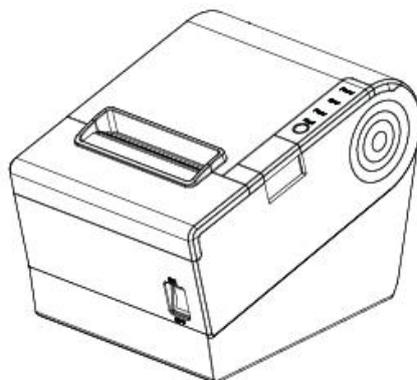




CP-650

User Manual



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Statement

Copyright

Printed in China

Version 1.0

CAUTIONS

Warnings



This must be complied with in order to avoid any damage to the human body and to the equipment.



This is showing the important information and tips for the printer operating.

Note: Due to continuous improvement of our product, the description of printer specification, accessories, design in this manual may slightly different, please in kind prevail.

IMPORTANT SAFETY INSTRUCTIONS

Carefully read the installation and operating instructions provided with the printer before starting up your printer:

1. Safety warning



Warnings: The print head will become very hot during printing. avoid contact with the print head after printing has finished.



Warnings: Do not touch the printer head and connector in case static damage the printer head.

2. Instructions

- 1) Place the printer on a flat and stable surface.
- 2) Leave enough space around printer for operation and maintenance.
- 3) Do not place the printer on or near a sunlight, glare and heat source.
- 4) Do not use or storage the printer near high temperatures, high humidity and serious pollution.
- 5) Protect the printer from shock, impact and vibration.
- 6) Do not place the power cord where it can be stepped on. If the power cord becomes damaged or frayed, replace it immediately.
- 7) Switch off the printer AC Adapter power when won't use it for a long time.
- 8) To ensure the print quality and reliability, you are suggested to use the recommended paper or the same quality paper.
- 9) Please switch off the power supply when connect/disconnect all the ports or it will cause damage to the printer control circuit.
- 10) Never carry out maintenance or repair work yourself. Always contact a qualified service technician.
- 11) Keep this User Manual in a place which is easily accessible at all times.
- 12) Due to continuous update of product, please take in kind of real machine, such as accessories, programs etc.

◆ Other Precautions

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◆ WEEE (Waste Electrical and Electric Equipment)

This information only applies to customers in the European Union, according to Directive 2012/19/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 04 July 2012 on waste electrical and electronic equipment, and to customers in countries in Europe, Middle East and Africa(EMEA) where they have implemented equivalent regulations.



For other countries, please contact your local government to investigate the possibility of recycling your product.

◆ FCC WARNING

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.



Note: The product needs to be reliably earthing after being powered on.



Caution: This is a Class A product. In a domestic environment this product may cause radio interference in which the user may be required to take adequate measures.

1 OVERVIEW

1.1 Introductions

CP-650 is a thermal receipt printer with auto-cutter, featured by high print quality, high print speed, high stability, etc. It can be used in commercial POS system, food industry and occasions which need real-time print receipts.

CP-650 can connect to other equipment through USB and Ethernet interfaces. And the printer drivers are available for the WINDOWS XP/7/8/10/Vista operating system.

1.2 The Main Features

- 1) Patent design of unique vertical double auto cutter.
- 2) Low noise.
- 3) High print speed.
- 4) Easy paper loading.
- 5) Easy to use and storage.
- 6) Compatible with various width paper.
- 7) Communication interfaces optional.

2 GETTING STARTED

2.1 Packing List

Warnings:

- 1) After receiving your printer, please check for possible shipping damage:
- 2) Check whether you have received the following accessories as 1-1 showed together with the printer, if there is any items missing, please contact your local dealer.

■ Standard



Printer



AC Adapter



Power Cord



CD



Quick Start Guide



USB Cable



Waterproof Cover

Ethernet Waterproof Buckle
(Without Ethernet Cable)

Roll Paper

■ Optional



Cable Cover



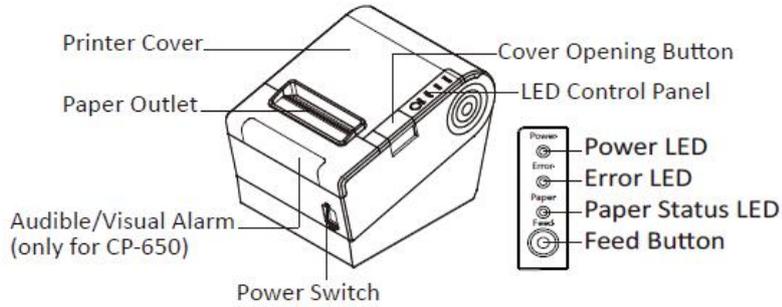
Wall Mounting Kit

Notes:

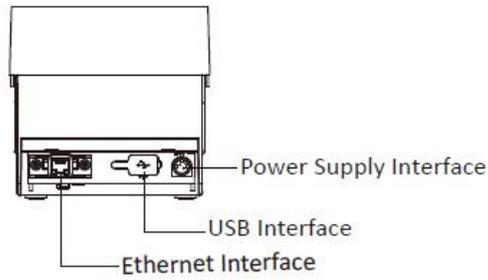
- 1) The power cord varies by country or region.
- 2) The items in the package depend on the actual order .

2.2 Appearance and Components

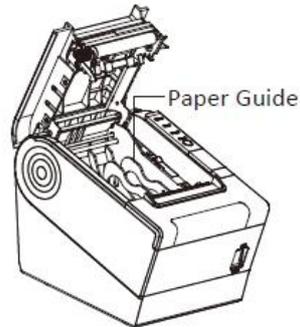
■ Front View



■ Rear View



■ Inside View



Specification of some components:1) Power switch

Press “0” to turn off power and press “|” to turn on the printer.

2) Feed button

Feed paper: When it’s not in the error status, press the button to feed paper. Press the button continuously to feed the long distance of paper.

3) Power LED

It indicates the power status.

4) Paper LED

It indicates the status of paper, such as paper near end and paper end. Please refer to “3.4 Specification of LED Indicator and beeper” for more details.

5) Error LED

If there is an abnormal phenomenon and the error LED is flashing, it means the printer is in the error status. Please turn off the printer immediately.

6) Paper guide

The paper guide should be inserted in a suitable paper guide slot in the paper container, which helps to fit different width of paper.

The paper container of CP-650 has 2 paper guide slots, for paper width of 80_{-1}^{+0} mm and 58_{-1}^{+0} mm respectively.

**Warning:**

The paper guide is important for the printer to fit different paper width. Please keep it properly.

3 SPECIFICATION

3.1 Printer Specification

Model		Parameters
Printing Parameter	Print method	Direct thermal line printing
	Resolution	203 dpi,8 dots/mm
	Printing width	72 mm/48 mm
	Print speed	Max. 250 mm/s
	Interface	USB/Ethernet
	Print density	Adjustable from level 1 to level 4
Page Mode		Support
Memory	RAM	2 MB
	Flash	4 MB
Character	Font	Alphanumeric, 45 international character sets, Simplified Chinese, Traditional Chinese
	Code page	PC437(std.Europe), Katakana, PC850(Multilingual), PC860(Portuguese), PC863(Canadian), PC865(Nordic), PC857(Turkish), PC737(Greek), ISO08859-7(Greek), WPC1252, PC866(Cyrillic #2), PC852(Latin 2), PC858(Euro), KU42(Thai), TIS11(Thai), TIS18(Thai), PC720(Arabic), WPC775(Baltic Rim), PC855(Cyrillic), PC862(Hebrew), PC864(Arabic), ISO8859-2(Latin2), ISO8859-15(Latin9), WPC1250(Latin 2), WPC1251(Cyrillic), WPC1253(Greek), WPC1254(Turkish), WPC1255(Hebrew), WPC1256(Arabic), WPC1257(Baltic Rim), WPC1258(Vietnamese), MIK(Cyrillic), PC755(Latin 2), Iran, Iran II, Latvian, ISO-8859-1(WestEur), ISO-8859-3(Latin 3), ISO-8859-4(Baltic), ISO-8859-5(Cyrillic), ISO-8859-6(Arabic), ISO-8859-8(Hebrew), ISO-8859-9(Turkish), PC856, PC3848(ABICOMP)
Graphics		Support downloading and printing bitmaps of different densities. The total memory for bitmap is 256K.
Barcode	1D	UPC-A, UPC-E, EAN8, EAN13, CODE39, ITF, CODABAR, CODE128, CODE93
	2D	PDF417, QR code
Detect Function	Sensors	Paper end sensor, cover open sensor, Paper presence sensor (only for CP-650)
LED Indicator	Power LED	Green LED
	Paper LED	Red LED
	Error LED	Red LED
Power Supply	Input	AC100V-240V 50-60HZ
	Output	24V --- 2A

Model		Parameters
Paper	Paper type	Thermal Receipt Paper
	Paper width	80^{+0}_{-1} mm/ 58^{+0}_{-1} mm
	Paper thickness	0.050 ~ 0.130mm
	Roll paper diameter	Max. 83mm
Command		ESC/POS
Physical Spec.	Operating condition	0°C ~ 45°C , 20% ~ 85%RH
	Storage condition	-40°C ~ 60°C , 5% ~ 95%RH
	Dimensions (W*L*H)	197×145×146 mm
	Weight	1.8kg
Reliability	TPH lifetime	150km
	Cutter lifetime	2,000,000 cuts
Software	Driver	Win7/Win8/Win10/Linux CUPS/OPOS/JavePOS
	SDK	Android, iOS
Network		10/100 Mps

3.2 Media Specification

3.2.1 Continuous Thermal Paper Specification

- 1) Paper Type: Specified Thermal Paper
- 2) Paper Width: 80^{+0}_{-1} mm/ 58^{+0}_{-1} mm
- 3) Paper Outer Diameter : Max. 83 mm
- 4) Paper Thickness: 0.050 ~ 0.090mm
- 5) Recommending Paper

Paper Type	Manufacturer
FD210,PD150R,PD160R	OJI Paper CO.,

3.2.2 Paper Specification

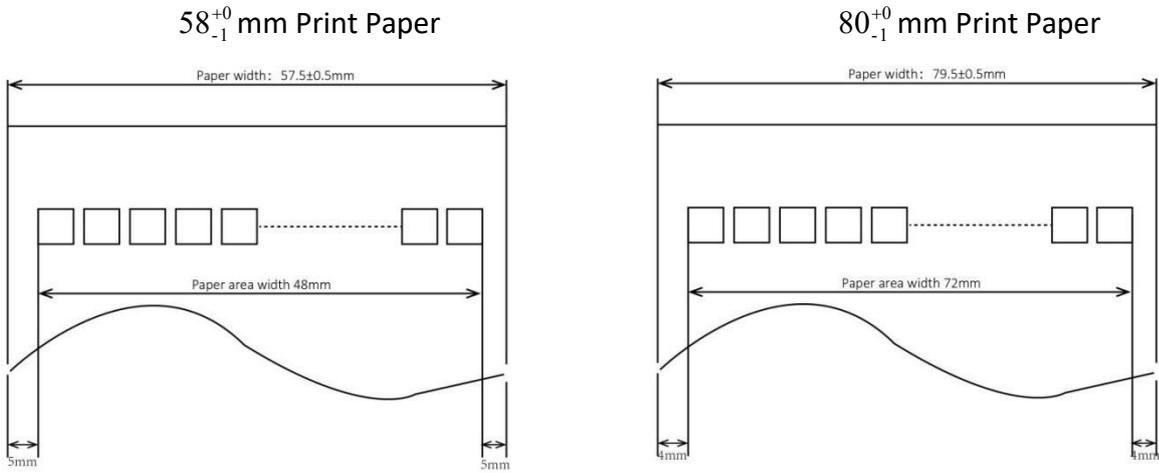


Notes:

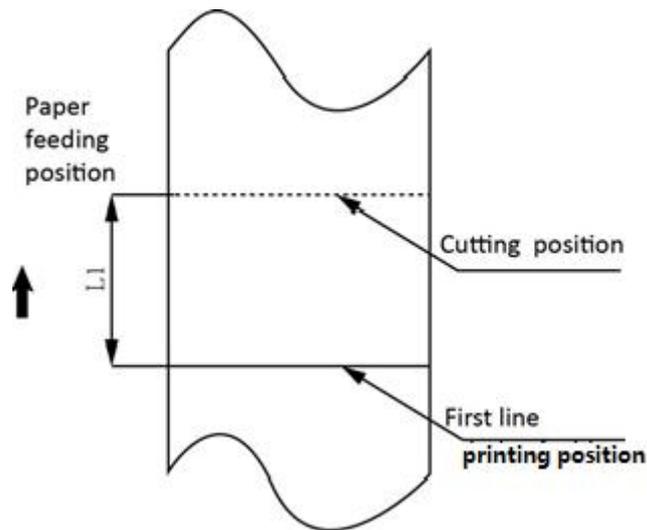
- 1) Please use the recommended thermal paper or same quality paper, otherwise it will influence the print quality and decrease the thermal printer head life.
- 2) Don't stick the paper on the roll paper mandrel.
- 3) If the thermal paper is polluted by chemical or oil, the thermal paper heat sensibility decreases, which will influence the print quality.
- 4) Don't use finger nail or hard articles to touch the surface of thermal paper, otherwise it will cause color fading.
- 5) When the environment temperature is higher than 70°C, the thermal paper color will fade, so pay attention to the influence of temperature, humidity and sunlight.

3.3 Printing and Cutting Position

3.3.1 Printing Position



3.3.2 Cutting Position



Type	Paper Cutting Position(L1)
CP-650	15.4mm

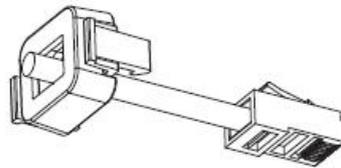
4 INSTALLATION AND USAGE

4.1 Installation Site and Direction of Printer

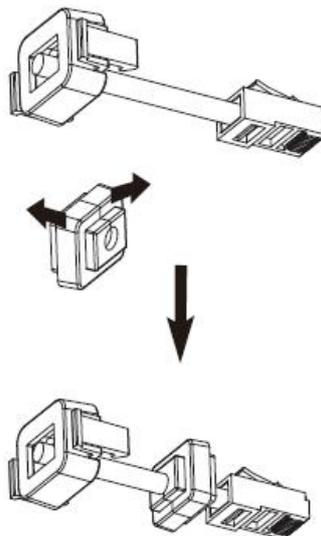
- 1) CP-650 has two options: wall-mounting (optional: wall-mounting kit) and horizontal installation.
- 2) It's recommended to install the printer at a horizontal surface. The inclination angle should not exceed $\pm 10^\circ$ (only to paper feed direction).
- 3) Keep printer far away from source of water.
- 4) Avoid placing the printer at places with vibrations and shocks.
- 5) Make sure the printer ground connection is safe.
- 6) When the printer is at operation and maintenance, it is recommended to retain enough space to ensure the printer working in reliability and ease.

4.2 Ethernet Waterproof Buckle Loading

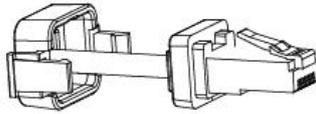
- 1) Make the Ethernet cable get through the waterproof buckle lid.



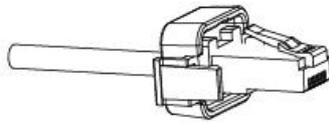
- 2) Open the silicon block of the buckle lid, and put it on the Ethernet cable as shown below.



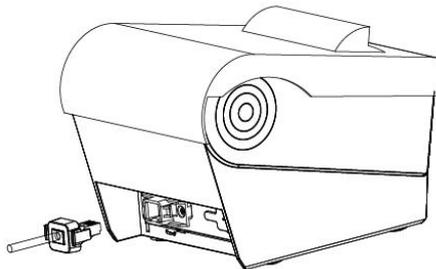
3) Adjust the incisions of the silicon block and the buckle lid to make them correspond to the shrapnel of the Ethernet cable head.



4) Plug silicon block and Ethernet cable head into the buckle lid, and make sure they are tight.



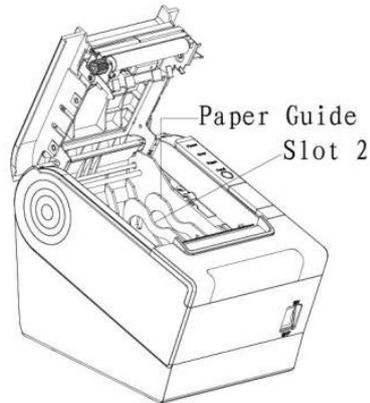
5) Plug the waterproof buckle into the waterproof base and press the waterproof buckle until they are tight.



4.3 Media Loading

4.3.1 Paper Confirmation

Confirm the type of paper used by the printer before printing. The default paper type is specified thermal paper. According to the paper width, insert the paper guide in the proper guide slot.



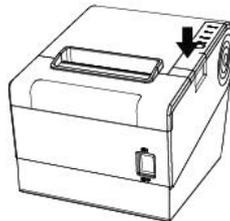
Notes:

Paper guide in slot 1 : 80^{+0}_{-1} mm

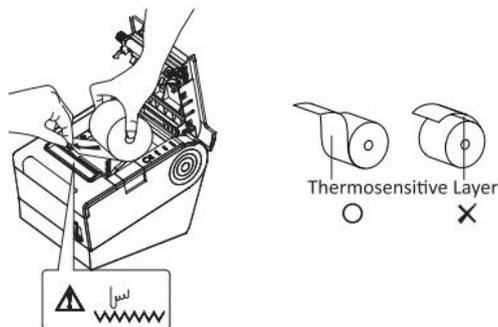
Paper guide in slot 2 : 58^{+0}_{-1} mm

4.3.2 Procedure of Loading

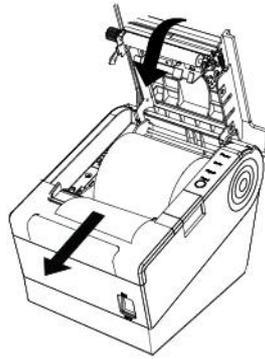
1) Turn off the printer. Press the cover opening button to open the printer cover.



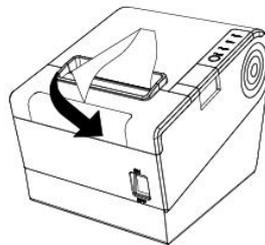
2) Load the paper roll in the correct direction as shown below.



3) Pull out some roll paper and close the printer cover.



4) Tear the extra paper in the direction as shown below.



Notes:

- 1) Adjust the paper guide according to the paper size.
- 2) Make sure the paper roll inside is at tight status, or it will issue paper jam or other fault.

4.4 Specification of LED Indicator and Beeper

Name	Status	Specification
POWER LED (Green)	ON	The printer works well
	OFF	The printer is powered off
ERROR LED (Red)	Flash	The printer is in an error state
	OFF	The printer is in a normal state
PAPER LED (Red)	ON	The printer is in a paper end state
	OFF	The printer is in a normal state

Description	POWER LED	ERROR LED	PAPER LED	Paper Taken Alarm (CP-650)	Beeper
Cover Open	ON	ON	ON	-	"Beep ,Beep--,Beep"
Sufficient Paper	ON	OFF	OFF	-	Silent
No Paper	ON	ON	ON	-	"Beep Beep Beep".
Cutter Jam	ON	Flash	OFF	-	"Beep—, Beep—"
Paper is not taken after being cut	ON	OFF	OFF	Fast flash	"Beep Beep Beep". (CP-650)
Overheating alarm before stop printing	ON	OFF	OFF	-	"Beep ,Beep--,Beep-"
Overheating alarm after stop printing	ON	FAST FLASH	OFF	-	"Beep ,Beep--,Beep-"
Low voltage alarm	ON	See ※ 1	OFF	-	"Beep ,Beep,Beep-"
Over voltage alarm	ON	See ※ 2	OFF	-	"Beep ,Beep,Beep-"

※ 1: Error LED would cycle like this: fast flash 4 times and constant light for a while;

※ 2: Error LED would cycle like this: fast flash 3 times and constant light for a while.

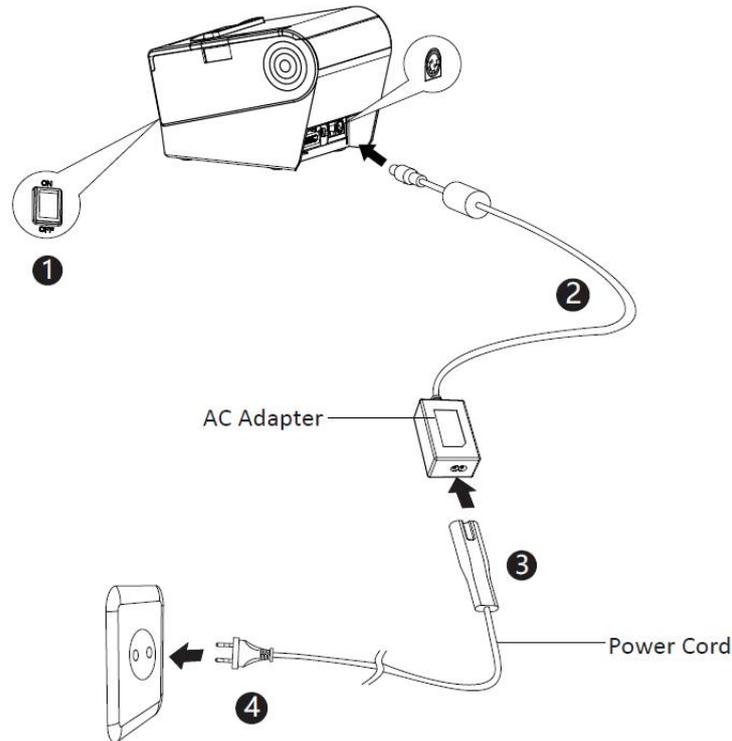


Notes:

The printer use a thermistor to detect the temperature of the print head. If the temperature of print head is higher than 65° C, printer will send a warning. If the temperature of print head is higher than 80° C, printer will stop working until the temperature is lower than 60° C.

4.5 Power Supply

- 1) Make sure the printer is "OFF".
- 2) Connect AC adapter to printer.
- 3) Connect power cord to AC adapter.
- 4) Plug the other side of power cord into the socket nearby.



 **Note: The power cord varies by country or region.**

The plug of power adapter is designed in a switch type, when accessing power adapter and uttered the voice "click", it means the connected socket switch is locked and the adapter connect well, otherwise please connect again.

When pulling out the adapter, please pinch the shell of power adapter and pull the switch up, when the switch is fully opened then pull out the power adapter.

Don't pull the plug by squeezing any other place of power adapter. Because it is more difficult to pull it out and easy to damage the cable.



Notes:

- 1) Please only use the power adapter recommended by supplier or equivalent products.
- 2) When disconnecting the power adapter plug, handhold plug connector housing to avoid the pulling on the cable in force.
- 3) Avoid dragging the power adapter cable, otherwise it will damage the cables, causing fire and shock.
- 4) Avoid putting power adapter around a heating device, otherwise the cable may melt, causing fire and shock.
- 5) If you do not use the printer in a long time, disconnect the power supply for the printer.

4.6 Interface Cable Connection

- 1) Make sure the printer's power switch is turned off.
- 2) Plug the interface cable into the matched interface and fixed with screws (or spring) on the plug.
- 3) Connect the other end of the interface cable to the host.

4.7 Print Test

4.7.1 Print Self-Test

The self-test checks the printer's current settings, status and whether the printer has any problem.

- 1) Make sure the power is connected and paper is loaded properly.
- 2) Make sure the printer is off and top cover is closed properly.
- 3) Press the paper feed button and power button simultaneously to turn the printer on. The printer is ready to receive data as soon as it completes the self-test.

4.7.2 Printing of Windows Driver Program

- 1) Install the Windows Driver program. (Please refer to the Windows Driver Instruction at chapter 9)
- 2) Please set the "Interface" as the type you use.
- 3) Use the Windows Driver Program to print out the "Print Test Page".

4.8 Hexadecimal Dumping

This function allows experienced users to see exactly what data is coming to the printer. This can be useful in finding software problems. When you turn on the hexadecimal dump function, the printer prints all commands and data in hexadecimal format along with a guide section to help you find specific commands.

To use the hexadecimal dump function, follow these steps.

- 1) After making sure that the printer is off, open the cover.
- 2) Turn the printer on, while holding down the FEED button.
- 3) Close the cover, and then the printer enters the hexadecimal dump mode.
- 4) Run any software program that sends data to the printer.

The printer will print all the codes it receives in a two-column format.

The first column contains the hexadecimal codes

The second column gives the ASCII characters that correspond to the codes.

```
1B 21 00 1B 26 02 40 40 40 40      . ! . . & . @ @ @ @
02 0D 1B 44 0A 14 1E 28 28 28      ... D . . . . ( ( (
00 01 0A 41 0D 42 0A 43 43 43      ... A . B . C   C   C
```

- A period (.) is printed for each code that has no ASCII equivalent.

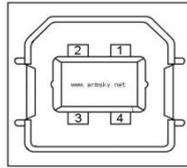
- During the hex dump, all commands are disabled.

- 5) After completing the print task, shortly press the FEED button three times to exit hexadecimal printing mode.

5 INTERFACES

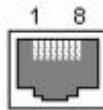
Printer CP-650 supports USB interface and Ethernet interface.

5.1 USB



PIN NO.	Signal Name
1	VBUS
2	D-
3	D+
4	GND

5.2 Ethernet Interface

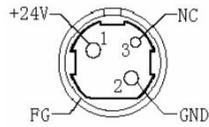


PIN No.	Signal Name
1	TX+
2	TX-
3	RX+
4	-
5	-
6	RX+
7	-
8	-



Note: The printer is equipped with an Ethernet interface, and use the network connection router, switch and other network communication equipment which meet RJ45 interface standard. When connecting directly with PC, it is suggested that the cross network line in accordance with RJ45 interface standard should be adopted.

5.3 Power Interface



PIN No.	Signal Name
1	+24V
2	GND
3	N.C
SHELL	F.G

Printer end-Unetop DC-002 or similar products, user end-Unetop DC-002 or similar products.

6 TROUBLESHOOTING

Your printer is very reliable, but occasionally problems may occur. This chapter provides information on some common problems you may encounter and how to solve them. If you encounter problems that you can not resolve, contact your dealer for assistance.

6.1 Printer Not Working

Problem Description	Probable Reason	Solution
LED light is off, printer is not working	Printer has no power	Connect printer to power supply
	Printer is turned off	Turn on the printer
	Circuit board is broken	Contact with the dealer

6.2 LED Indicator on The Control Panel and Beeper Alarm

Problem Description	Probable Reason	Solution
Paper LED is always on	Paper near end	The paper roll is near end, the printer can work normally
Error LED is always on and beeper alarms	Printer cover is open	Close the printer cover
Paper LED and Error LED are always on and beeper alarms	Paper end	Reload the roll paper
Error LED flashes and beeper alarms	Thermal print head is over-heated	Turn the printer off and resume when it cools
	Over-voltage	Print with specified voltage
	Low-voltage	Print with specified voltage

6.3 Troubles Occur During Printing

Problem Description	Probable Reason	Solution
Coloured stripe in the paper	Paper near end	Reload the paper roll
Blurred printing or spot	Incorrect paper loading	Check if the paper roll is loaded
	Unqualified paper roll	Use recommended thermal paper roll
	Dirty thermal head or print roller	Clean the thermal head or print roller
	Low print density	Increase the print density level
Paper is not feeding normally	Paper jam	Open the printer cover, check the paper path and remove jammed paper
Vertical print words are missing	Dirty thermal head or print roller	Clean the thermal head or print roller
	Thermal head is damaged	Contact with your dealer for assistance

6.4 Problems Emerge During the Paper Cutting Processes

Problem Description	Probable Reason	Solution
Cutter jam, the movable cutter cannot go back	Cutter abrasion, insufficient cutting	Replace the cutter
	Worm gear and worm wheel abrasion	Replace the worm gear and worm wheel
	Motor is burnt	Replace the motor
	Paper scraps	Clean the paper scraps on the transmission
Insufficient cutting	Cutter edge abrasion, paper is too thick	Replace the cutter
Paper jam	Thermal printer head is over-heated	Reduce the density of printing
	Driving is too fast	Reduce the printer speed to the limit of thermal printer head
	Wrong paper feeding position	Put the paper parallel with the paper mount and insert into the space between platen roller and the thermal printer head.



Note: Regarding the density of setting, please refer to "Utility Tool for POS Instruction" in Chapter 8 of this manual.

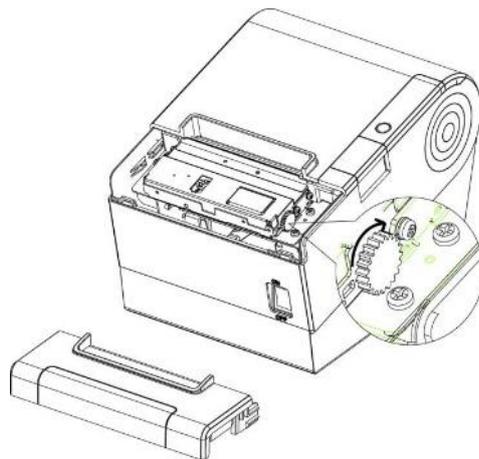
6.5 Remove Jammed Paper

If the printer cover can be opened, operate it according to the next steps.

- 1) Turn the printer off and open the printer cover.
- 2) Remove jammed paper, reload the paper roll, and close the printer cover.

If the auto cutter jam occurs on printer and you cannot open the printer cover, please open the cutter cover as shown below.

- 1) Turn the printer off and open the front cover.
- 2) Turn the knob until the cutter returns to the normal position (tip tag).
- 3) Close the front cover.
- 4) Open the top cover and remove jammed paper.



7 PRINTER CLEANING AND MAINTENANCE

Print quality might be degraded by dust, foreign substance, adhesive substance, or other pollution materials stuck in the printer head or inside the printer.

When dirty, clean the print head as following steps:

※ CAUTION

- 1) Make sure to turn off the printer prior to cleaning.
- 2) As the print head gets hot during printing, turn the printer off and wait approximately 2~3 minutes before starting to clean.
- 3) When cleaning the print head, take care not to touch the heated portion of the print head.
Print Head is susceptible to damage from static electricity, etc.
- 4) Take care not to allow the print head become scratched and/or damaged in any way.

7.1 Cleaning Head

- 1) Open the printer cover and then use cotton stick with medical alcohol to clean the head in the direction from the center of the head to the edges.
- 2) After cleaning the head, do not use the printer until the alcohol used for cleaning evaporates completely (1~2 min.) and the printer has completely dried.

7.2 Cleaning Sensors, Roller and/or Paper Path

- 1) Open the printer cover and then remove the paper.
- 2) Remove any dust or foreign substance using dry cloth or cotton swab.
- 3) Soak the cloth or cotton swab in alcohol for medical use and use it to remove adhesive foreign substances or other pollution materials.
- 4) After cleaning the parts, do not use the printer until the alcohol evaporates completely (1~2 min.) and the printer has completely dried.

※ ***Clean the parts whenever print quality or paper detection degraded.***

8. UTILITY TOOL FOR POS INSTRUCTION

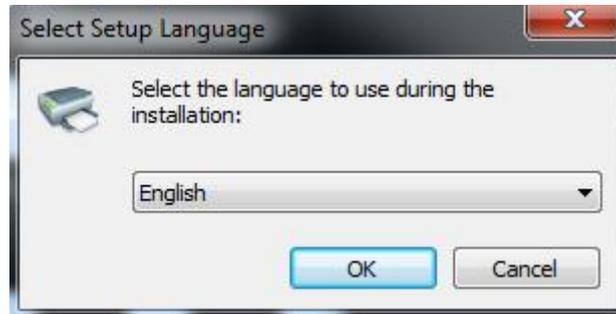
Utility Tool is applicable to the following operating system:

- Microsoft Windows 10 (32 bit/64 bit)
- Microsoft Windows 8 (32 bit/64 bit)
- Microsoft Windows 7 SP1 (32 bit/64 bit)
- Microsoft Windows Vista SP2 (32 bit/64 bit)
- Microsoft Windows XP Professional SP3 (32 bit)
- Microsoft Windows Server 2012 (64 bit)
- Microsoft Windows Server 2008 R2

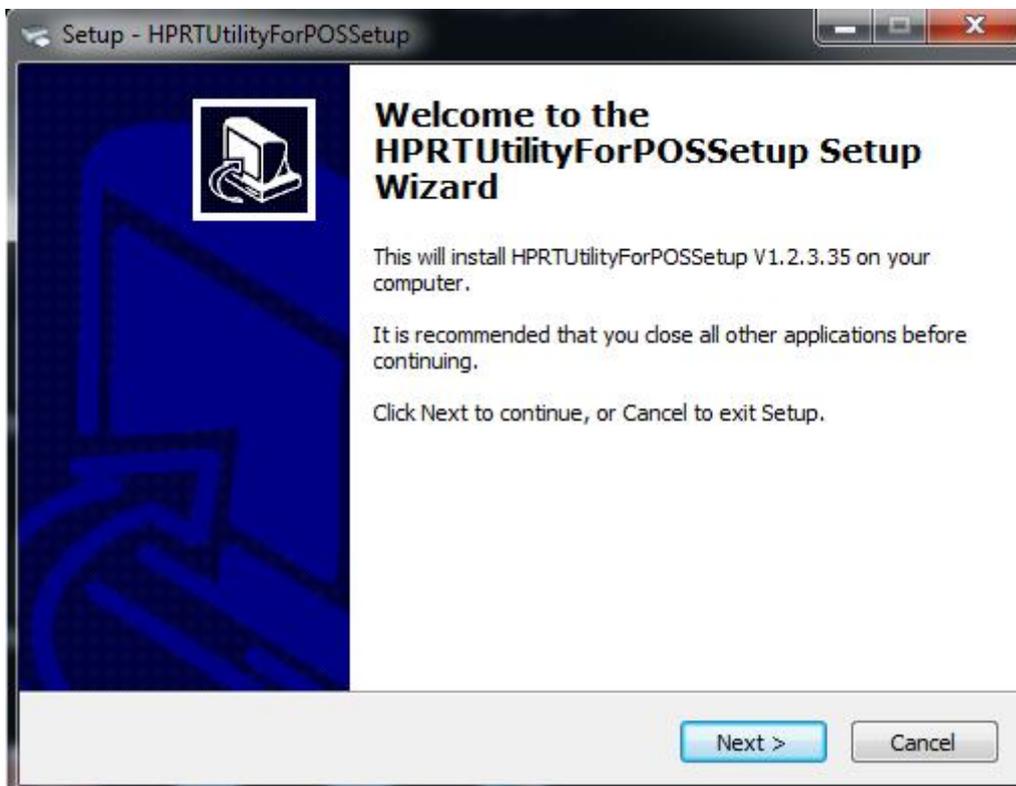
8.1 Utility Tool Installation

The following screen-shots are based on Win 7.

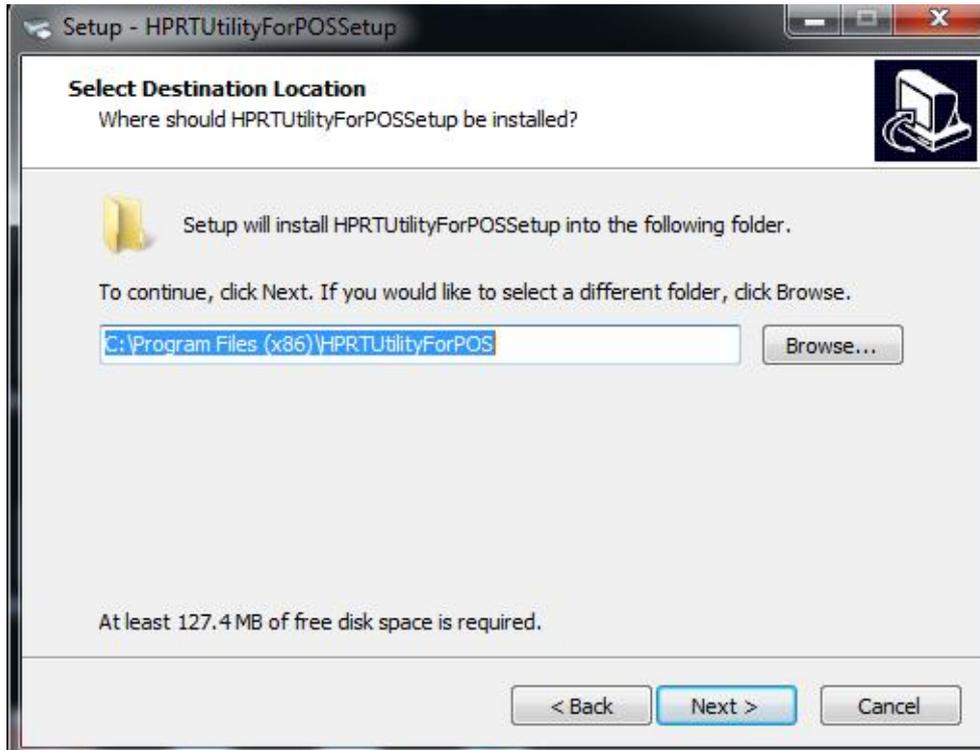
- 1) Double click the installation package and choose the language to install.



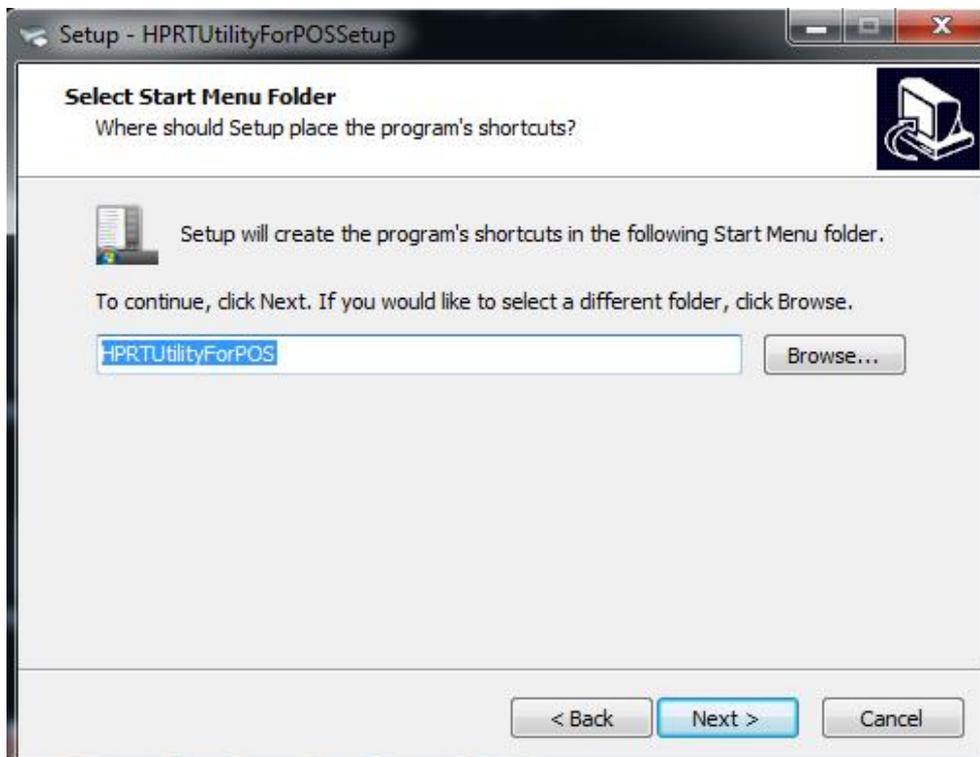
- 2) click "Next".



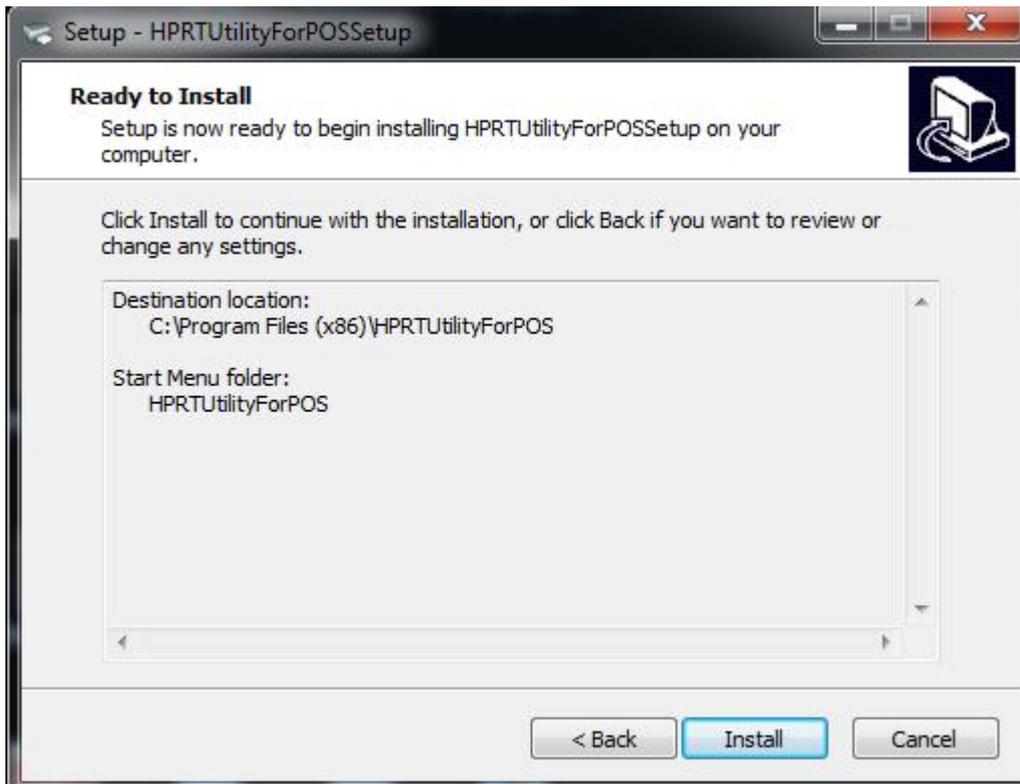
3) Click “Browse” to select a folder that you want, and click “Next”.



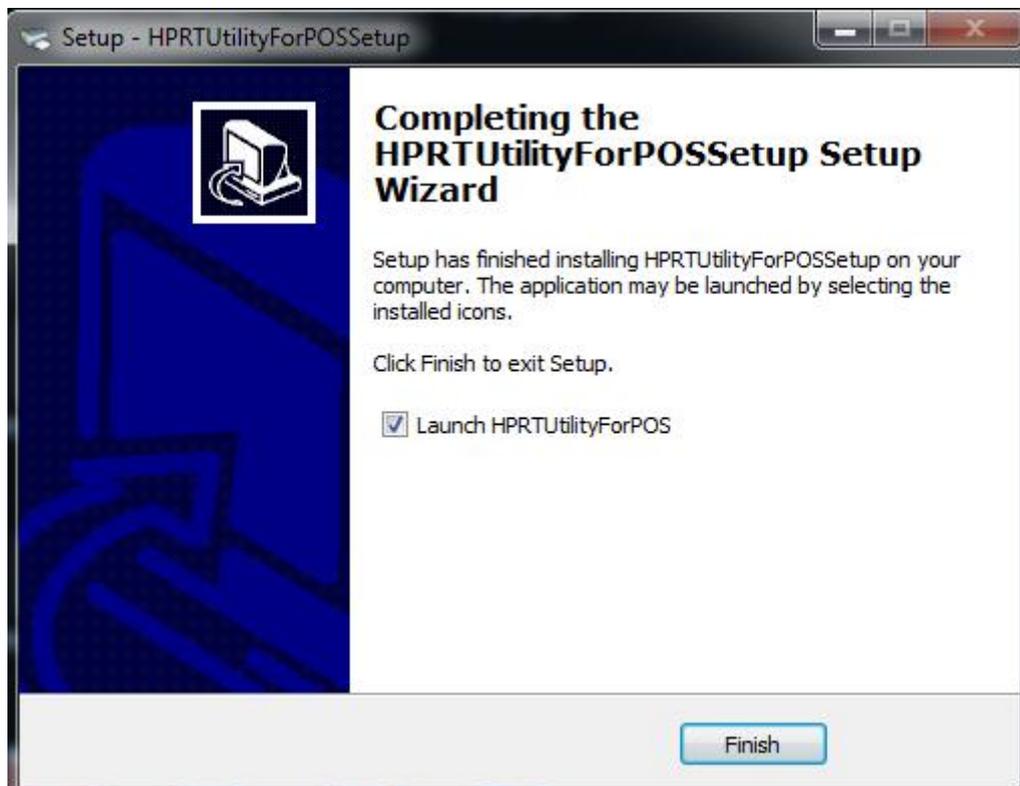
4) Click “Next”.



5) Click “Install”.



6) Click “Finish”. Utility is installed successfully.



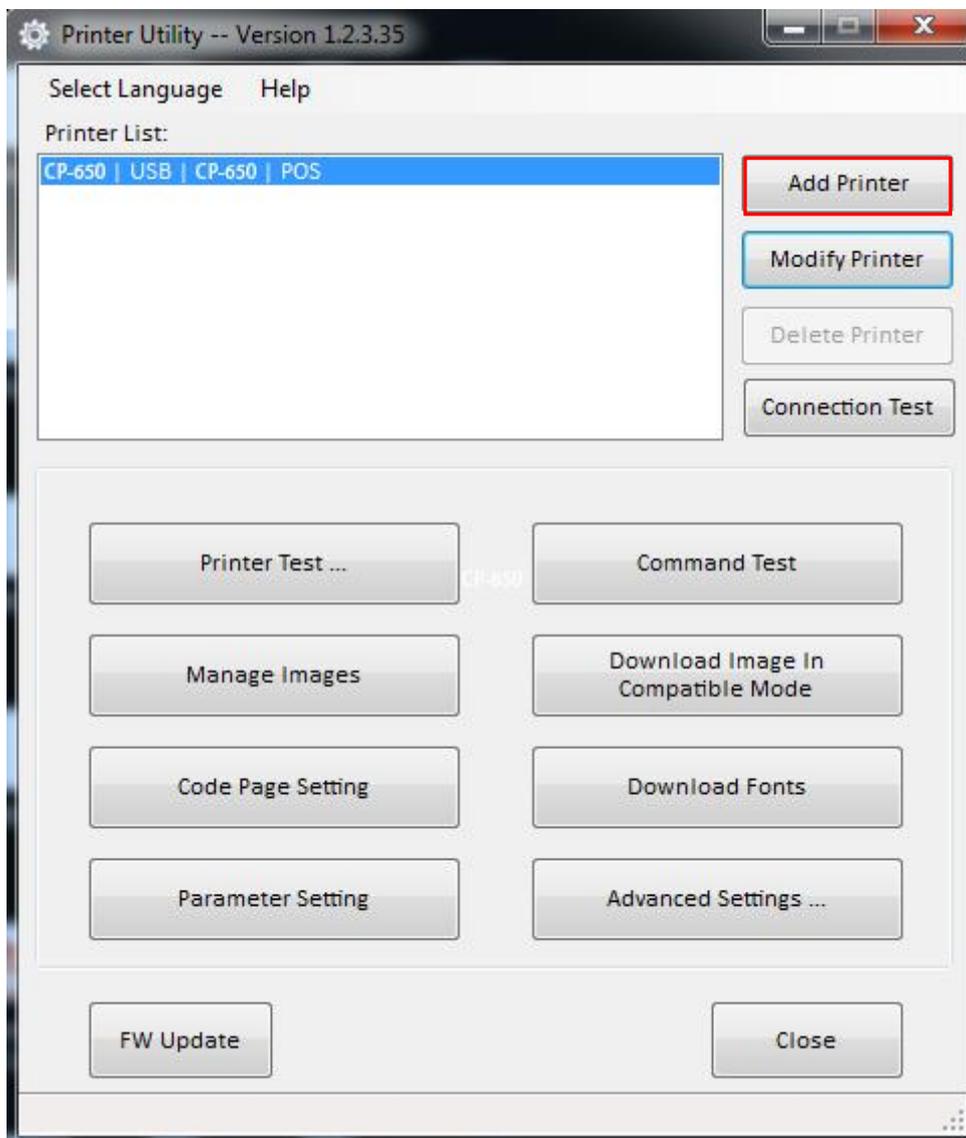
8.2 Using Utility Tool

 Warning: In different operating system, screen has a slight difference. Please operate it according to the tips. Take CP-650 (Windows 7) for example.

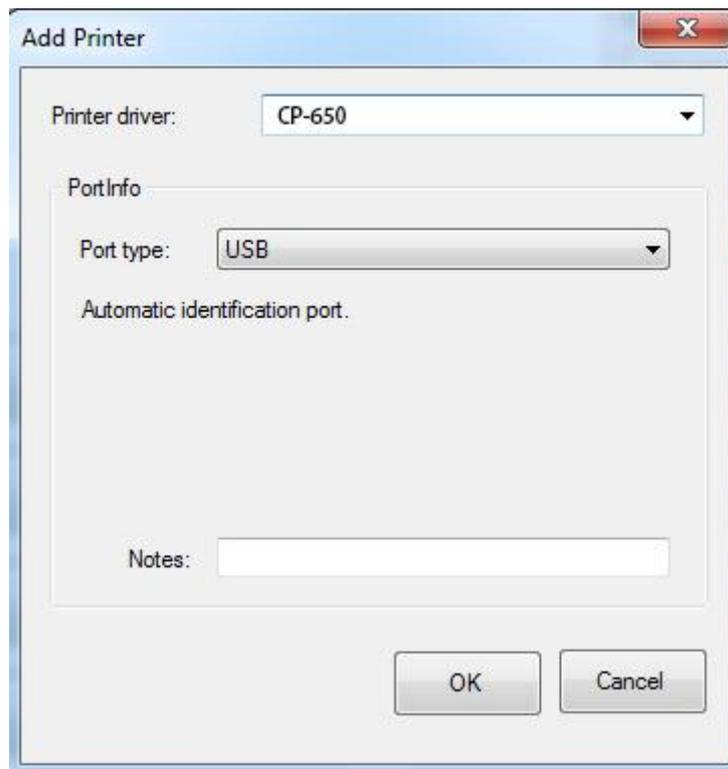
8.2.1 Add/Modify/Delete/Connect Printer

8.2.1.1 Add printer

1) Click "Add Printer".

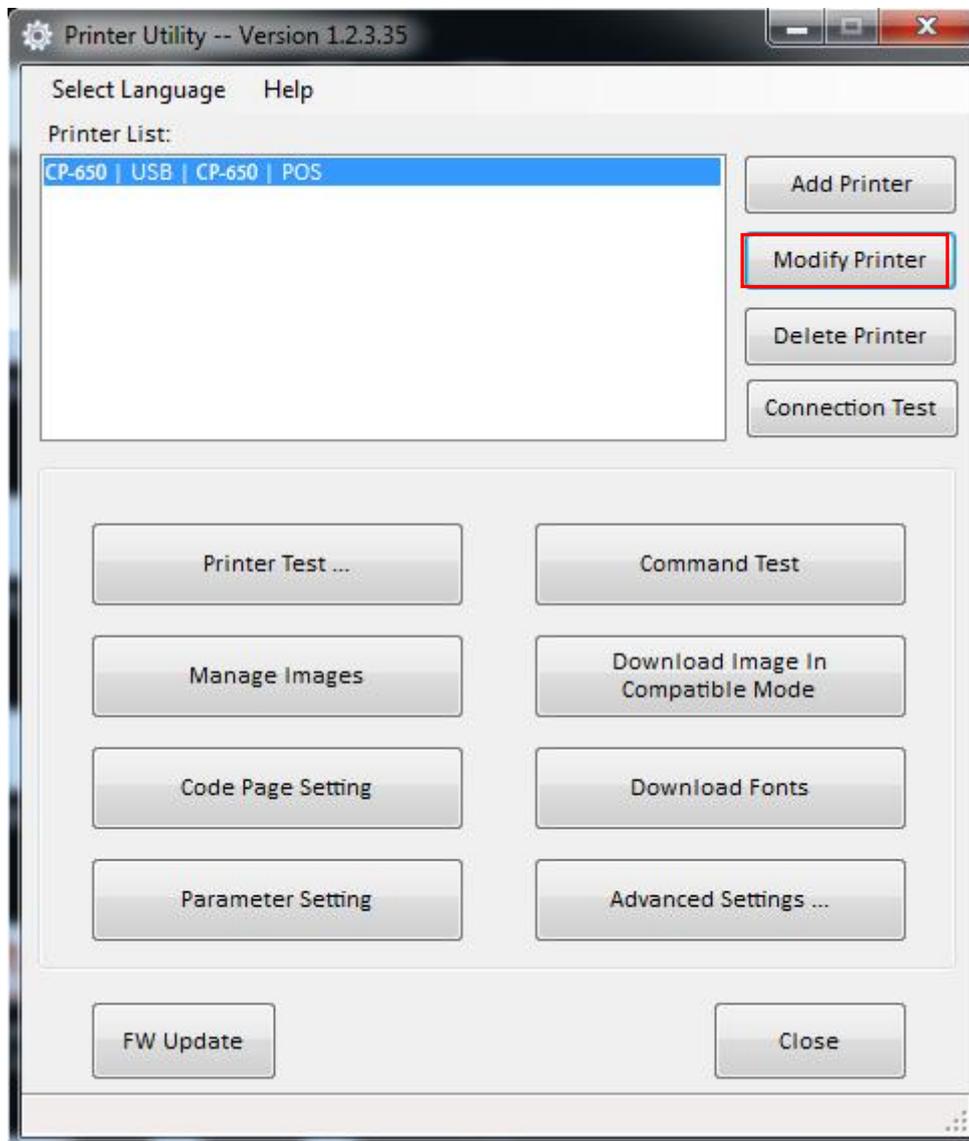


2) Choose the appropriate printer type and port. Then click “OK”. (Take CP-650 for example.)

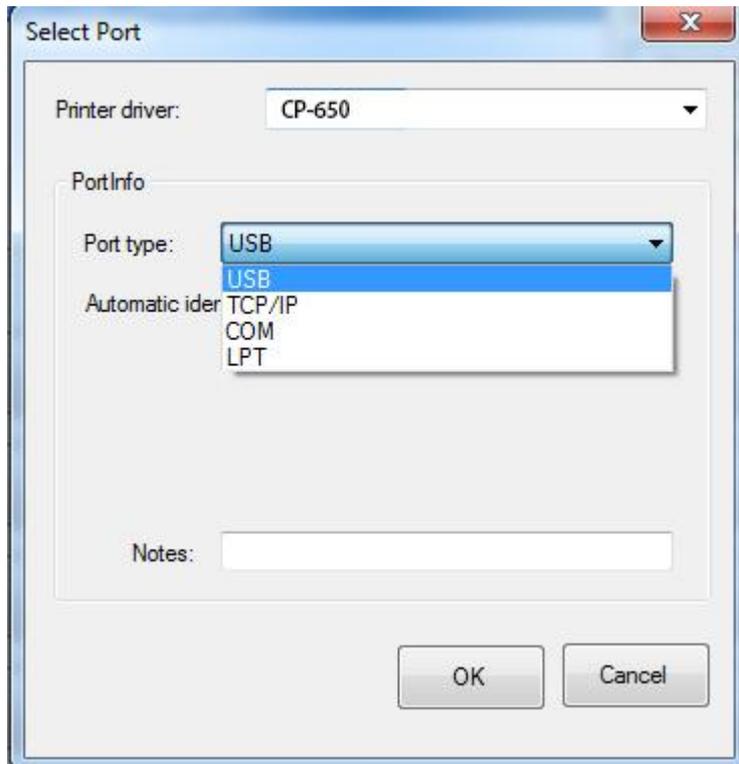


8.2.1.2 Modify printer

1) Choose the printer you want to modify in the list. Click “Modify Printer”.



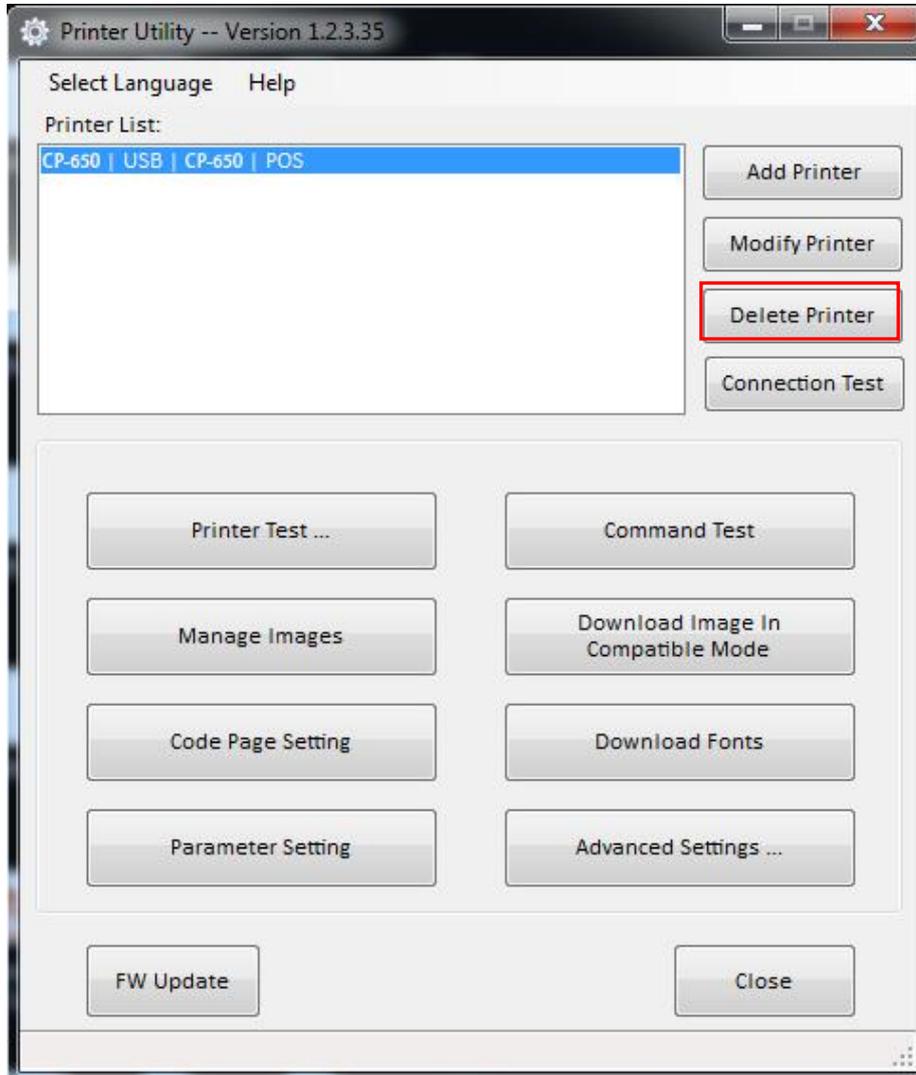
2) Choose the new printer and new port. Then click “OK”.



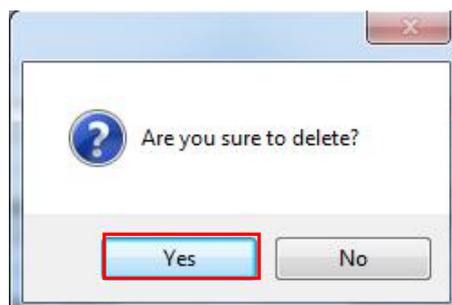
3) The new printer is added successfully.

8.2.1.3 Delete printer

1) Choose the printer you want to delete in the list and click “Delete Printer”.



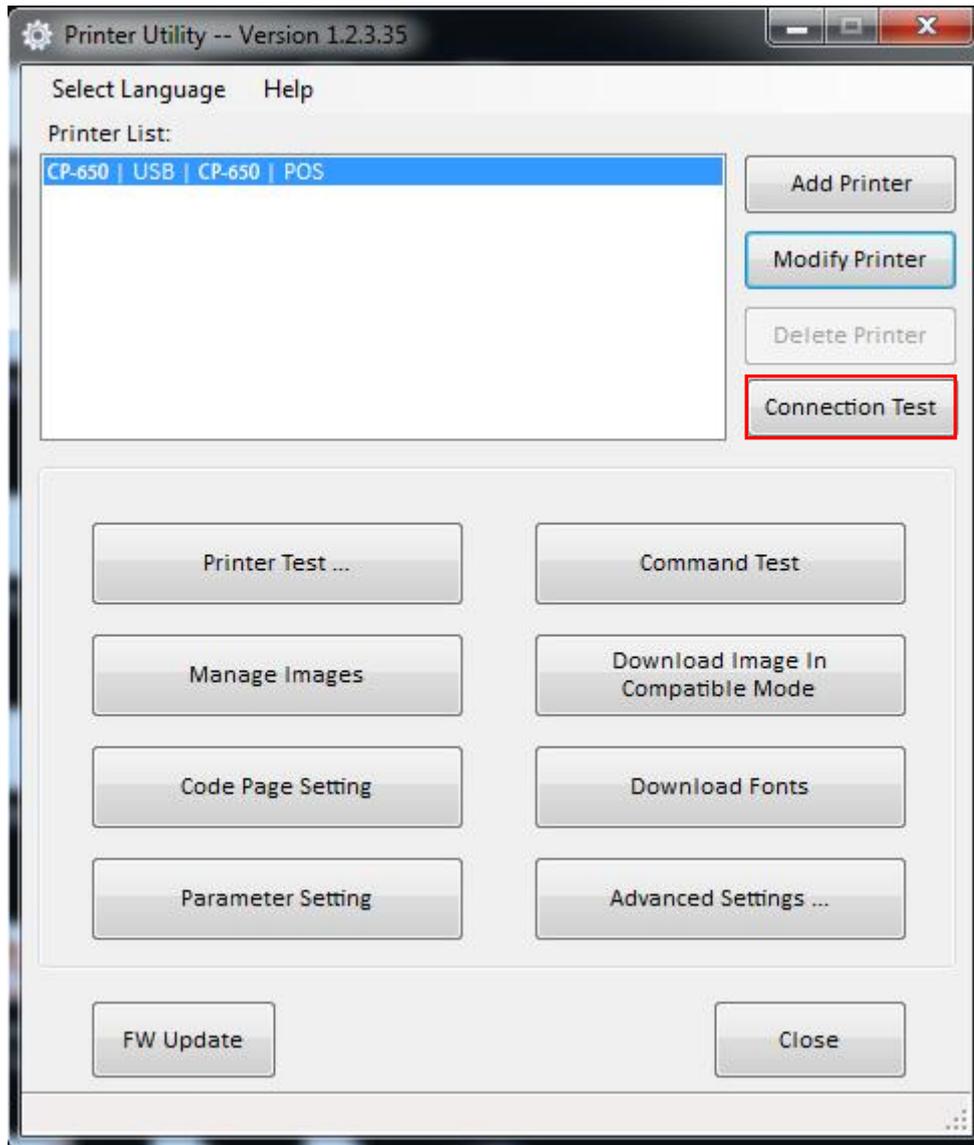
2) Click “Yes”, then the printer is deleted.



8.2.1.4 Connection Test

Make sure printer is connected to computer and it is power on.

1) Choose the printer. Click “Connection Test”.



2) If the connection is successful, it will appear the following window. If the connection is unsuccessful, please connect the printer with computer.



Notes:

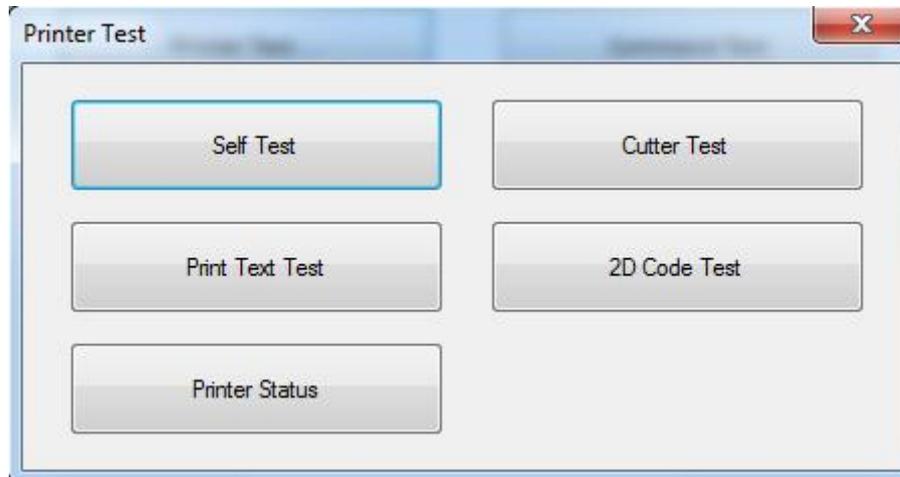
- 1) **Make sure printer is connected with computer and power on.**
- 2) **Make sure printer is loaded with paper.**
- 3) **Before using the following function, carry out the “Connection Test” first.**

8.2.2 Functions

Printer Test contains the following items:

- Printer Test
- Command Test
- Manage Images
- Download Image in Compatible Mode
- Code Page Setting
- Download Fonts
- Parameter Setting
- Advanced Settings

8.2.2.1 Printer Test



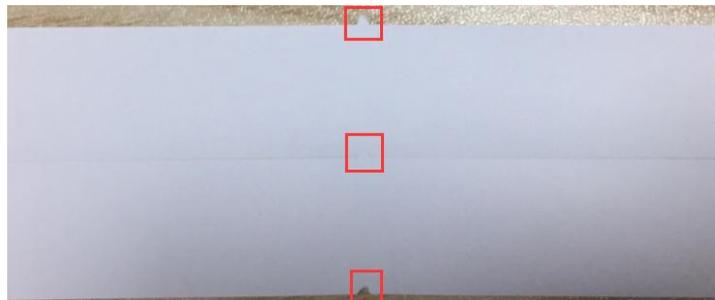
1) Self Test

Click “Self Test” to see if the printer will print properly.

2) Cutter Test

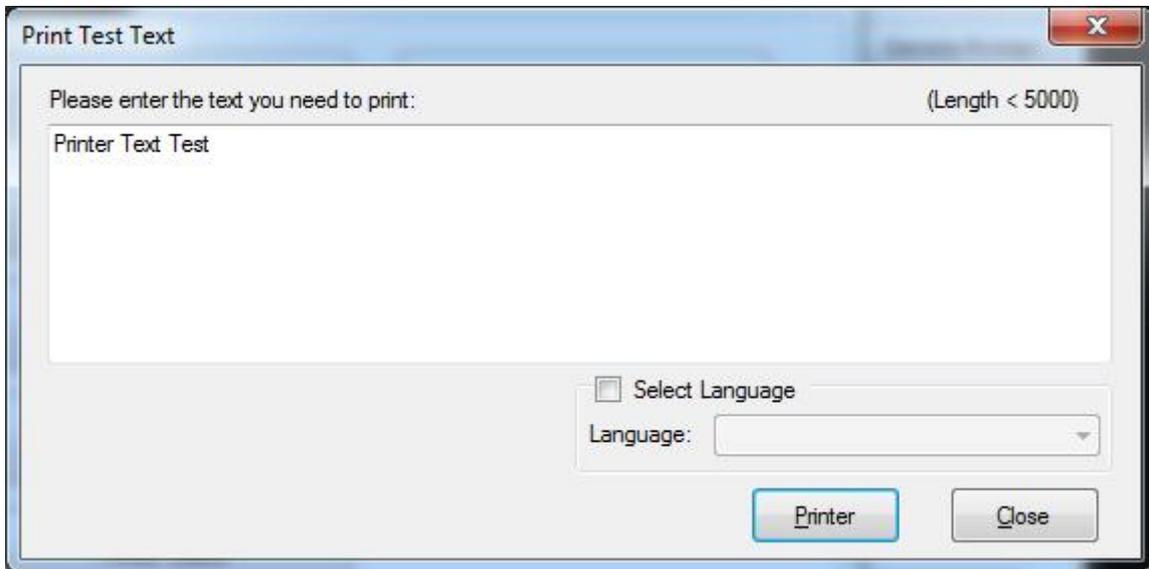
Click the cutter test and the paper will be cut automatically. Cutting method is partial cut. (Partial cut: the paper is not fully cut off. It leaves connection point between the cut off paper and the left paper.)

As shown in the figure:



3) Print Text Test

Click "Print Text Test", input the text you want to print. When you click "Print", the printer starts printing text content. Such as: Print Text Test.

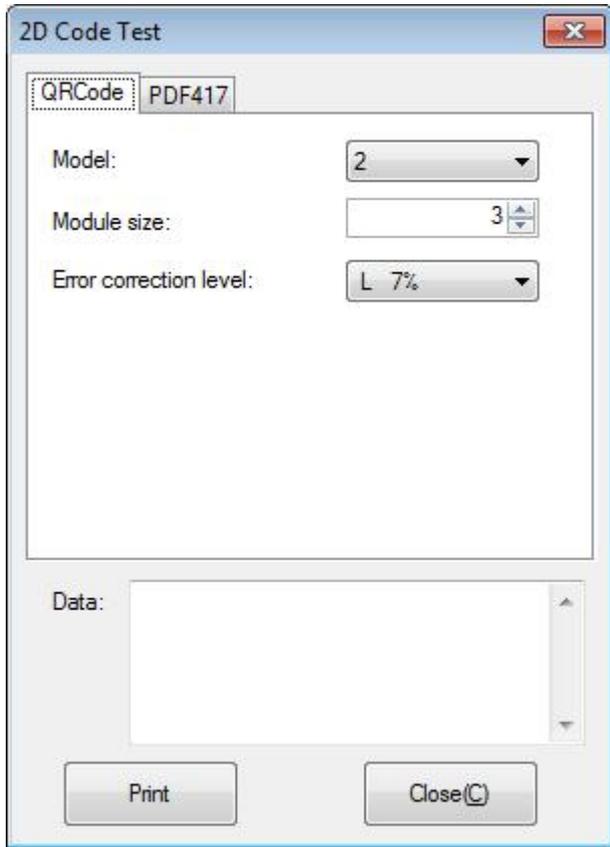


Note:

The language option in the lower right corner is checked according to the input text. (For example: The input is Simplified Chinese, the language is checked for Simplified Chinese, the printer prints the input text according to the setting options, and if you check other languages, the printer does not print the text)

4) 2D Code

Click the QRCode mode.



▲ Model: 1~2

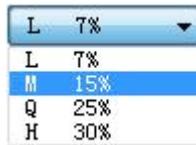


▲ Module size: 1~16

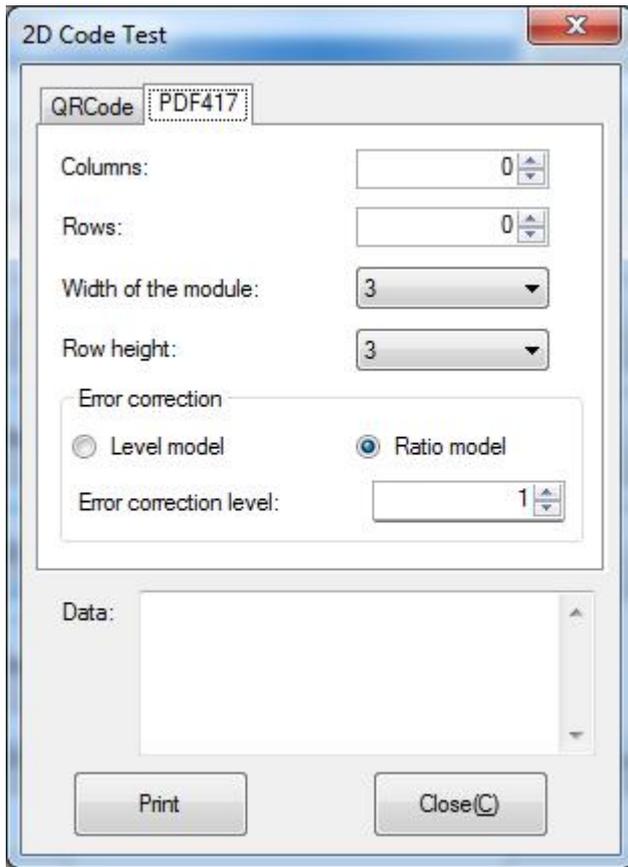
The larger the module value, the larger the printed QR code is, and the smaller the opposite.

▲ Error correction level: 7%~30%

The higher the error correction level, the more intensive the module graphics.



Click the PDF417 mode.



▲Columns: 0 ~ 30

▲Rows: 0 ~ 90

▲Width of the module: 2 ~ 6

The larger the module value, the wider the width of the printed PDF417 barcode, and the smaller the opposite.



▲Row height: 2 ~ 8

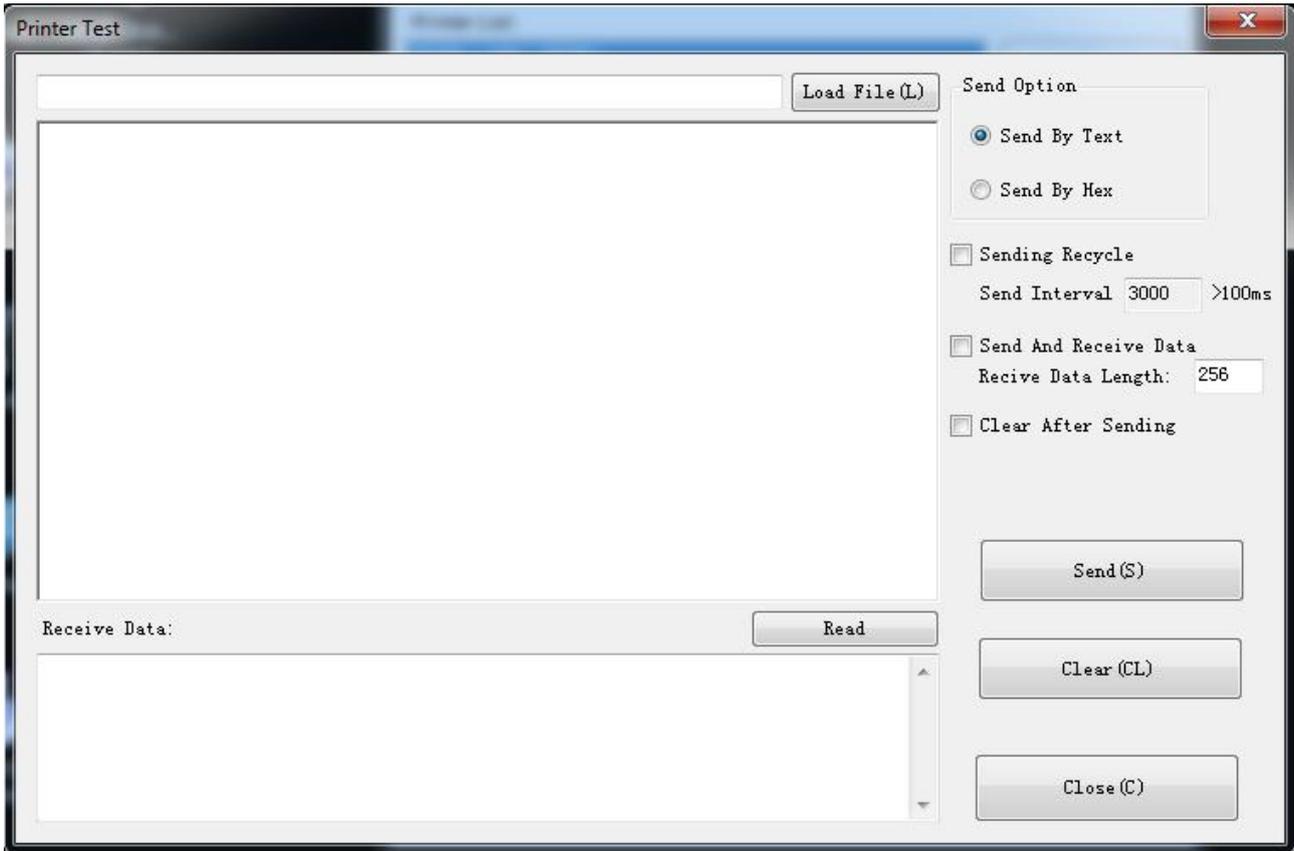
The larger the module value, the longer the printed PDF417 barcode, and the smaller the opposite.

▲Error connection level: 0 ~ 40

8.2.2.2 Command Test

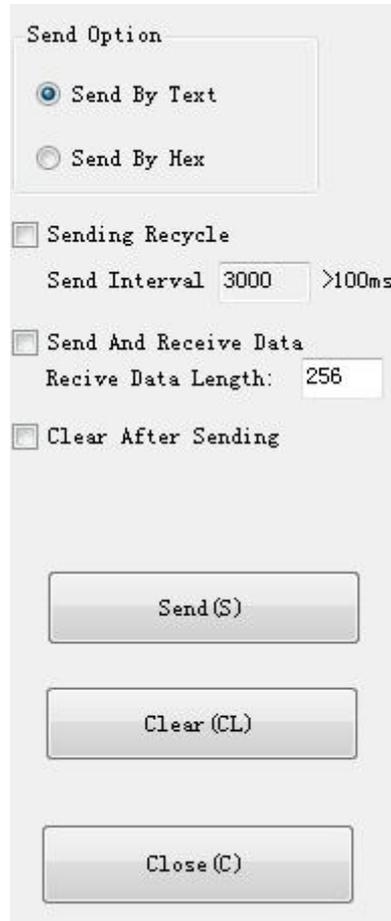
In the command test, you can send command to the printer. Input text or hexadecimal data. Select a file or enter a command in the input box.

- 1) Click "Send by Text", input text content.



▲Sending Recycle:

When the interval is set to 3000ms (you can set the interval as needed), then click “Send”, the printer starts to recycle printing. Click “Stop” to stop the recycle printing.



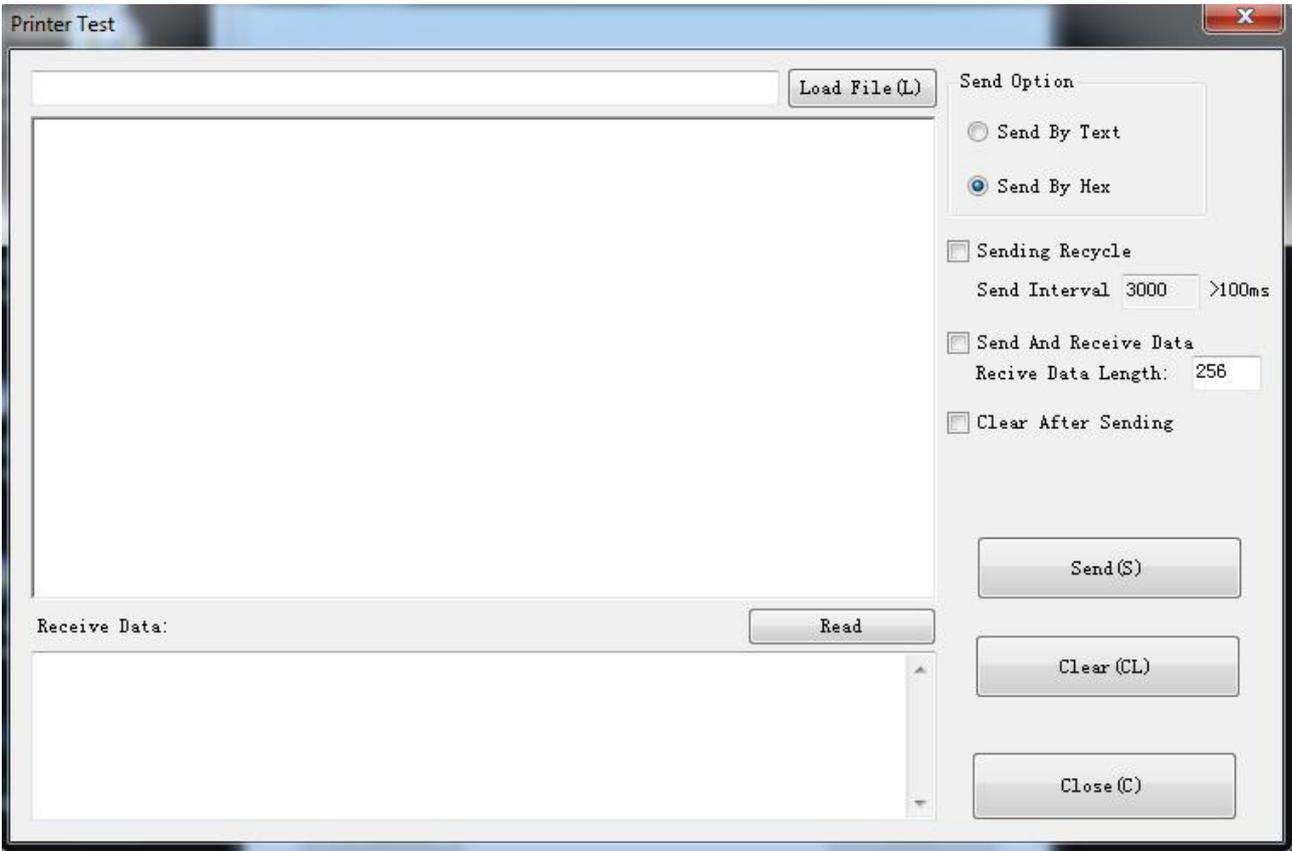
The screenshot shows a software dialog box titled "Send Option". It contains the following elements:

- Send Option** section with two radio buttons:
 - Send By Text
 - Send By Hex
- Sending Recycle
 - Send Interval: >100ms
- Send And Receive Data
 - Recive Data Length:
- Clear After Sending

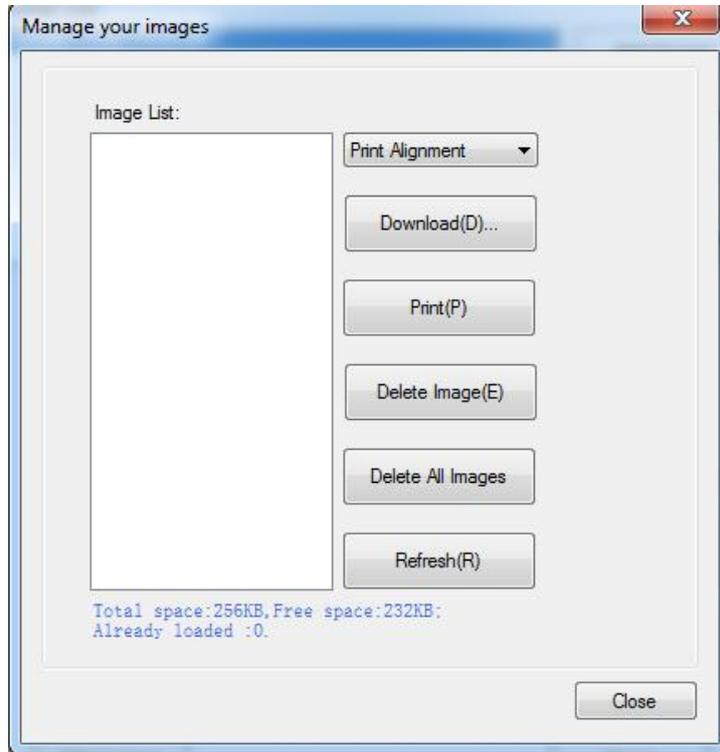
At the bottom of the dialog, there are three buttons arranged vertically:

- Send (S)
- Clear (CL)
- Close (C)

2) Click “Send by Hex”, input the content. (Convert text to HEX or send ESC command)



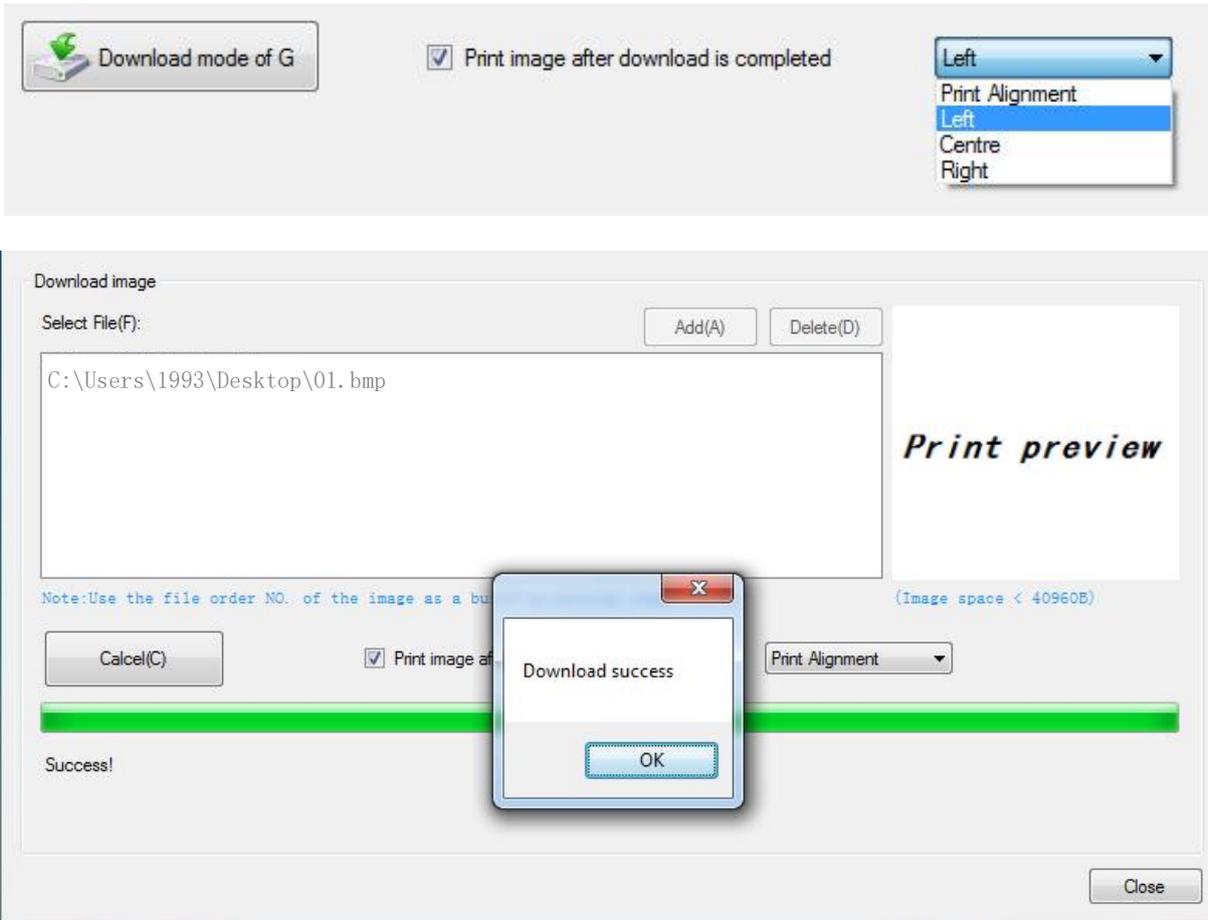
8.2.2.3 Manage Images



1) Click "Download" to add the image, if you want to print the picture, set the print location before clicking "Download mode of G" to print the picture. (It is recommended to use a picture in BMP format)



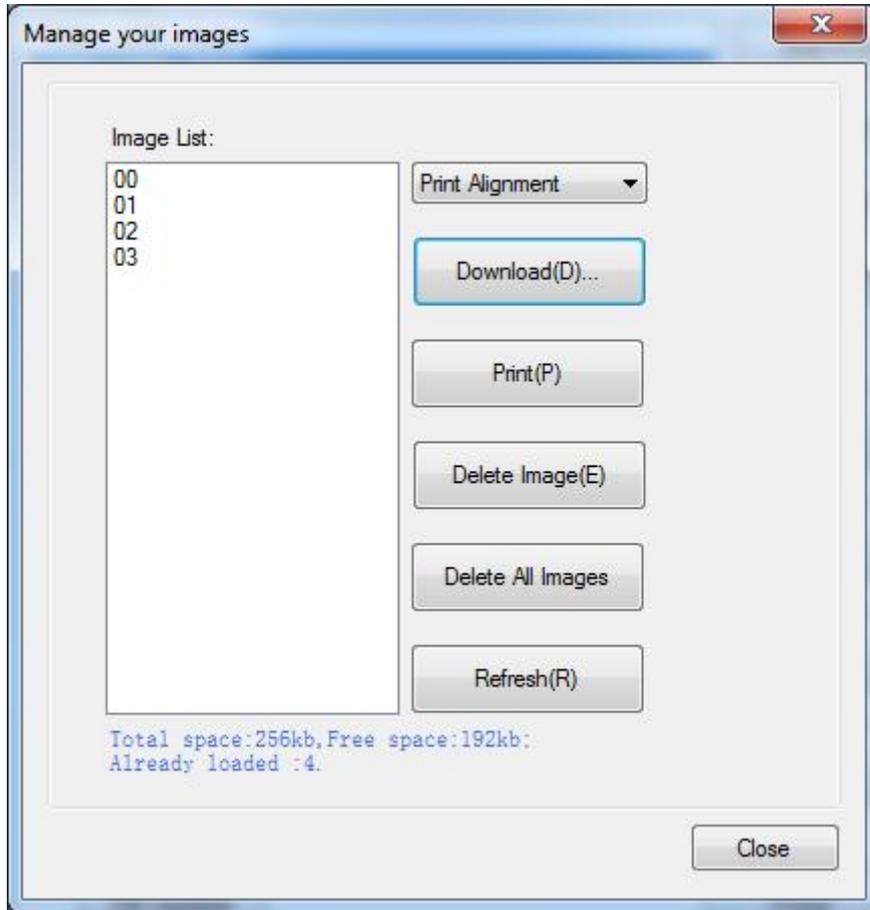
2) Select the print location, center, left, and right. (Such as, left print).



 **Note: Total memory is 256K.**

3) Delete Image.

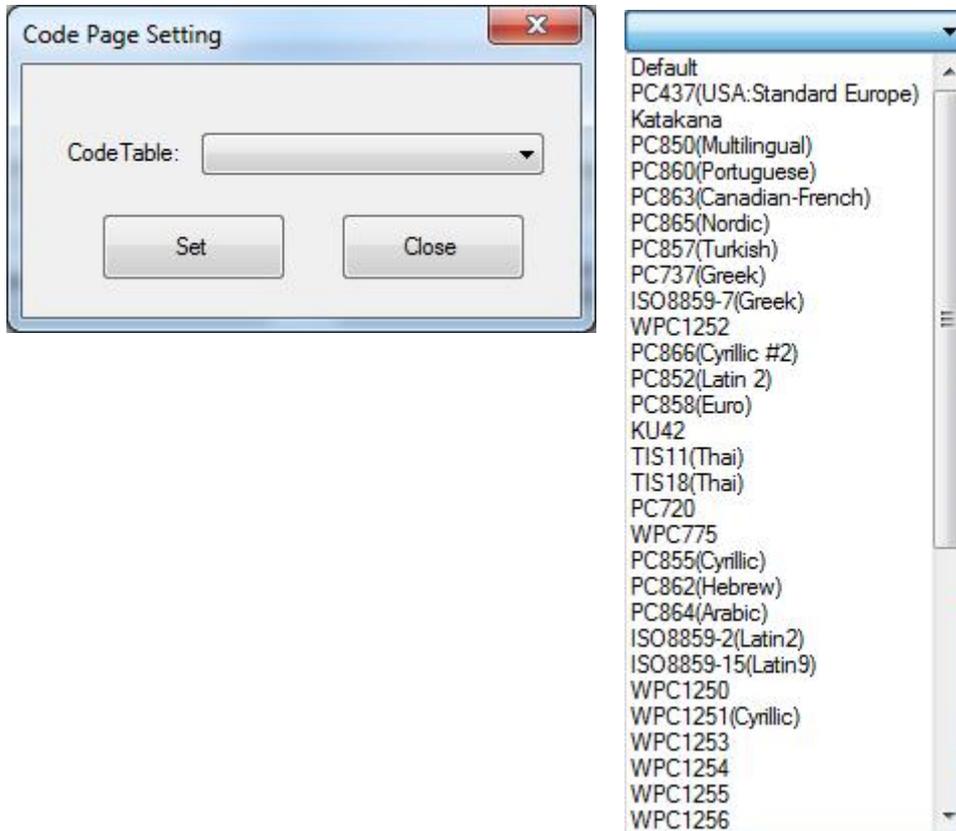
 **Note:** Each time click "Download mode of G", an image list number will be generated.



Click the image list, select "Delete selected image" will delete the image, click "Delete all Images", without clicking the list option to delete all the images in the list.

8.2.2.4 Code Page Setting

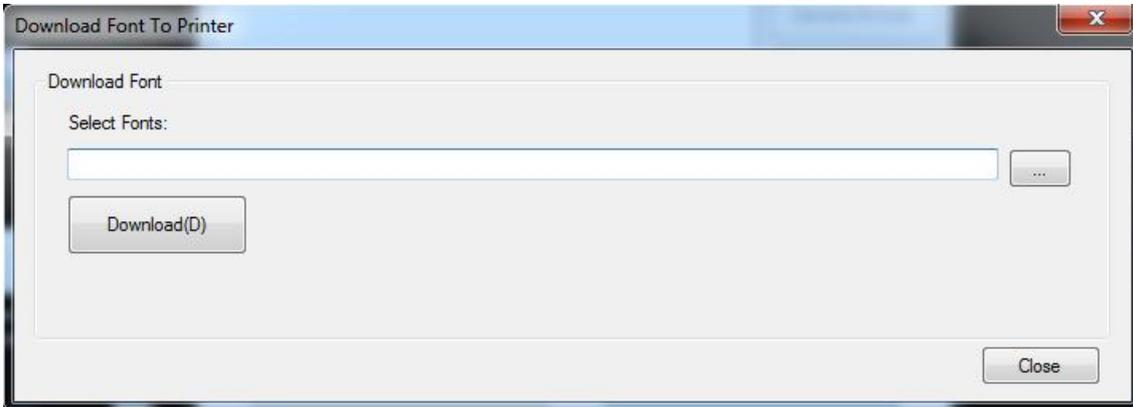
Select the code page from the list and click “Set”.



 **Note: This code page is only valid in multiple languages.**

8.2.2.5 Download Fonts

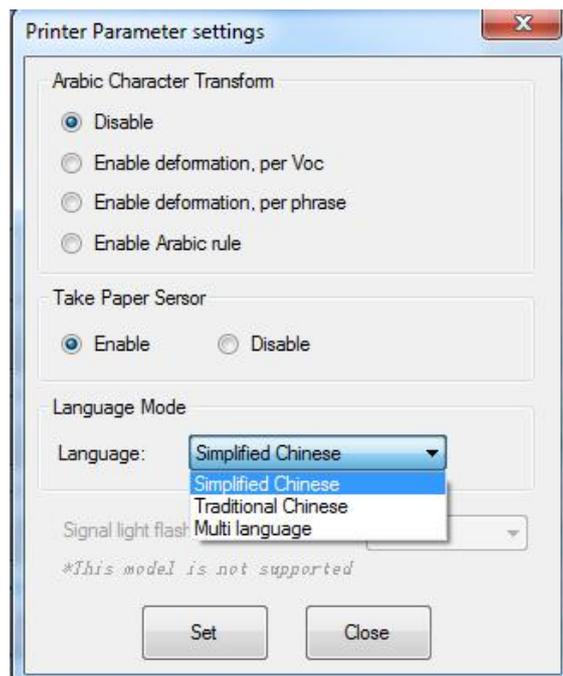
Select the font from the existing file and click "Download".



! Note: After downloading the font successfully, you need to restart the printer to take effect.

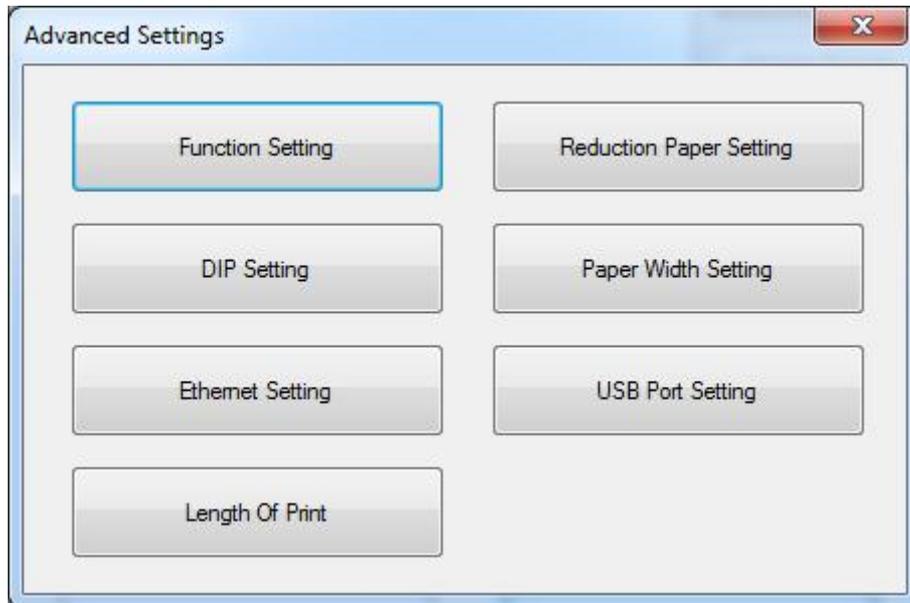
8.2.2.6 Parameter Setting

You can set Arabic Character Transform (for example: WPC1256).



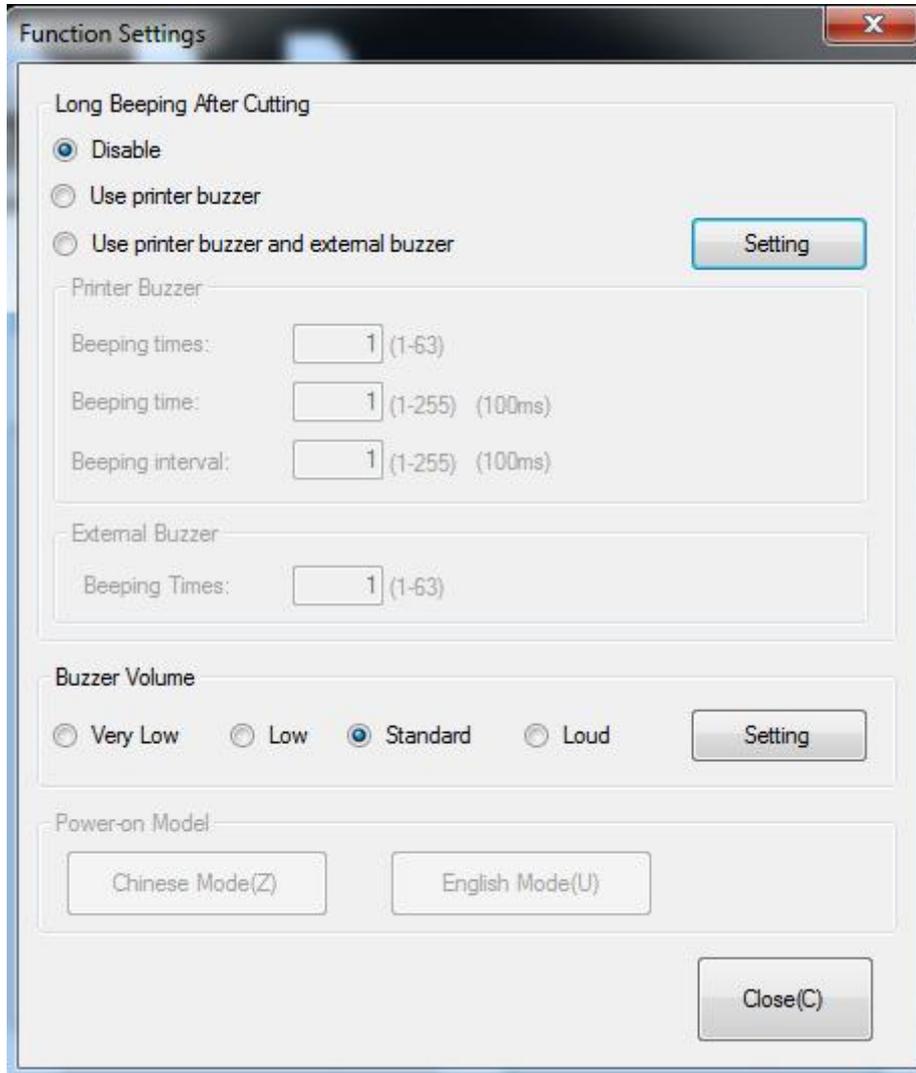
8.2.2.7 Advanced Setting

Click the button and printer will execute the appropriate action. The change will take into effect after restarting the printer.



◆ **Function Setting**

Choose the item and click “Setting”.



- **Long Beeping After Cutting:**

- ① **Disable:** there is no sound after cutting
- ② **Use printer buzzer (The beeping time, times and interval time can be set for what you want, such as 2 milliseconds, 3 milliseconds or 4 milliseconds, etc.):**

The following setting is set as an example:

When cutting one piece of paper each time, the printer will emit the “Beep” for one time, and the beeping time is two milliseconds and beeping interval is three milliseconds.



Printer Buzzer

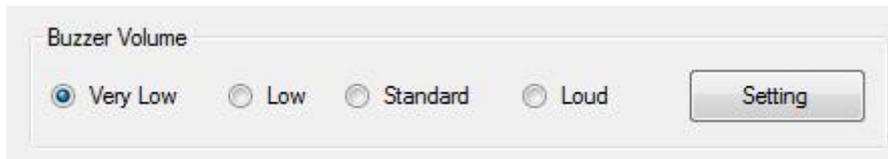
Beeping times: (1-255)

Beeping time: (1-255) (100ms)

Beeping interval: (1-255) (100ms)

 **Note: 100ms=0.1s, 1s=1000ms**

- **Buzzer Volume:**

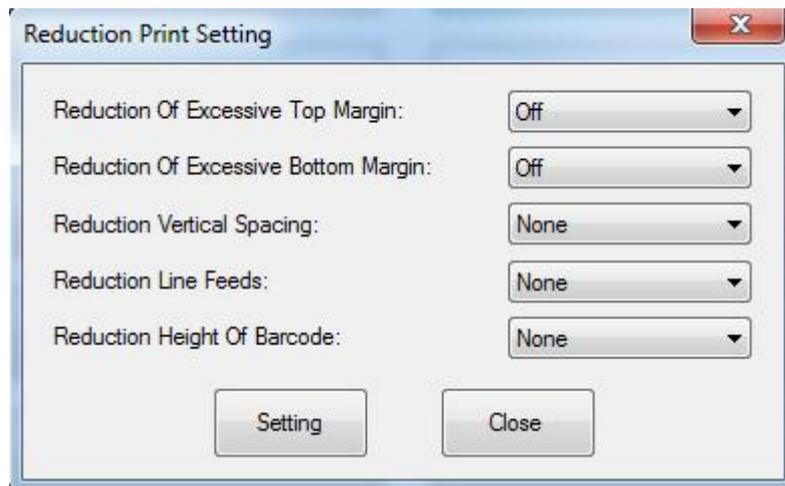


Buzzer Volume

Very Low
 Low
 Standard
 Loud

The “Very Low” is the minimum sound, and the “Loud” the maximum sound. You can select a volume level and click "Setting" to print (Default: "Standard" level).

◆ ***Reduction Paper Setting***



Choose the item and click "Setting".

① Reduction Of Excessive Top Margin:

When the printer is in the "off" state, the blank part at the top of the printed paper is larger than the blank part at the top of the paper printed in the "on" state.

② Reduction Of Excessive Bottom Margin:

When the printer is in the "off" state, the blank part of the bottom of the printed paper is larger than the blank part of the bottom of the paper printed in the "on" state.

③ Reduction Vertical Spacing: 25%~75%

The bigger the reduction vertical spacing, the narrower the interval between two lines of characters.

④ Reduction Line Feeds: 25%~75%

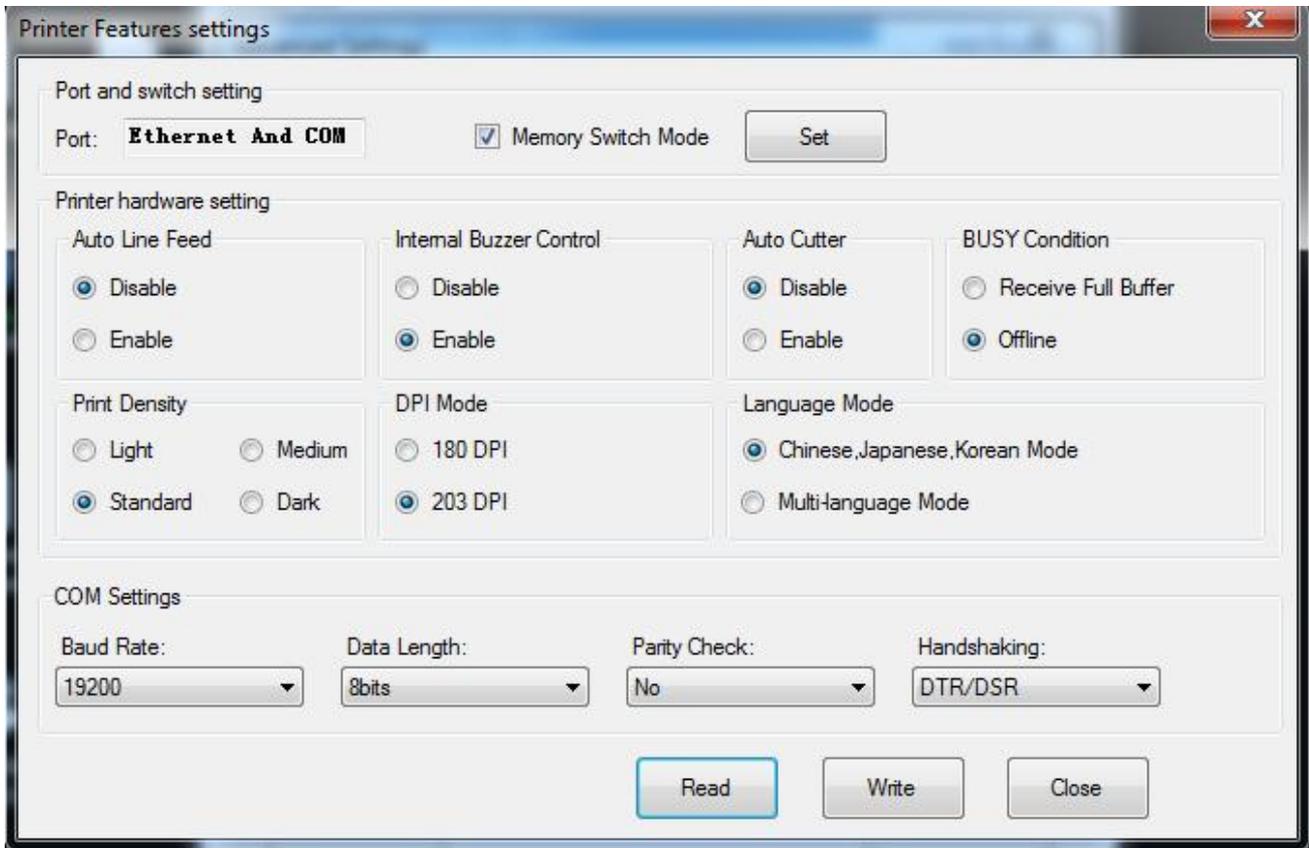
The higher the reduction line feeds, the narrower the interval between two lines of characters.

⑤ Reduction Height of Barcode: 25%~75%

The bigger the reduction height of barcode, the smaller the height of the barcode.

◆ **DIP Setting**

Click "Read" to get the printer parameters, click "Write" to send the modified parameters to the printer.



Printer Features settings

Port and switch setting
Port: **Ethernet And COM** Memory Switch Mode

Printer hardware setting

Auto Line Feed
 Disable
 Enable

Internal Buzzer Control
 Disable
 Enable

Auto Cutter
 Disable
 Enable

BUSY Condition
 Receive Full Buffer
 Offline

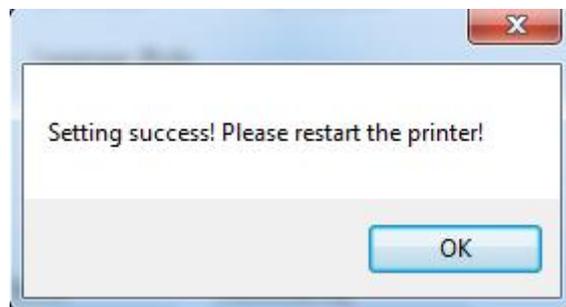
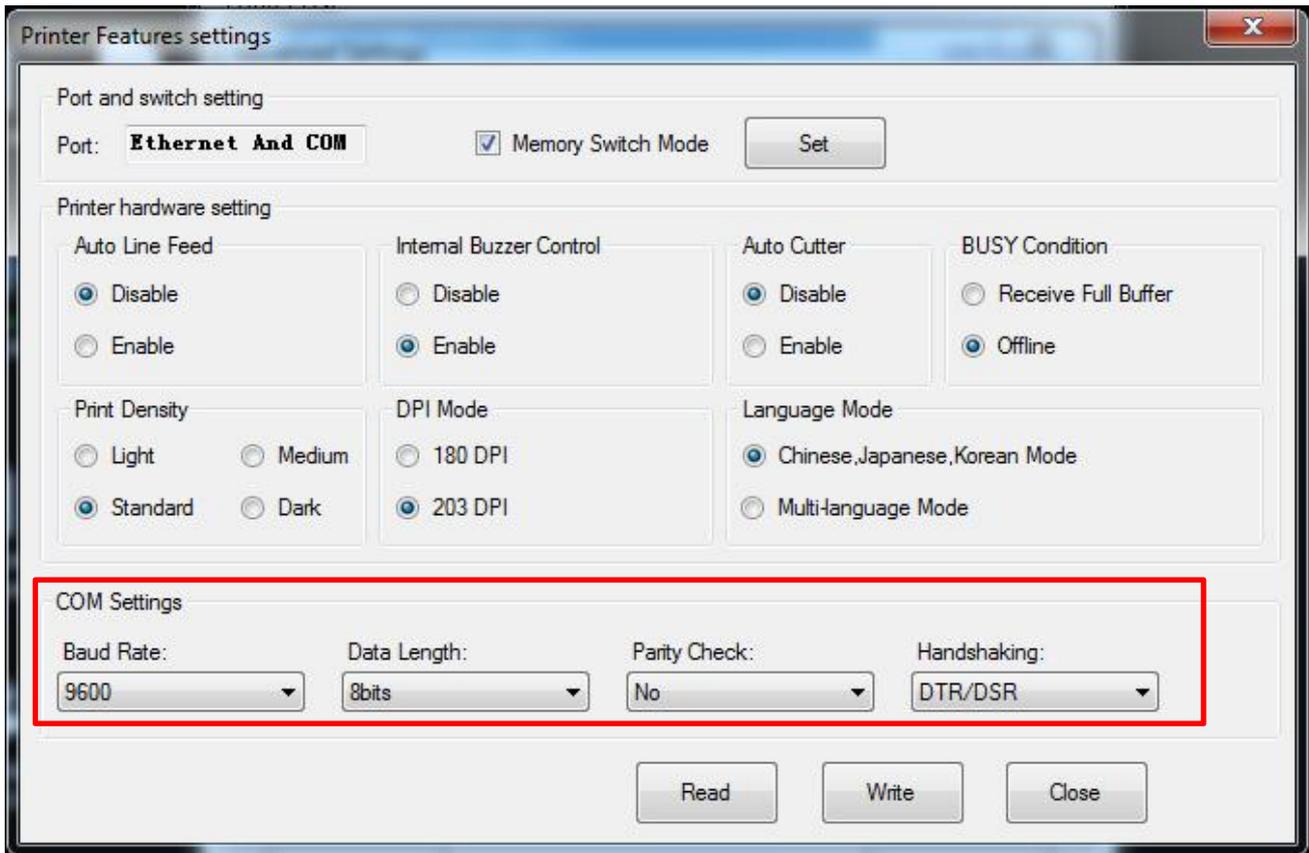
Print Density
 Light Medium
 Standard Dark

DPI Mode
 180 DPI
 203 DPI

Language Mode
 Chinese, Japanese, Korean Mode
 Multi-language Mode

COM Settings
Baud Rate: 19200 Data Length: 8bits Parity Check: No Handshaking: DTR/DSR

After the serial port parameter is set, click "Write".



⚠ Note: When DIP setting is set in soft, the DIP switch in the bottom of printer is disable.
 After setting the DIP successfully, you need to restart the printer to take the settings into effect..

- **Printer hardware setting**

- ① Print Density: Light, Medium, Standard, Dark (default "standard" level)

- The print density value varies according to the paper material and it can be adjusted to suit your needs.

- ② DIP Mode: 180/203DPI (default "203 DPI")

- The printer supports both of these resolutions.

- ③ Language Mode:

- Chinese, Japanese, Korean mode (default)

- Multi-language mode

- **COM Setting**

- ① Baud Rate: 2400, 4800, 9600, 19200, 38400, 57600, 115200

- ② Data Length: 7bits, 8bits

- ③ Parity Check: No, EVEN, ODD

- ④ ADDC: DTR/DSR, XON/XOFF



Note: The value of the serial port parameter can be obtained according to the value of the Self-test page information:

E.g: Self-test page (Serial 115200, None, 8, 1, DTR/DSR)

Baud Rate: 115200

Parity Check: None

Data Length: 8 bits

Stop Bits: 1

ADDC: DTR/DSR



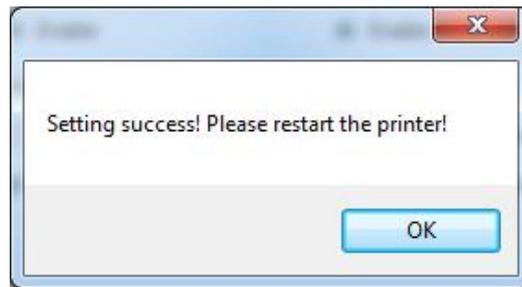
Note: When the DIP setting is set in memory switch mode, the DIP switch at the bottom of the printer need to be disabled.

- **Modify the COM setting**

COM Settings

Baud Rate:	Data Length:	Parity Check:	Handshaking:
<input type="text" value="57600"/>	<input type="text" value="7bits"/>	<input type="text" value="No"/>	<input type="text" value="DTR/DSR"/>

① After setting the parameters as required, click "Write" and restart the printer.



② After restarting the printer, open the main menu screen of the tool and click "Modify Printer".

Printer List:

<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #e0f0ff; border: 1px solid #ccc;">CP-650 USB CP-650 POS</td> </tr> </table>	CP-650 USB CP-650 POS	<input type="button" value="Add Printer"/> <input style="border: 2px solid red;" type="button" value="Modify Printer"/> <input type="button" value="Delete Printer"/> <input type="button" value="Connection Test"/>
CP-650 USB CP-650 POS		

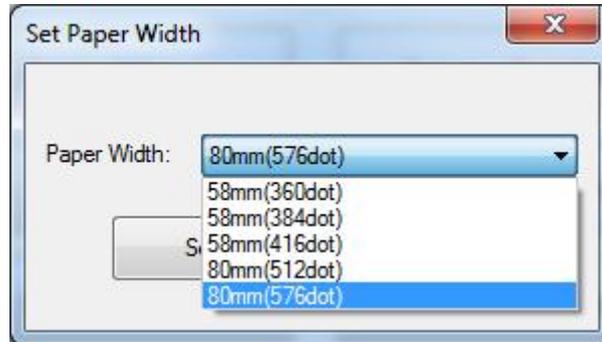
③ Select the port category "COM" and set the baud rate to the value "57600" as shown above, and parity "None". This port allows you to print after setup is complete.

PortInfo

Port type:	<input type="text" value="COM"/>
System Port:	<input type="text" value="COM1"/>
Baud rate:	<input type="text" value="57600"/>
Parity:	<input type="text" value="None"/>
Stop Bits:	<input type="text" value="1"/>

◆ **Paper Width Setting**

Choose the item and click “Setting”.

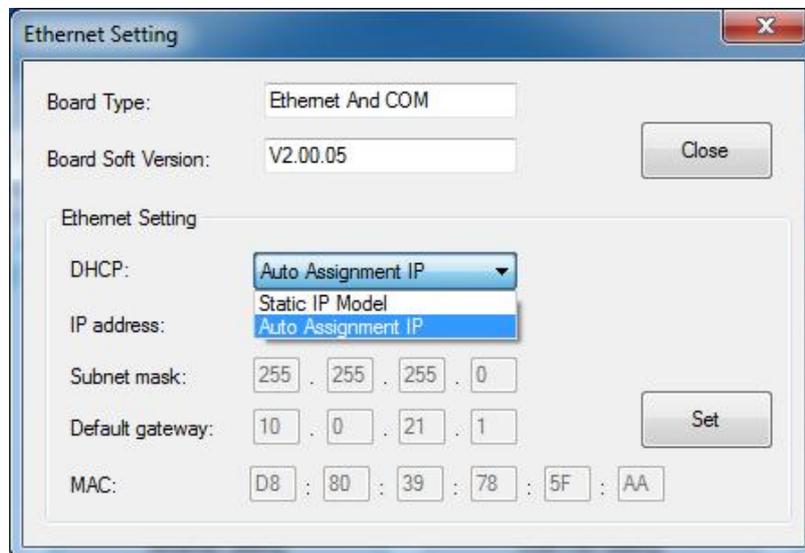


⚠ **Note:** Select the paper width above according to the paper print width.

◆ **Ethernet Setting**

This mode is divided into “Auto Assignment IP” and “Static IP Mode”, select one of the modes to connect as needed.

⚠ **Note:** IP addresses can be obtained from the Self-test page.



- Static IP Mode

① Change the printer IP address so that the printer IP address (such as: 192.168.0.33) is the same segment as the host IP address (such as: 10.0.21.89).

Here is the illustration:

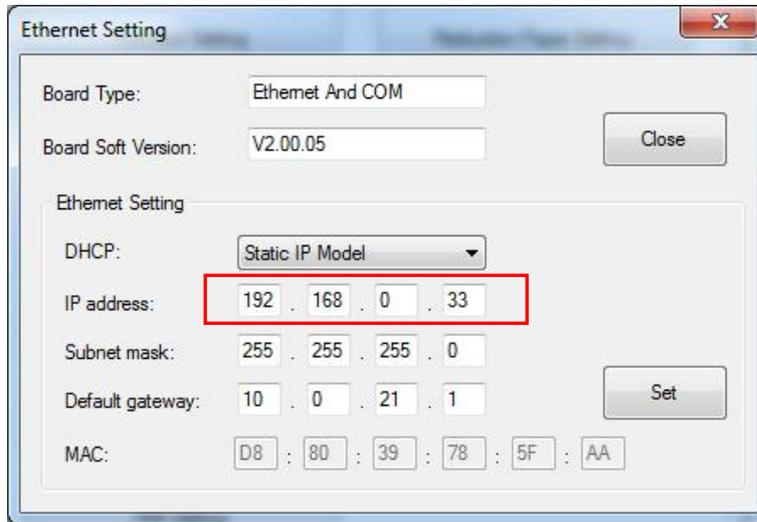


Figure ■ Printer IP Address

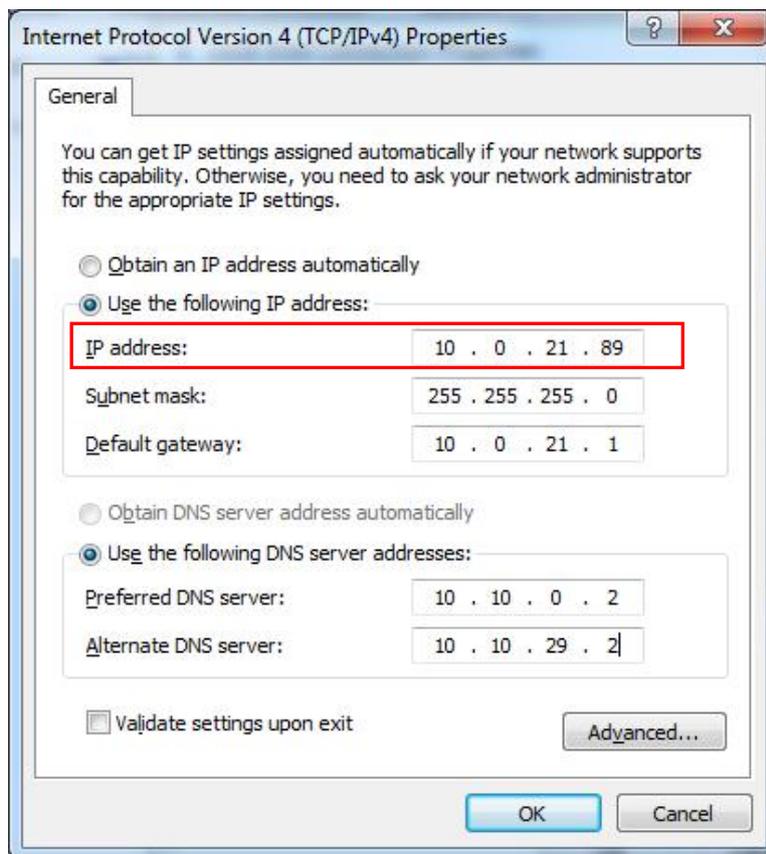


Figure ■ Host IP Address

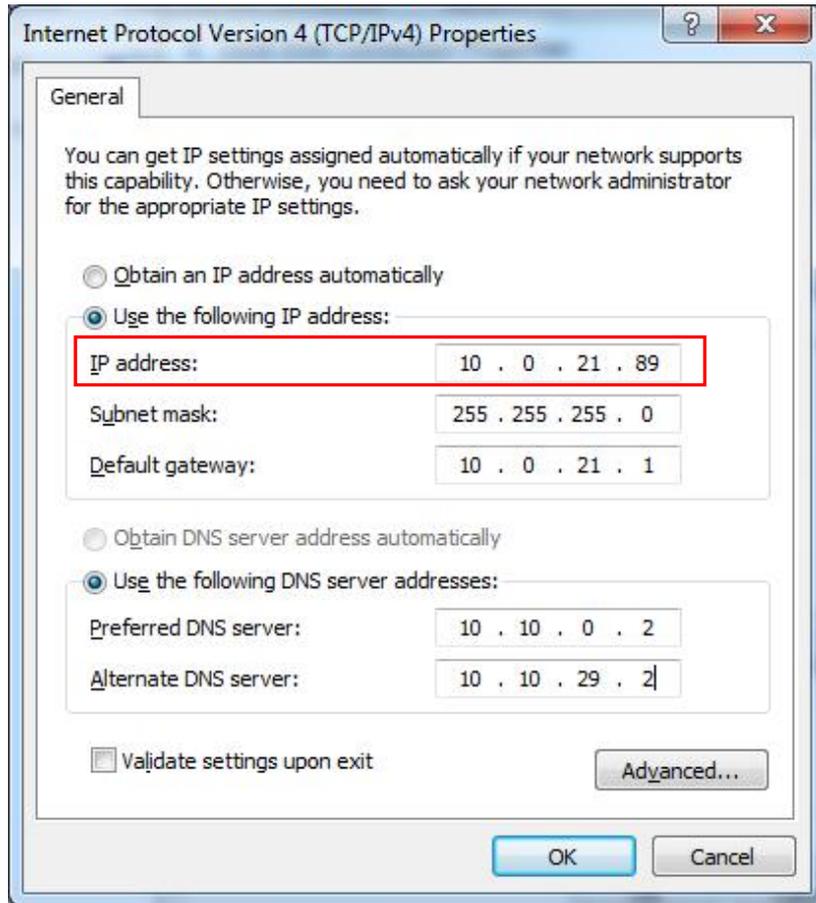


Figure ■ Host IP Address

② Set the same network segment.

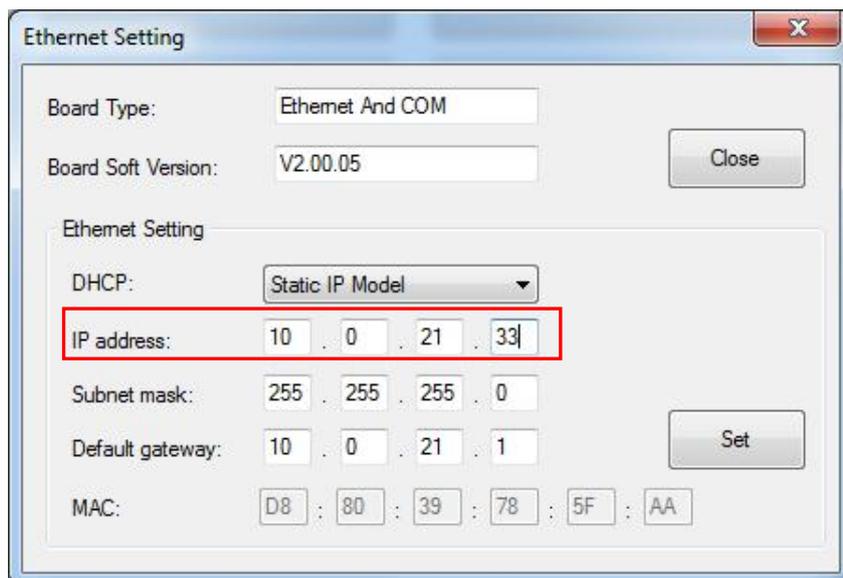
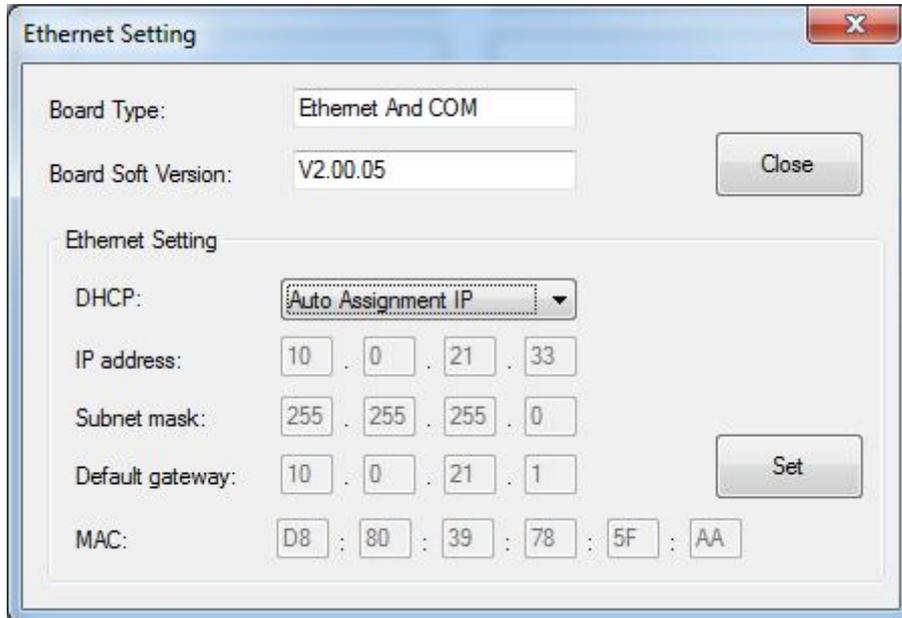


Figure ■ Printer IP Address

- Auto Assignment IP

This mode automatically assigns the IP address to the printer.

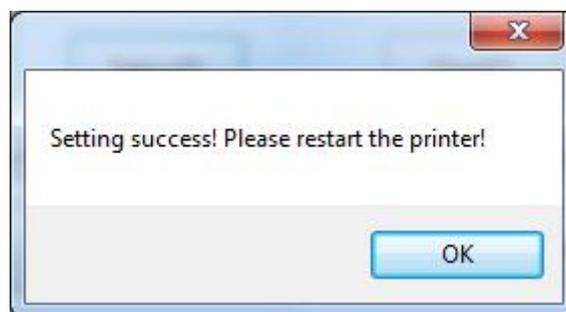


When the settings are complete, click "Write", then restart the printer.

- ◆ **USB Port Setting**

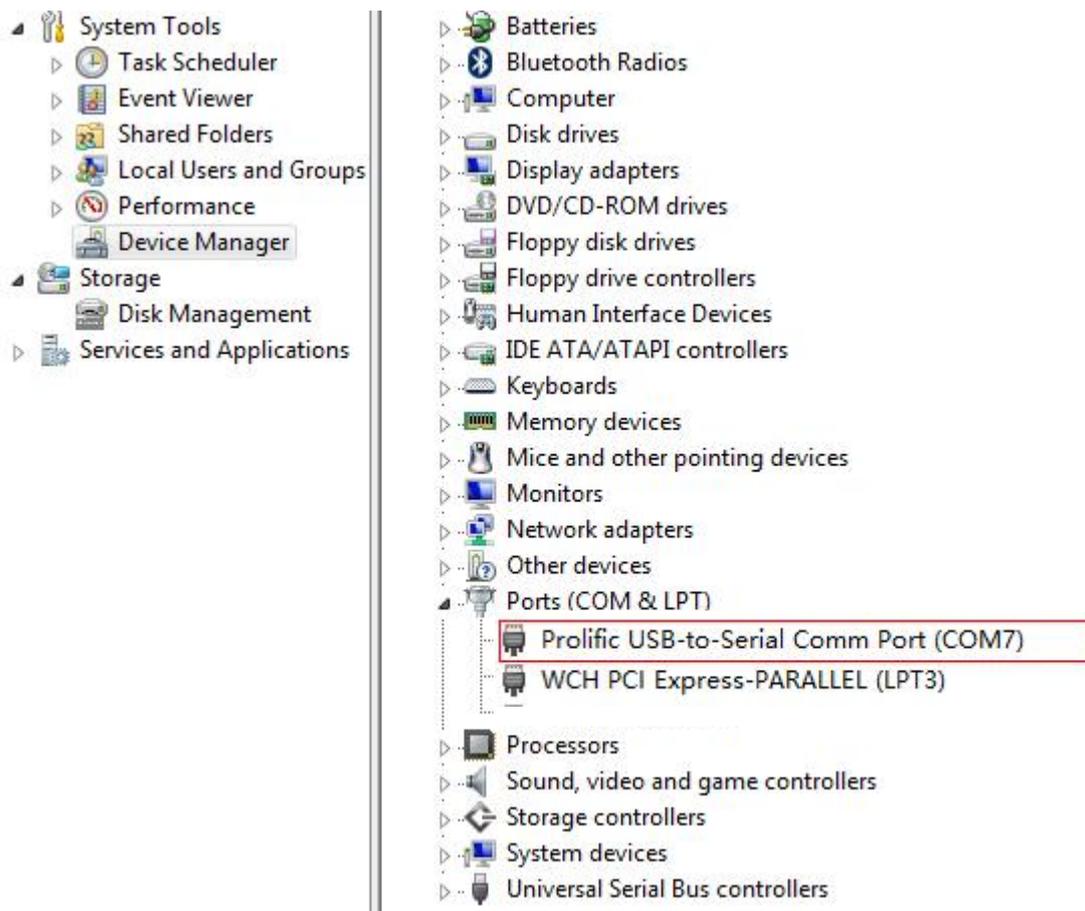


Click "Virtual serial port" setting and restart the printer.



- **Check the Virtual Serial Port**

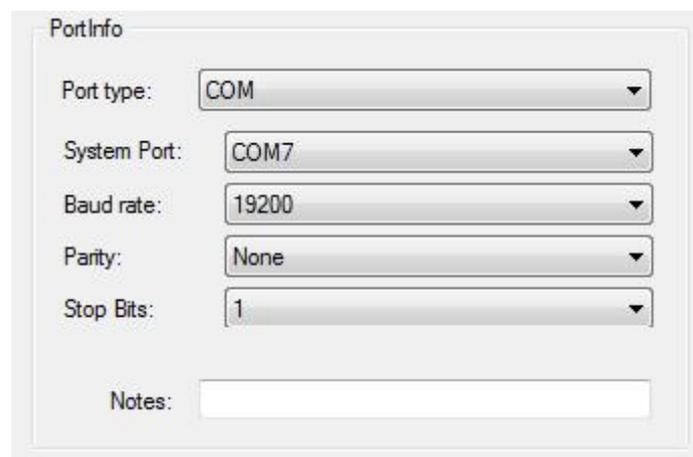
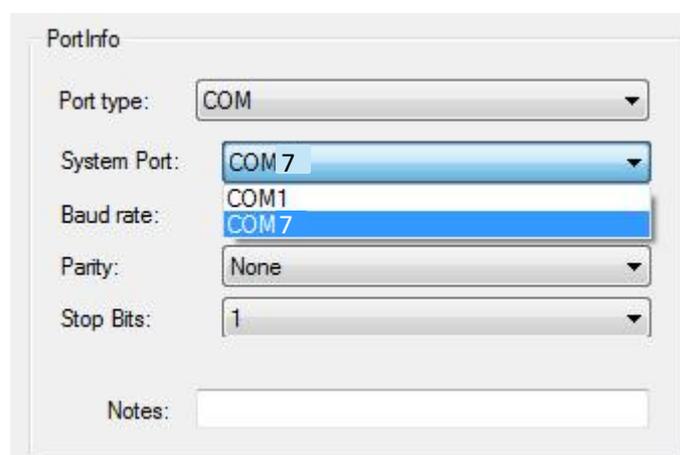
- ① Right-click the computer and select "Manage".
- ② Click "Device Manager" to view the virtual port. (such as: COM7).



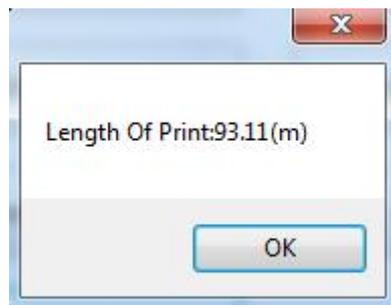
- ③ Return to the printer utility and click "Modify Printer".



- ④ Change the port to "COM7".



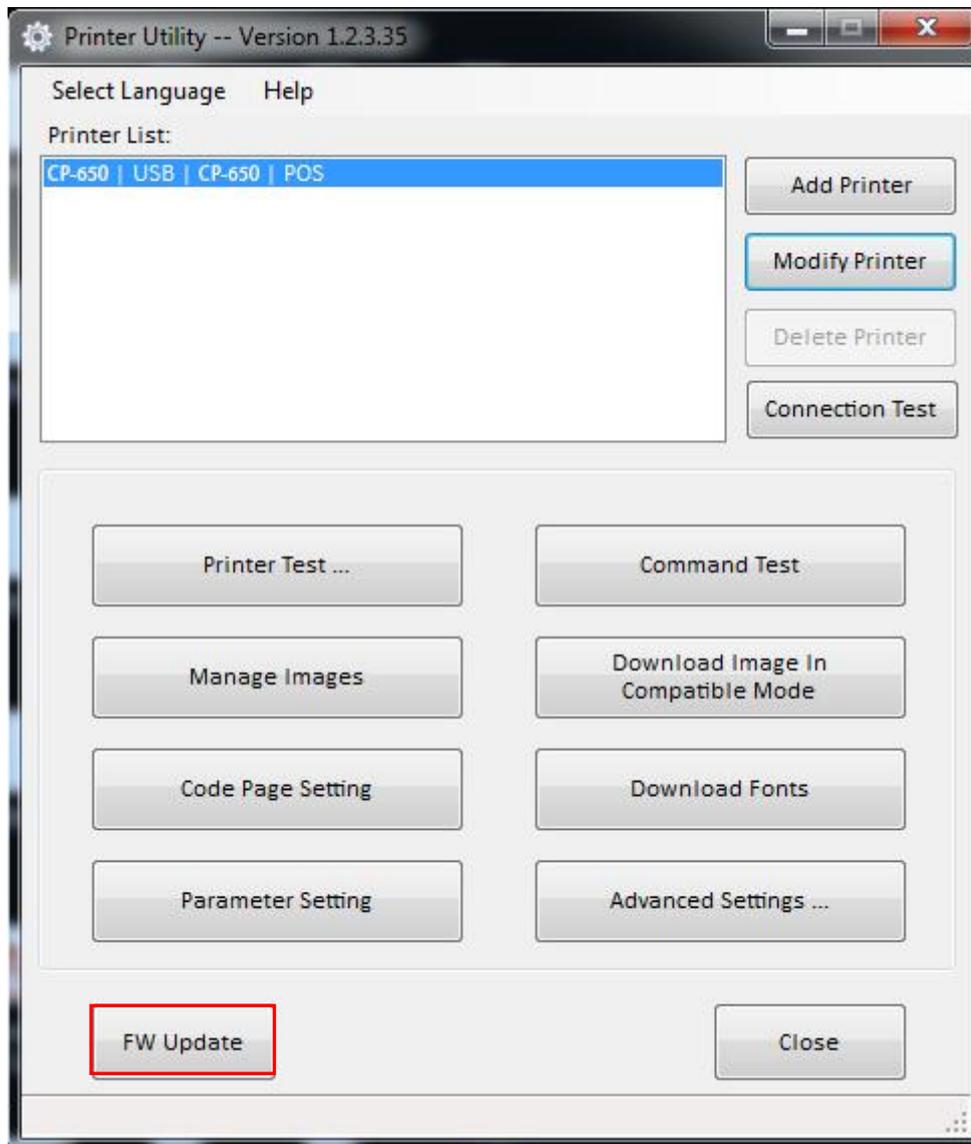
◆ **Length Of Print**



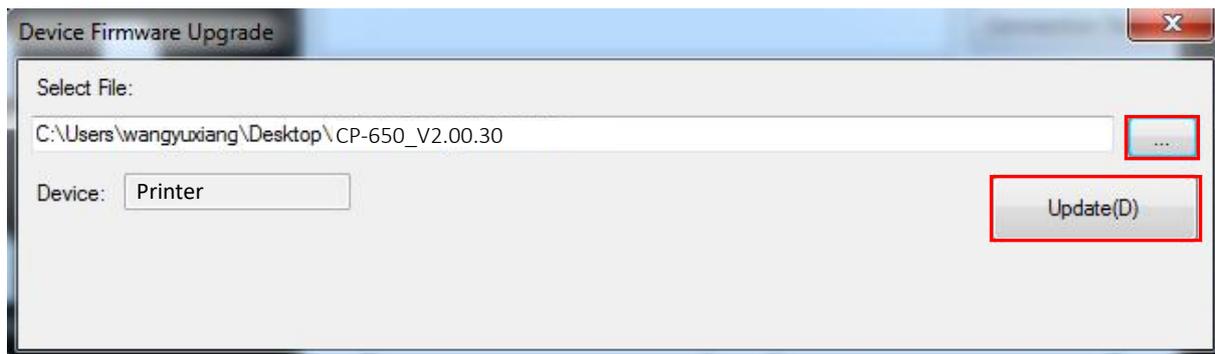
It shows the length of the paper that the print head of the printer has printed.

8.3 Firmware Update

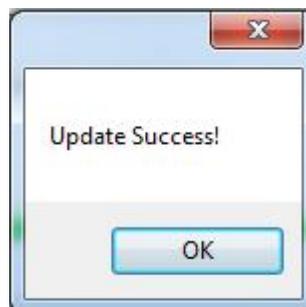
1) Click “FW Update”.



2) Add the “dfu” file. When the device appears in the list, click “Update”.



3) Update success.



4) Restart the printer.

9 WINDOWS DRIVER INSTRUCTION

9.1 Information

This Windows Driver Installation Instruction provides information on installation, detailed specifications, and usage of the printer's Windows Driver according to PC operating system (OS). We maintain ongoing efforts to enhance and upgrade the functions and quality of all our products. As follows, product specifications and/or user manual content may be changed without prior notice.

9.2 Operating System (OS) Environment

The following operating systems are supported for usage.

- Microsoft Windows 10 (32 bit/64 bit)
- Microsoft Windows 8 (32 bit/64 bit)
- Microsoft Windows 7 SP1 (32 bit/64 bit)
- Microsoft Windows Vista SP2 (32 bit/64 bit)
- Microsoft Windows XP Professional SP3 (32 bit)
- Microsoft Windows Server 2012 (64 bit)
- Microsoft Windows Server 2008 R2

9.3 Windows Driver Preparation

The Windows Driver is included in the enclosed CD.

The installation file name is HPRT_POS_Printer_Driver_v2.7.3.1.exe

9.4 Windows Driver Installation

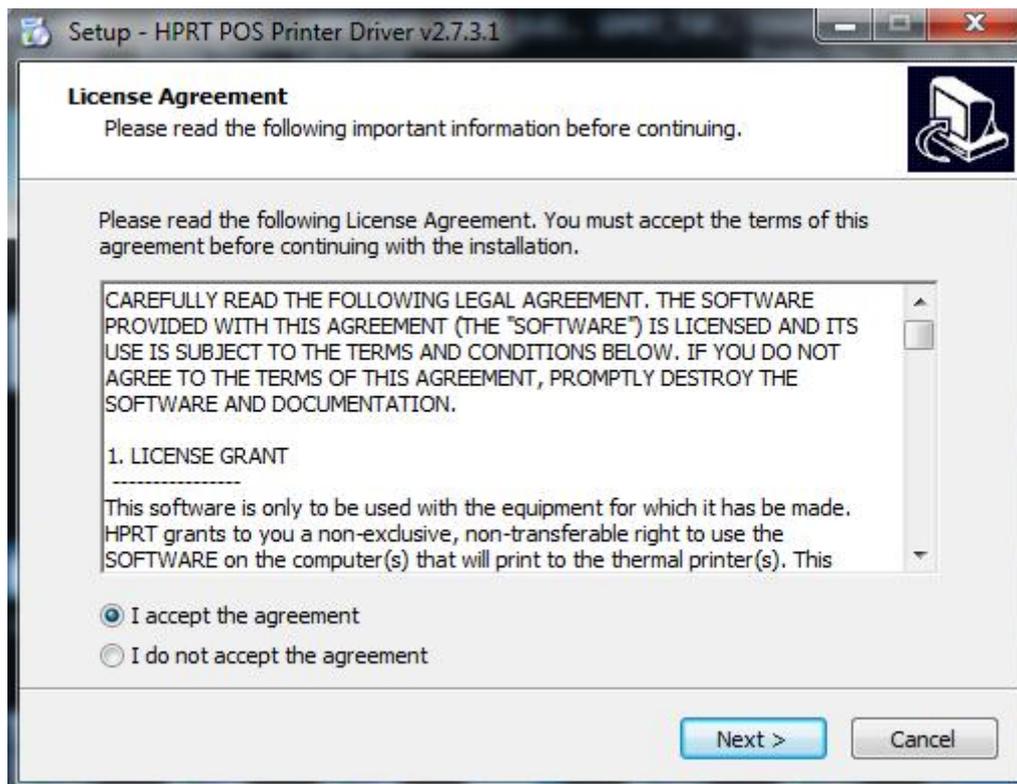
Warning:

Under different operating system, the screen has slight difference. Please operate it according to the tips. Take CP-650 (Windows 7) as example.

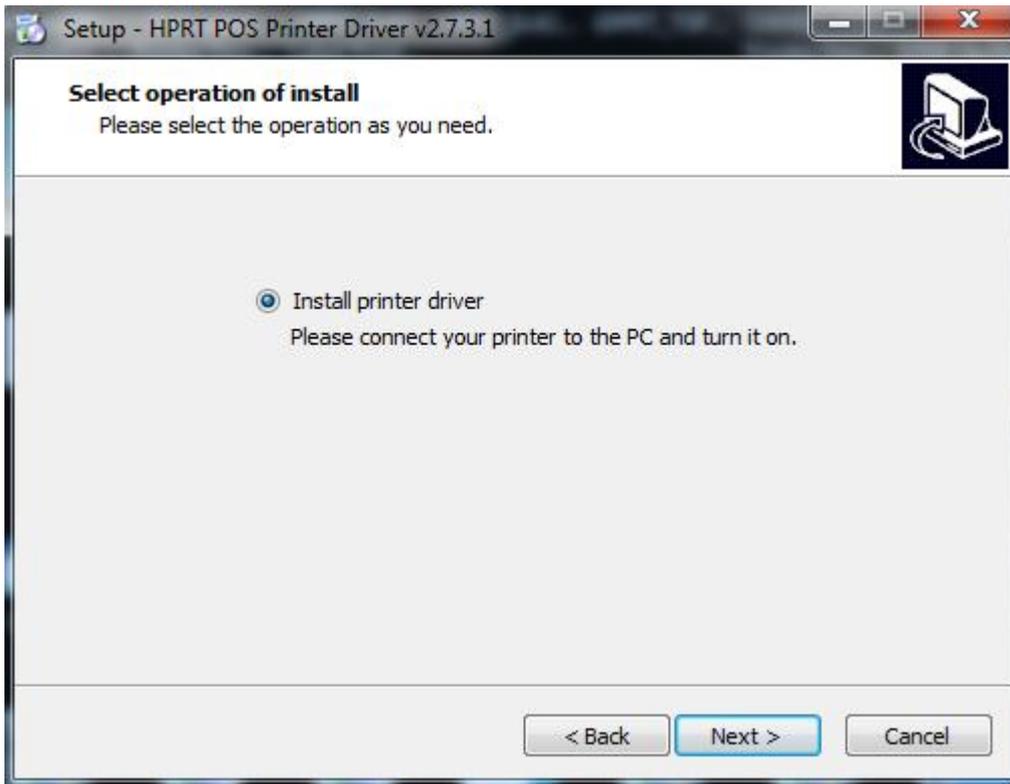
- 1) Double click Windows Driver, and choose the language.



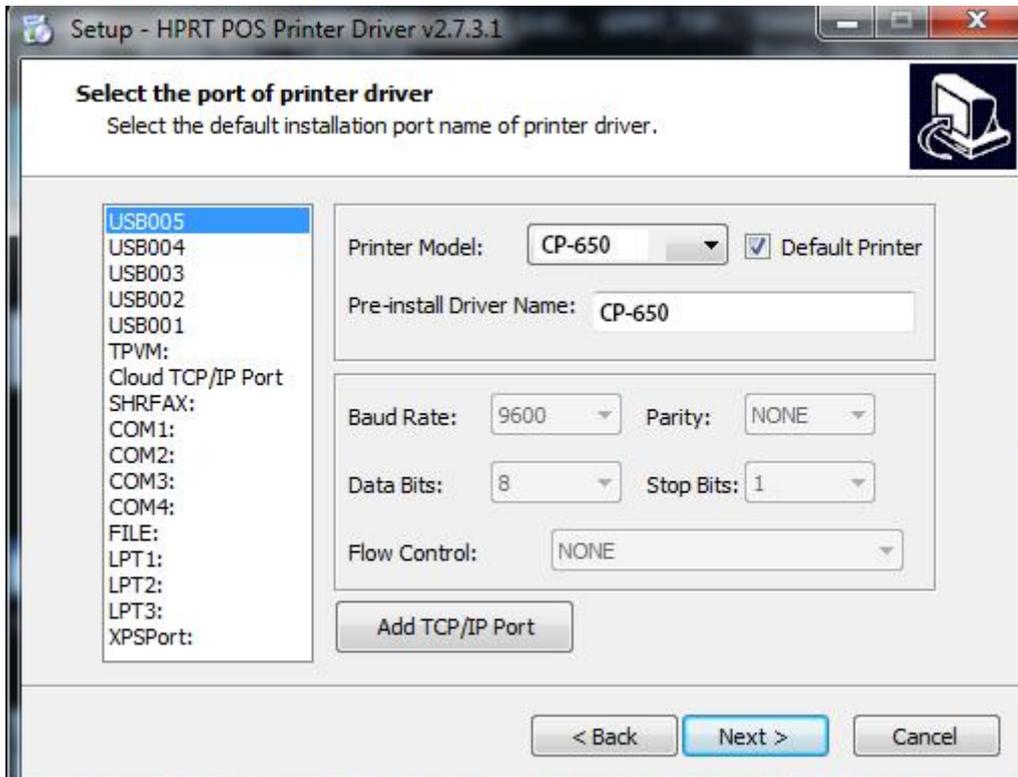
- 2) Choose "I accept the agreement" and click "Next".



3) Click “Next”

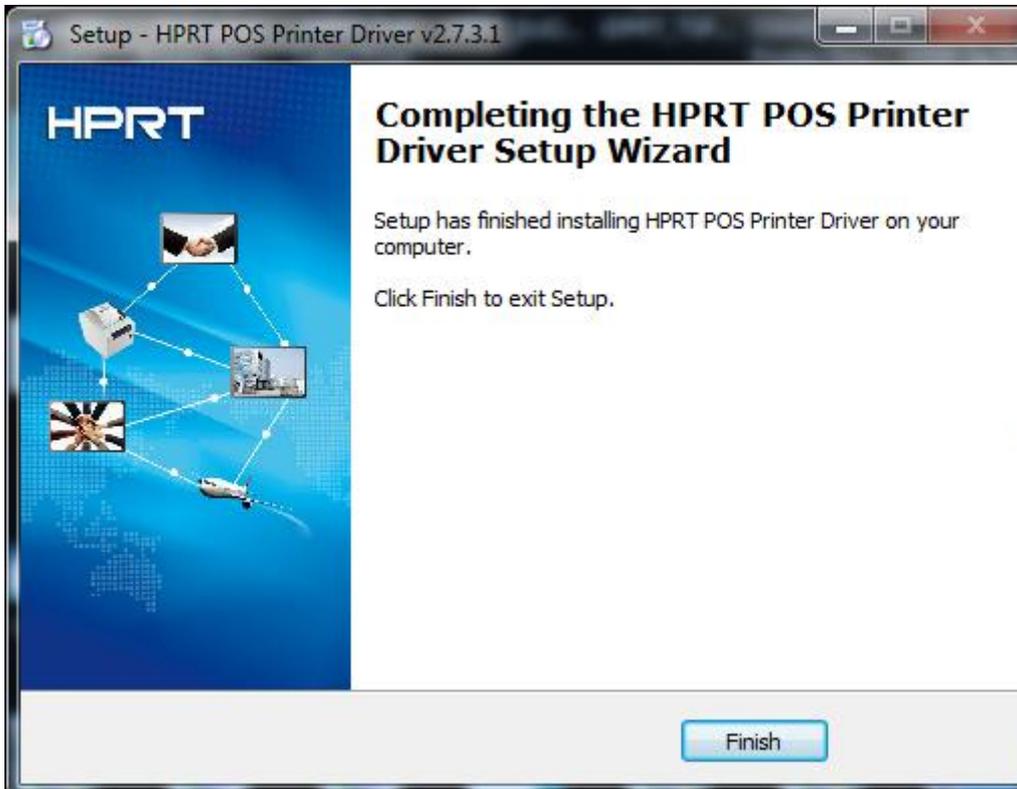


4) Choose the matched type and port (USBxxx is for USB port, COMx is for serial port, LPTx is for parallel port). Choose the type and port of driver, such as “CP-650”, “COM1” . Click “Next”.



 **Note:** If printer is already connected with computer by USB port, it only needs to click “Install”, then it will be installed automatically. Otherwise, proceed to the next step.

5) Click “Finish”. POS printer driver is installed successfully.



6) After installation, the icon will be found in “Start” → “Devices and Printers”.

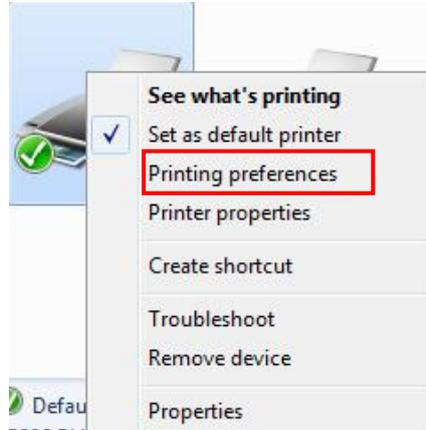


 **Note:** If you already installed the driver (No matter what kind of port), when you connect the printer to computer, it will create a USB port automatically.

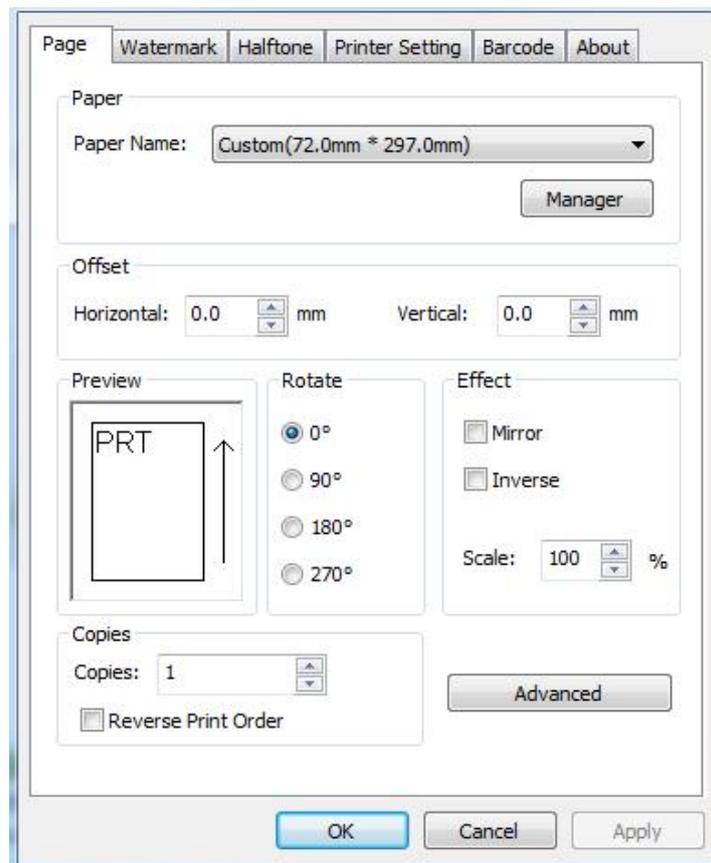
9.5 Detailed Windows Driver Setting

9.5.1 Printing Preferences

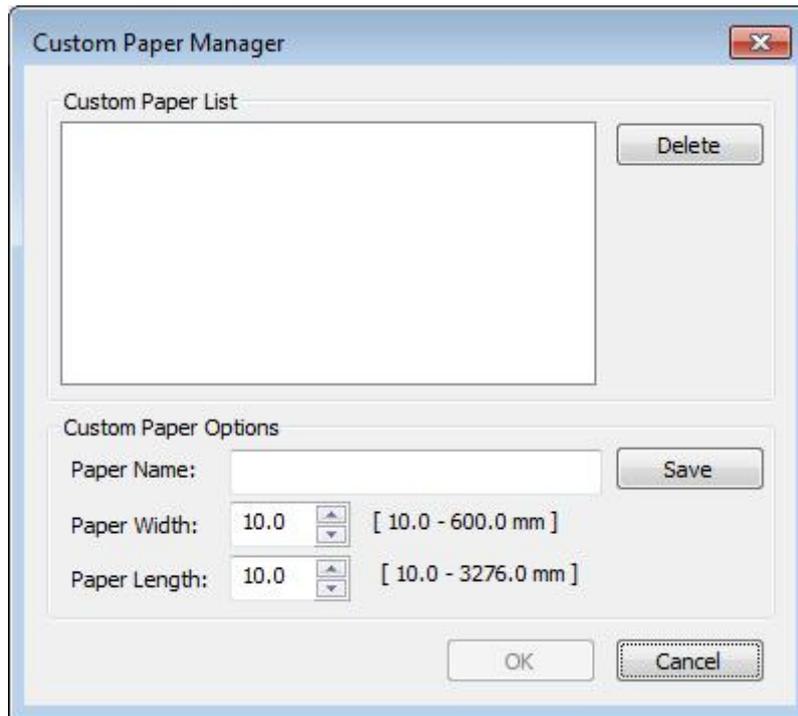
1) Click “Start” → “Devices and Printers”. Right click “CP-650” and choose “Printing preferences”.



2) According to the different needs, choose “Paper”\“Offset”\“Rotate”\“Effect”\“Copies” in “Page”.

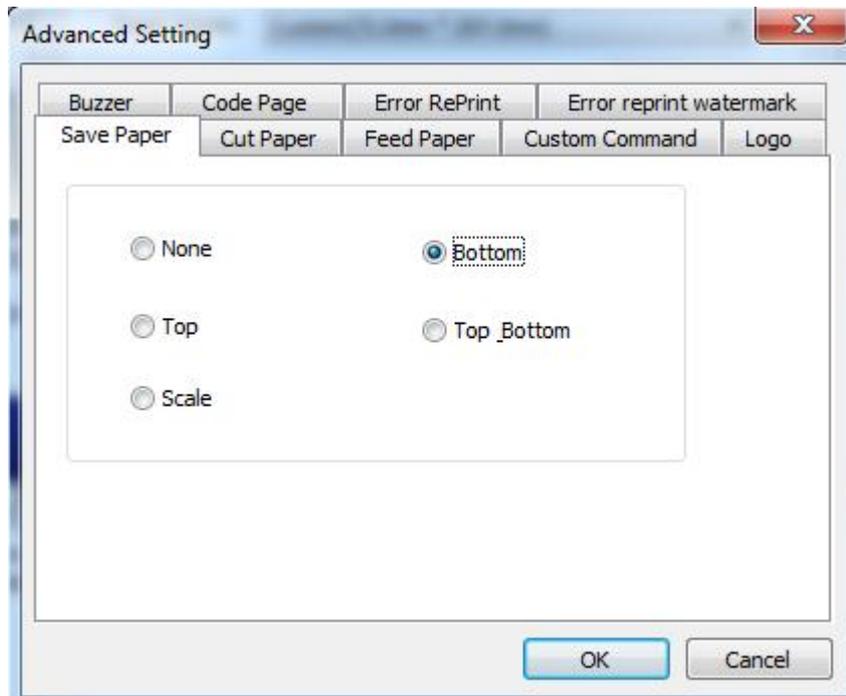


- Click on “Manager”, add or delete paper.

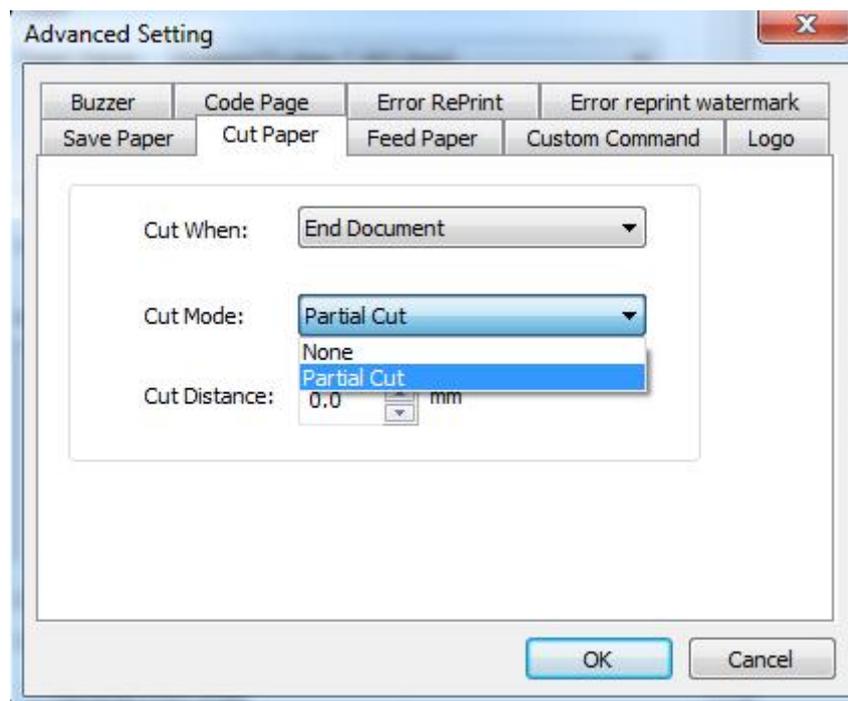
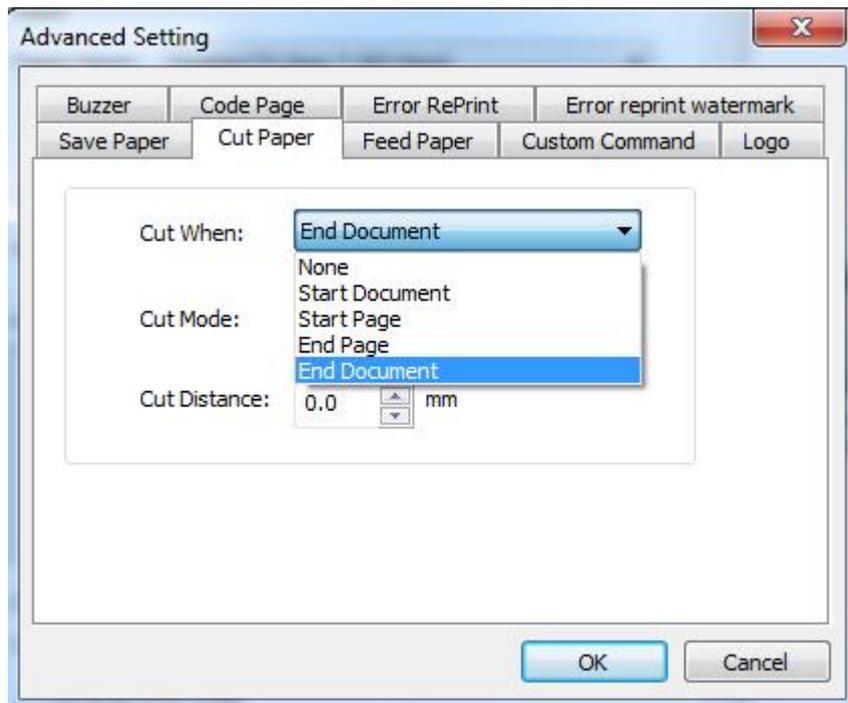


- Click on “Advanced” to set “Custom Command”, “Logo”, “Buzzer”, “Code Page”, “Save Paper”, “Cut Paper”, “Feed Paper”, “Error Reprint” and “Error Reprint Watermark”.

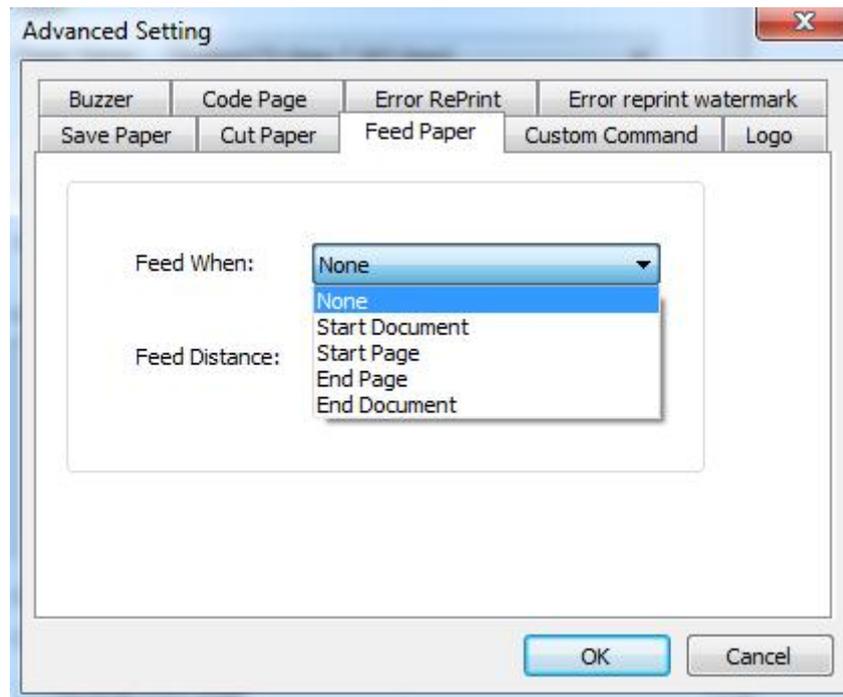
- Save paper



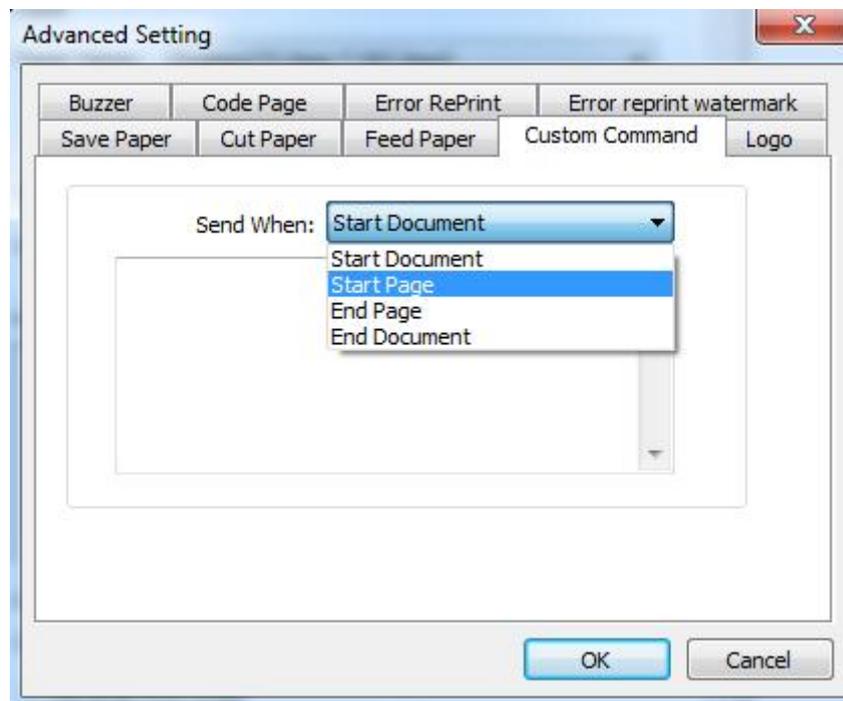
▪ Cut Paper



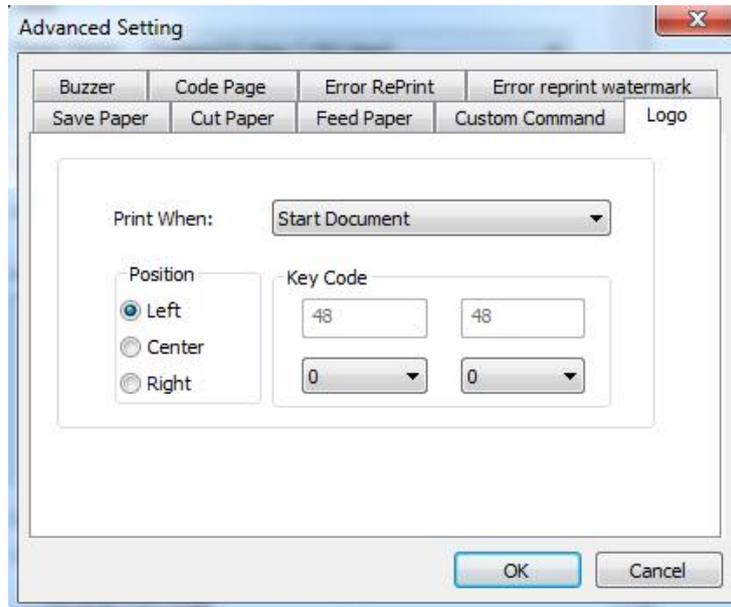
▪ Feed paper



▪ Custom command

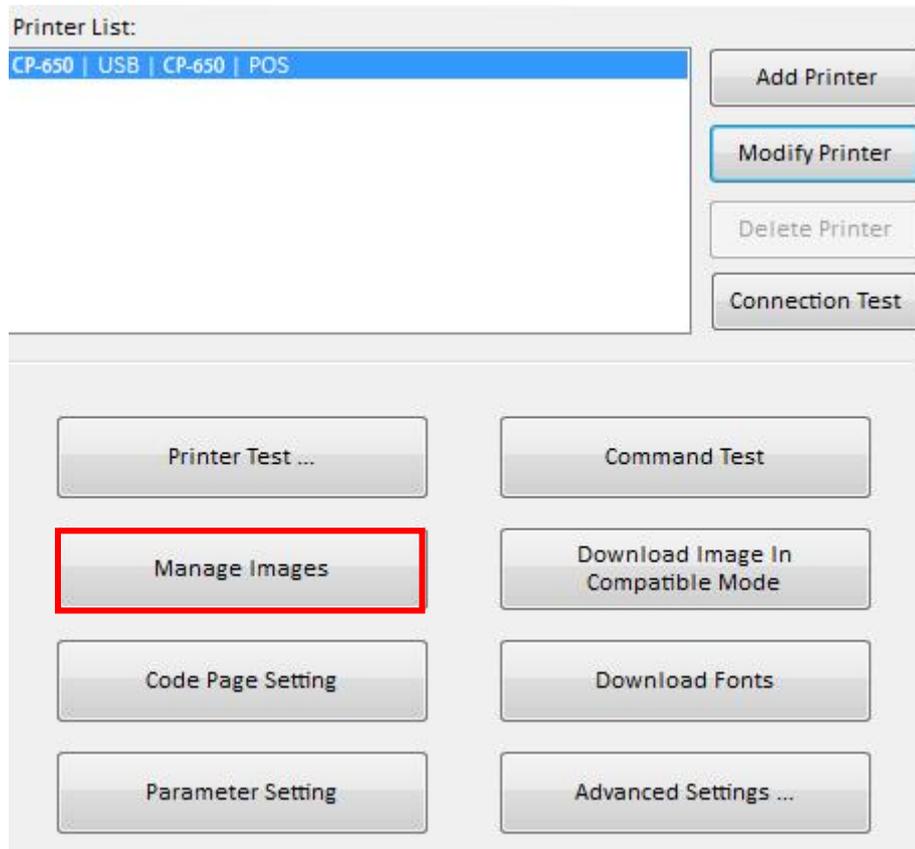


▪ Logo

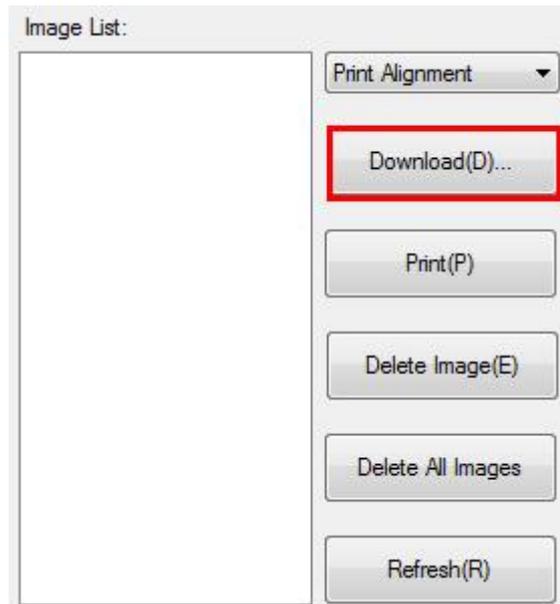


 **Note: this setting need to be set in utility.**

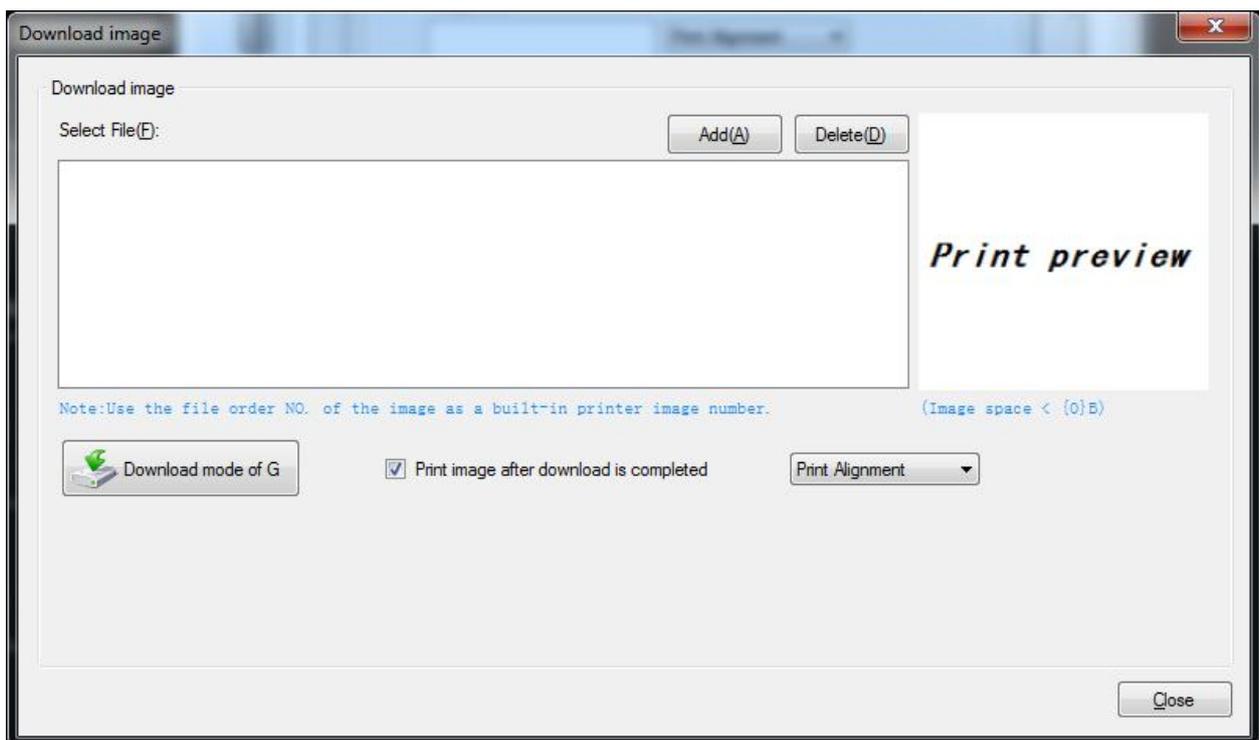
① Open the utility and click "Manage Images".



② Click "Download".

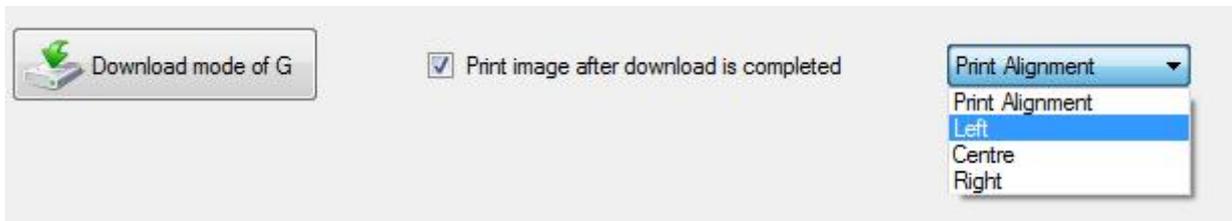


③ Click "Add" to add a logo. (BMP format is recommended)



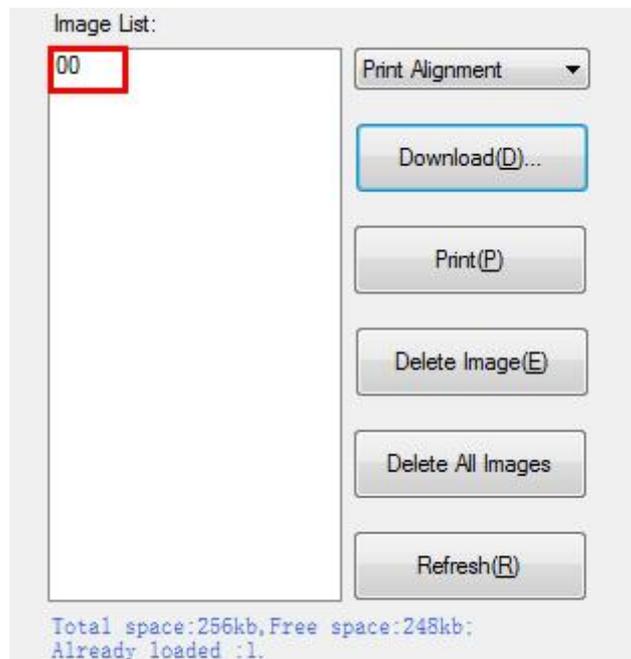


- ④ Select the print location, and then click "Download mode of G". (Such as: left print)

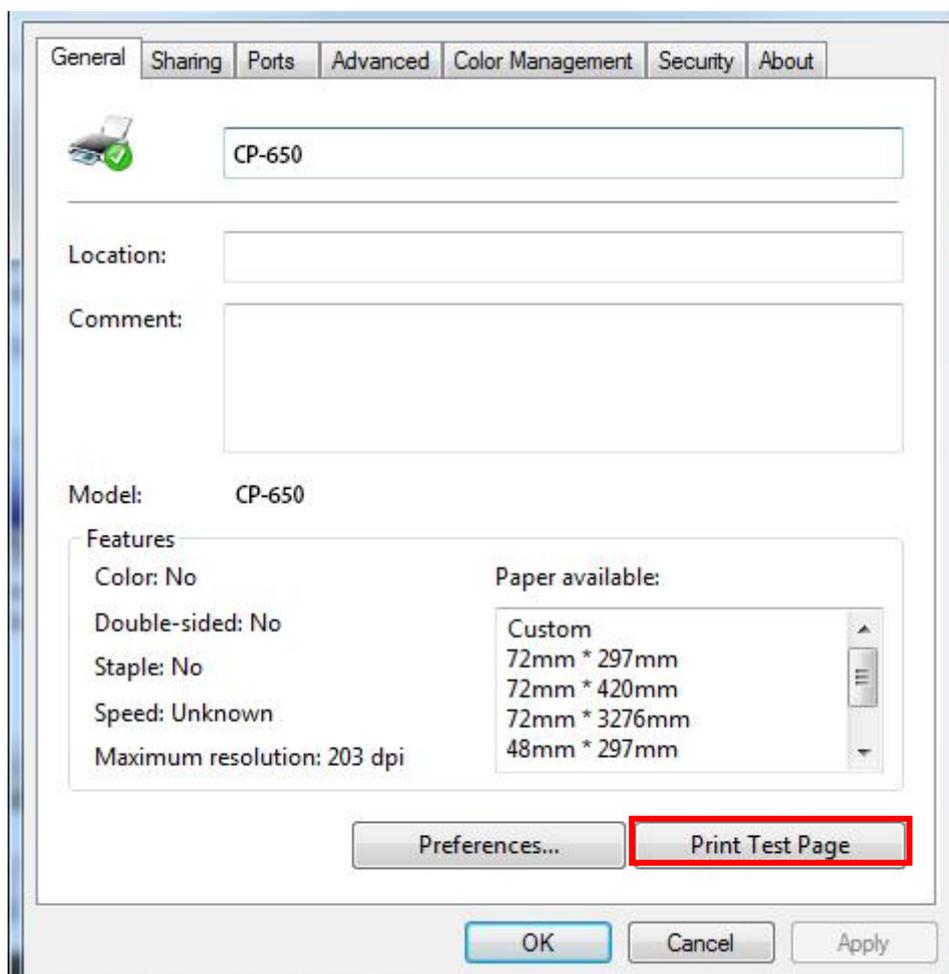
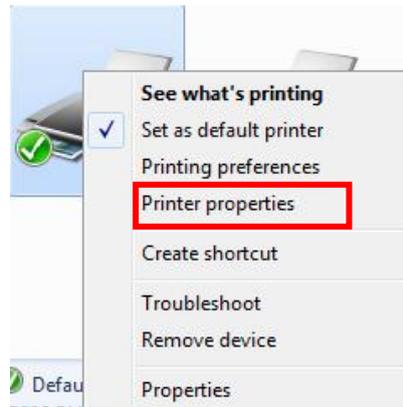


- ⑤ Return to image list to view the image number.

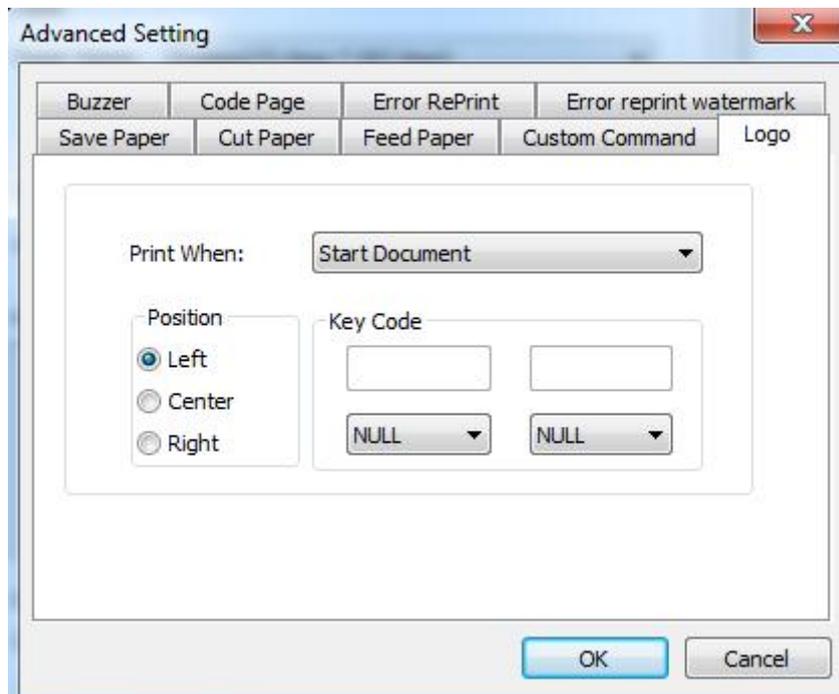
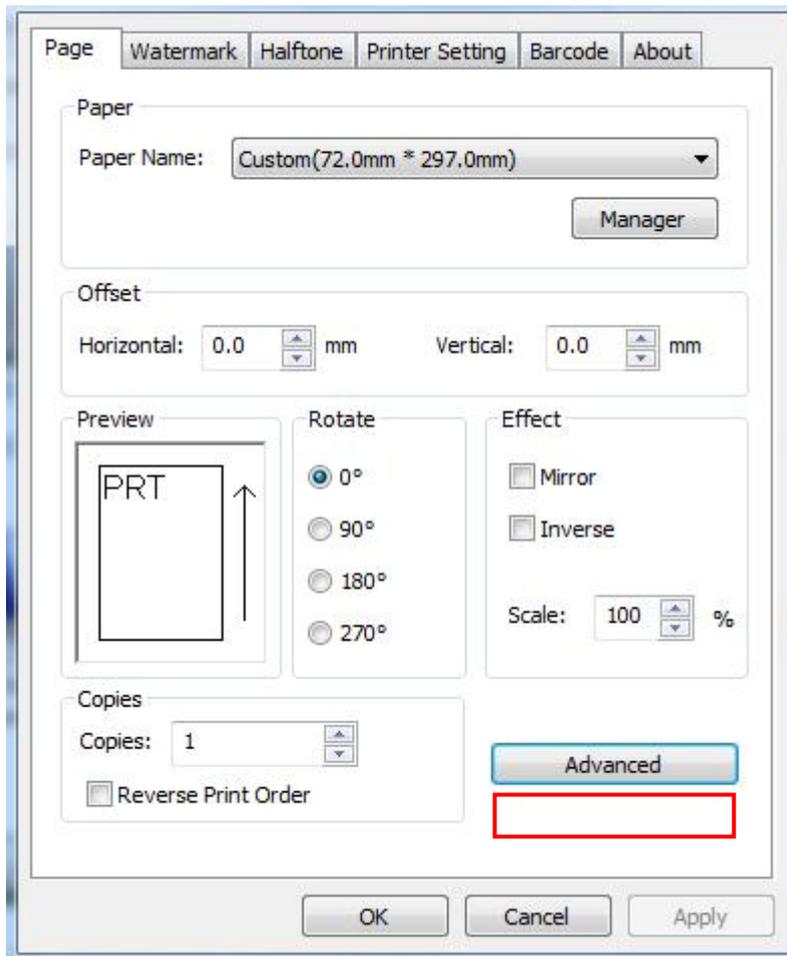
! Note: each time click "Download mode of G", an image list number will be generated.



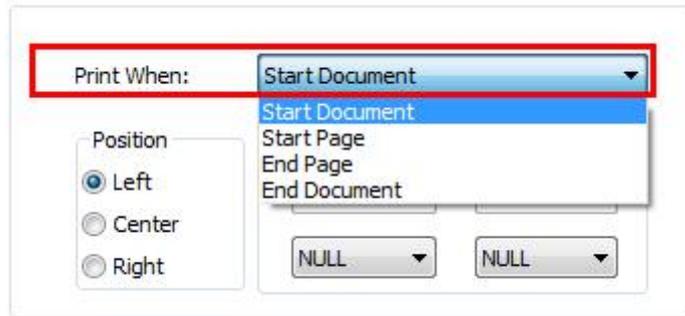
⑥ Select Printer properties, click “Print Test Page” to view the printing effect.



⑦ Click the “Advanced”, then click “Logo”.



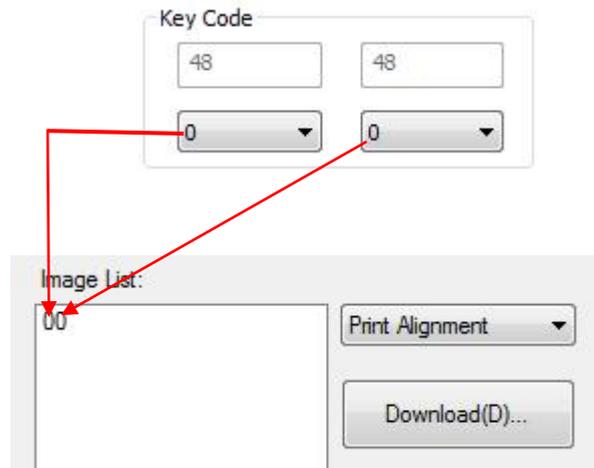
⑧ Set the printing time to print and click "OK". (Such as: Start Document)



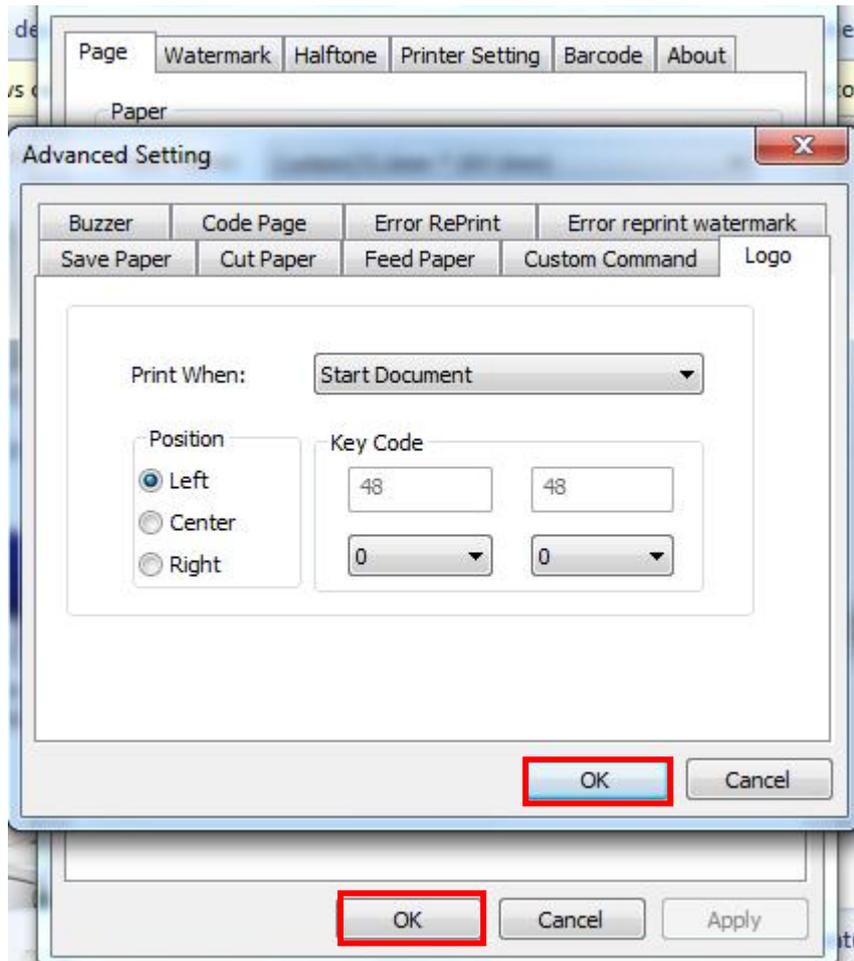
⑨ Return to the logo setting in driver, also select "Print left".



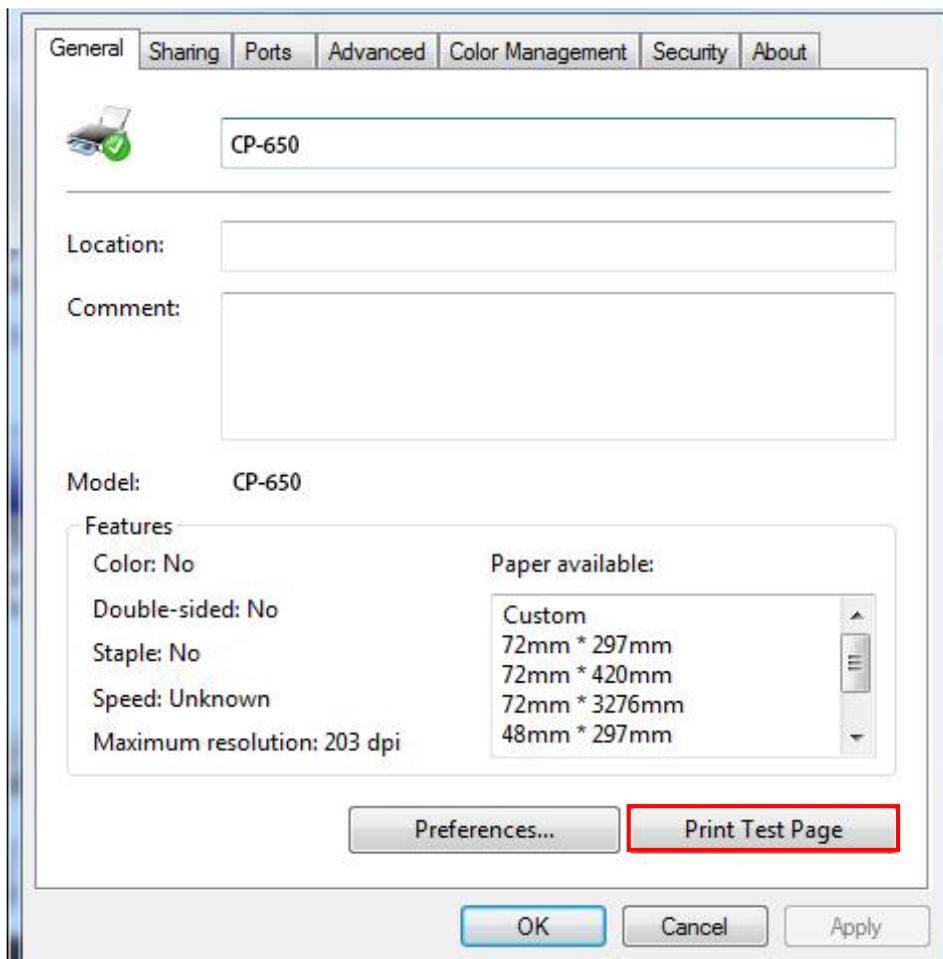
⑩ Set the key Code according to the image number. (Such as: 0 0)



11 Then click "OK".

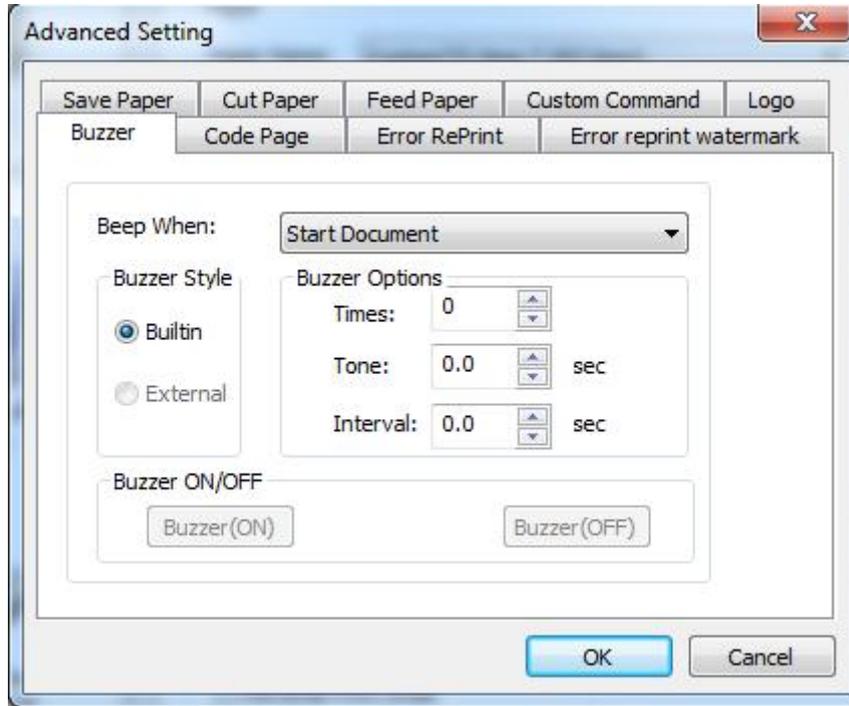


⑫ Click “Print Test Page” to view the printing effect.

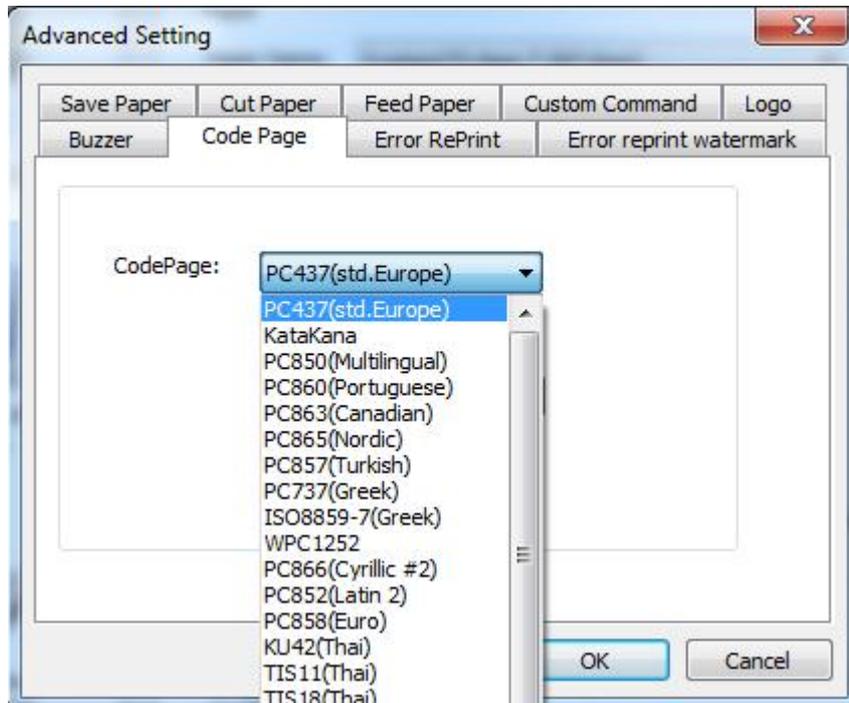


▪ Buzzer

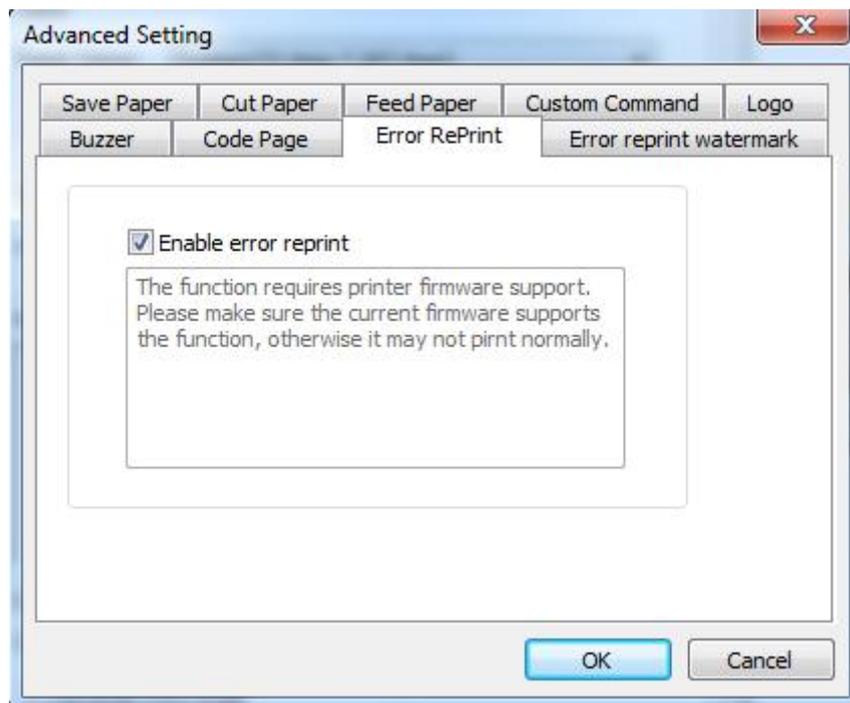
 **Note: this setting need to be set in utility.**



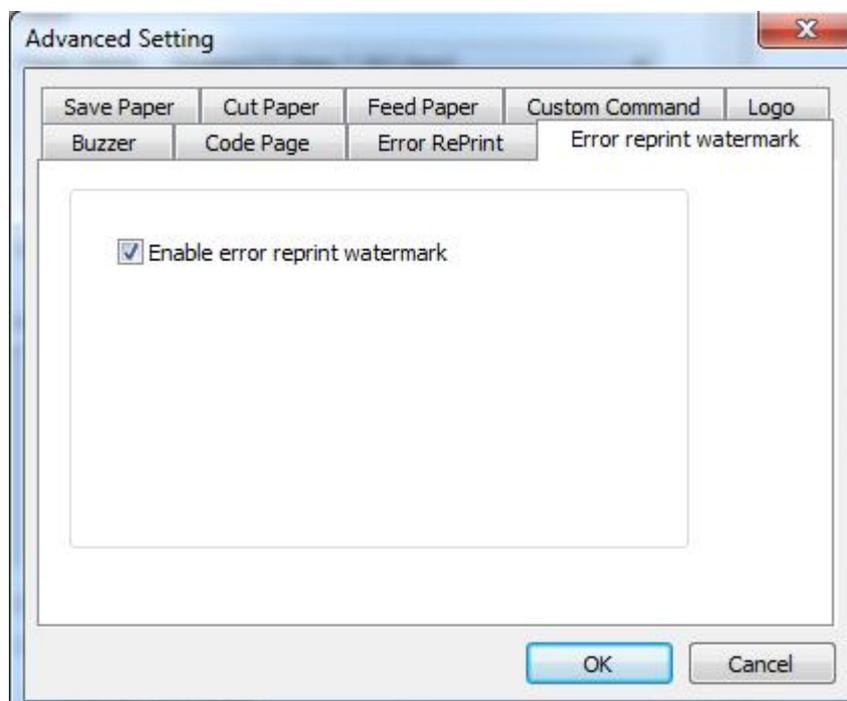
▪ Code Page



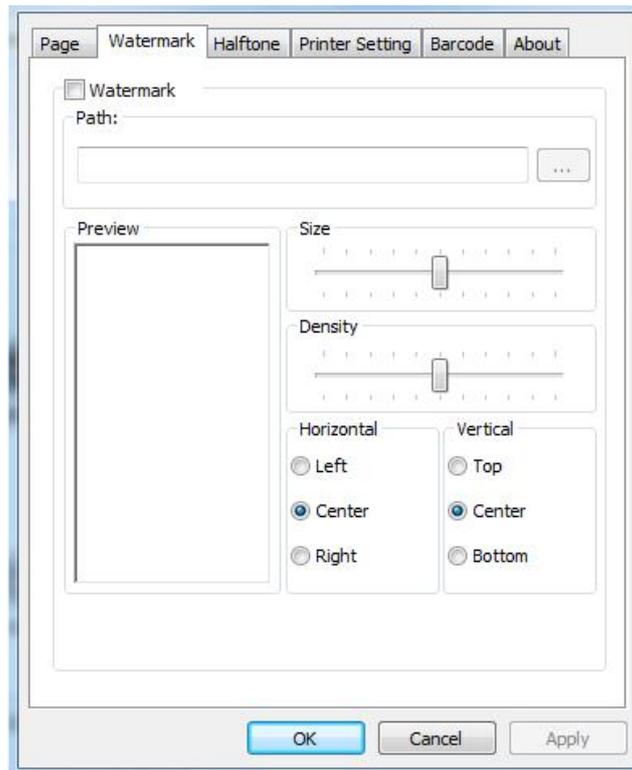
▪ Error Reprint



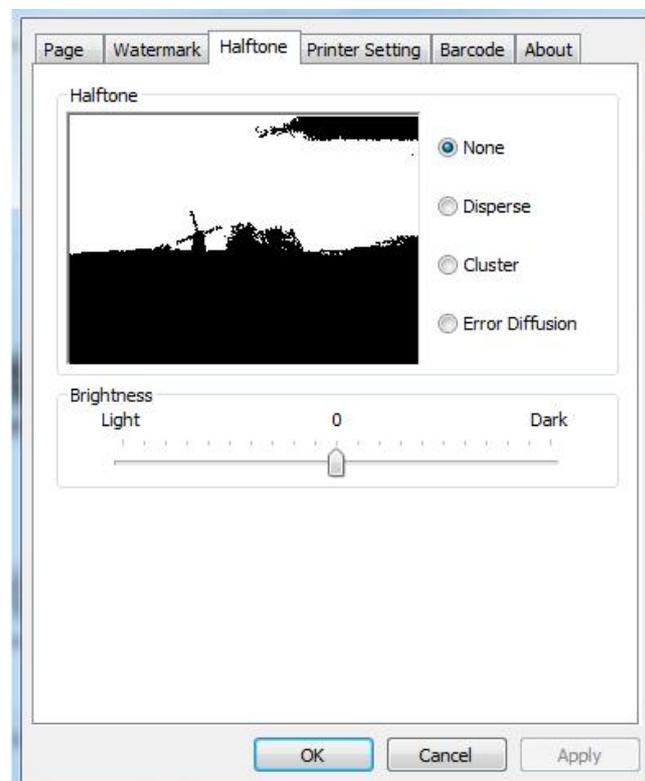
▪ Error Reprint Watermark



3) Click “Watermark”. Set watermark to print (Only BMP file can be selected).



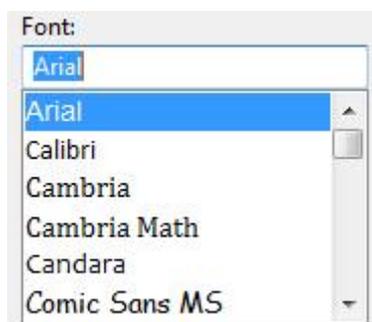
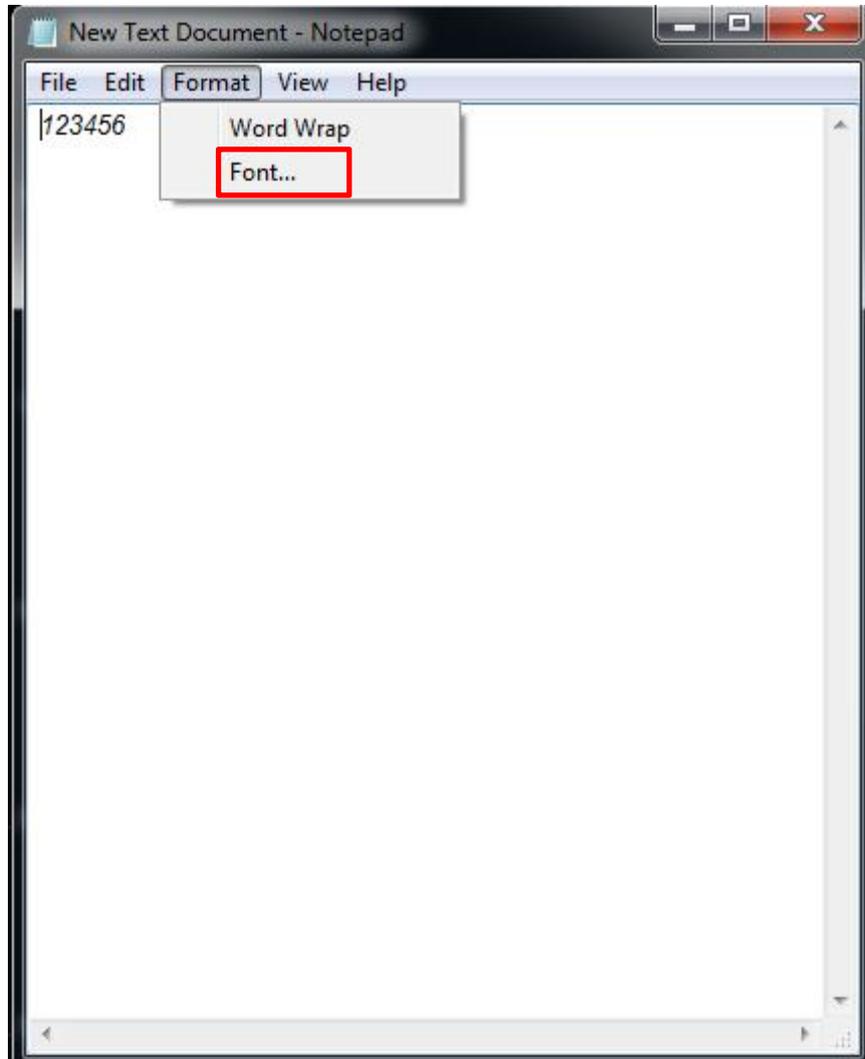
4) Click “Halftone” to set the halftone.



5) Set up the “Barcode”.

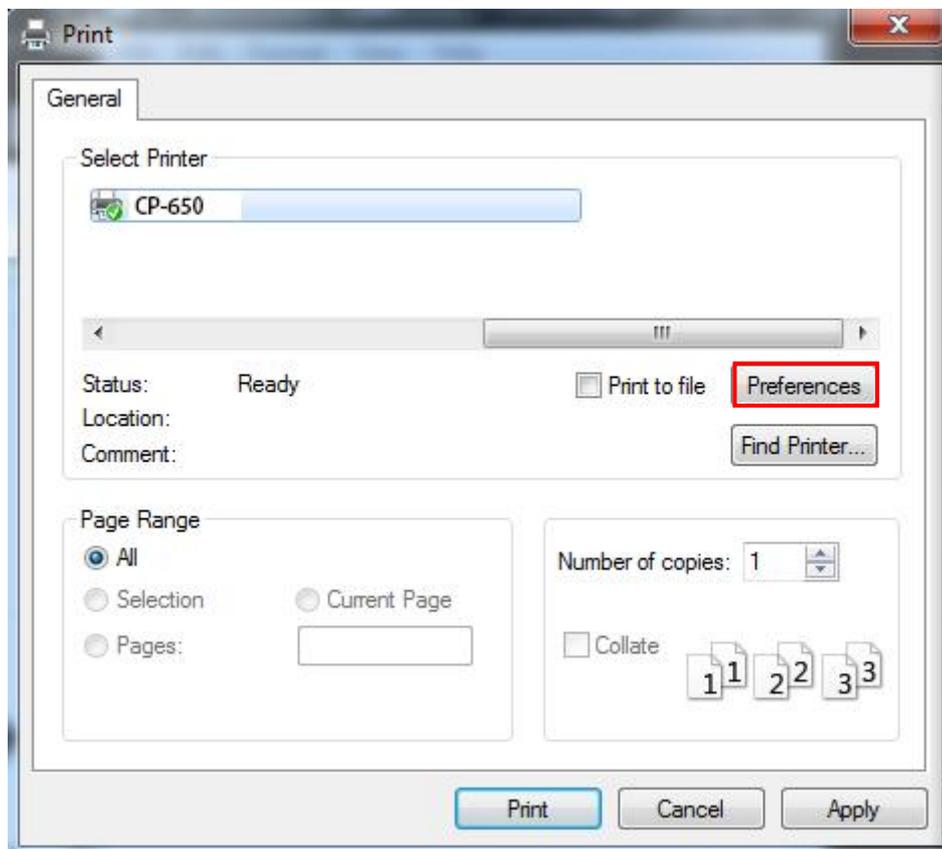
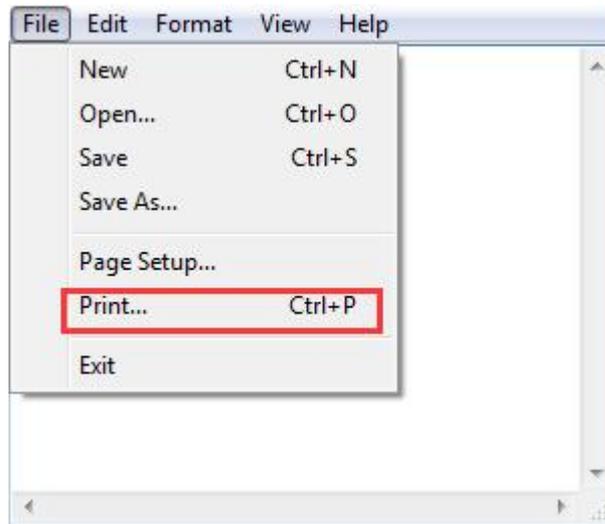
Assuming the font type of the main document is “Italics”, if you want to convert the data “123456” to the barcode printing, the steps are as follows:

- Sets the data "123456" font type to a different font from the main document. Such as: Arial.

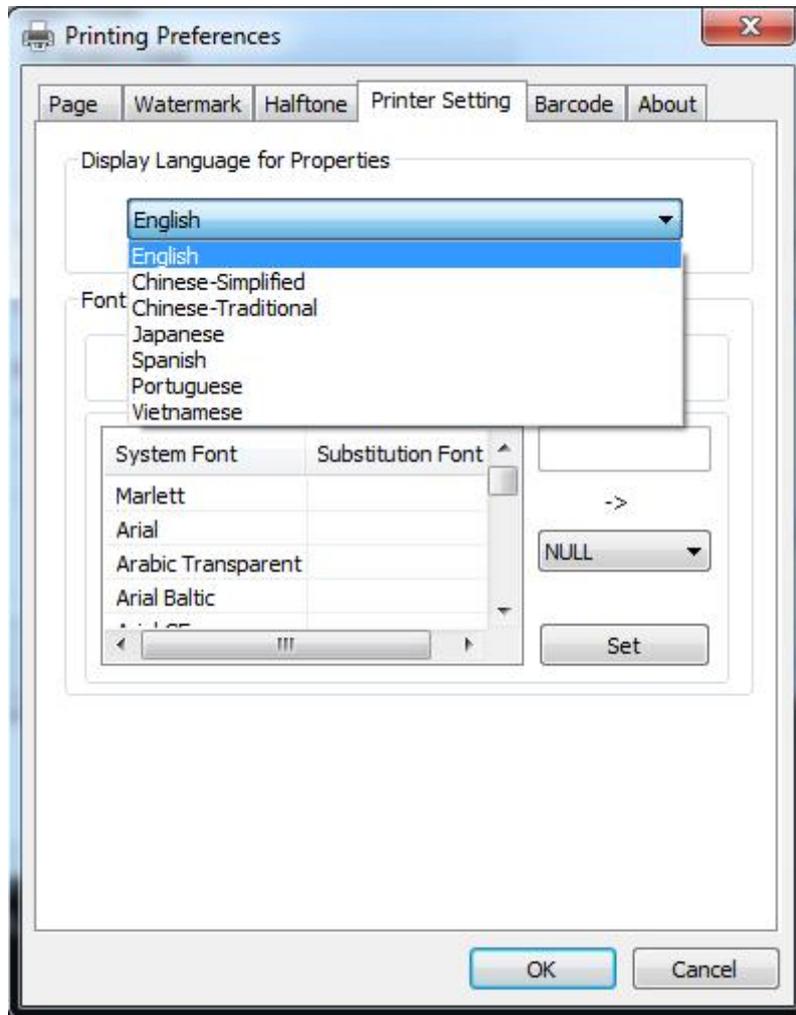


- Open the Preference.

If the document is open, you can set it in the document: file-print-preferences.

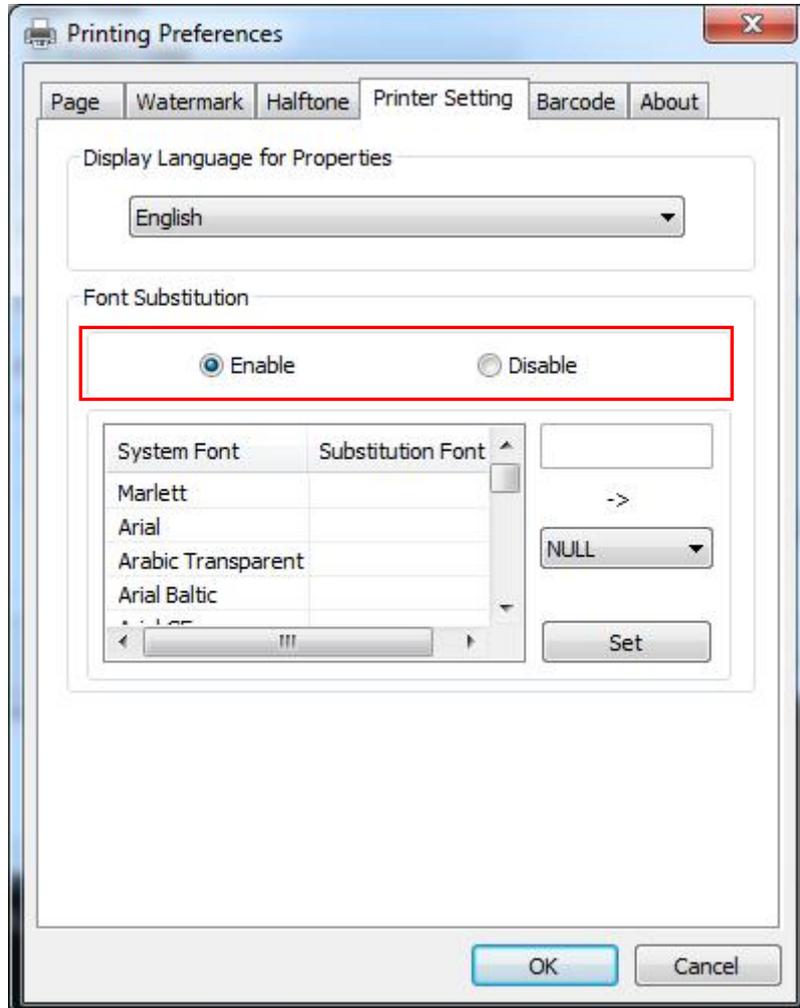


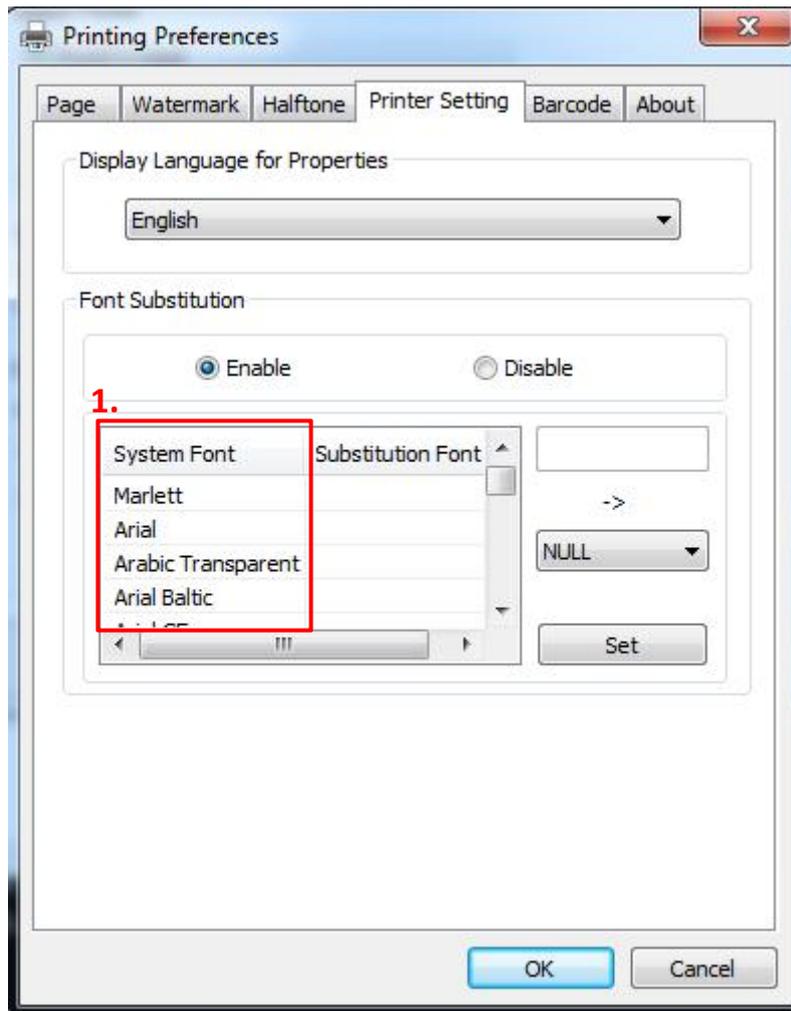
- ③ Click the “Printer Setting”.
- Choose the “Display Language for Properties”

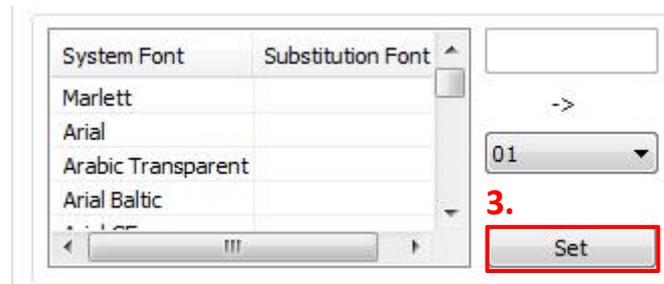
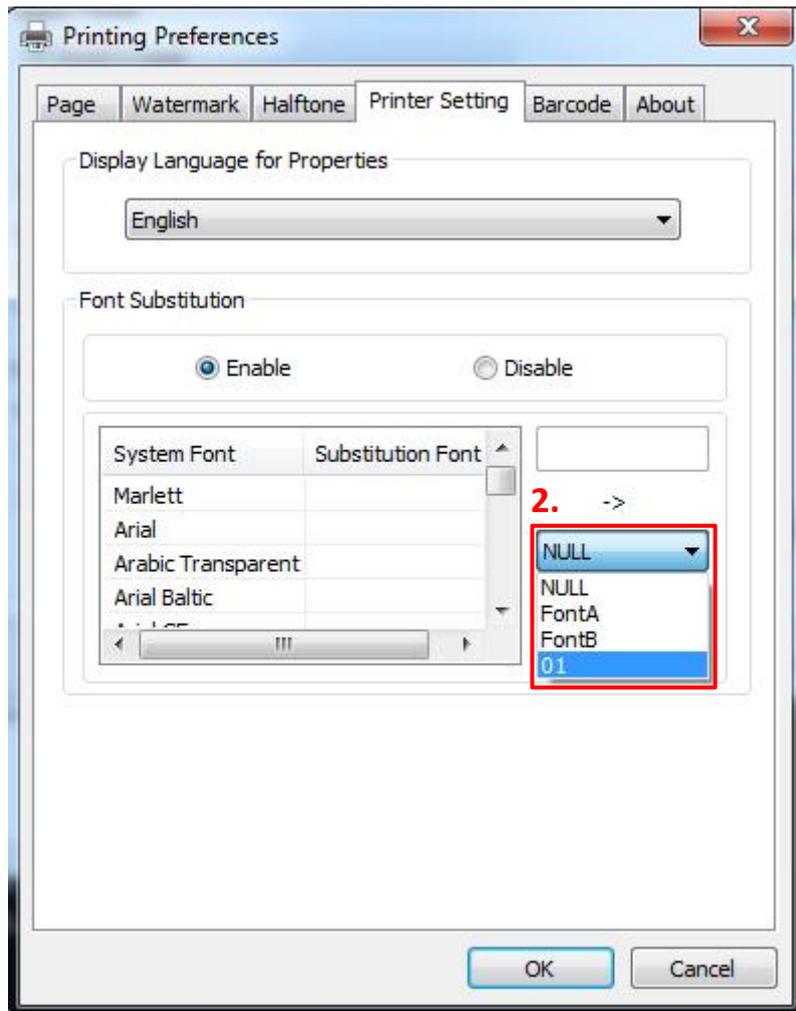


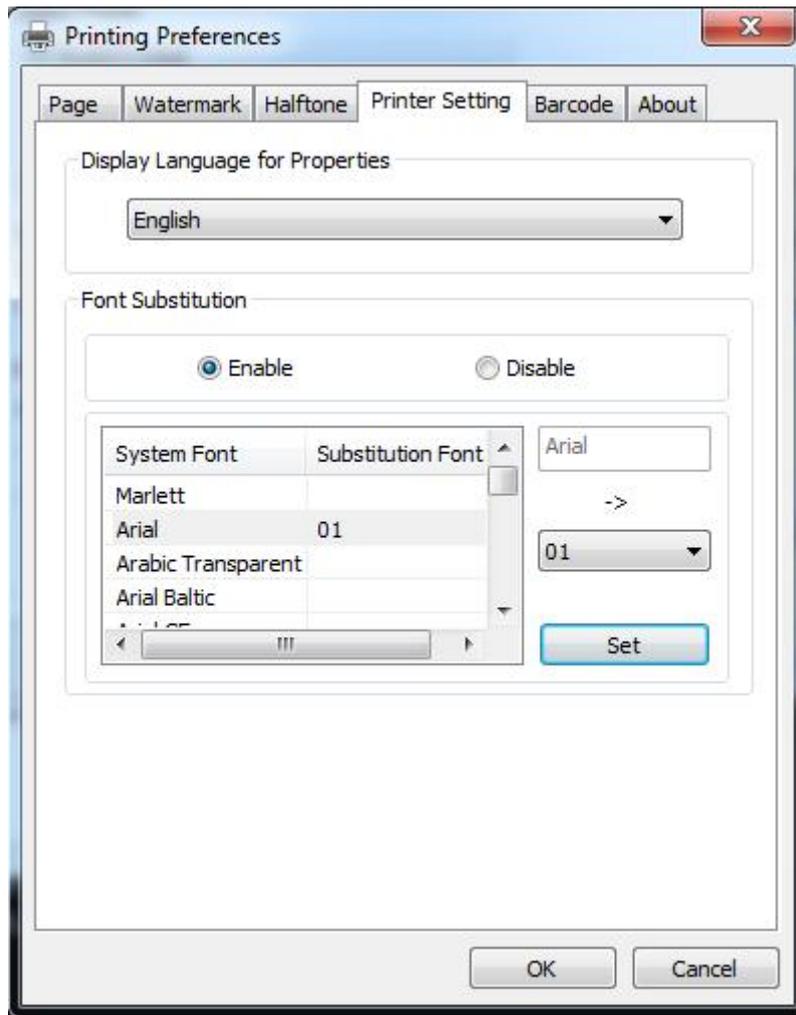
- Turn on the “Font Substitution”, select the system text need to be replaced (for example, Arial), and then select the font you want to replace (for example, 01) and click Settings, and the replacement font will display "01".

the steps are as follows:



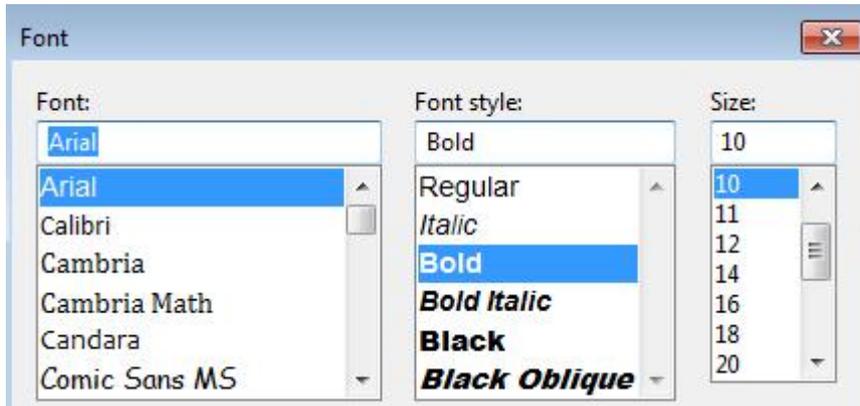




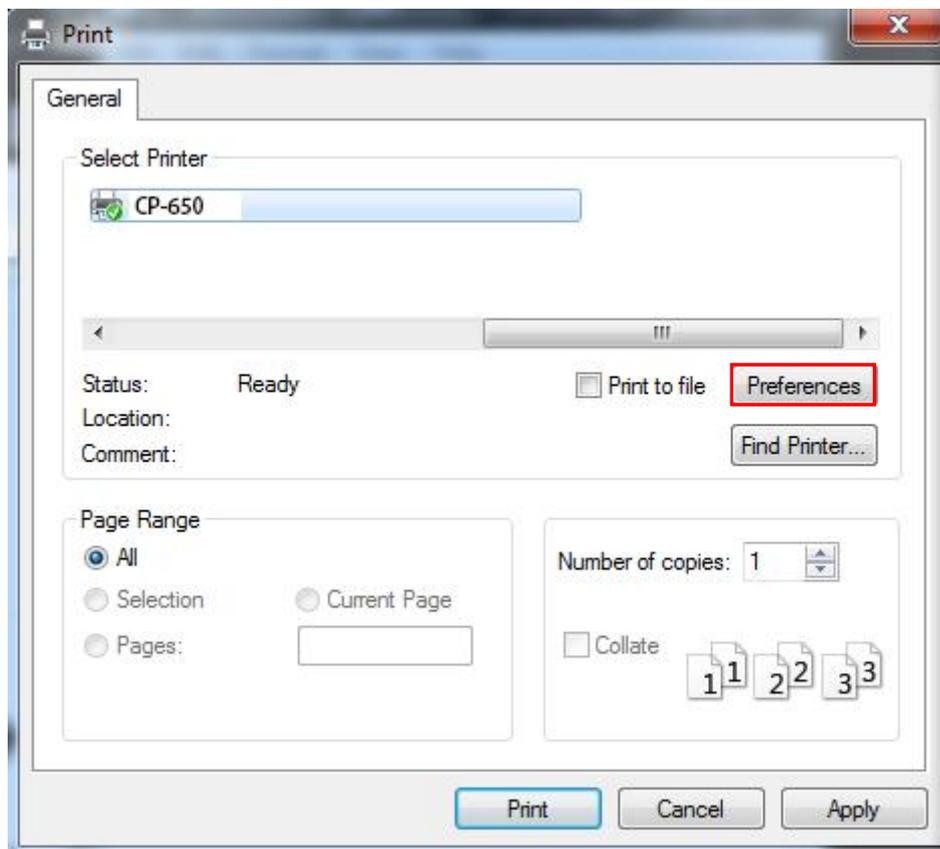


- If you do not have a barcode set, the action is as follows:

① Suppose you change the size of the data "123456", for example:

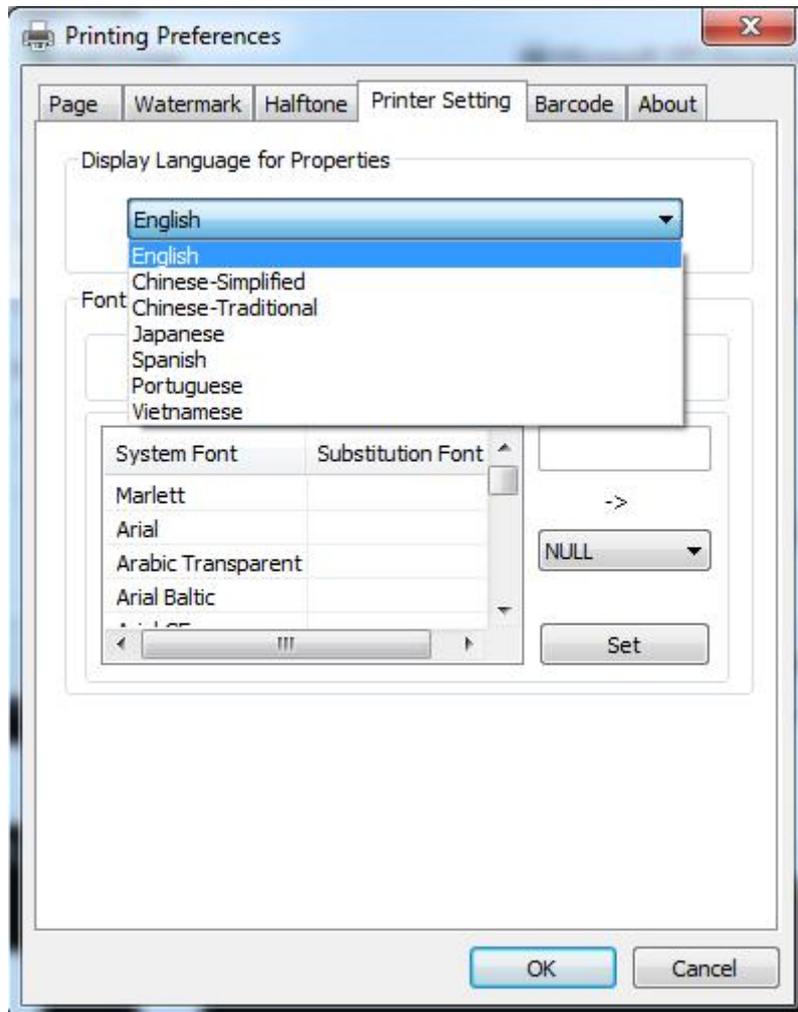


② Set the Printing preferences.

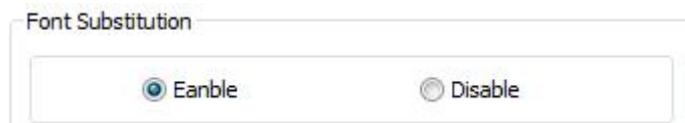


③ Click the “Printer Setting”.

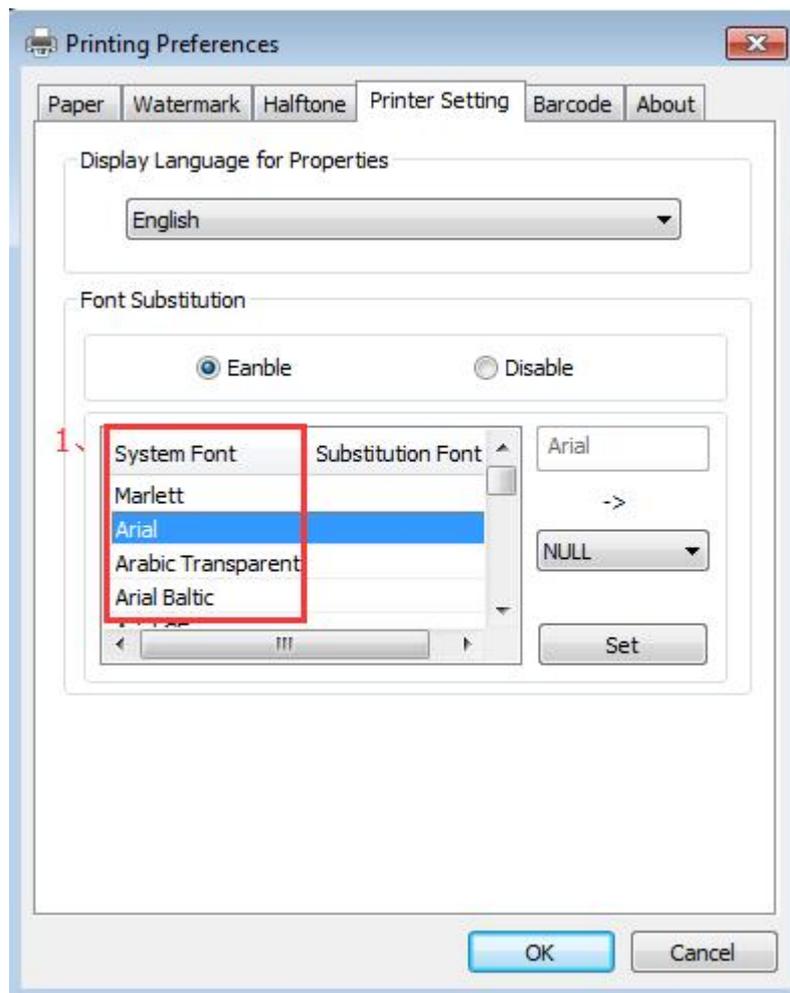
Choose the “Display Language for Properties”.



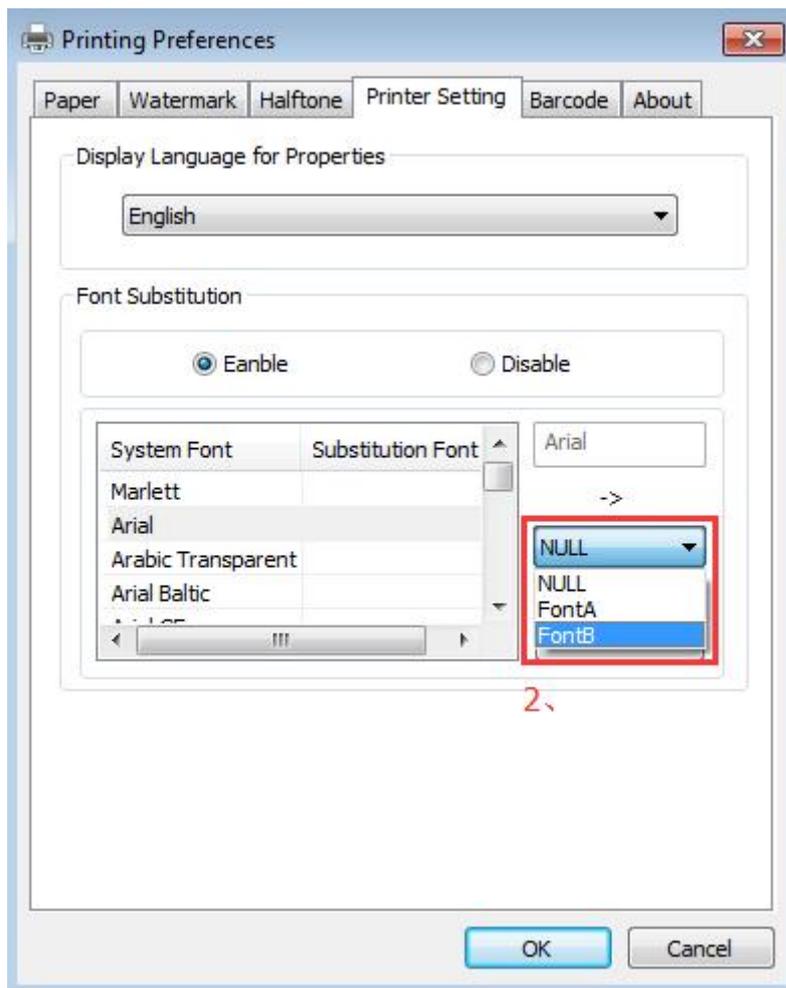
④ Turn on the “Font Substitution”.



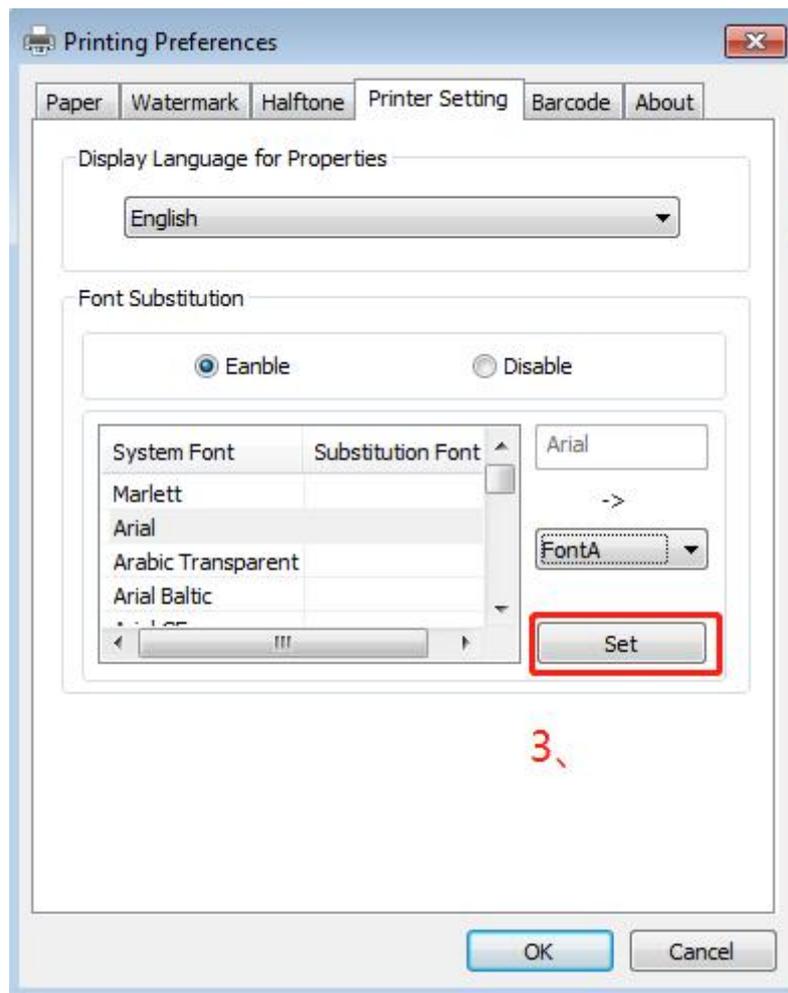
- ⑤ Select the “System Font”, for example: Arial.

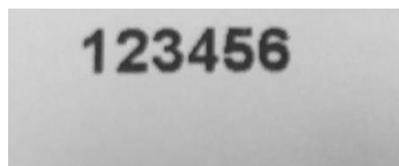
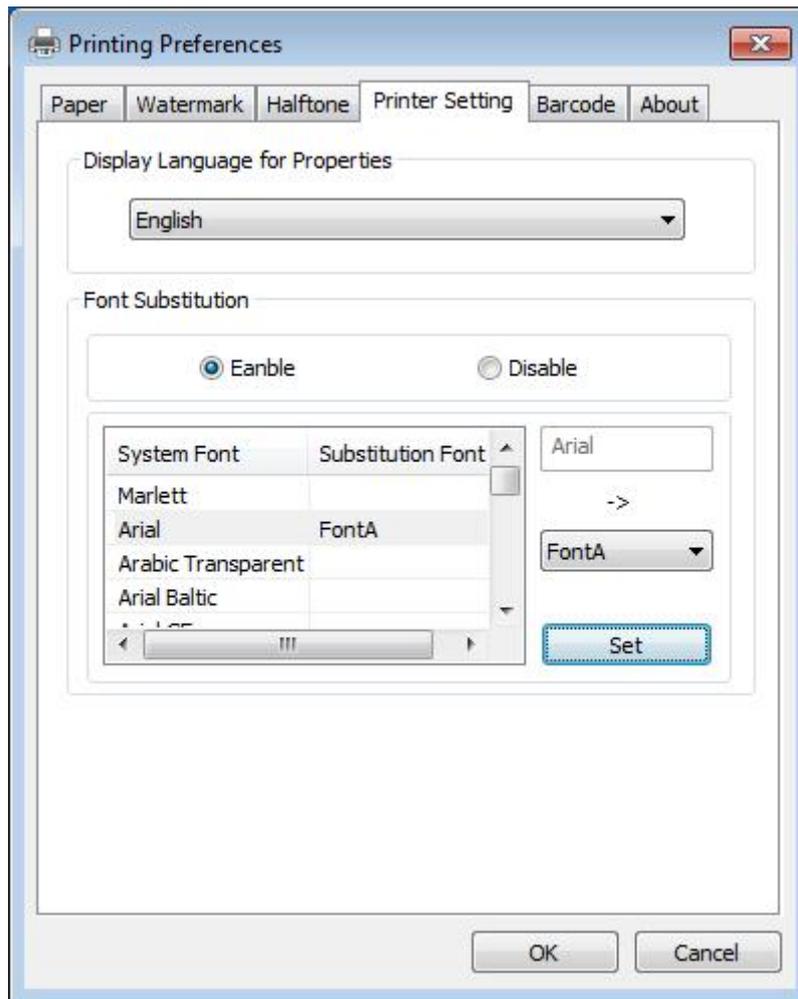


⑥ Select the font to that you went to replace.



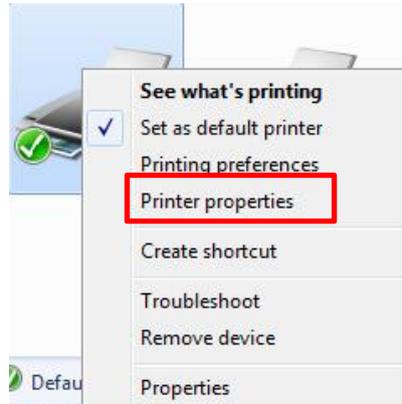
⑦ Click “Set”.



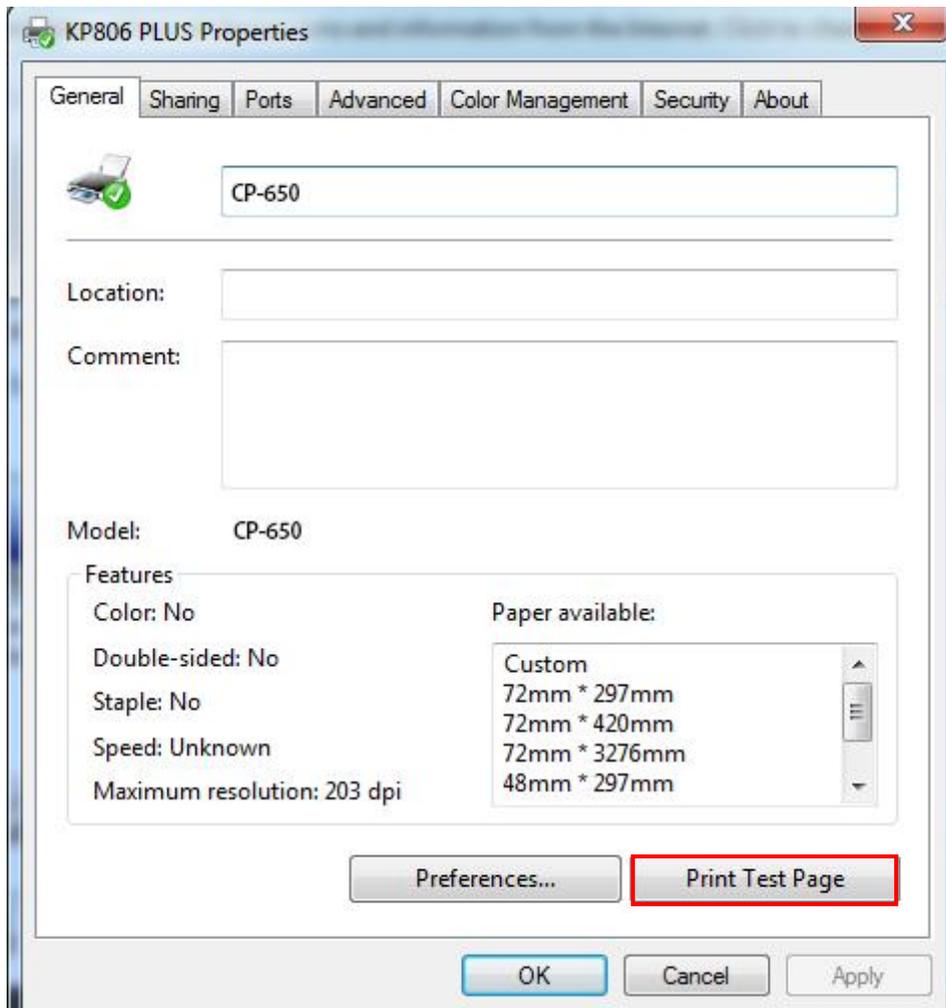


9.5.2 Other Settings

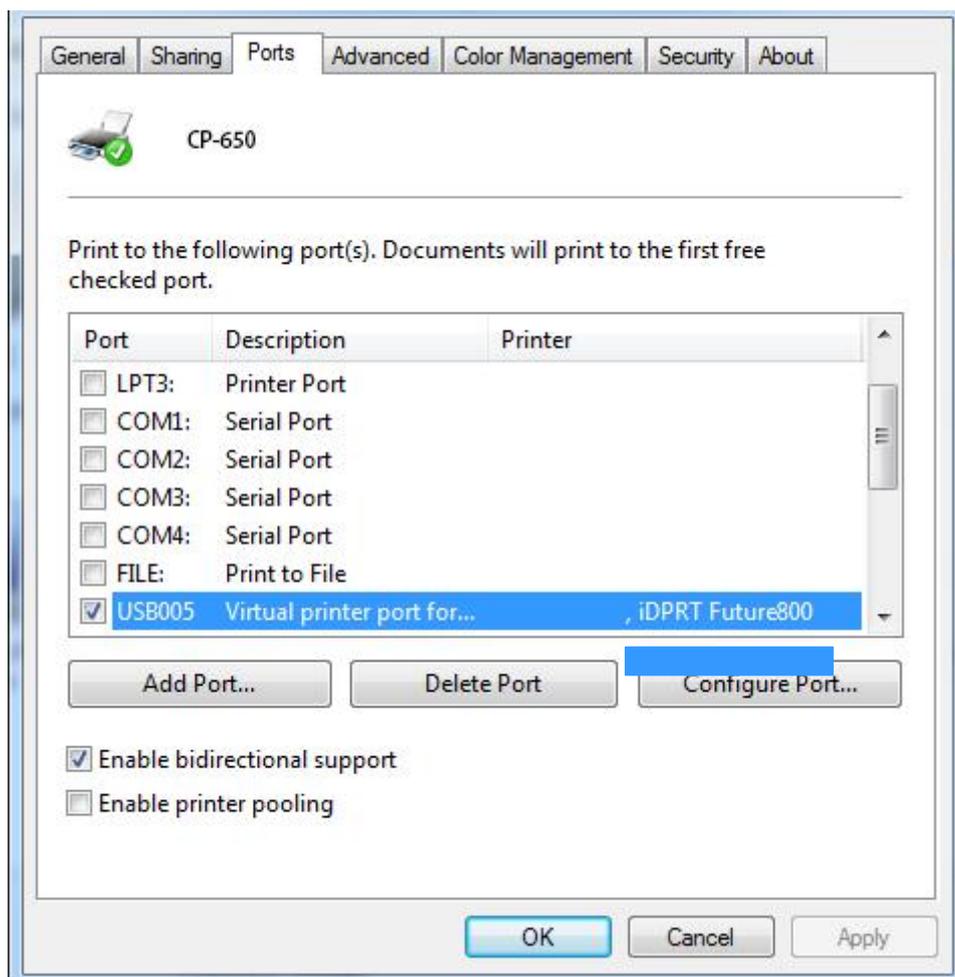
1) Click "Start" → "Devices and Printers". Right click "CP-650" and choose "Printer properties".



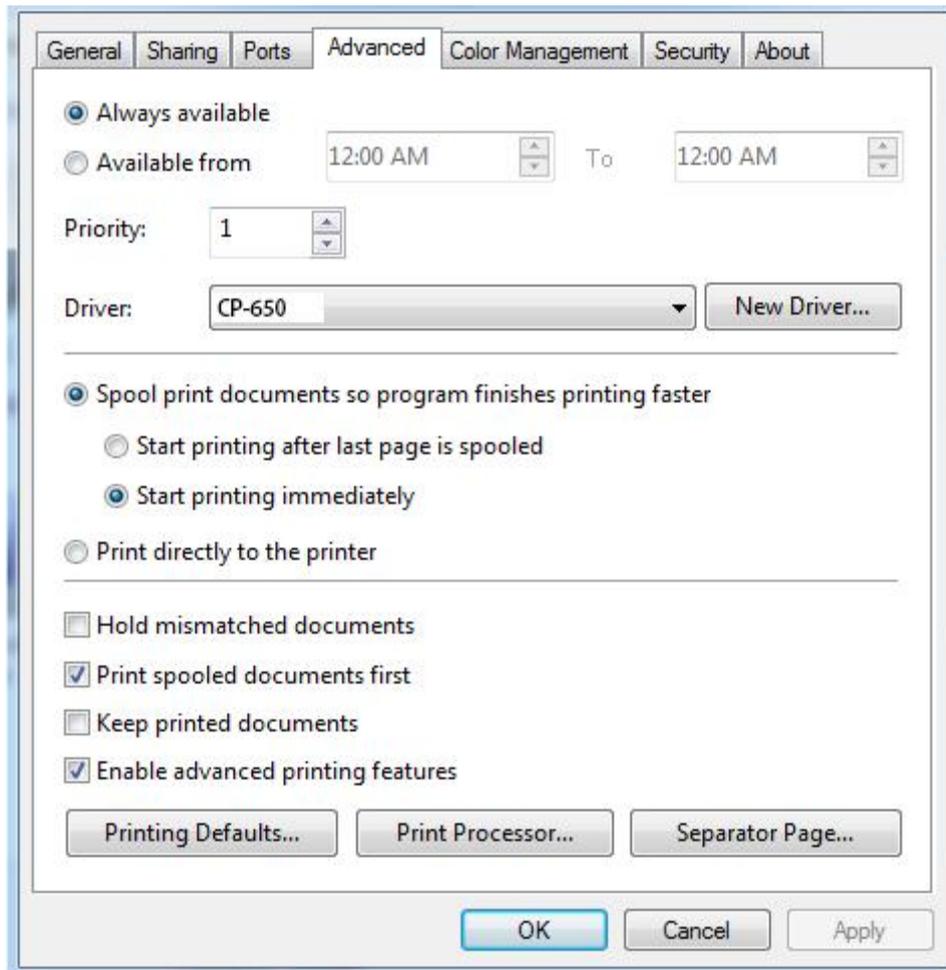
2) Choose "General", click on "Print Test Page", then it will print the current settings.



3) Click "Port" to change the other connecting port.



4) Click “Advanced” to set the available time for using.

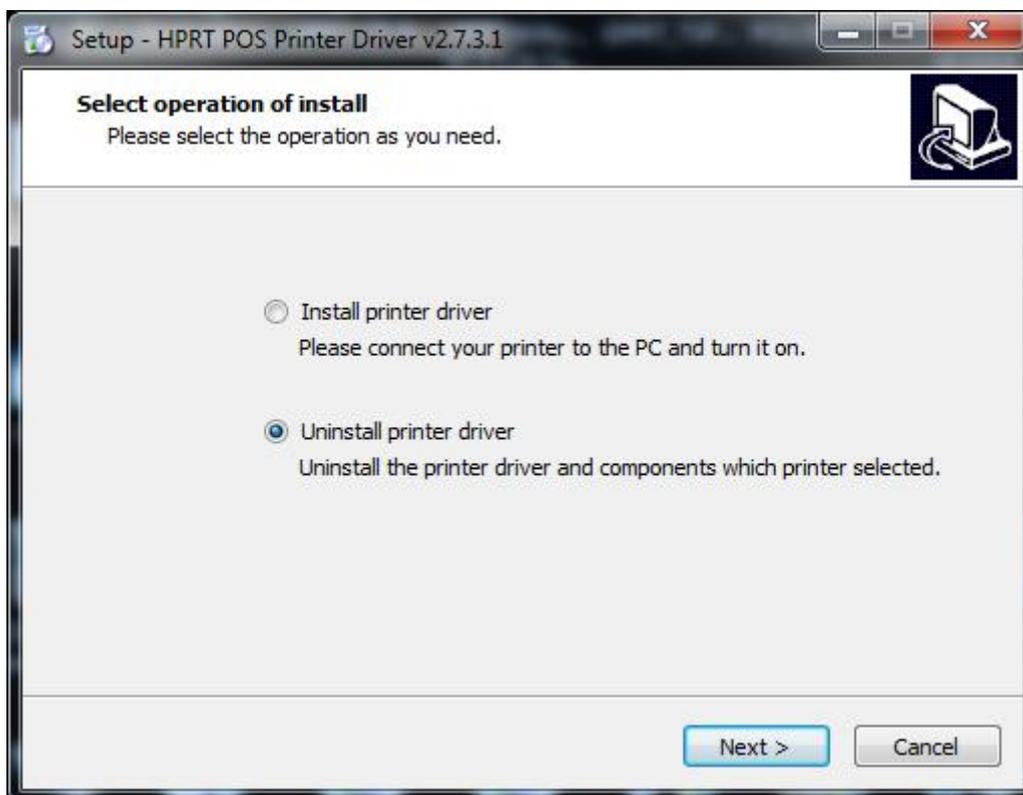


9.6 Uninstall Windows Driver

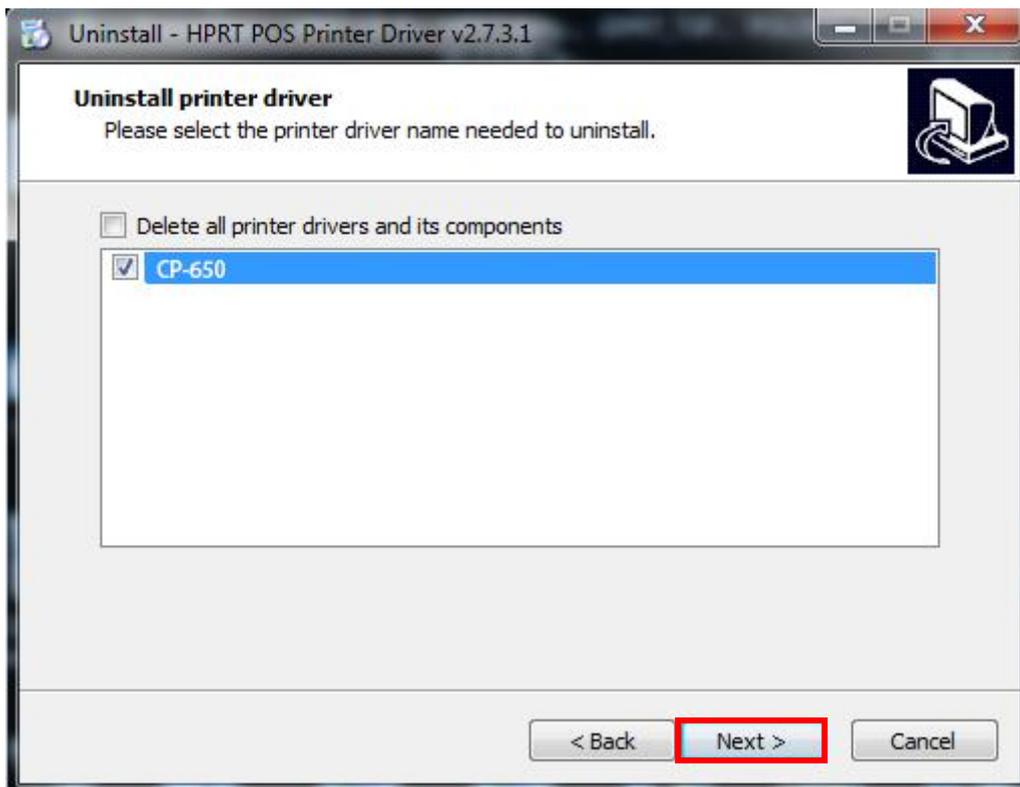
- 1) Double click Windows Driver, and then click “OK”.



- 2) Choose “Uninstall printer driver”, then click “Next”.



- 3) Choose “CP-650”, then click “Next”.



- 4) Then the uninstallation is complete.

9.7 Specification

Resolution:

203×203dpi

Paper Size:

72mm * 297mm
72mm * 420mm
72mm * 3276mm
48mm * 297mm
48mm * 420mm
48mm * 3276mm