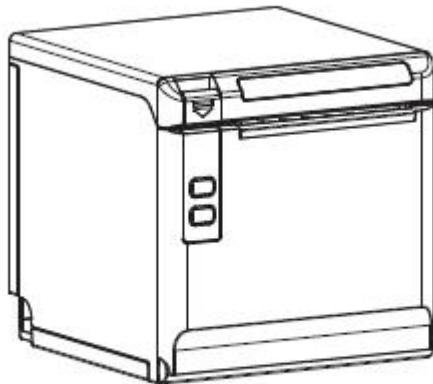


Desktop POS Printer

TP85 V

User Manual



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Statement

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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 the products, the specifications, accessories and procedures described in the manual are based on actual machines. And it may be changed without prior notice

Important Safety Instructions

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

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

- 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 heat source.
- 4) Do not use the printer near water. Never spill liquid into the printer.
- 5) Do not expose the printer to high temperatures, direct sunlight or dust.
- 6) Protect the printer from shock, impact and vibration.
- 7) Be certain the power source is within the voltage rating and frequency listed for the printer.
- 8) Switch off the printer power supply when won't use it for a long time.
- 9) Do not place the power cord where it can be stepped on. If the power cord becomes damaged or frayed, replace it immediately.
- 10) To ensure the print quality and reliability, you are suggested to use the recommended paper or the same quality paper.
- 11) Please switch off the power supply when connect/disconnect all the ports or it will cause damage to the printer control circuit.
- 12) Never carry out maintenance or repair work yourself. Always contact a qualified service technician.
- 13) Keep this User Manual in a place which is easily accessible at all times.

3. Other Precautions

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4. 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 legal systems, 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.



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

TP85 V is a thermal receipt printer, 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 field print receipts.

TP85 V can connect with other equipment through serial, USB and Ethernet interfaces. And the printer drivers are available for the WINDOWS XP/WINDOWS 7/WINDOWS 8/WINDOWS 10/Linux operating system.

1.2 The Main Features

- 1) Low noise
- 2) High print speed
- 3) Easy paper loading
- 4) Support page mode printing
- 5) Compatible with various width paper
- 6) Cash drawer interface
- 7) Communication interfaces optional

2 GETTING STARTED

2.1 Packing List

After receiving your printer, please check for possible shipping damage:

1. Inspect the outside of both the box and the printer for possible damage.
2. Check whether you have received the following accessories together with the printer, if there is any items missing, please contact your local dealer.

■ Standard Accessories



Printer



USB Cable



Power Cord



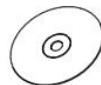
Power Adapter



Roll Paper

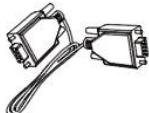


Quick Start Guide



CD

■ Optional Accessories

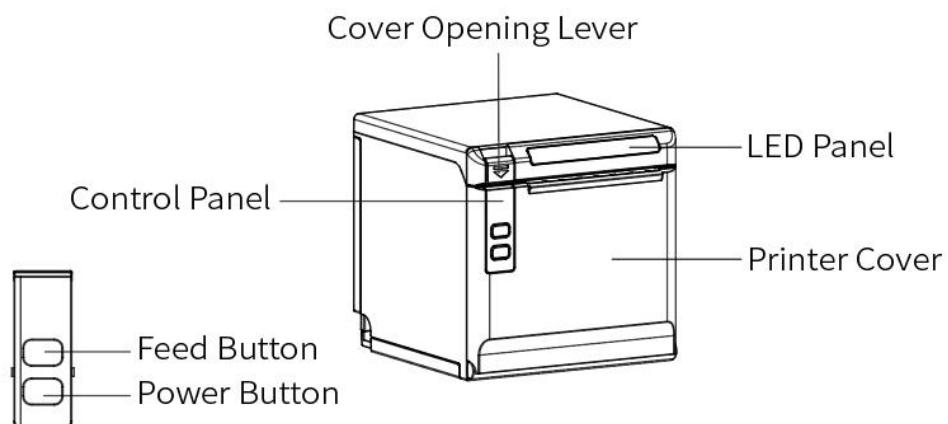


Note:

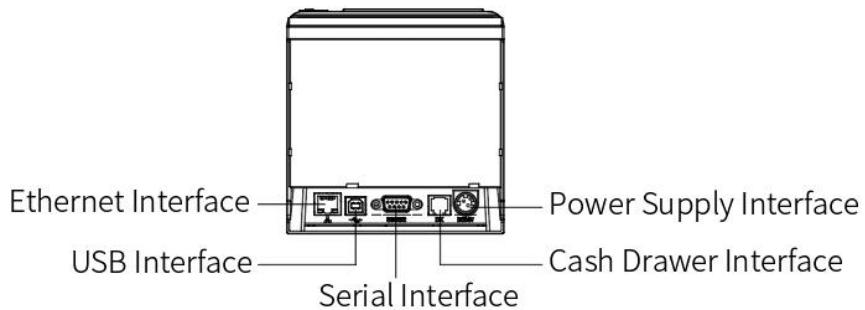
- 1) *The Power adapter and power cord vary by local and region.*
- 2) *The packing materials are actually dependent on the order.*

2.2 Appearance and Components

■ Front



■ Rear



■ Inside



Note: Bluetooth and WiFi interfaces are embedded in the printer.

3 SPECIFICATION

3.1 Printer Specification

Table3-1 General Specification

(1/2)

Item	Parameter	
Printing Parameter	Printing Method	Direct thermal line printing
	Resolution	203dpi, 8dots/mm
	Printing Width	72mm
	Print Speed	Max. 260mm/s
	Interface	USB, Serial, Ethernet, Cash drawer, Bluetooth, WiFi
	Print density	Adjustable from level 1 to level 4
Page Mode	Support	
Memory	RAM	4Mbyte
	Flash	4Mbyte
Fonts	Chinese	GBK 24×24
	Alphanumeric	ASC II 9×17,12×24.
	User-defined	Support
	Code page	Optional international character sets: 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), MONGOLIAN, VISCII
Barcode	1D	UPC-A, UPC-E, EAN8, EAN13, CODE39, ITF, CODABAR, CODE128
	2D	PDF417, QR code, (DataMatrix, Maxicode and Aztec) for optional
Graphics	Support varied density bitmap as and download bitmap printing Max size of each bitmap is 40K, the total size of bitmap is 256k.	
Detection	Sensors	Paper out detection, Cover open detection
LED Indicator	Power LED	Blue LED
	Paper LED	Orange LED
	Error LED	Red LED

Table3-1 General Specification(Continued)

(2/2)

Item		Parameter
Power Supply	Input	AC100V-240V
	Output	24V == 2A
Paper	Paper type	Specified Thermal Paper
	Paper width	58 ⁺⁰ ₋₁ mm/ 80 ⁺⁰ ₋₁ mm
	Paper thickness	0.056 ~ 0.13mm
	Roll paper diameter	Max. OD φ83mm
	Paper load	Easy-loading structure of forward open cover or upward open cover
	Paper cut	Partial cut or full cut
Physical Spec.	Operating condition	0°C ~ 45°C, 20% ~ 85%RH
	Storage condition	-20°C ~ 70°C, 5% ~ 95%RH
	Dimensions	137.3(L)*132(W)*130.5(H)mm
	Weight	1.33kg
Command		ESC/POS
Software	Driver	Win7/Win8/Win10/Linux CUPS/OPOS/JavaPOS
	SDK	Android, iOS

3.2 Printing Media Specification

3.2.1 Continuous Thermal Paper Specification

Paper Type : Specified Thermal Paper

Paper Width : 58^{+0}_{-1} mm / 80^{+0}_{-1} mm

Paper Outer Diameter : Max. 83 mm

Paper Thickness : 0.056 ~ 0.13m

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

3.2.2 Notices

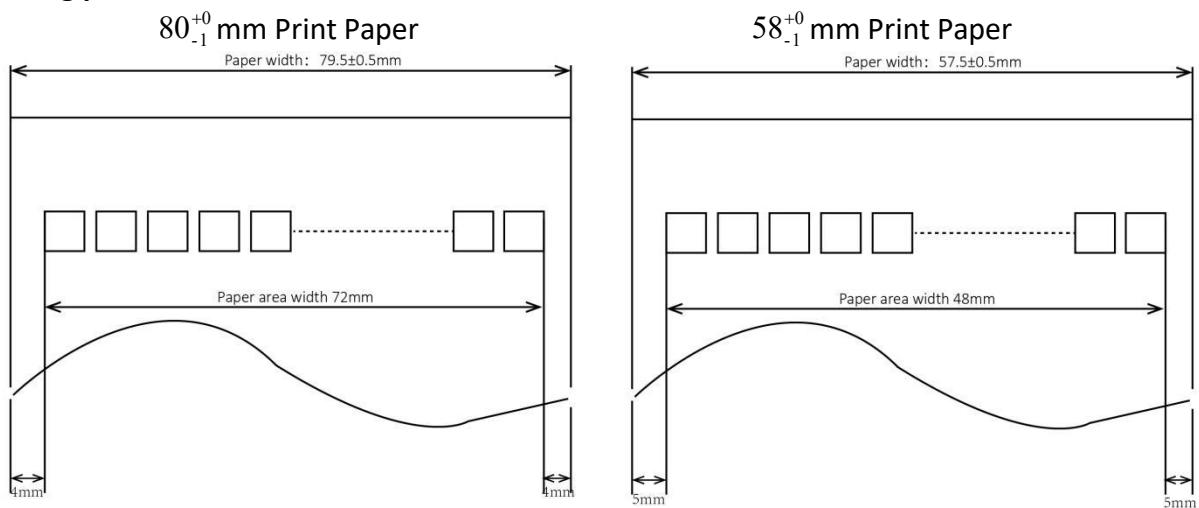


Notes:

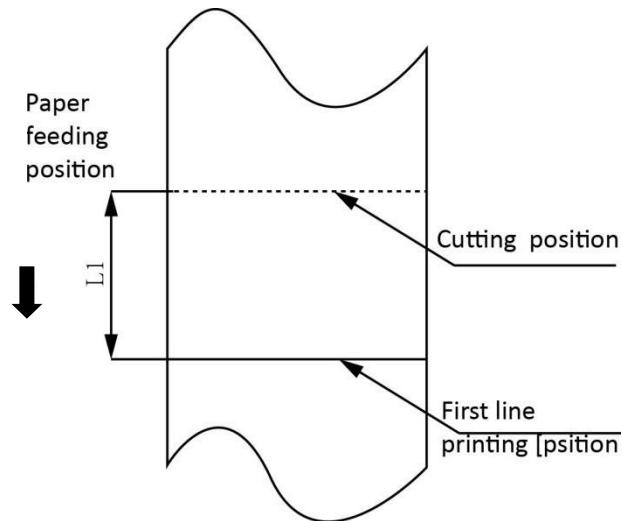
- Please use the recommended thermal paper or same quality paper, otherwise it will influence the printing quality and decrease the thermal printer head life;
- Don't stick the paper on the roll paper mandrel;
- If the thermal paper is polluted by chemical or oil, the thermal paper heat sensibility decreases, which will influence the printing quality;
- Don't use finger nail or hard articles to touch the surface of thermal paper, otherwise it will cause color fading;
- 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)
TP85 V	11.6mm

4 INSTALLATION AND USAGE

4.1 Media Loading

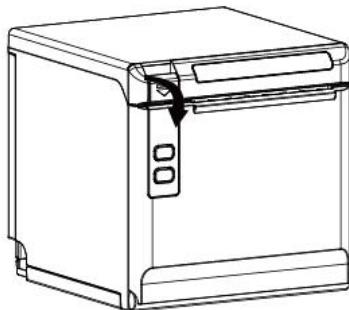
4.1.1 Paper Confirmation

- 1) When using 80mm(width) roll paper, take down the paper guide of both sides.
- 2) When using 58mm(width) roll paper, insert the paper guide to each side.

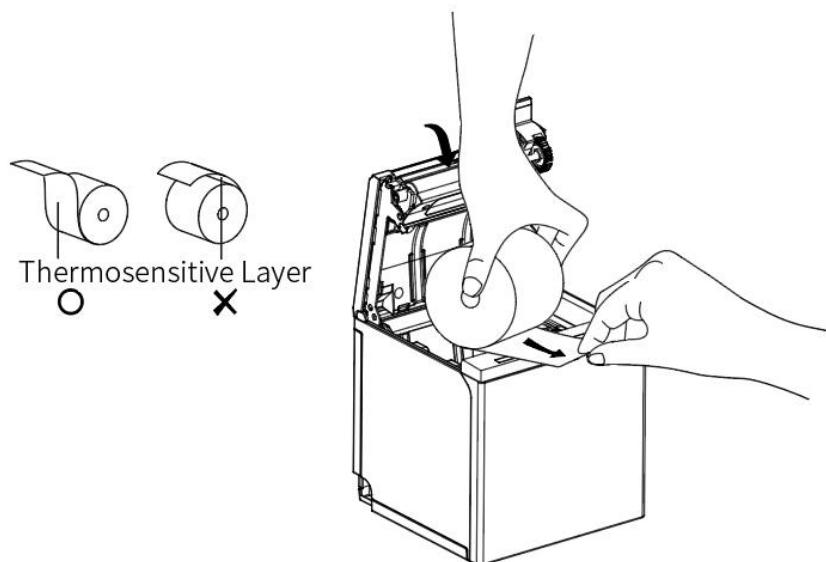
Note: Roll paper should be placed in the middle.

4.1.2 Paper Installation (Forward Paper-out Direction)

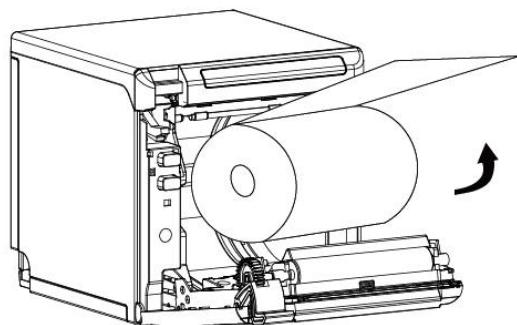
1. Press the cover open button.



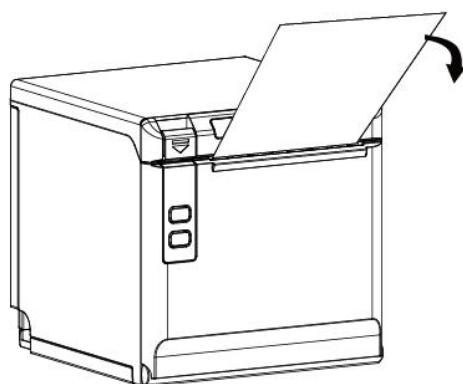
2. In the correct direction of the roll paper, insert the paper.



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



4. Tear the extra paper.



Notes:

- ▶ According to the paper size to adjust the paper guide;
- ▶ Make sure the paper inside is at tight status, or it will issue paper or other obstacle.

4.2 LED Indication and Beeper

Function specification of indicated light and beeper.

Name	Status	Specification
POWER LED (Blue)	ON	The printer work well
	OFF	The printer does not work
ERROR LED (Red)	Flashing	The printer in an error state
	OFF	The printer in an normal state
PAPER LED (Orange)	ON	The printer in paper end state
	OFF	The printer in an normal state

Description	POWER LED	ERROR LED	PAPER LED	Bepper
Open the cover of printer	ON	ON	ON	“Beep, Beep—, Beep”
Full of paper	ON	OFF	OFF	Silent
No paper	ON	ON	ON	“Beep Beep Beep”.
Cutter jam	ON	Flash	OFF	“Beep—, Beep—”

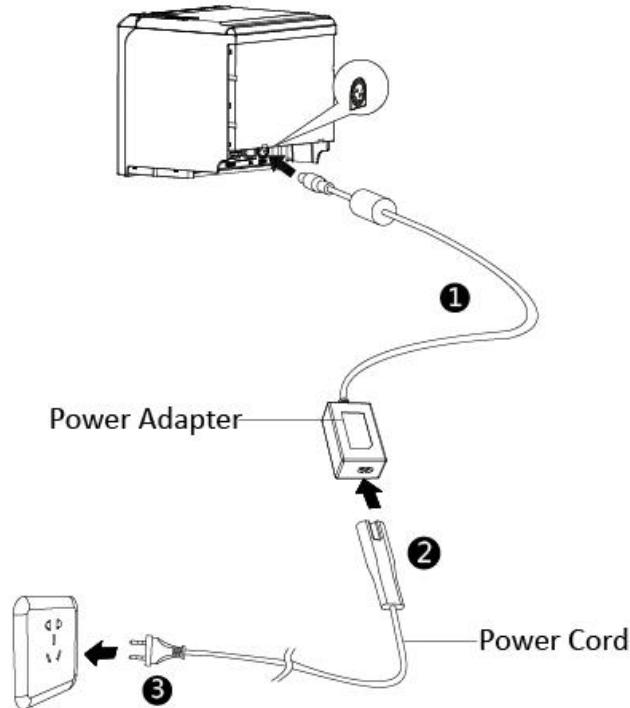


Notes:

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

4.3 Power Connection

- 1) Put the cable plug of power adapter facing up at flat side, insert the rear of the printer power connector;
- 2) Turn the power adapter input power;
- 3) Pay attention about disconnecting or connect the Power adapter at right method, or likely to cause damage.



Note: The Power adapter and power cord vary by local and region.

When pull 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 put forth your strength to pull the plug by squeeze at any of place of power adapter. Because, it is more difficult to pull it out and easy to damage the cable.



Notes:

- ▶ Please only use the power adapter recommended by supplied or equivalent products;
- ▶ When disconnecting the power adapter plug, handheld plug connector housing, to avoid the pulling on the cable in force;
- ▶ Avoid drag the power adapter cable, otherwise it will damage the cables, causing fire and shock;
- ▶ Avoid put power adapter around a heating device, otherwise the cable may melt, causing fire and shock;
- ▶ If you do not use the printer in a long time, disconnect the power supply of printer power adapter.

4.4 Interface Cable Connection

- 1) Make sure the printer's power switch is turned off;
- 2) Put 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.

4.5 Cash Drawer Connection

- 1) Make sure the printer's power switch is turned off;
- 2) Connect the cash drawer cable into the cash drawer interface on the rear side of the printer.



Warning:

Cash drawer interface can only be connected to a voltage of 24V cash drawer device (can't connect to the phone line, etc.)

4.6 Print Test

4.6.1 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 connecting and paper is loading properly.

2. Make sure the printer is off and top cover closes properly.

3. Pressing the paper feed button and power button simultaneously turns the printer on. The printer is ready to receive data as soon as it completes the self-test.

4.6.2 Printing of Windows Driver Program

1. Install the Windows Driver program. (Please refer to the Windows Driver Manual)

2. Please set the "Interface" as the type you use.

3. Use the Windows Driver Program to print out the "Print Test Page".

5 INTERFACES

TP85 V supports cash drawer interface and many other various communicate interfaces, such as Serial interface, USB interface, Ethernet interface.

5.1 USB

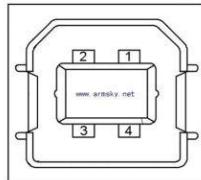


Figure 5-1

PIN	SIGNAL NAME
1	VBUS
2	D-
3	D+
4	GND

5.2 Serial Interface

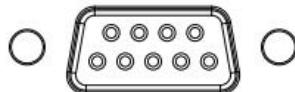
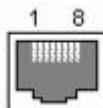


Figure 5-2

PIN	SIGNAL NAME
1	-
2	TXD
3	RXD
4	-
5	GND
6	RTS
7	CTS
8	RTS
9	-

5.3 Ethernet Interface



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

5.4 Cash Drawer Interface

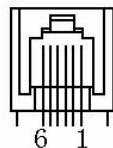


Figure 5-4

PIN NO.	Signal Name
1	FG
2	Drawer 1
3	DRSW
4	VDR
5	Drawer 2
6	GND

Electrical characteristics

- Driving voltage: DC 24 V
- Driving current: Maximum 0.8 A (In 510 ms)

Drawer check signal: "L" = 0 ~ 0.5 V "H" = 3 ~ 5 V

5.5 Power Supply Interface

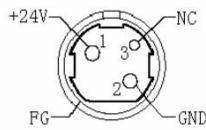


Figure 5-5

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 not light, printer not working	Printer no power	Connecting the power supply
	Printer not on	Turn on the printer
	Circuit board broken	Contact with the dealer

6.2 LED Indicator and Beeper

Problem Description	Probable Reason	Solution
Paper LED always on	Paper near end	The roll paper is near end, the printer can work normally
Error LED always on and beeper alarms	Printer Cover open	Close the printer cover
Paper LED and Error LED always on and beeper alarms	Paper end	Reload the roll paper
Error LED blinks and beeper alarms	Thermal print head overheated	Turn the printer off and resume when it cools
	Oversupply	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	Reinstall the roll paper
Blurred printing or spot	Incorrect roll paper installation	Check if the roll paper is installed
	Unqualified roll paper	Use recommended thermal roll paper
	Dirty thermal head or print roller	Clean the thermal head or print roller
	Low print density	Increase the print density level
Paper Jam	Paper strike	Open the printer cover, check the paper path and remove jammed paper
Vertical print words missing	Dirty thermal head or print roller	Clean the thermal head or print roller
	Thermal head damaged	Contact your dealer for assistance

NOTE: The density of setting, please refer to "Utility Tool for POS Instruction".

6.4 Problems Emerge During The Paper Cutting

Problem Description	Probable Reason	Resolution
Cutter jam, the movable cutter cannot back	Cutter abrasion, insufficient cutting	Replace the cutter
	Worm gear and worm wheel abrasion	Replace the worm gear and worm wheel
	Motor burnt	Replace the motor
	Paper scraps	Clean the paper scraps on the transmission system
Insufficient cutting	Cutter edge abrasion, paper too thick	Replace the cutter
Paper jam	Thermal printer head over heat	Reduce the density of printing
	Driving 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: The density of setting, please refer to "Utility Tool for POS Instruction".

6.5 Removing Jammed Paper



Warning: Do not touch the thermal print head because it becomes very hot after printing.

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

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

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 follows:

※ CAUTION

- Make sure to turn off the printer prior to cleaning.
- As the print head gets hot during printing, intending to clean the print head, turn the printer off and wait approximately 2~3 minute before commencement.
- 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.
- 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 the cleaning pen 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

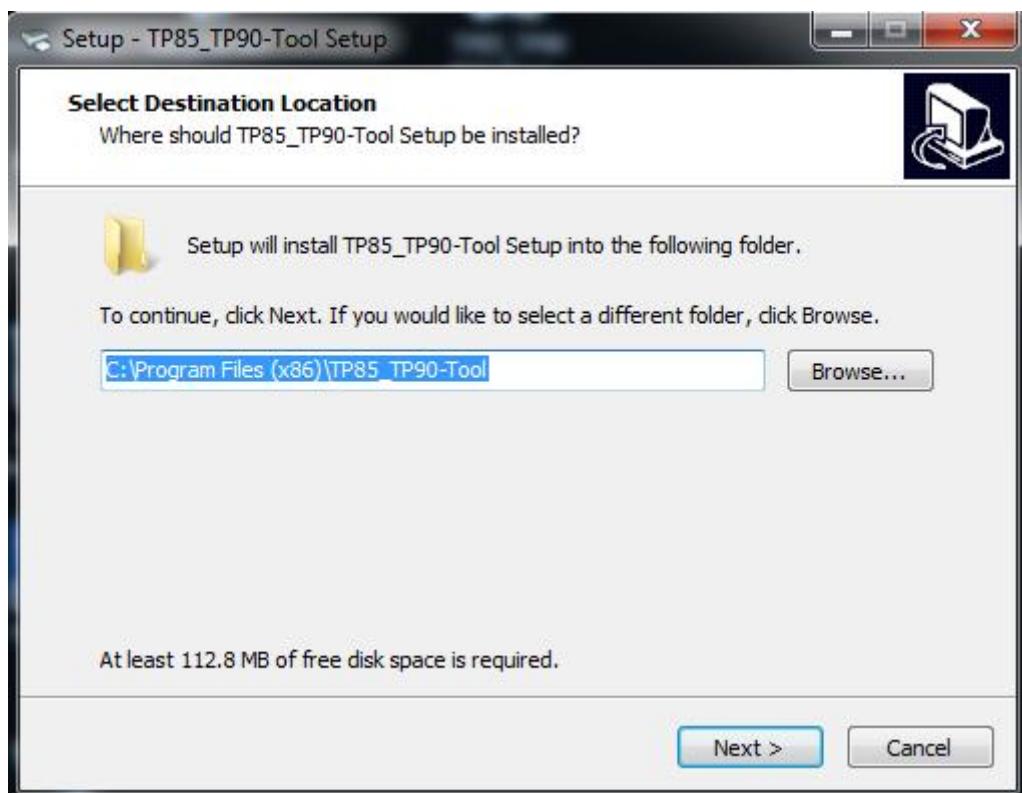
The following screens take Win 7 for example.

1) Open the installation package.

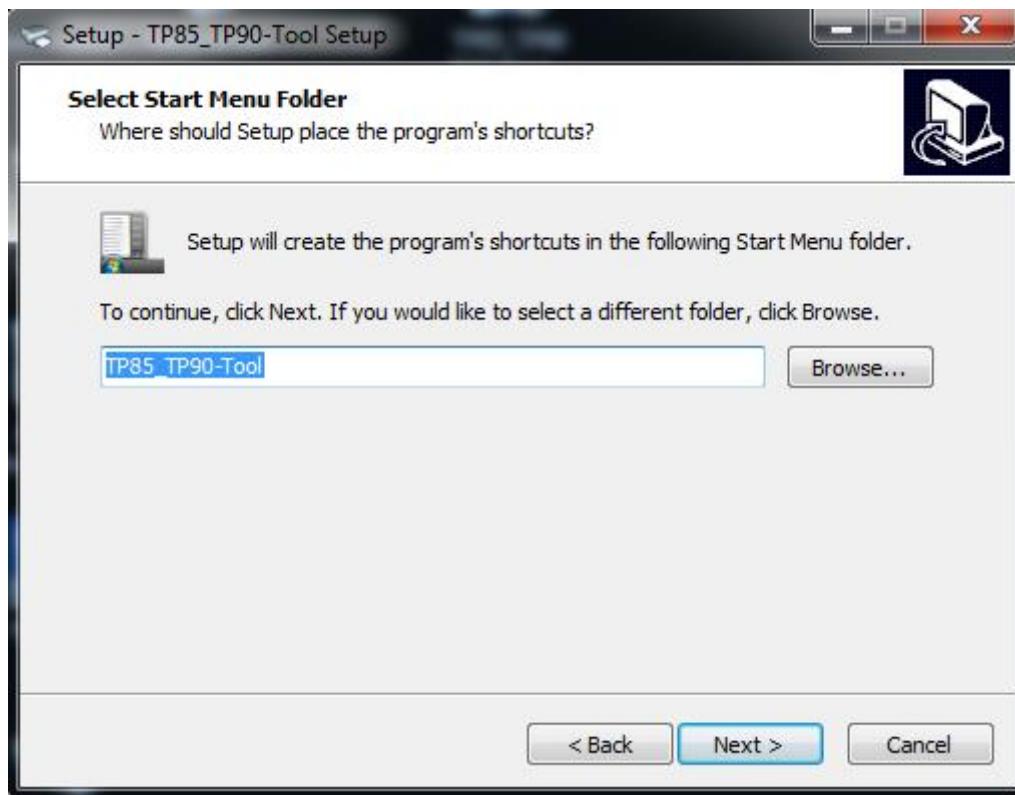
2) Choose “English” and click “OK”.



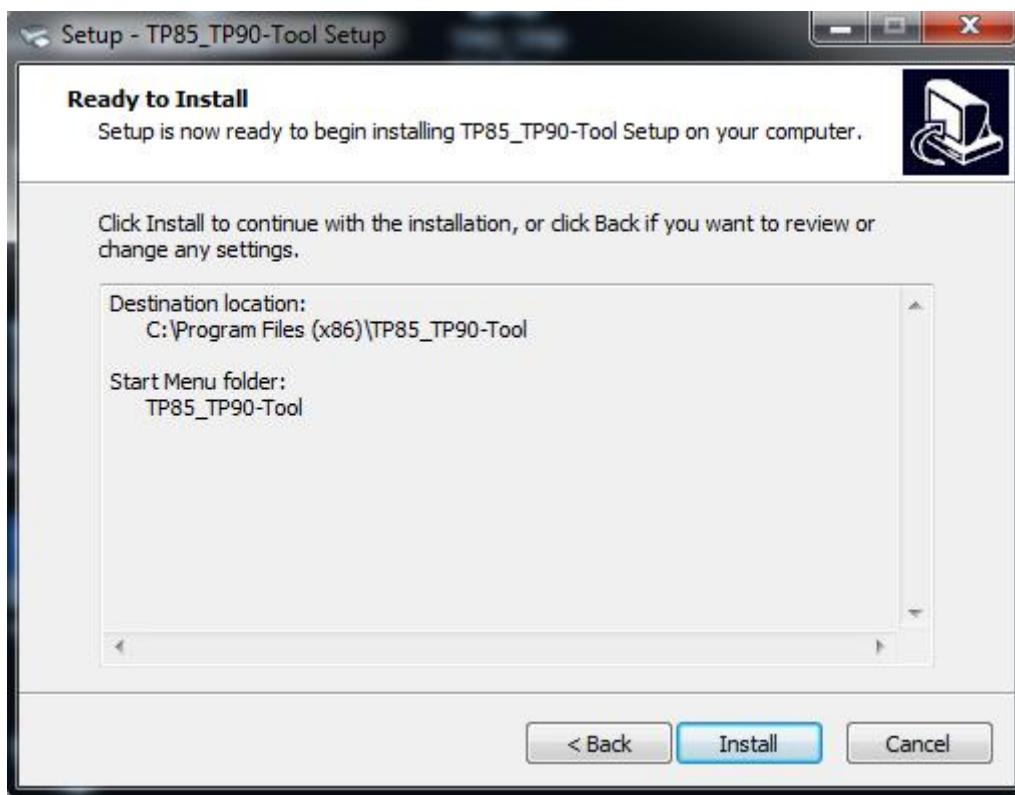
3) Click “Next”.



4) Select start menu folder. Click “Next”.



5) Click “Install”.



6) Click "Finish". Utility is installed successfully.



8.2 Using Utility Tool

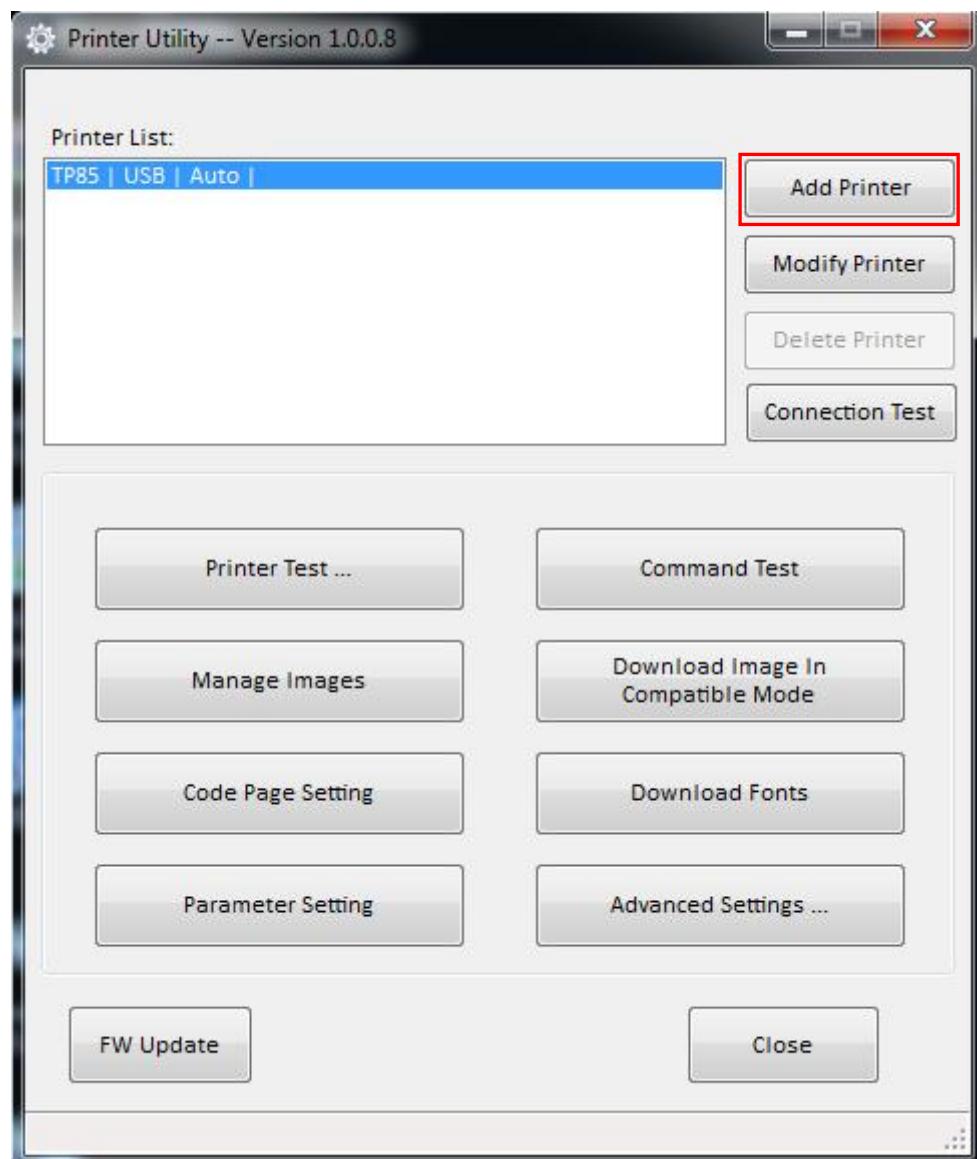


Warning: In different operating system, screen has a slight difference. Please operate it according to the tips. Take TP85 (Windows 7) for example.

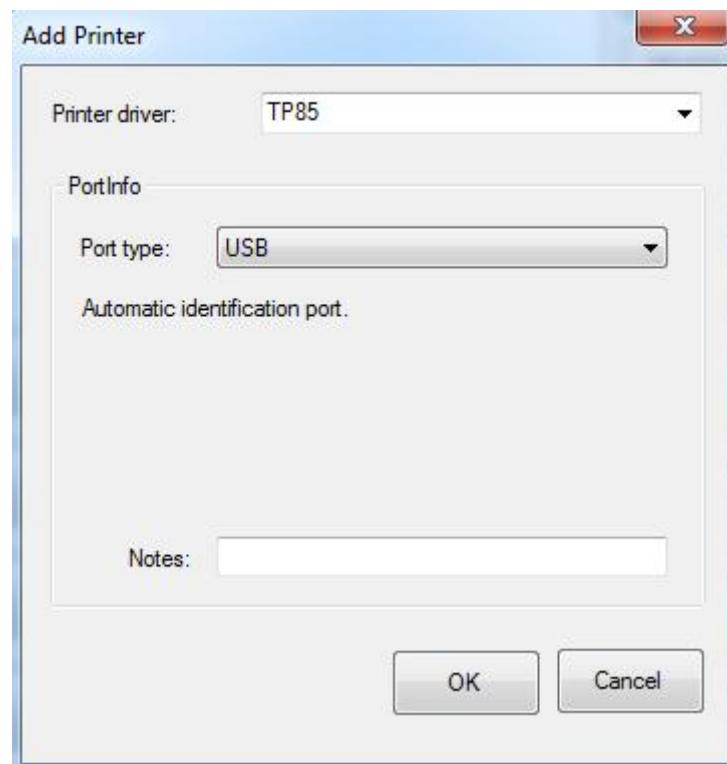
8.2.1 Add/Modify/Delete/Connect Printer

8.2.1.1 Add printer

- 1) Click “Add Printer”.

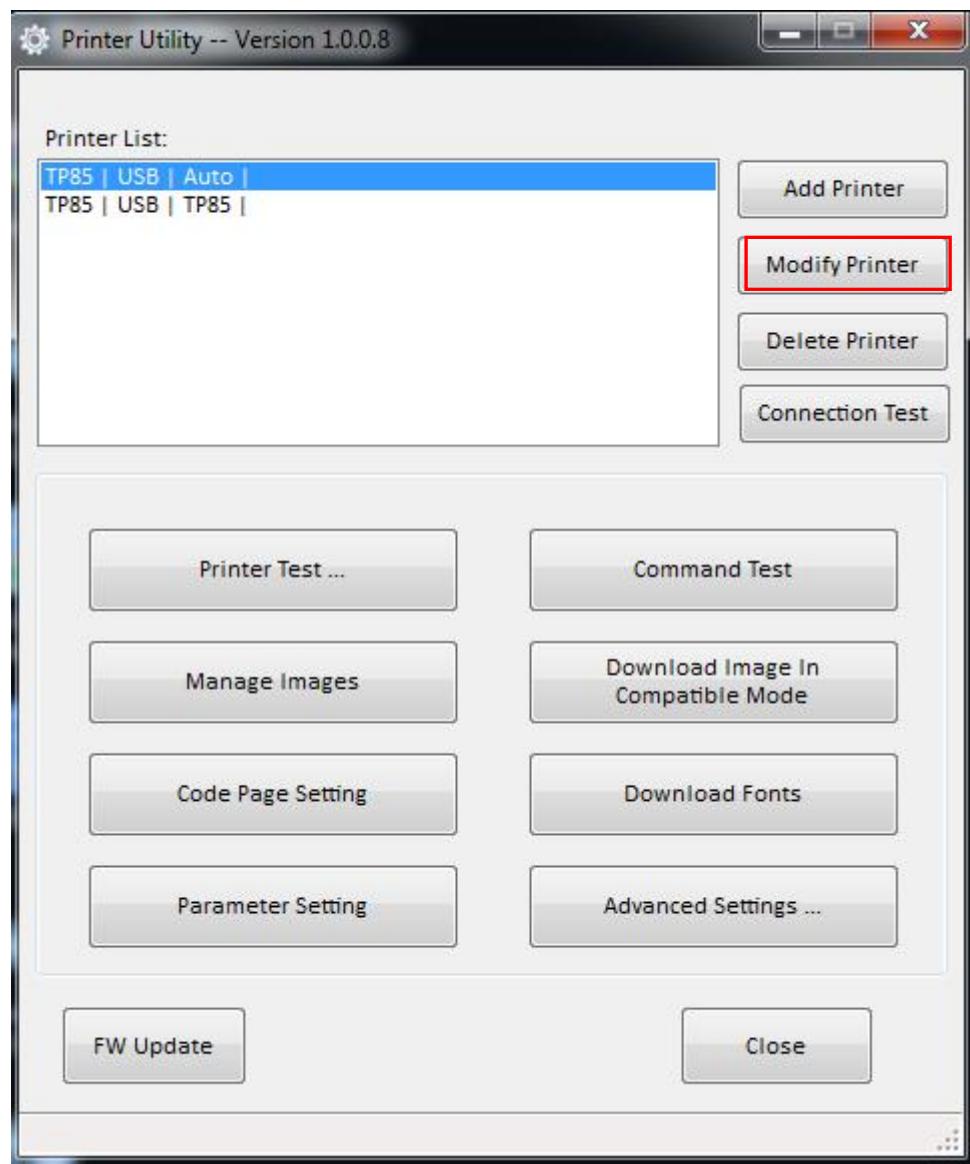


2) Choose the appropriate printer type and port. Then click “OK”. (Take TP85 for example.)

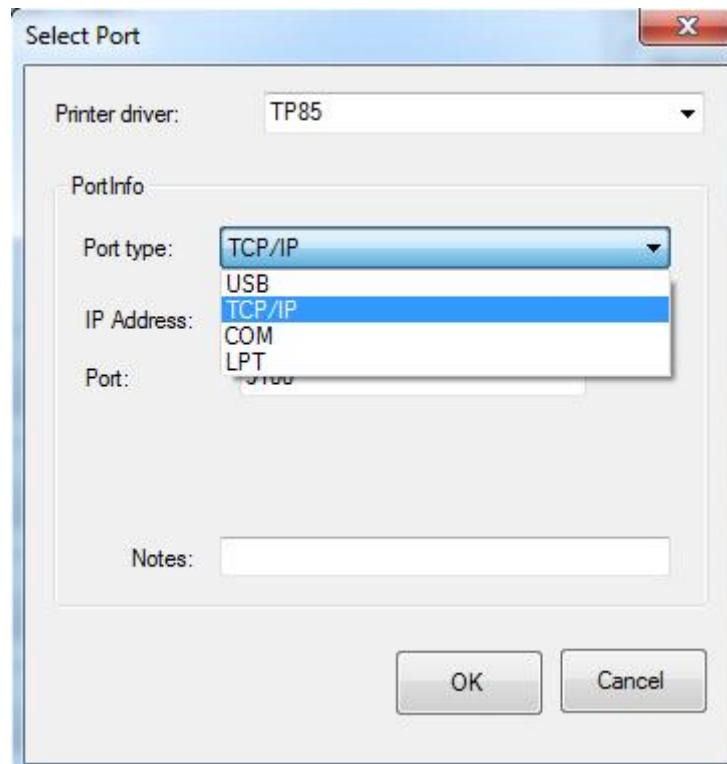


8.2.1.2 Modify printer

- 1) Choose the printer you want to modify in the list. Click "Modify Printer".



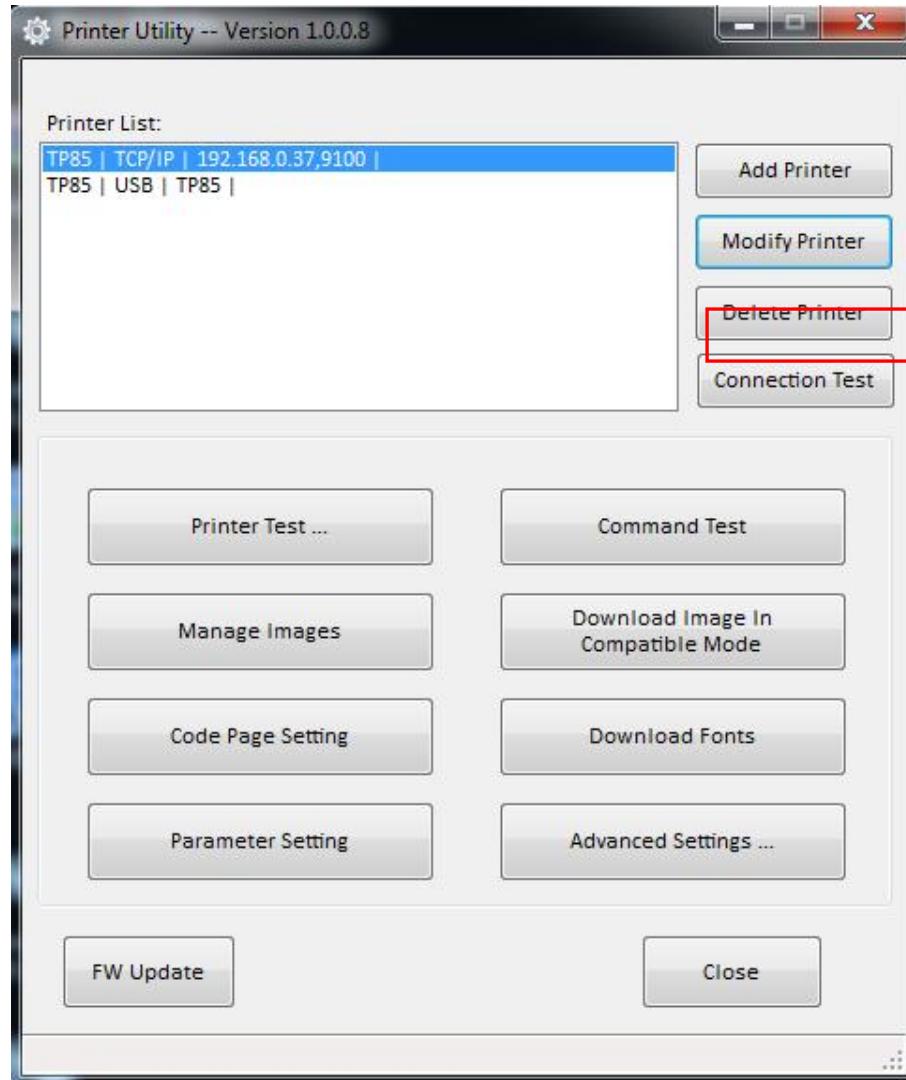
2) Choose the new printer and new port. Then click “OK”.



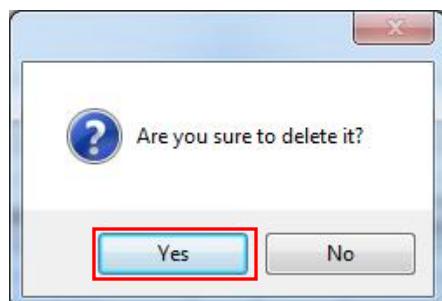
3) The new printer is added successfully.

8.2.1.3 Delete printer

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



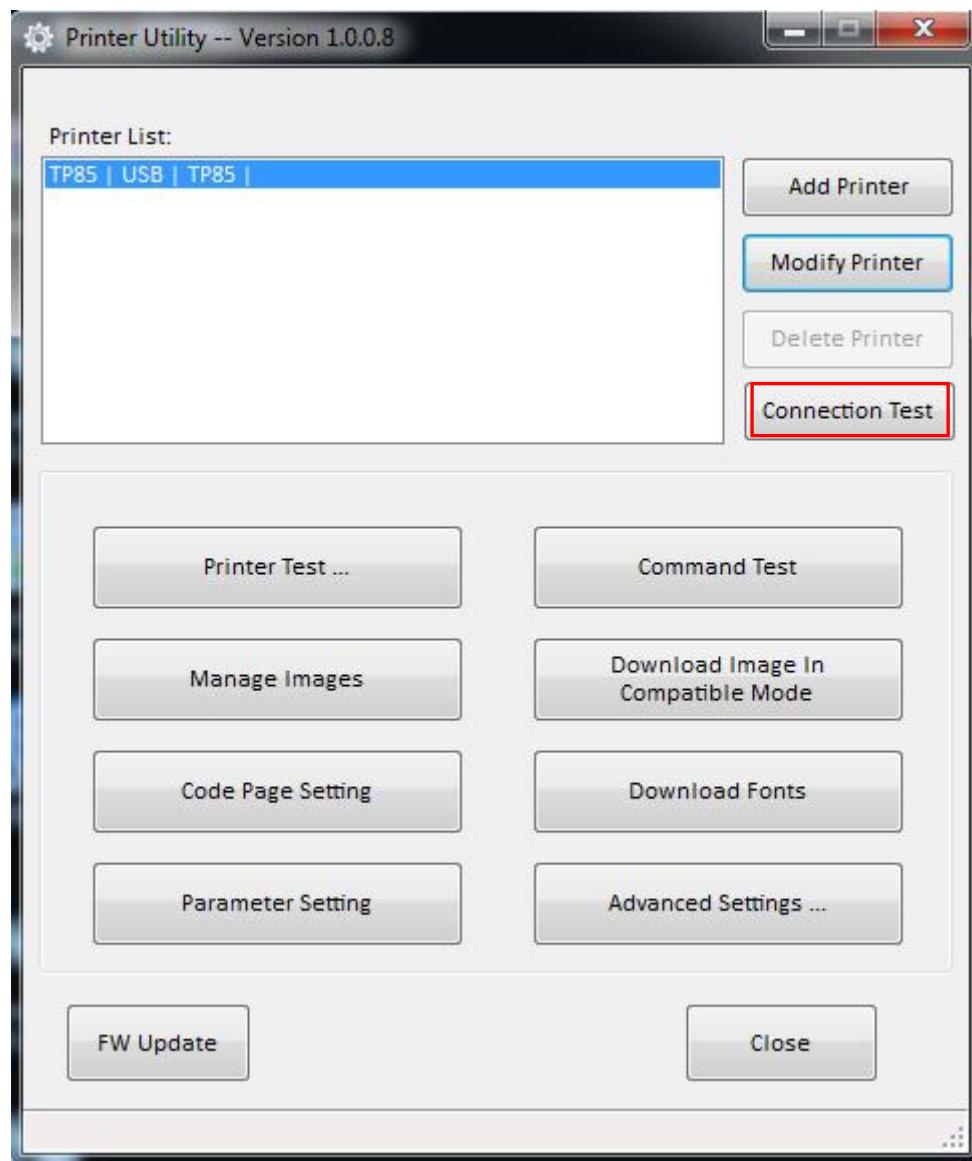
- 2) Click “Yes”, then the printer is deleted.



8.2.1.4 Connection Test

Make sure printer is connected to computer and it is powered 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

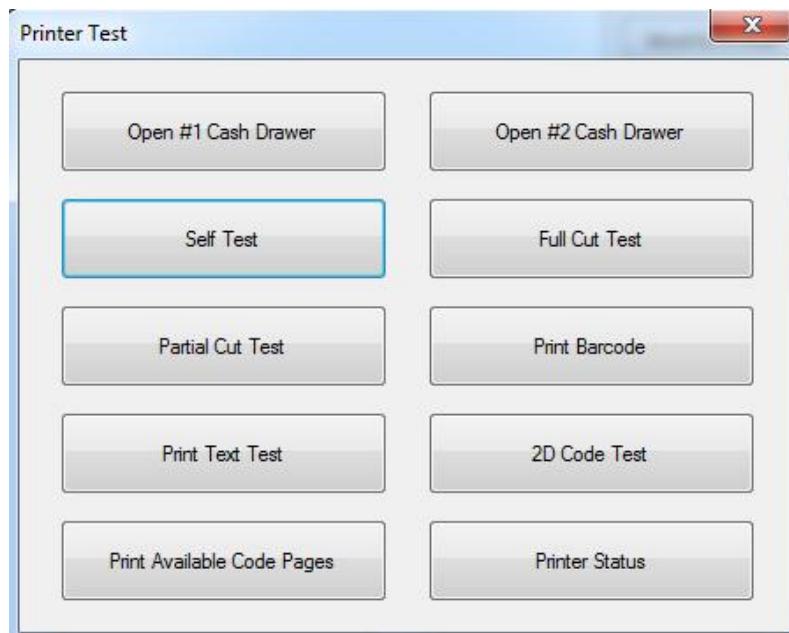
Printer Test contains the following items:

- 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.



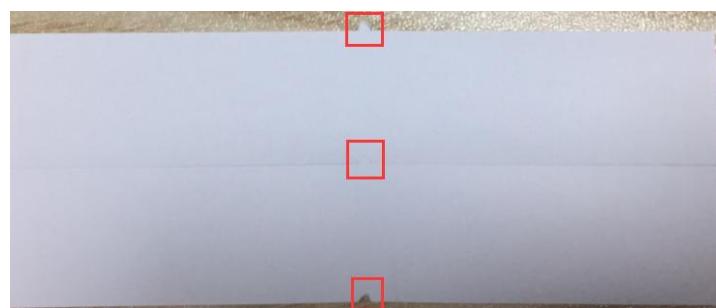
2) Full Cut Test

Click the “Full Cut Test” and the paper will be cut automatically. Cutting method is full-cutting. The paper would be falling down from the paper outlet after cutting.

3) Partial Cut Test

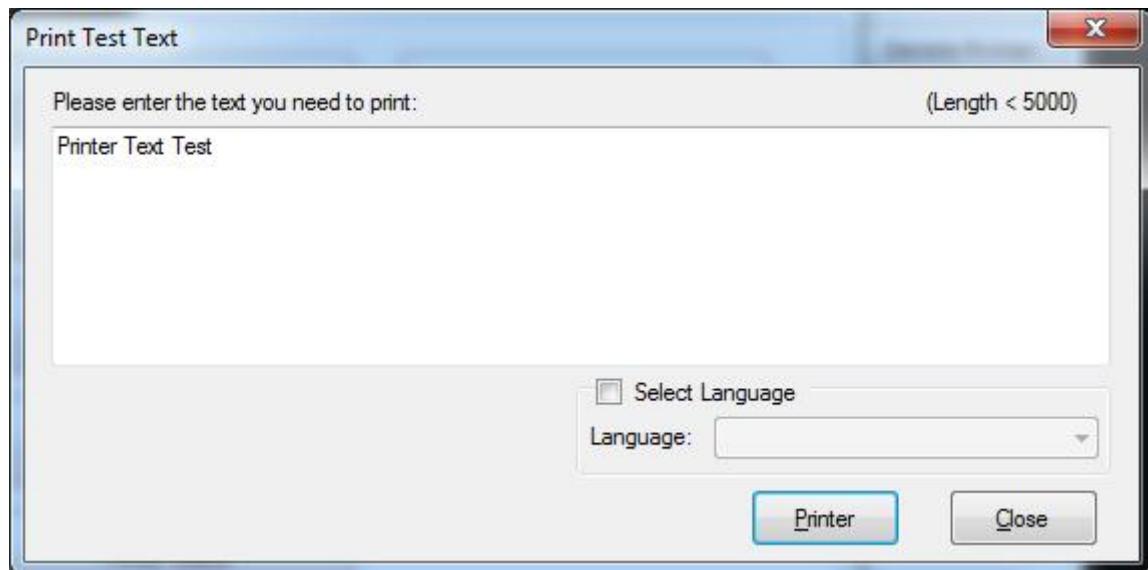
Click the cutter test and the paper will be cut automatically. Cutting method is partial cut (Partial cut: Not all cut off, between the two sheets of paper to leave a connection point).

As shown in the figure:



4) 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.

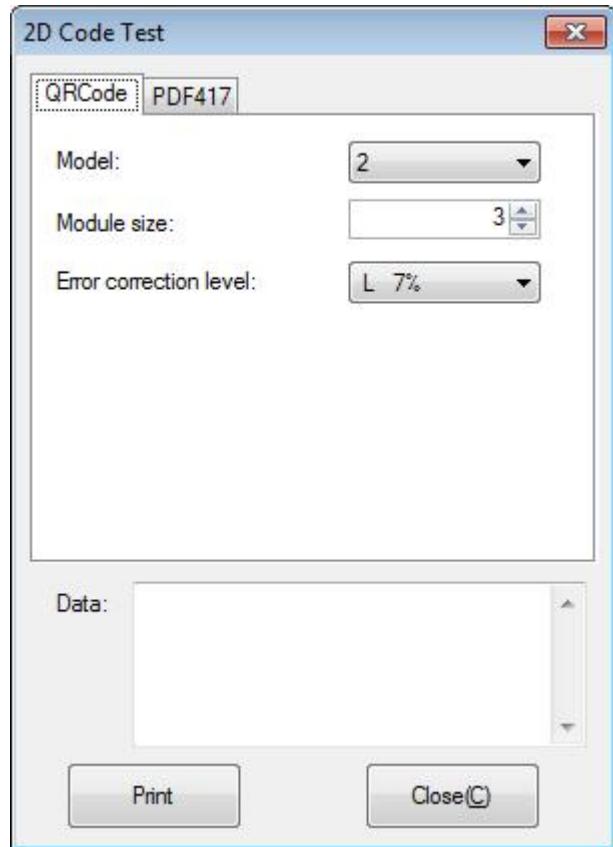


Note:

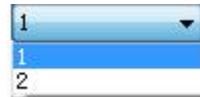
The language option in the lower right corner is checked according to the input text. (For example: The input is Simplified Chinese, the language is checked for Simplified Chinese, the printer prints the input text according to the setting options, and if you check other languages, the printer does not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

5) 2D Code

Click the QRCode mode.



▲ Model: 1~2

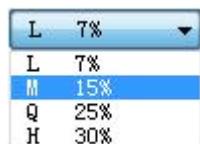


▲ Module size: 1~16

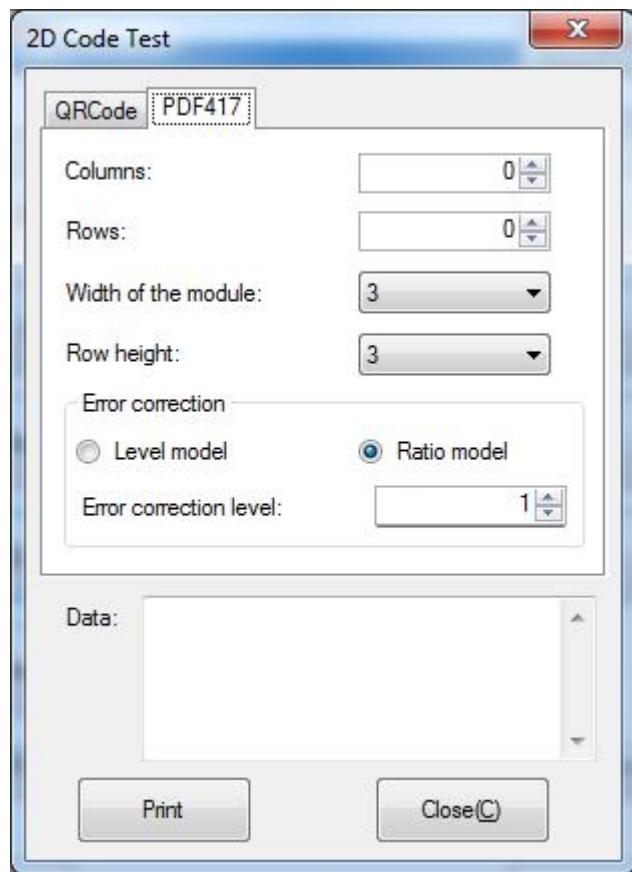
The larger the module value, the larger the printed QR code is, and the smaller the opposite.

▲ 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

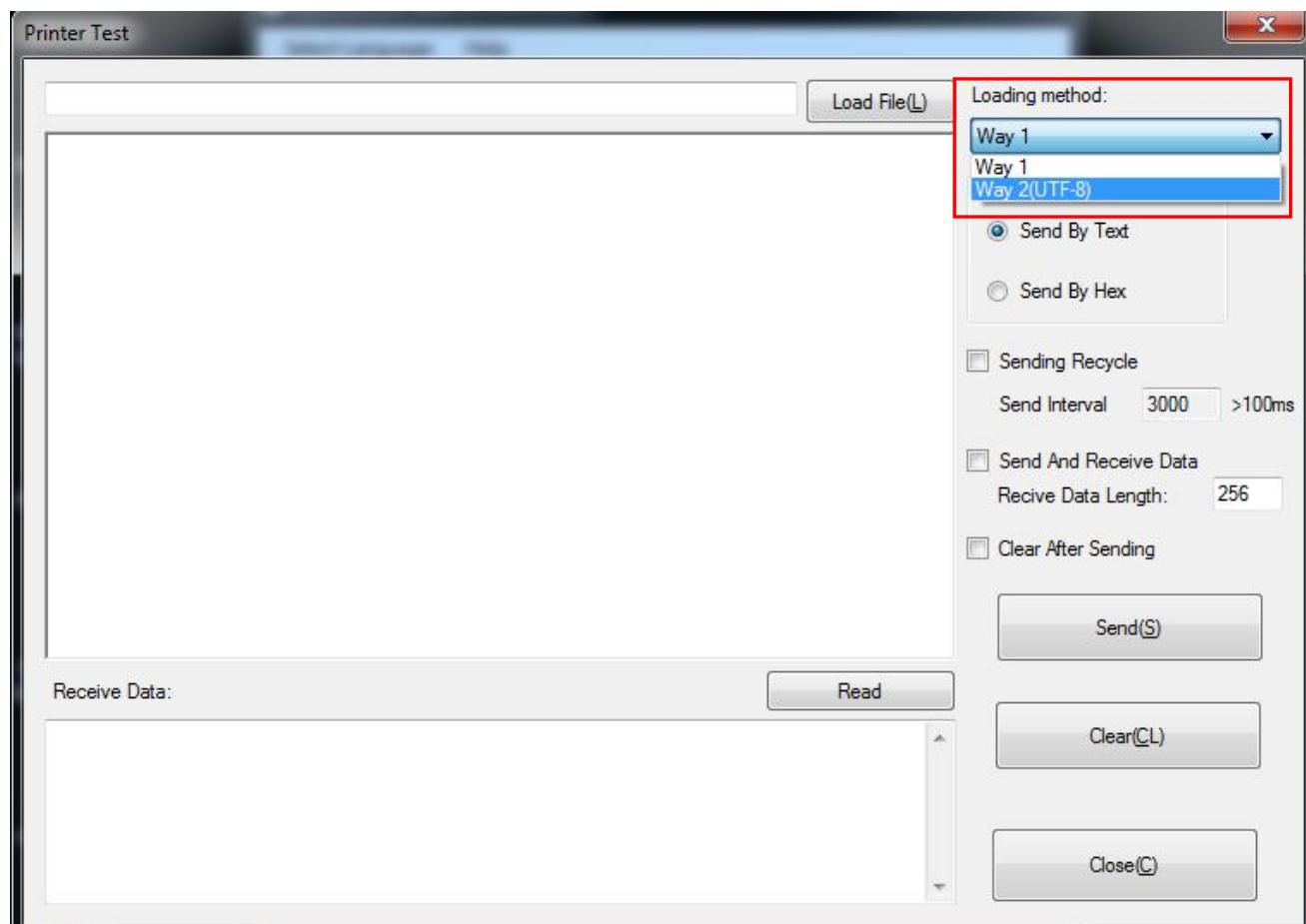
The larger the module value, the longer the printed PDF417 barcode, and the smaller the opposite.

▲ Error connection level

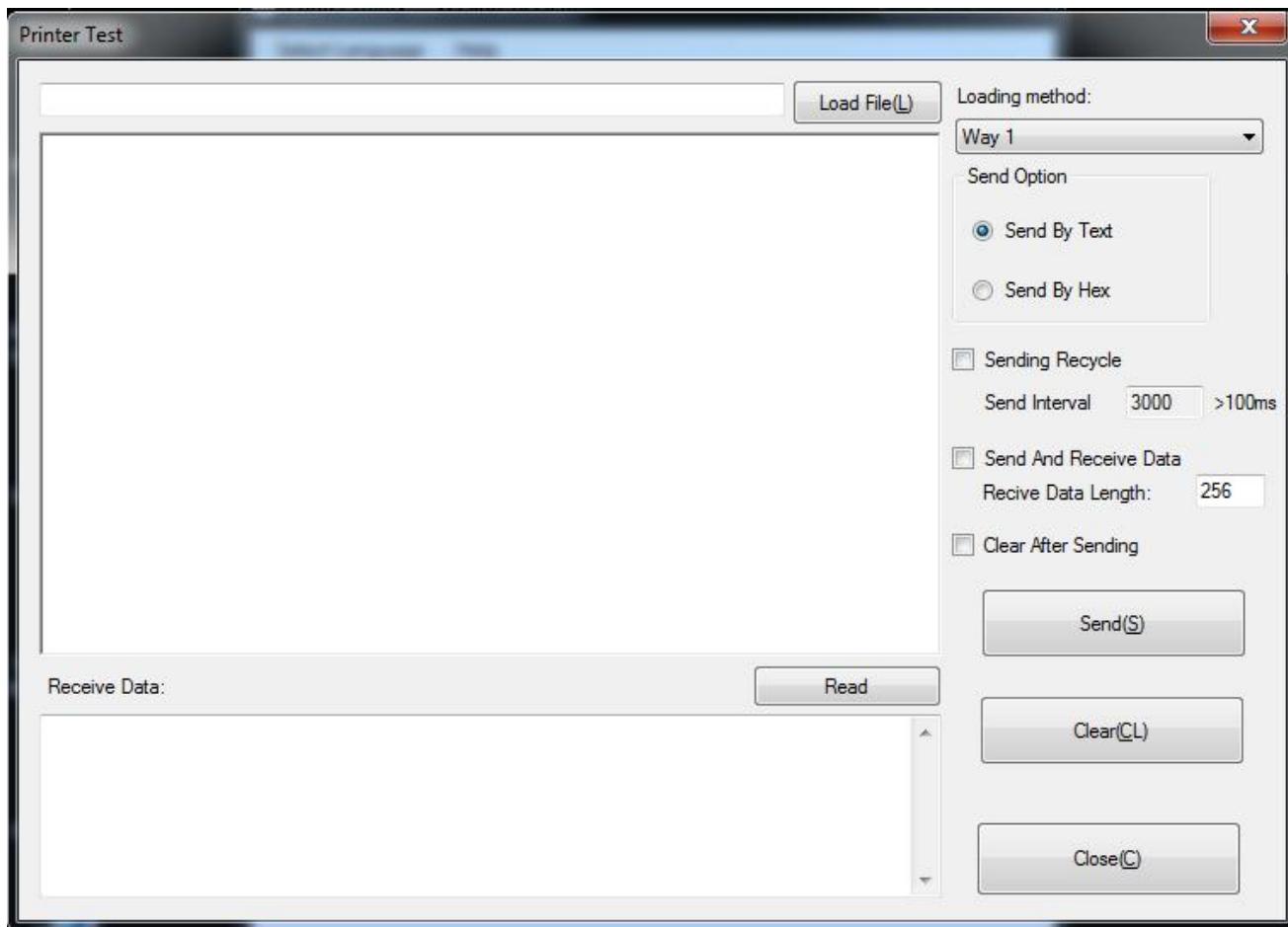
8.2.2.2 Command Test

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) There're two ways to load files. You can choose the way you want.

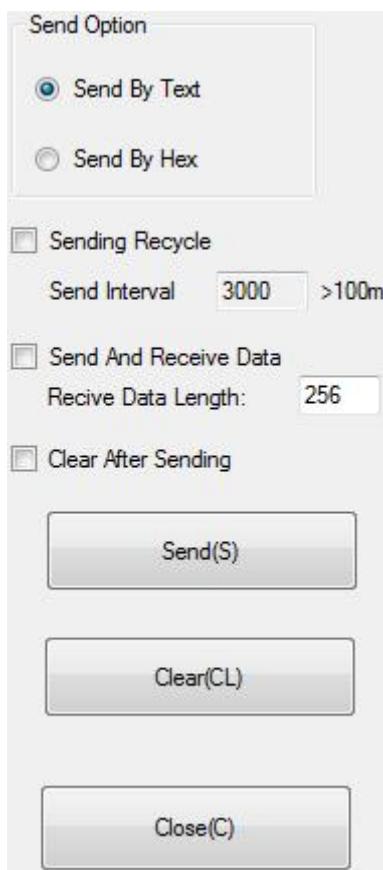


2) Click “Send by Text”, input text content.

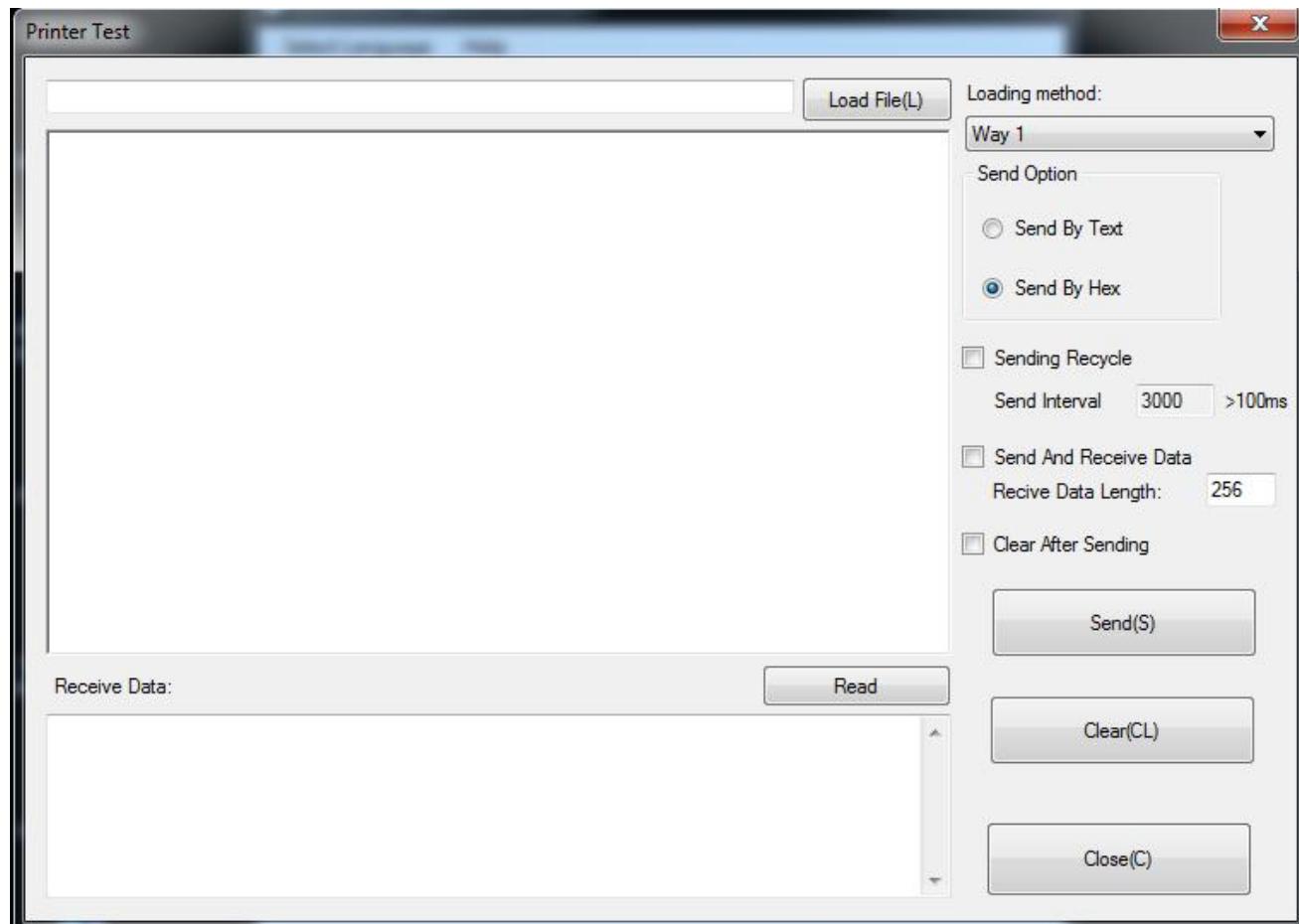


▲ Sending Recycle:

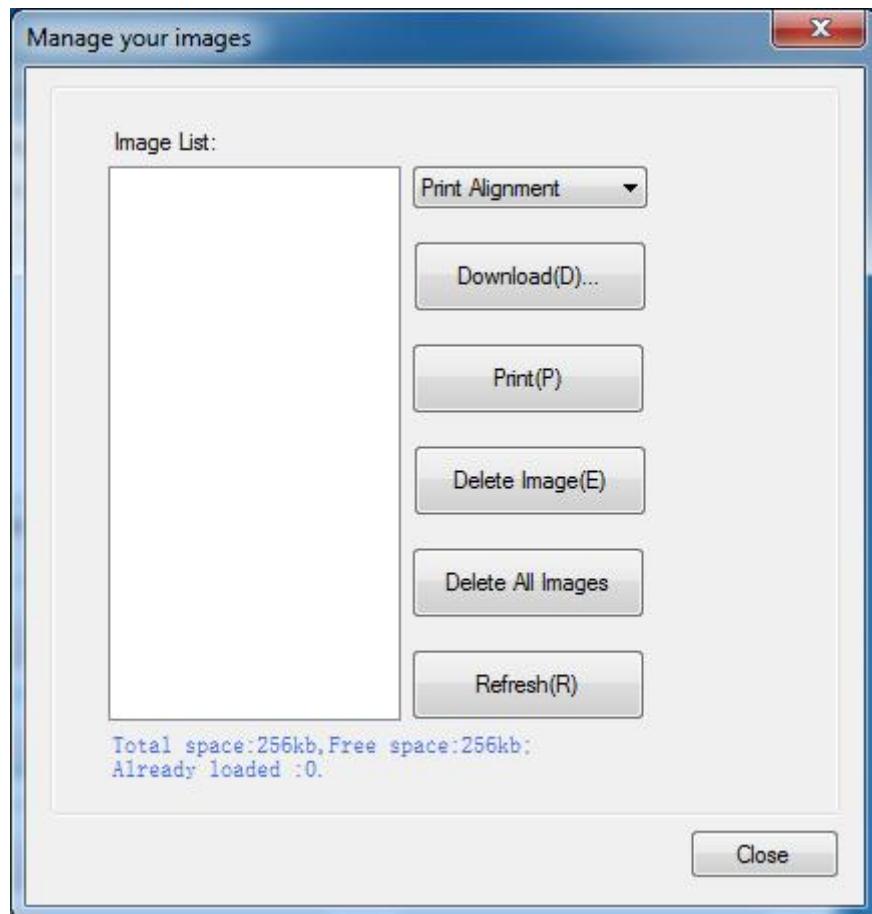
When the interval is set to 3000ms (you can set the interval as needed), then click “Send”, the printer starts to recycle printing. Click “Stop” to stop the recycle printing.



- 1) Click "Send by Hex", input the content. (Convert text to HEX or send ESC command)



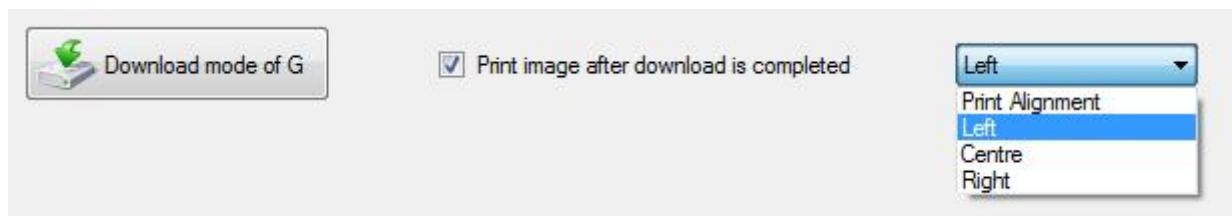
8.2.2.3 Manage Images

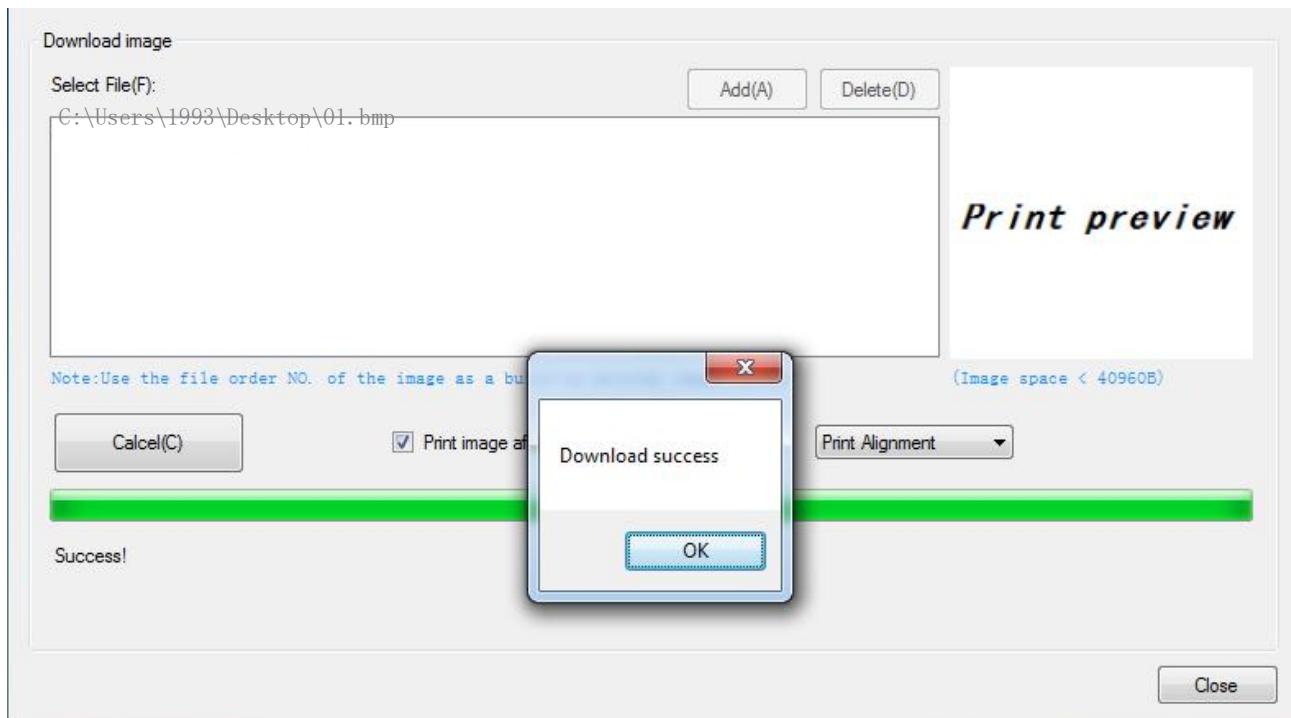


- 1) Click "Download" to add the image, if you want to print the picture, set the print location before clicking "Download mode of G" to print the picture. (It is recommended to use a picture in BMP format)



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



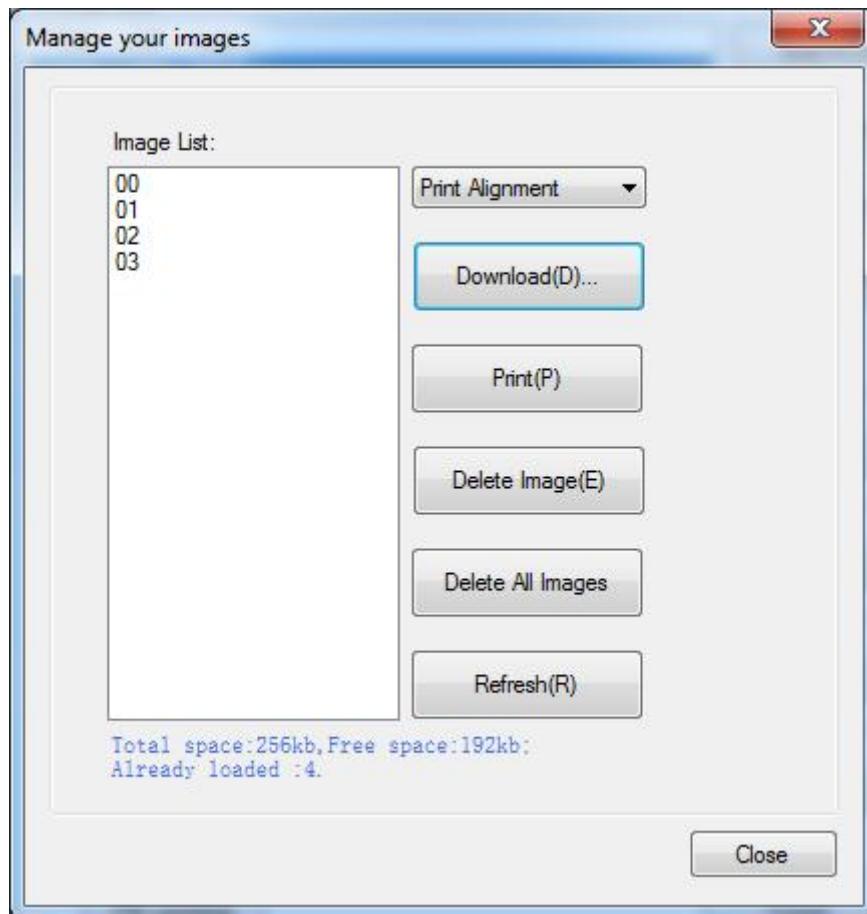


Note: Total memory 256K, each bitmap should be below 40K.

3) Delete Image.



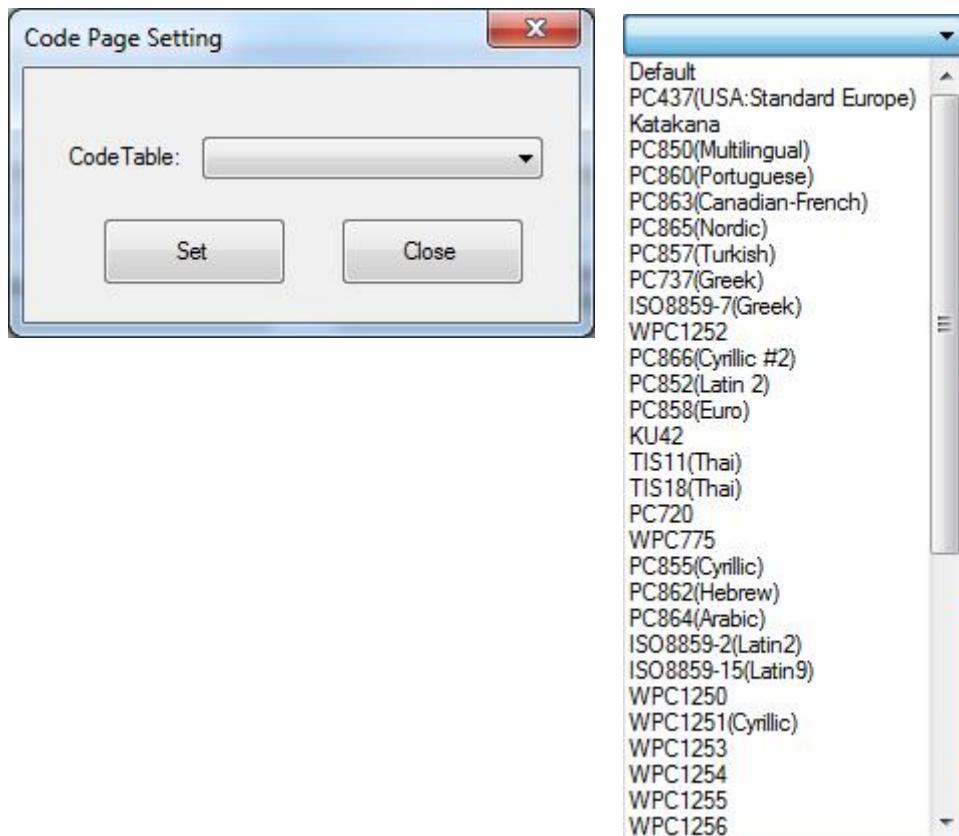
Note: Each time click "Download mode of G", an image list number will be generated.



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

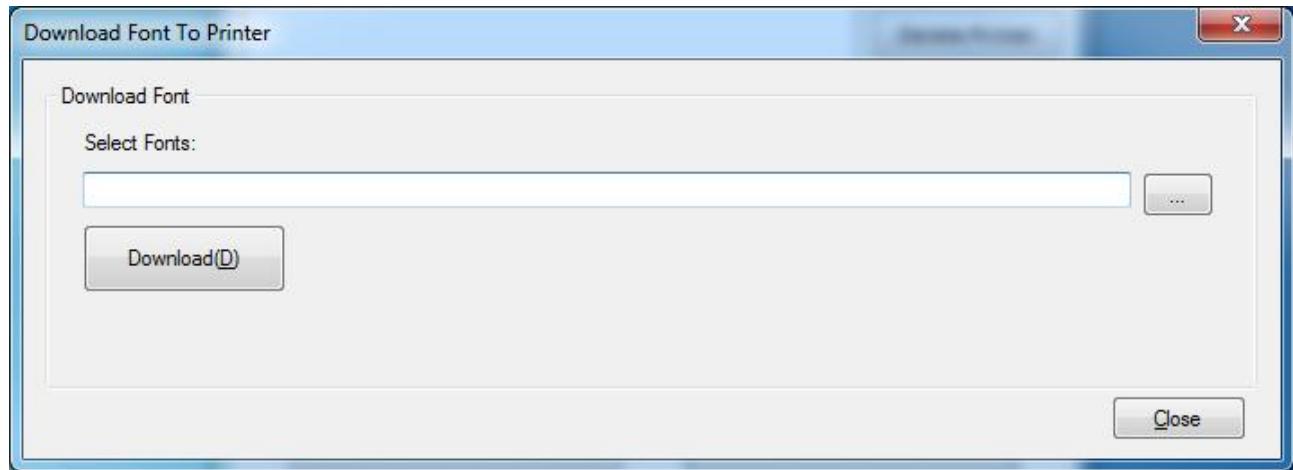
Select the code page from the list and click “Set”.



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

8.2.2.5 Download Fonts

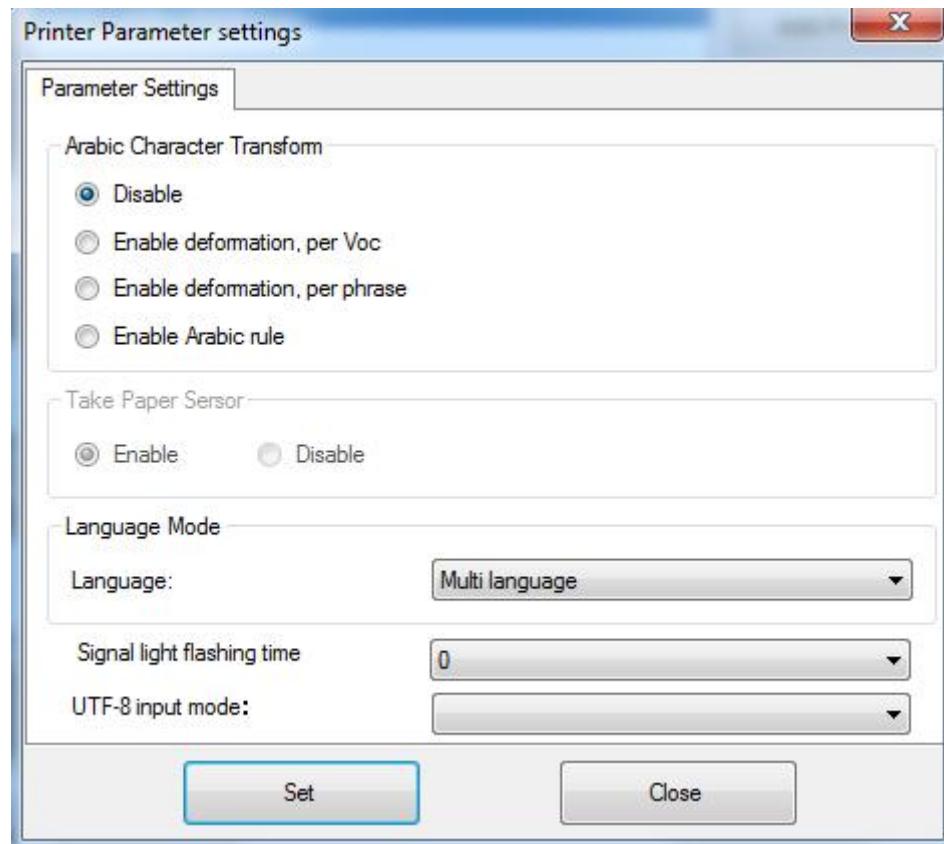
Select the font from the existing file and click "Download".



Note: After downloading the font successfully, restart the printer before using it.

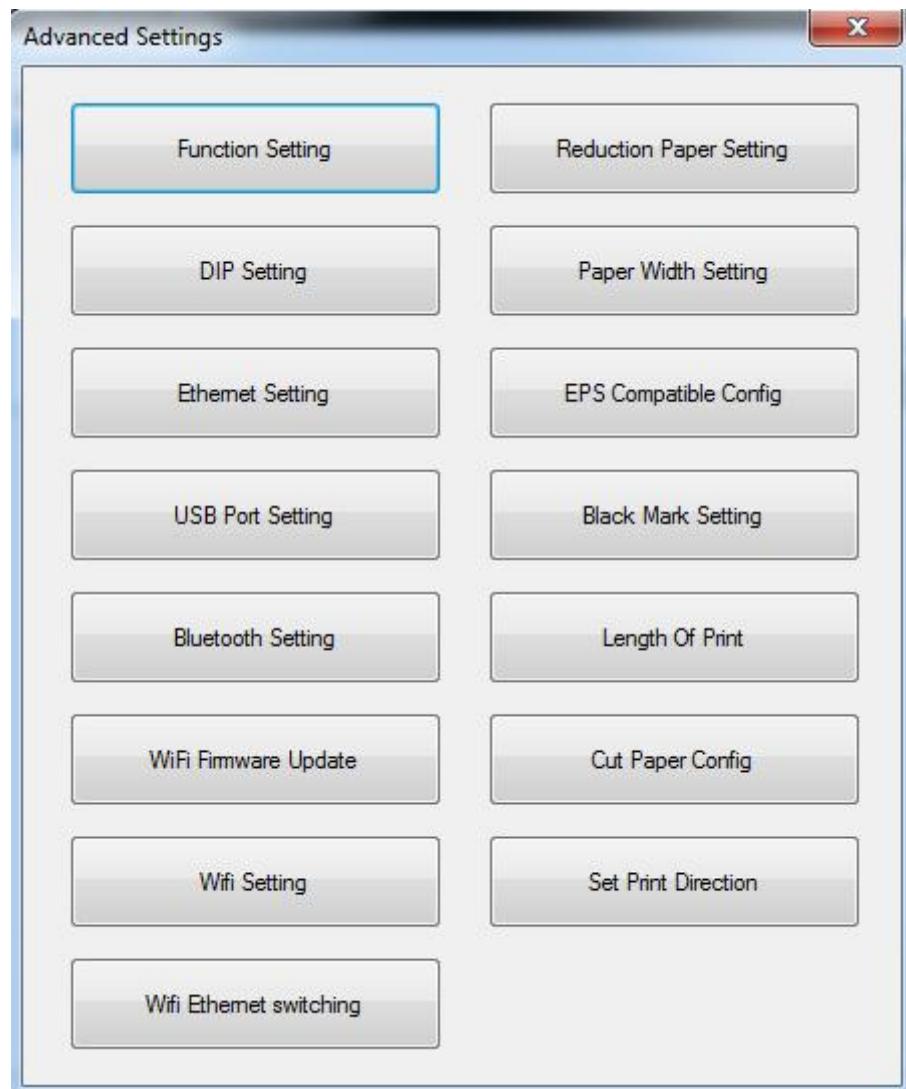
8.2.2.6 Parameter Setting

You can set “Arabic Character Transform”, “Language Mode”, “Signal light flashing time” and “UTF-8 input mode”.

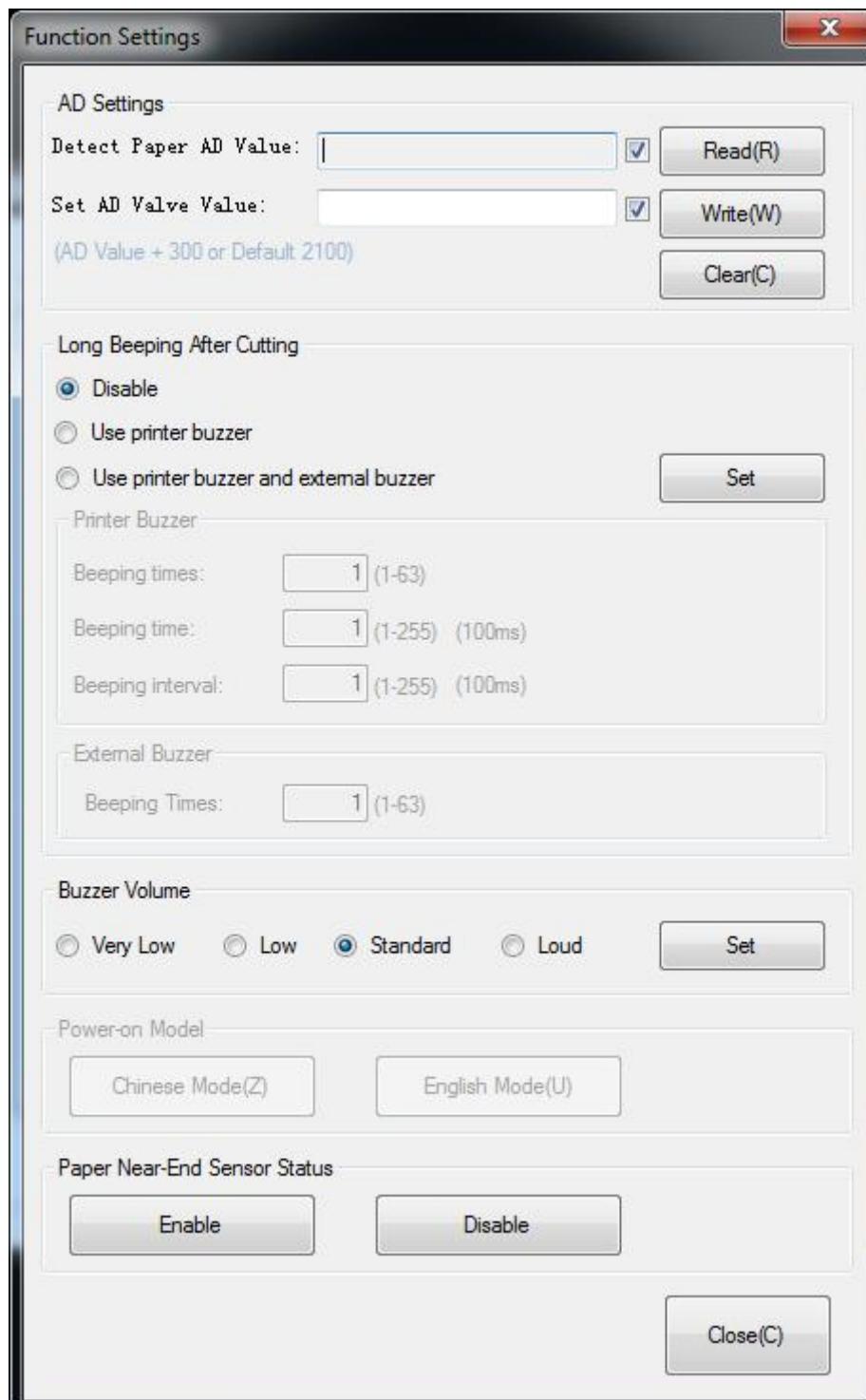


8.2.2.7 Advanced Setting

Advanced Settings contain following items. Click the button and printer will execute the appropriate action. The change will take into effect after restarting the printer.



◆ Function Setting



- **AD Settings:**

- ① Detect Paper AD Value: click “Read” and you can see the default value and cannot be input.
- ② Set AD threshold value: You can input the value, and the ideal value is the AD value plus 300, and the default value is 2100.

- **Long Beeping After cutting:**

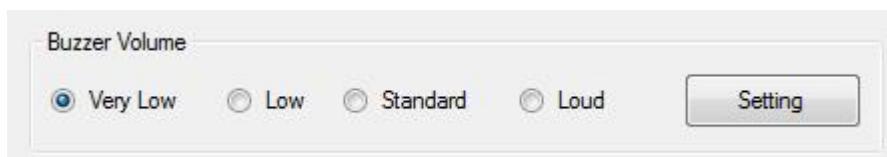
- ① **Disable:** there is no sound after cutting
- ② **Use printer buzzer (The beeping time, times and interval time can be set for what you want, such as 1 milliseconds, 2 milliseconds or 3 milliseconds, etc.):**

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.

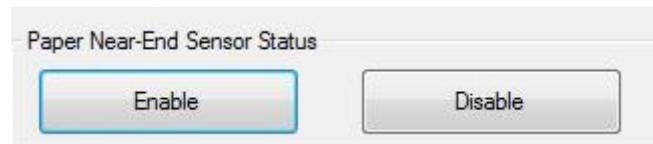


- **Buzzer Volume:**



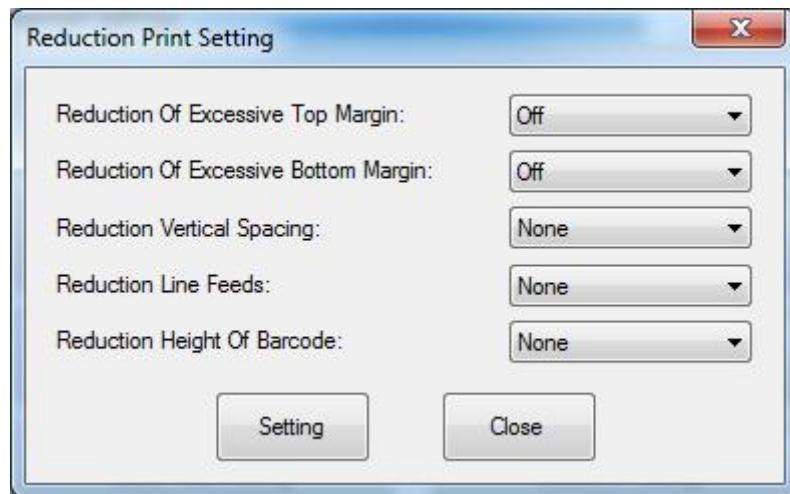
The “Very Low” is the minimum sound, and the “Loud” the maximum sound. You can select a volume level and click "Setting" to print (Default: "Standard" level).

- **Paper Near-End Sensor Status:**



◆ Reduction Paper Setting

Choose the item and click "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:

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

④ Reduction Line Feeds:

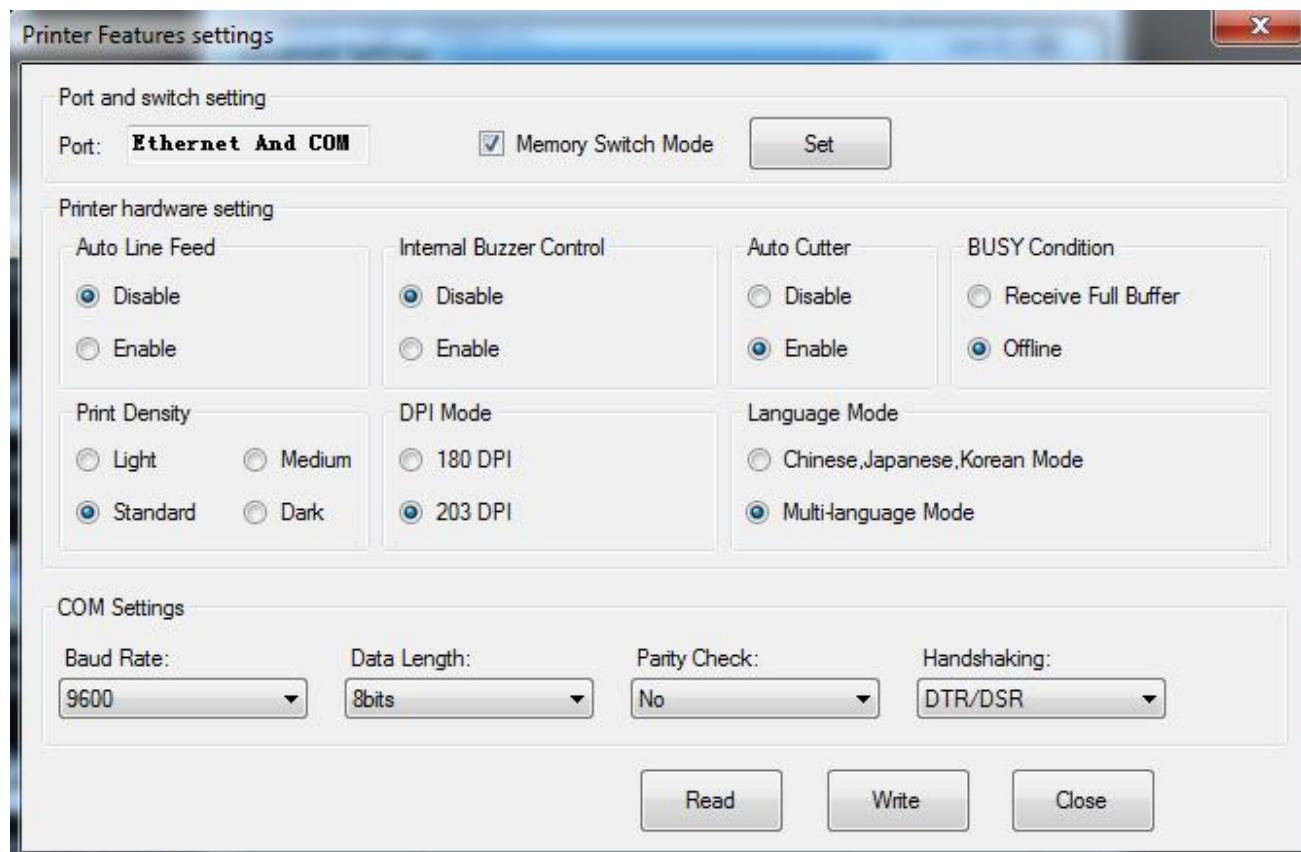
The higher the reduction line feeds, the narrower the interval between two lines of characters.

⑤ Reduction Height of Barcode:

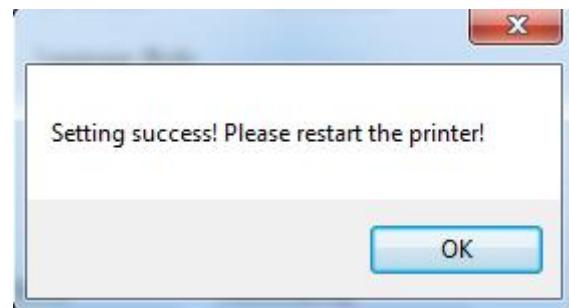
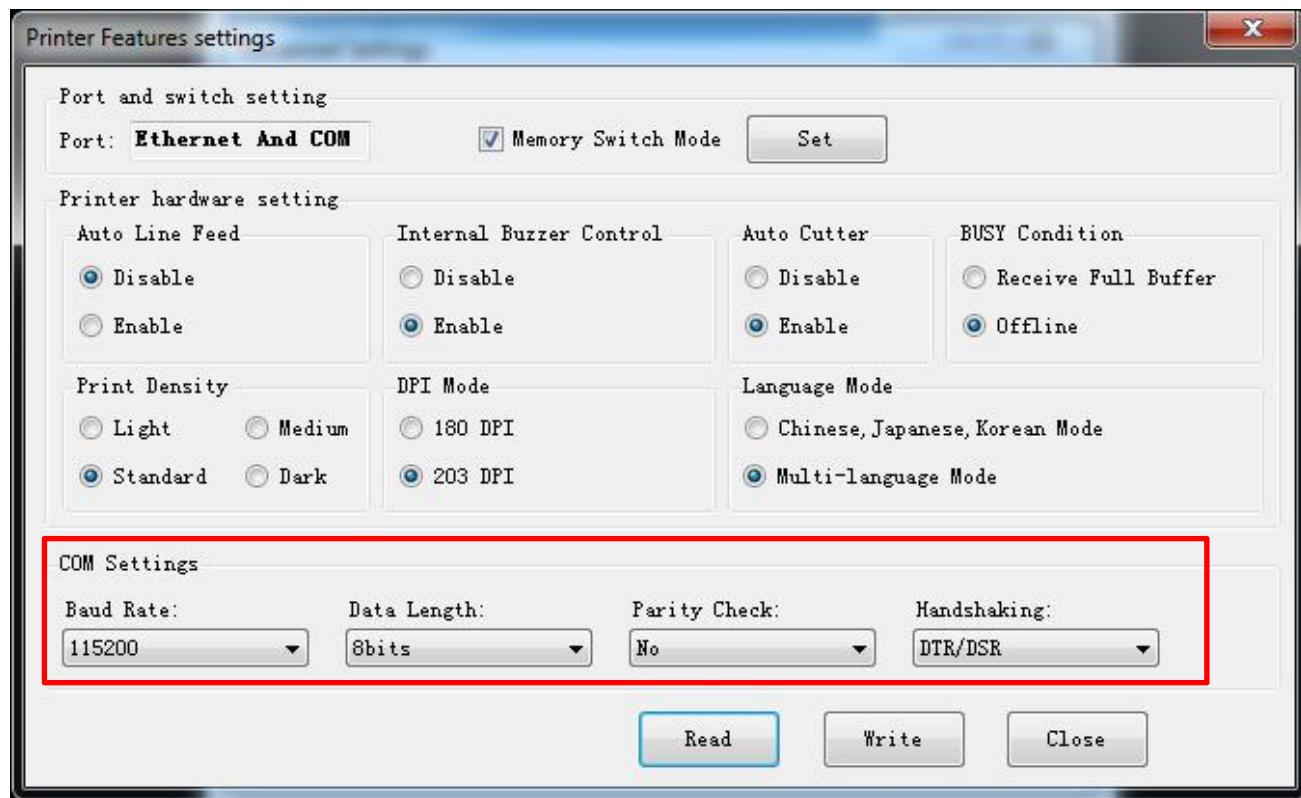
The bigger the reduction height of barcode, the smaller the height of the barcode.

◆ DIP Setting

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



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 before using it.

- **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: 8bits

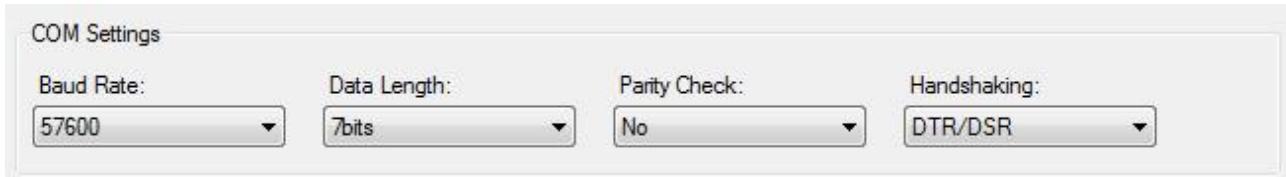
Stop Bits: 1

ADDC: DTR/DSR

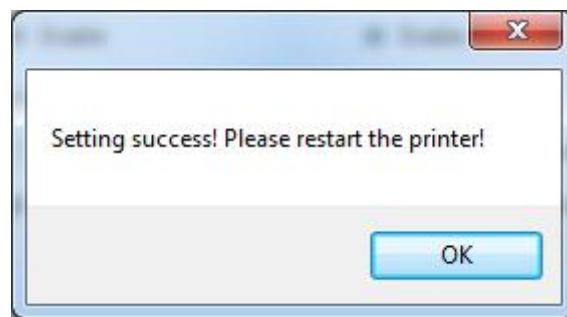


Note: When the DIP setting is set in memory switch mode, the DIP switch at the bottom of the printer need to be disabled.

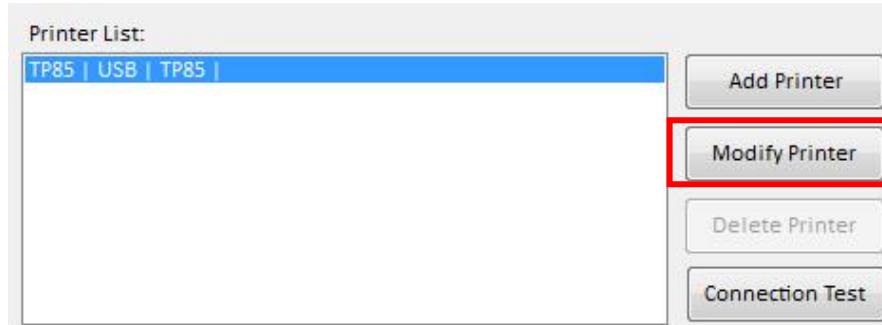
- **Modify the COM setting**



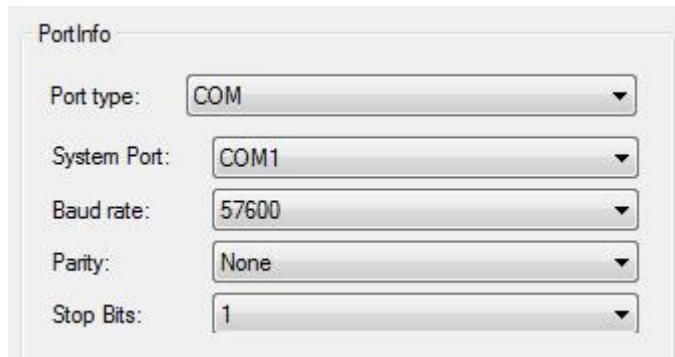
- 1) After setting the parameters as required, click "Write" and restart the printer.



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

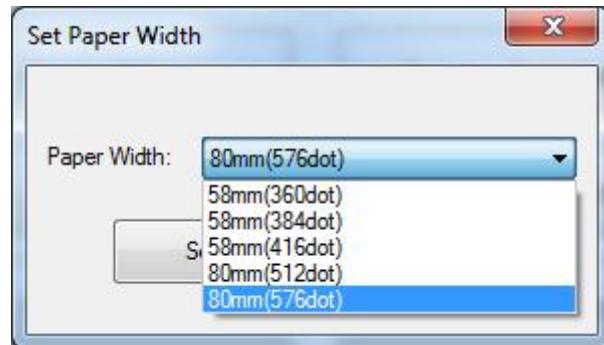


- 3) Select the port category "COM" and set the baud rate to the value "57600" as shown above, and parity "None". This port allows you to print after setup is complete.



◆ Paper Width Setting

Choose the item and click “Setting”.



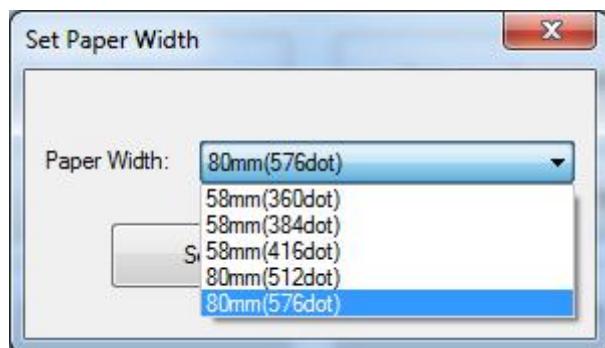
- ① 58mm (360dot)
- ② 58mm (384dot)
- ③ 58mm (416dot)
- ④ 80mm (512dot)
- ⑤ 80mm (576dot)



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

◆ Paper Width Setting

Choose the item and click “Set”.



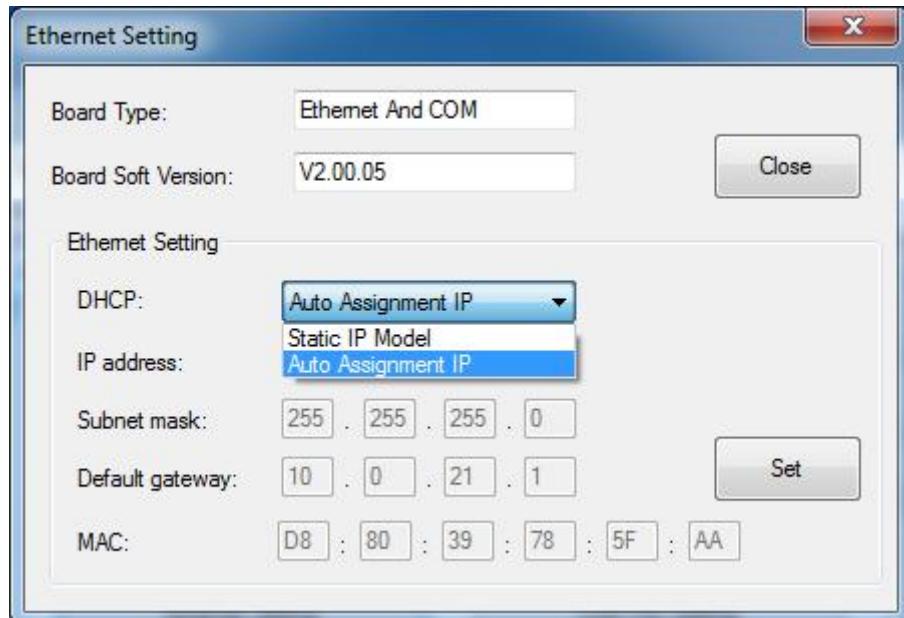
Note: Select the paper width above according to the paper print width.

◆ 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:

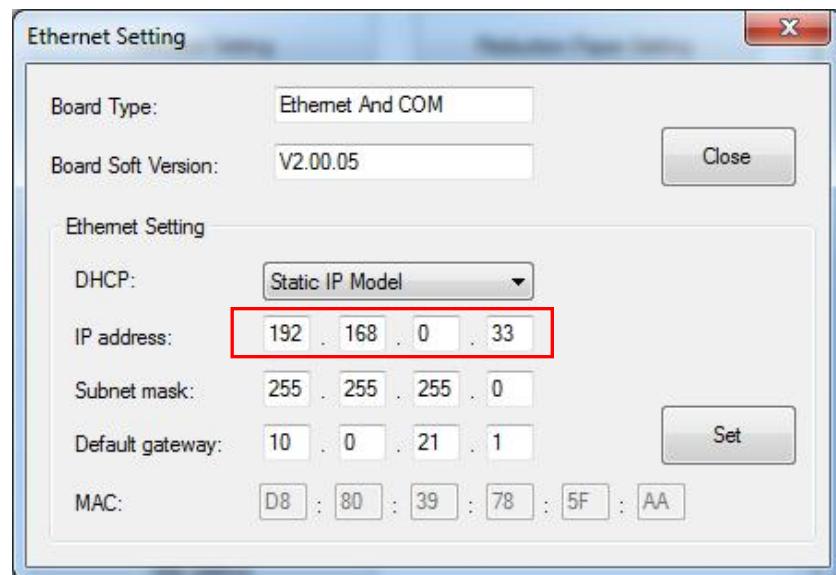


Figure ■ Printer IP Address

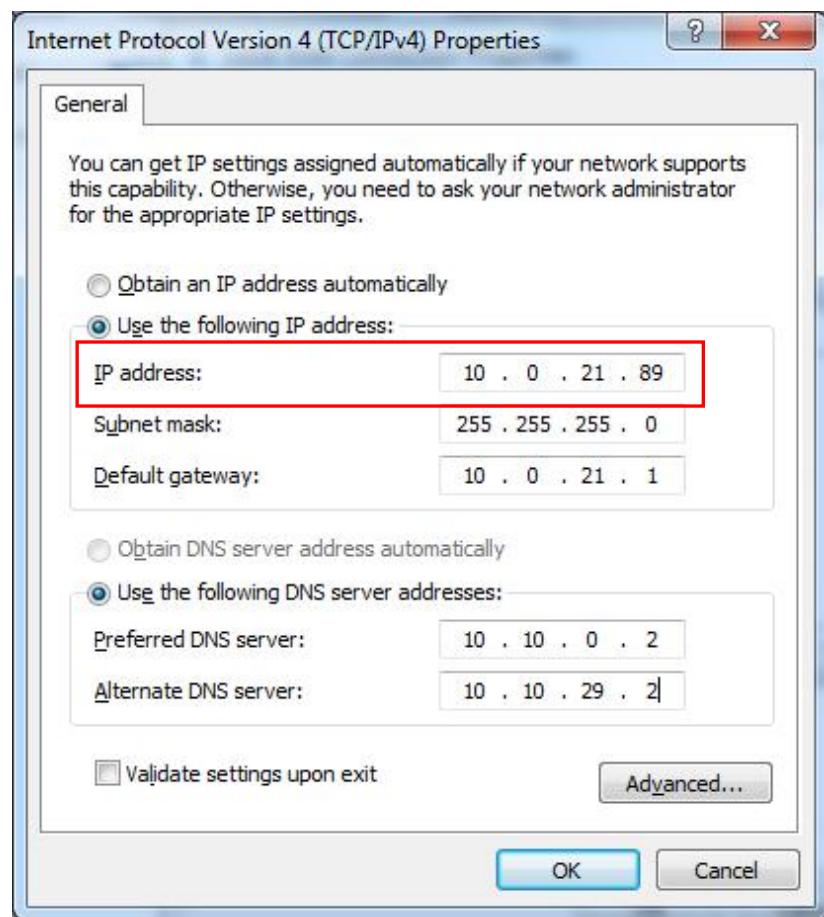


Figure ▪ Host IP Address

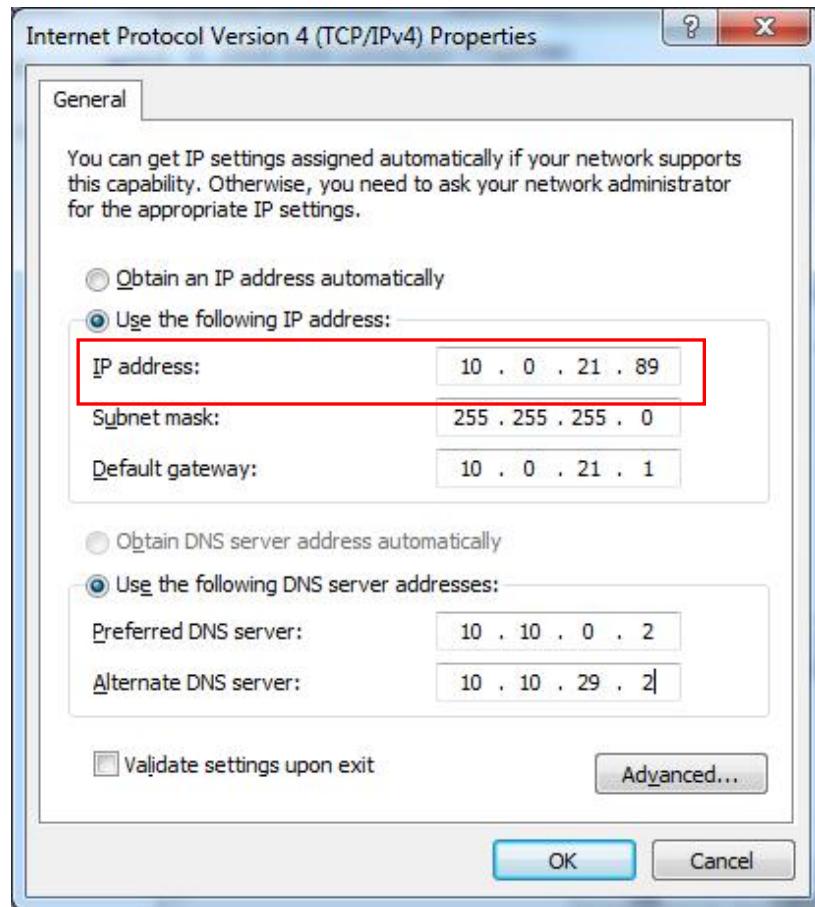


Figure ▪ Host IP Address

2) Set the same network segment.

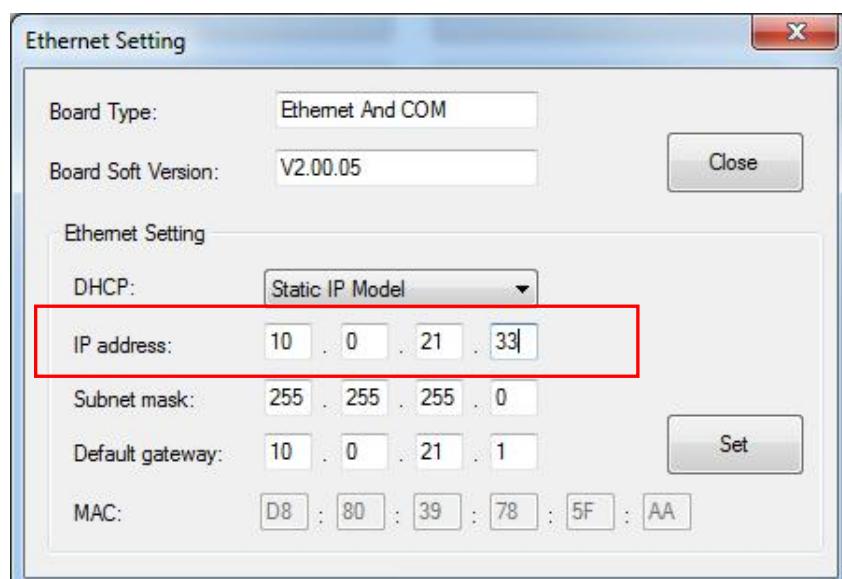
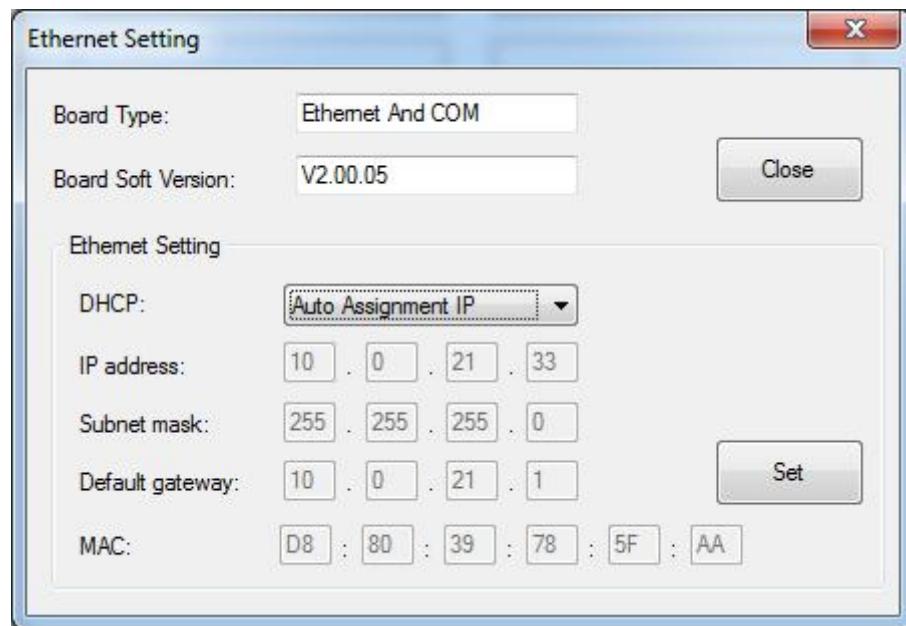


Figure ▪ Printer IP Address

- Auto Assignment IP

This mode automatically assigns the IP address to the printer.

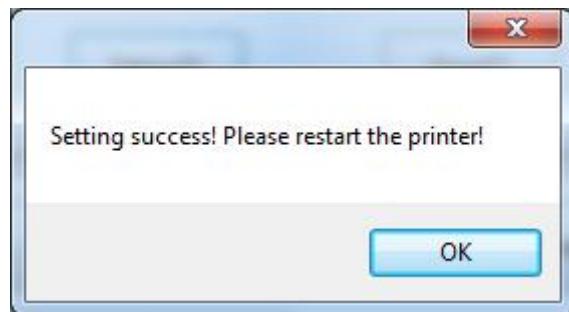


When the settings are complete, click "Write", then restart the printer.

◆ USB Port Setting

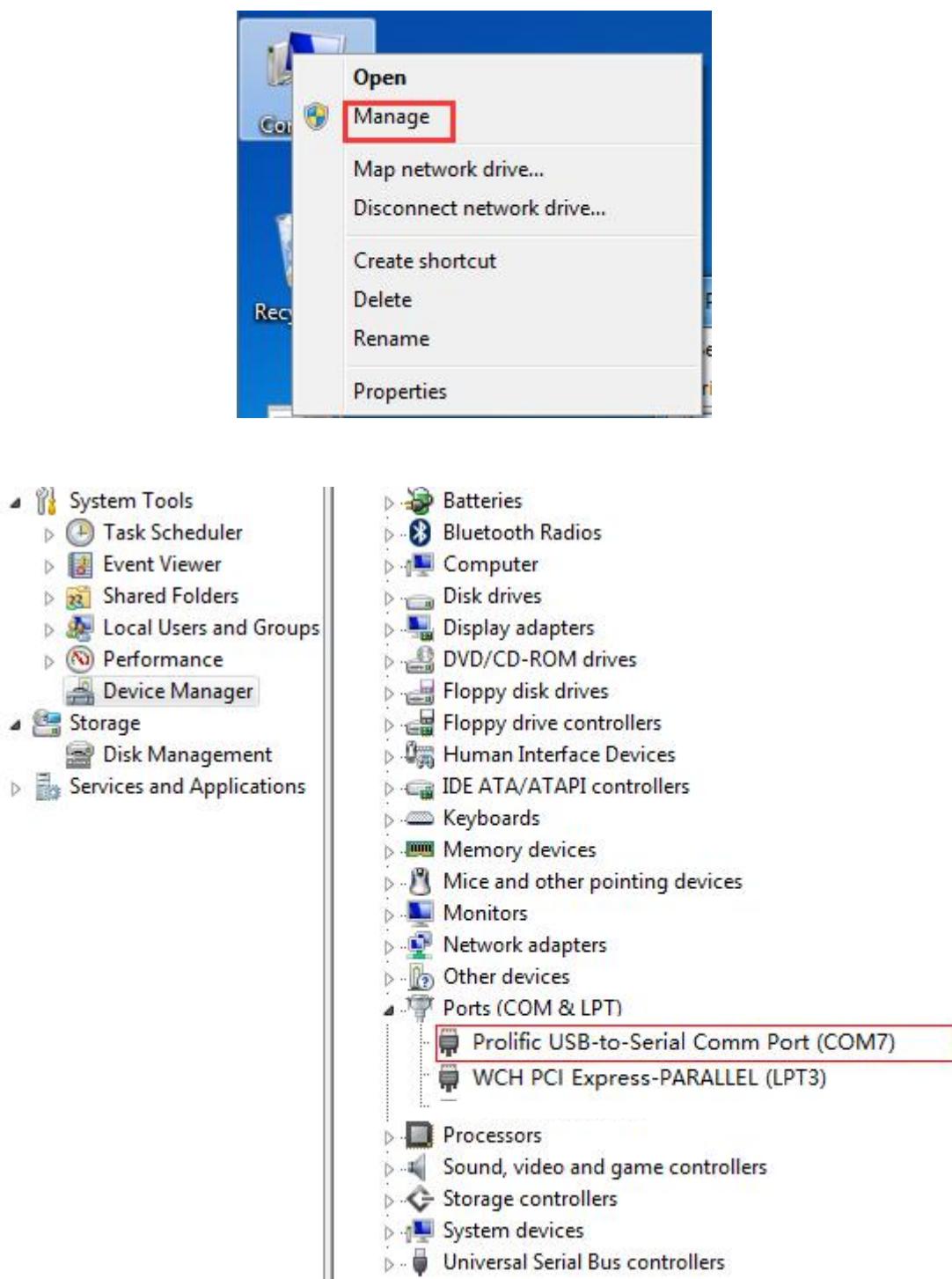


Click "Virtual serial port" setting and restart the printer.

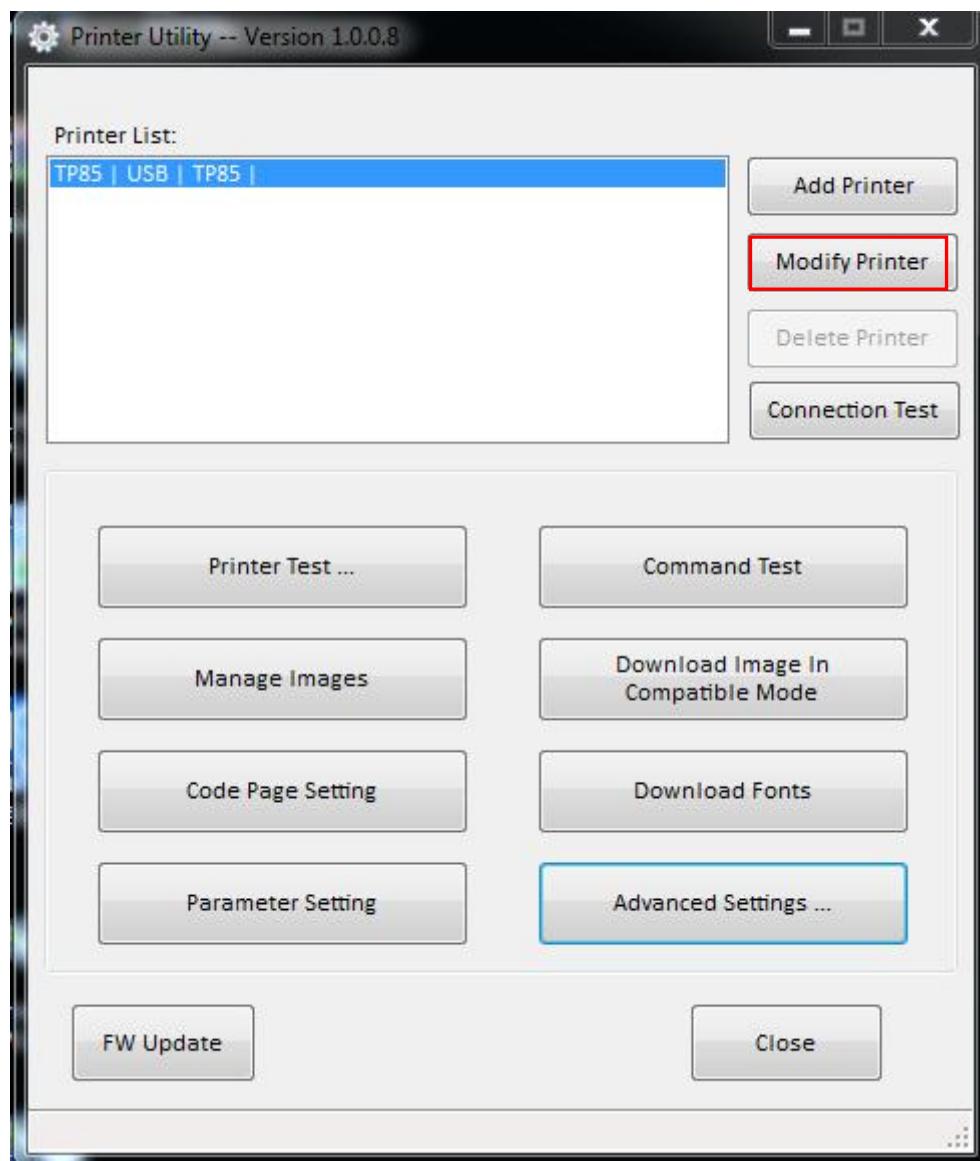


- **Check the Virtual Serial Port**

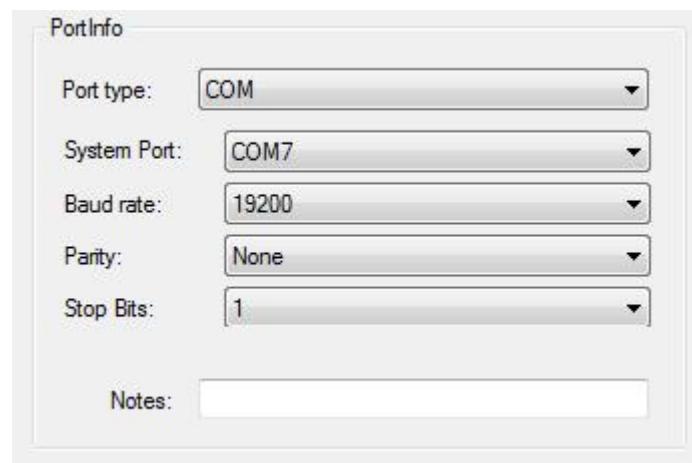
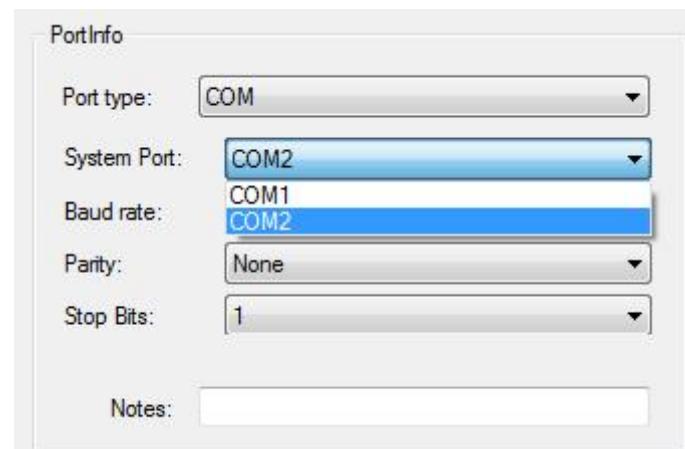
- 1) Right-click the computer and select "Manage".
- 2) Click "Device Manager" to view the virtual port. (such as: COM7).



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

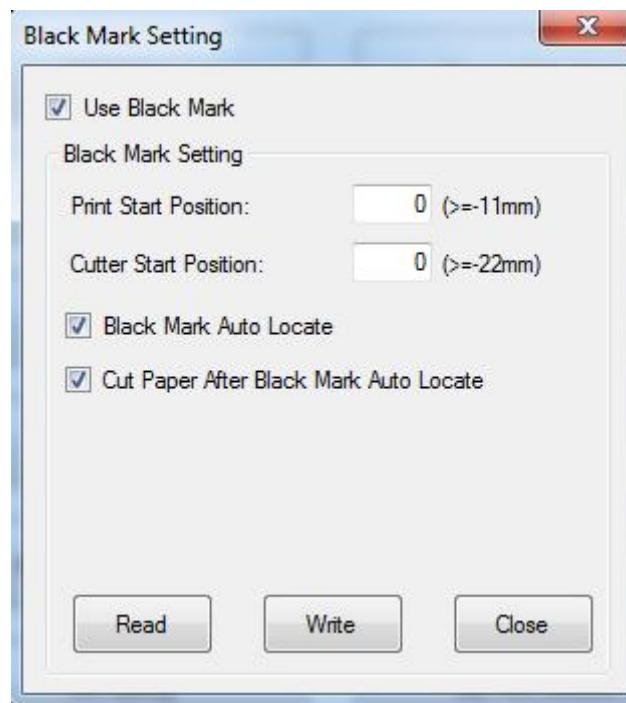


4) Change the port to "COM7".



◆ Black Mark Setting

When using black mark paper, the black mark can be set, and the printer will automatically locate the black mark position.



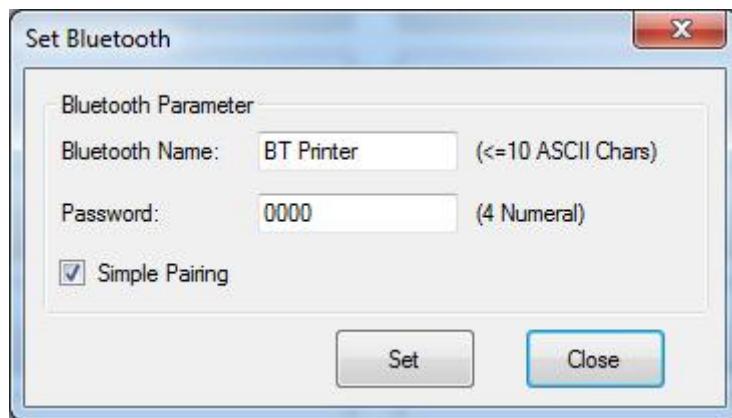
1) Print start position (>=-11mm)

>=14mm: the start position of printing is at least 11mm from the bottom edge of the black mark paper.

2) Cutter start position (>=-22mm)

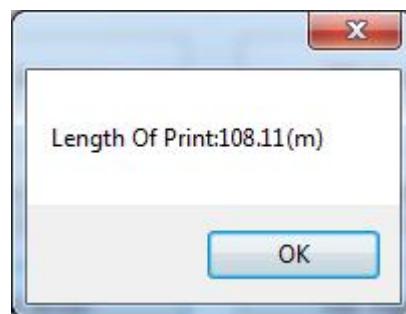
>=-25mm: the position of cutter is at least 22mm from the bottom edge of the black mark paper.

◆ Bluetooth Setting



When the "simple pairing" is checked, the printer does not need to enter the Bluetooth password to connect, when the "simple pairing" is not checked, the printer needs to enter a Bluetooth password to connect.

◆ Length Of Print

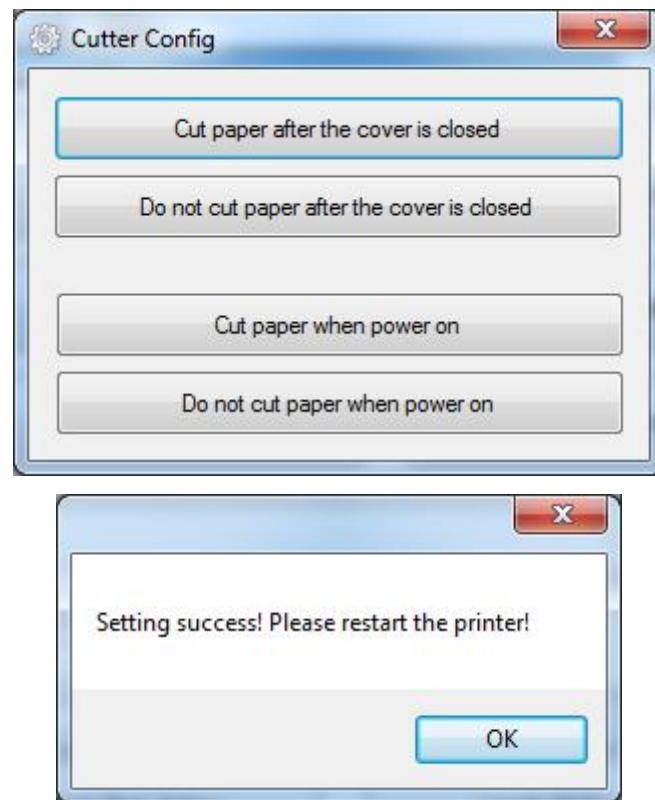


◆ WiFi Firmware Update



Click “...” to select file, and click “Update” to update the WiFi firmware.

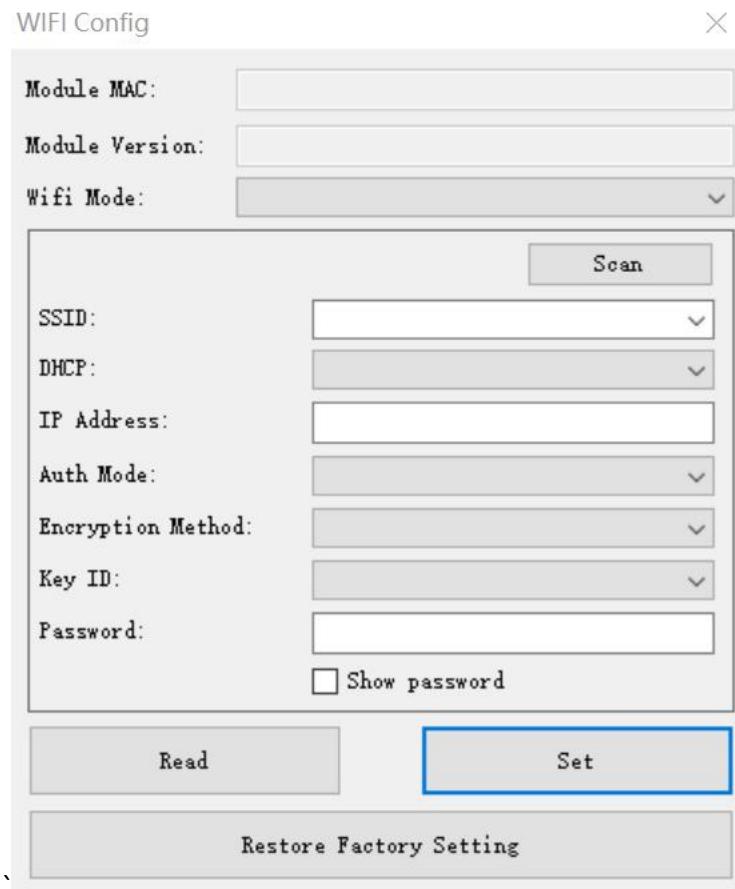
◆ Cut Paper Config



- 1) Cut paper after the cover is closed: the printer automatically cuts the paper after closing the cover.
- 2) Do not cut paper after the cover is closed: the printer does not automatically cut the paper after closing the cover.
- 3) Cut paper when power on: the printer automatically cut paper after the printer is power on.
- 4) Do not cut when power on: the printer does not automatically cut paper after the printer is power on.

◆ Wi-Fi Setting

Following steps take TP85 as an example. All the settings are effective only on the printers with Wi-Fi function.

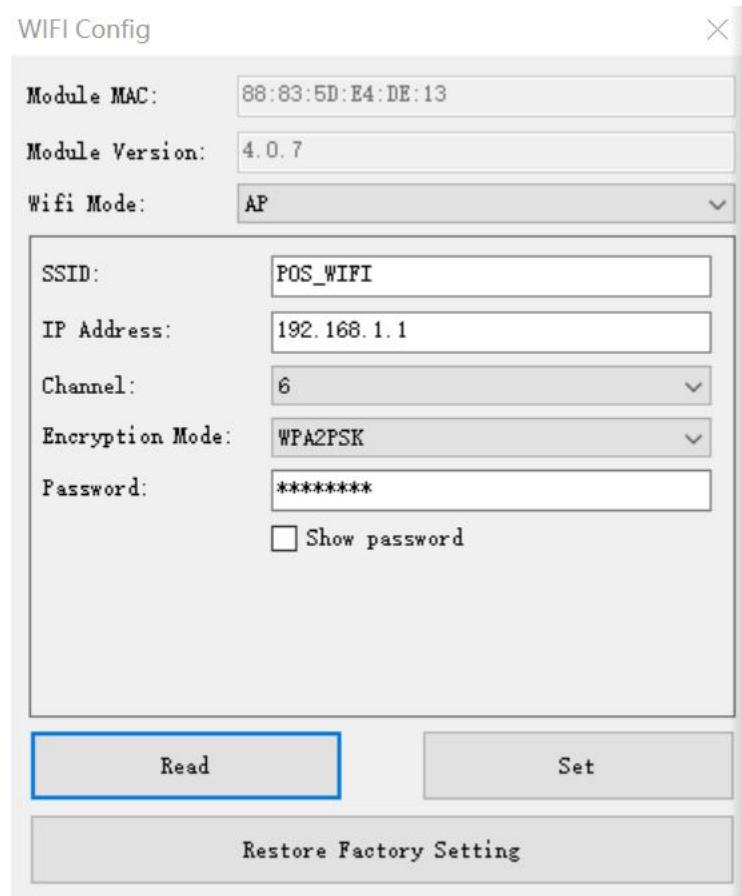


- 1) Click "Read" to obtain the current status of printer.

Read

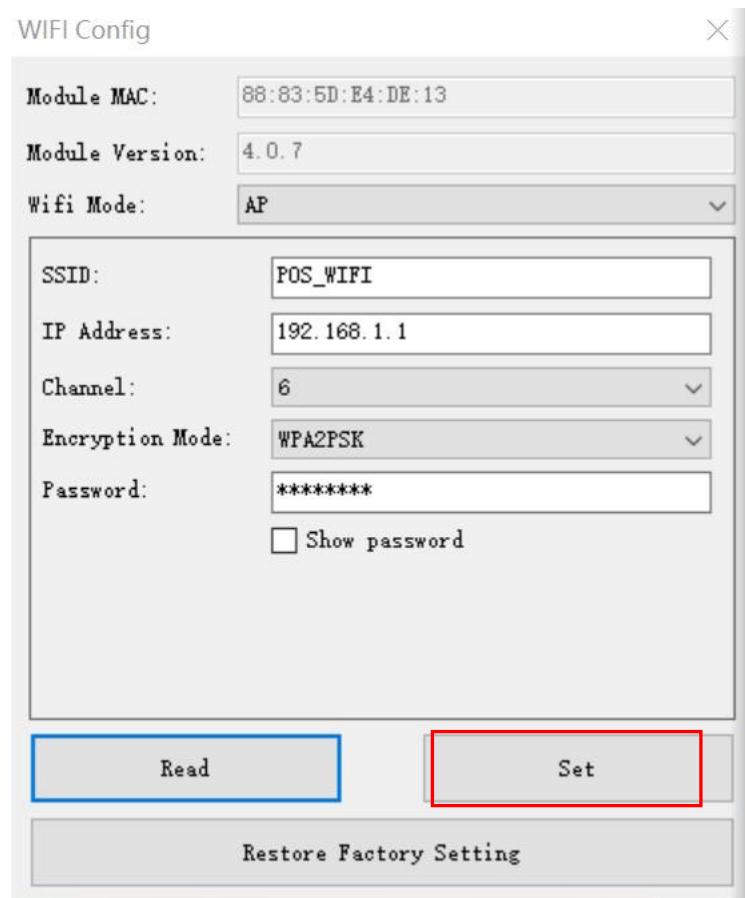
2) WiFi Module supports AP mode and STA mode, and default as AP mode

① Under AP mode, printer will be used as a wireless access point, computer or other mobile devices can connect to this Wi-Fi.



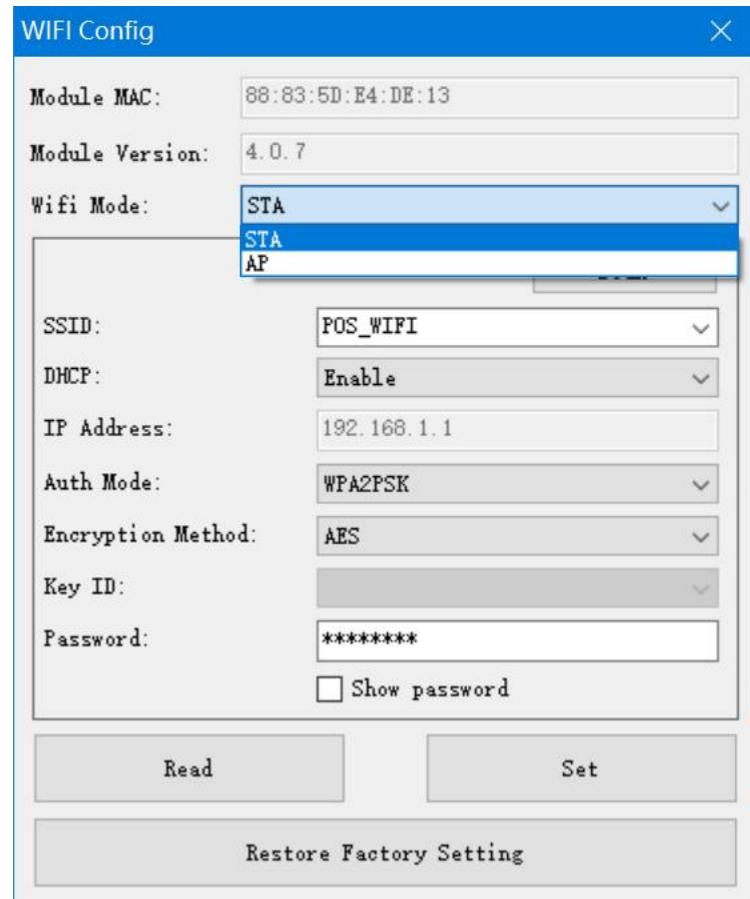
Module Version	Current Module Version
WiFi Mode	Supports “AP” mode and “STA” mode, and default as “AP” mode
SSID	Modifiable, default as “POS_WIFI”
IP Address	Modifiable, default as “192.168.1.1”
Encryption Mode	Supports “Open” and “WPA2PSK” mode, default as “WPA2PSK” (Default password is 12345678)”

If it's necessary to modify SSID and IP address, click "Set" after modifying, then restart the printer.



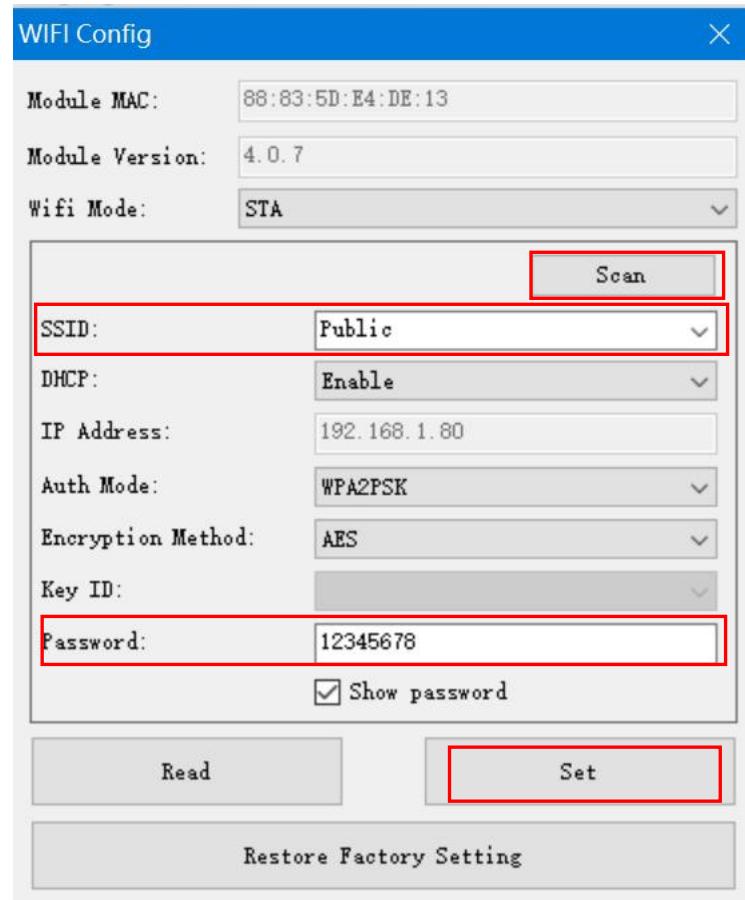
② Change from AP mode to STA mode.

- Choose STA under Wi-Fi mode, the interface is shifted to the following screenshot:



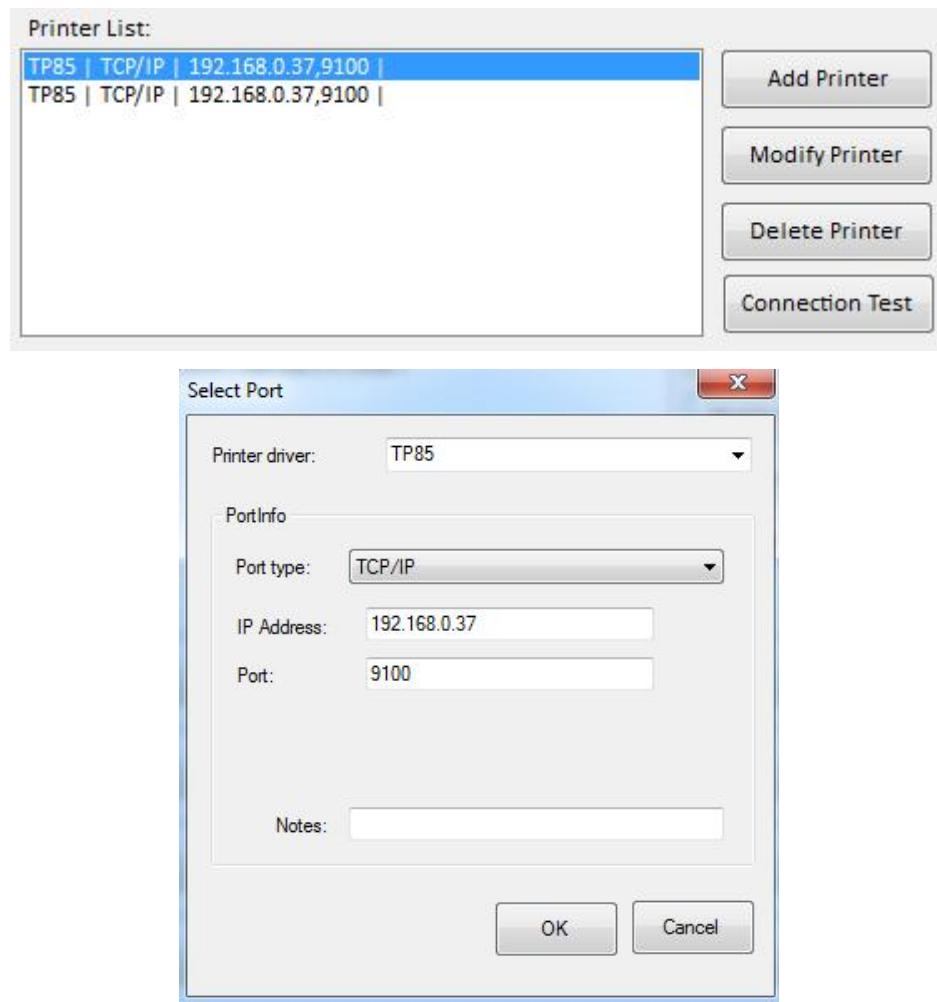
●Click “Scan”, choose a connectable “hot spot” from SSID options. Enter the password of Wi-Fi that you want to connect to.

●Click “Set”. After it is set successfully, the printer would restart automatically.



SSID	The SSID name that is chosen after scanning “hot spot”
DHCP	Enable/Disable dynamic allocation of IP
IP Address	When DHCP is at Enable status, IP address will be allocated automatically, no need to do the setting; When DHCP is at Disable status, IP address must be set to the same LAN with the Wi-Fi that you connect to
Auth Mode	Parameter of the router, which is read automatically, no need to do the setting
Encryption Method	Parameter of the router, which is read automatically, no need to do the setting
Key ID	Parameter of the router, which is read automatically, no need to do the setting; It is effective only when the Auth Mode is SHARED with the Encryption Method WEP.

- After the printer is restarted, short press the power button 3 times, so that the current Wi-Fi parameter information can be printed.
- After completing the setting, connect the computer to the Wi-Fi that the printer connects to, click “Modify Printer”, choose “TCP/IP”, and set the IP address the same as the printer’s IP address, then click “OK”.



- Click “Connection Test” to check if the setting is successful.

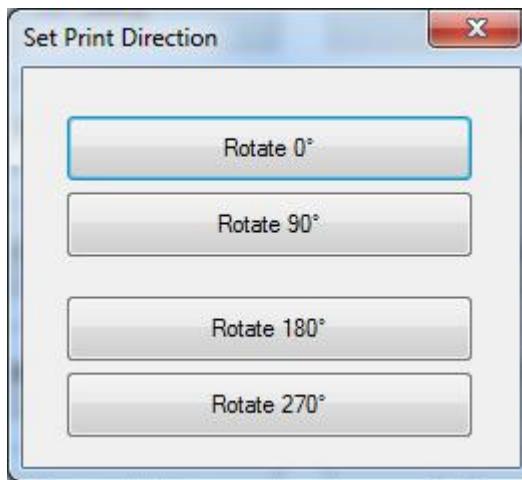




Notes: When the printer is failed to connect with its master devices, please check if the settings are correct, and please check if the master devices and the printer are on the same network segment. When parameter setting error occurs, which leads to the failed connection, please reset the Wi-Fi parameter by the following way 1) or 2):

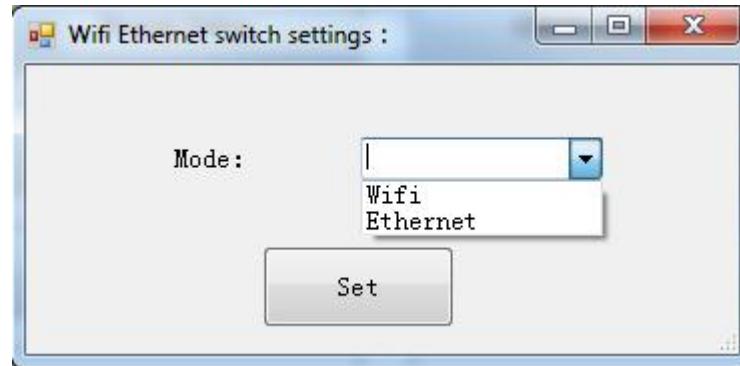
- 1) For TP85 (with built-in Wi-Fi module), shortly press the power button five times, so that the Wi-Fi parameter would be reset. The printer would restart automatically, so the reset is taken into effect.
- 2) For other models of POS printers (with external Wi-Fi module), shortly press the Function/Reset Button (at the interface board) for five times, and the Wi-Fi parameter would be reset. The printer would restart automatically, so the reset is taken into effect.

◆ **Set Print Direction**



◆ Wifi Ethernet switching

Click “Wifi Ethernet switching” to set the mode you want. Then click “set” and it will restart and print out the information about successful mode switching.



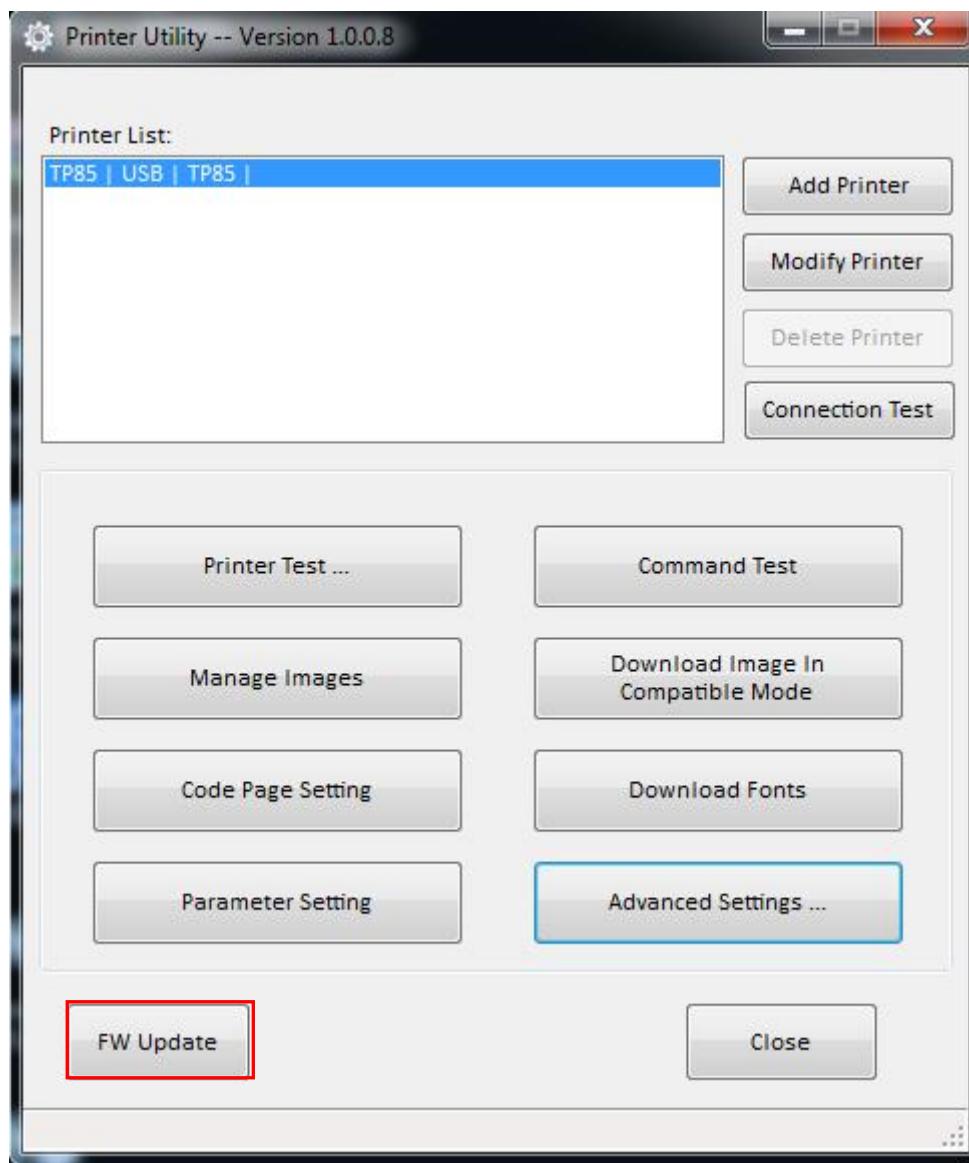
The manual method to switch between Ethernet and Wi-Fi modes: In the power-on state, open the top cover, then press and hold the paper feed button and power button at the same time for about 3 seconds. After that, close the cover, so the printer will automatically restart and print out the information about successful mode switching.



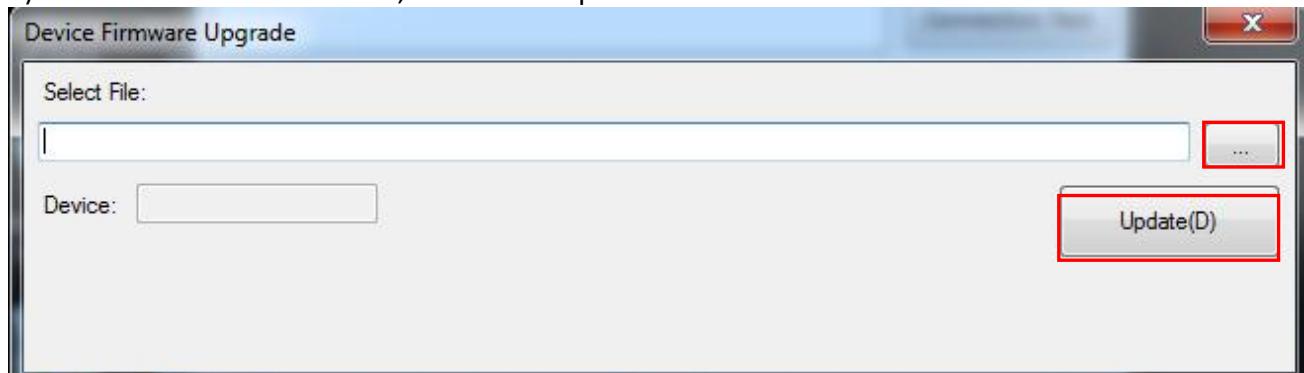
Note: Simultaneous use of Ethernet and Wi-Fi is not supported.

8.3 Firmware Update

- 1) Click “FW Update”.



2) Click “...” to choose DFU file, then click “Update”.



3) Update success.

4) Restart the printer.

9 WINDOWS DRIVER

9.1 Manual Information

This Windows Driver Installation Manual 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 POS Printer Driver-V-X.X.X.X.exe

9.4 Windows Driver Installation



Warning:

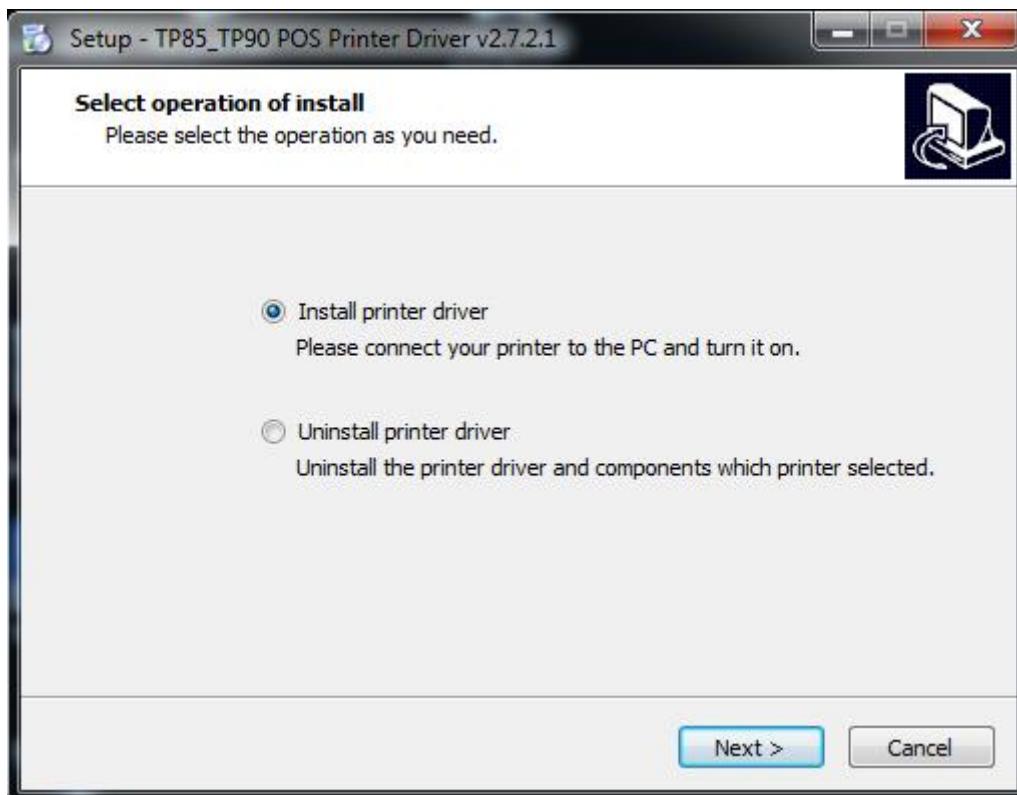
Under different operating system and different type of driver, the screen has slight difference.

Please operate it according to the tips. Take TP85 (Windows 7) as example.

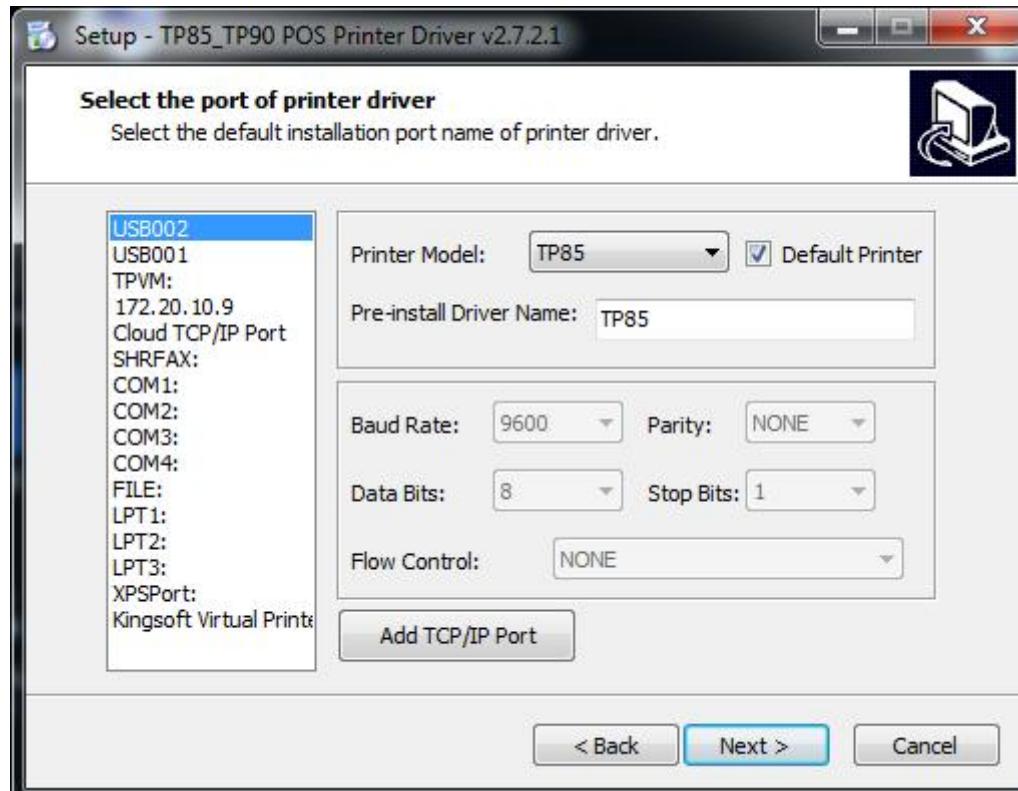
- 1) Double click Windows Driver.
- 2) Choose “English” and click “OK”.



- 3) Choose “Install printer driver”, and 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 of driver, port, such as "TP85", "USB" as port. Click "Next".



- 5) Click "Finish", the driver is installed successfully.



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

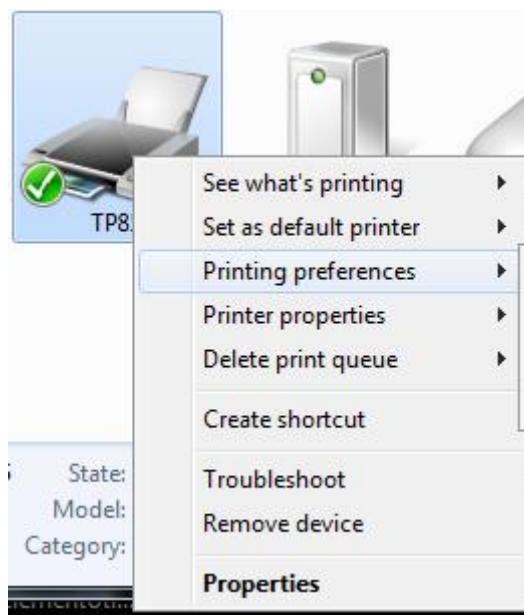


Note: If you already installed the driver (No matter what kind of port), when you connect the printer with computer, it will create a USB port automatically.

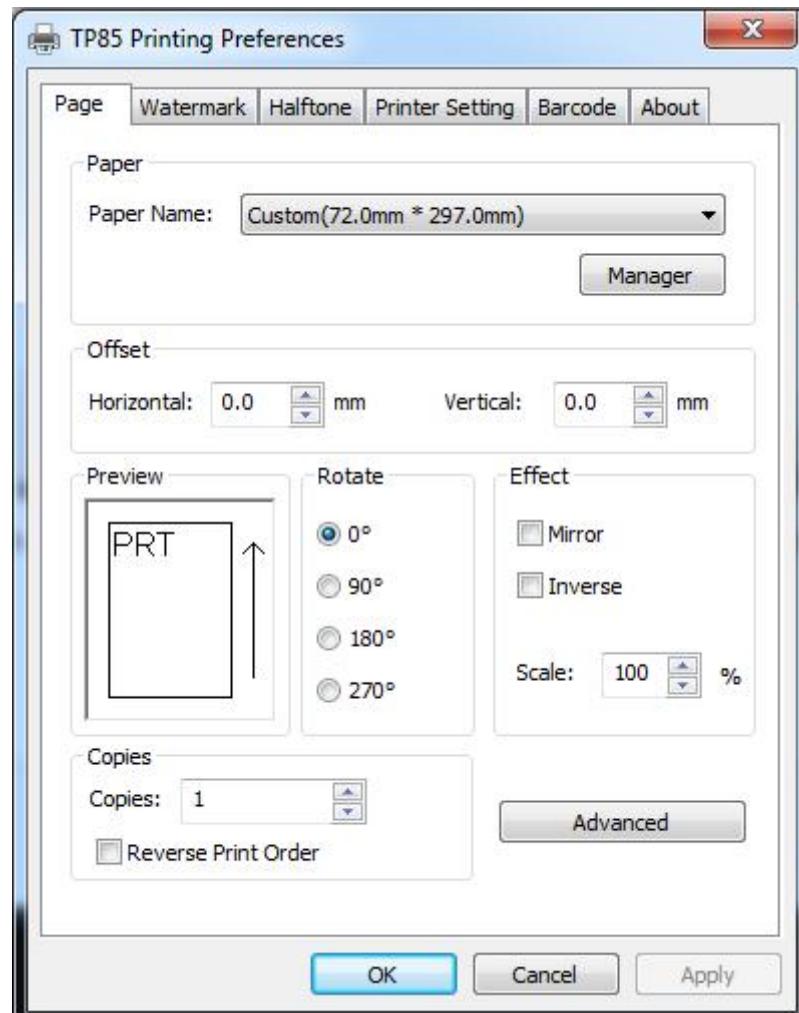
9.5 Detailed Windows Driver Setting

9.5.1 Printing Preferences

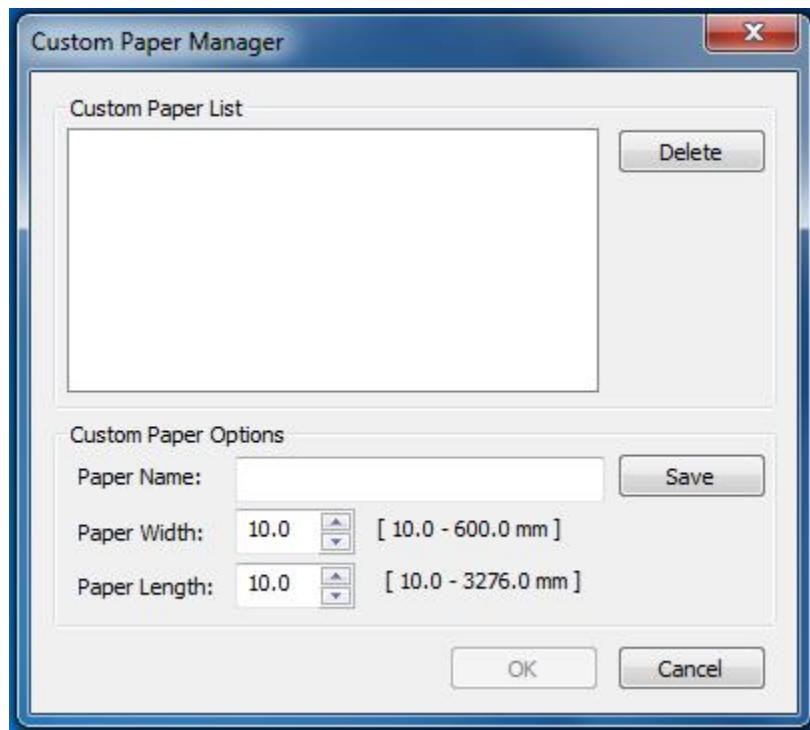
- 1) Click "Start" → "Devices and Printers". Right click "TP85" and choose "Printing preferences".



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

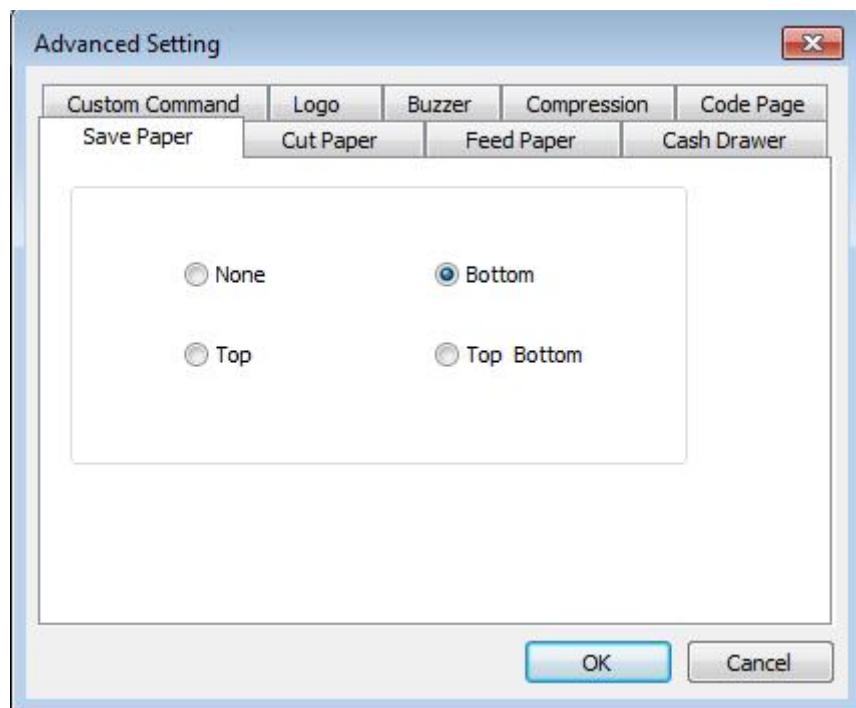


- Click “Manager”, add or delete paper.

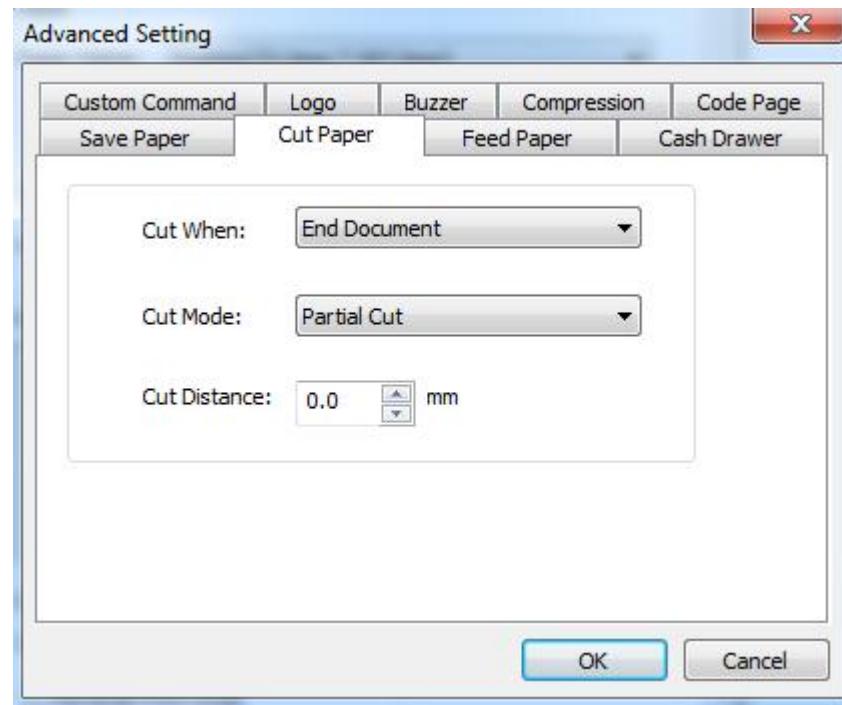


- Click “Advanced Setting” to set “Save Paper/Cut Paper/Feed Paper/Cash Drawer/Custom Command/Logo/Buzzer/Code Page”.

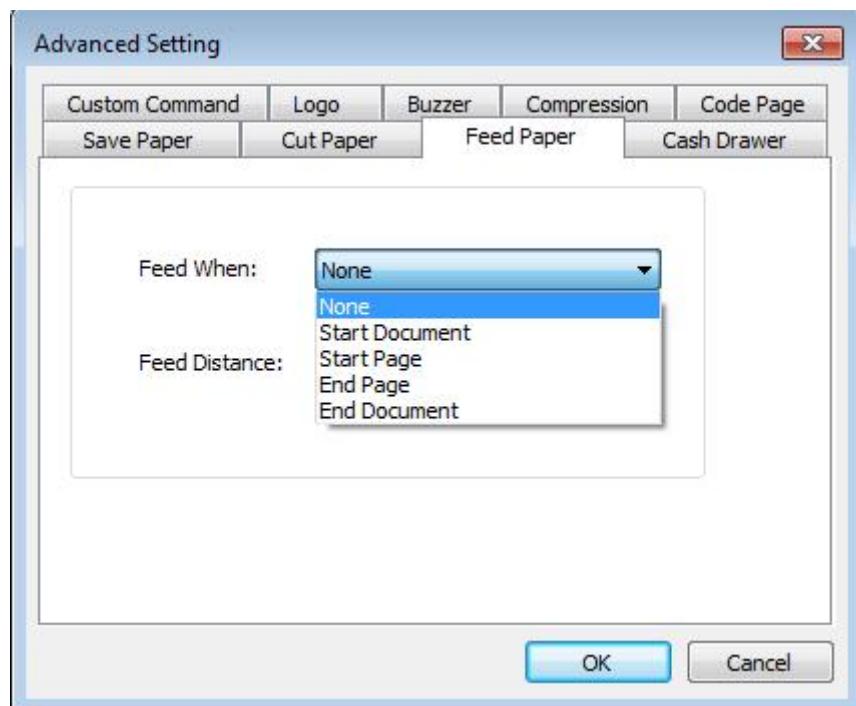
- Save Paper



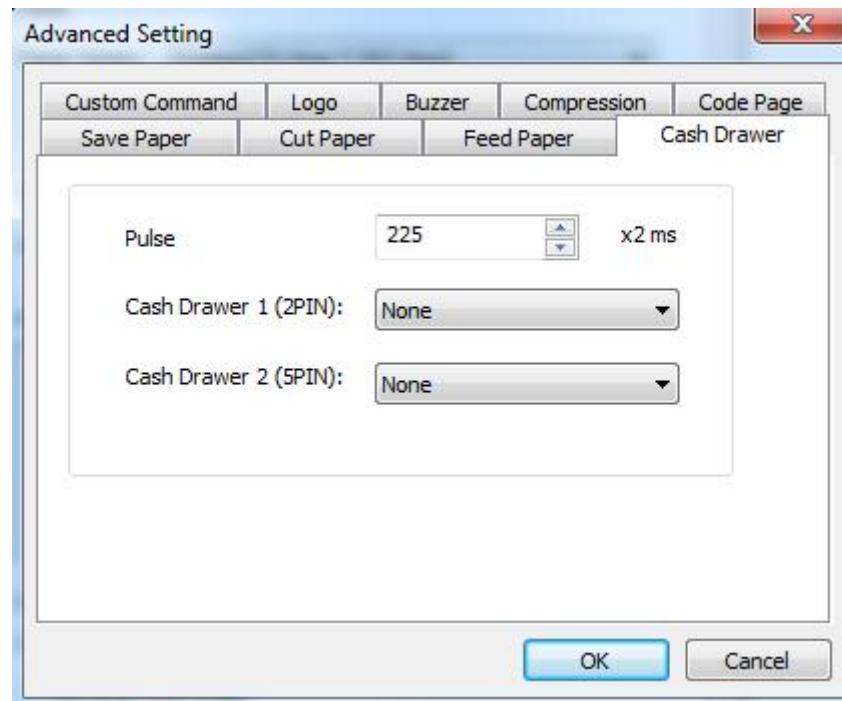
- Cut Paper



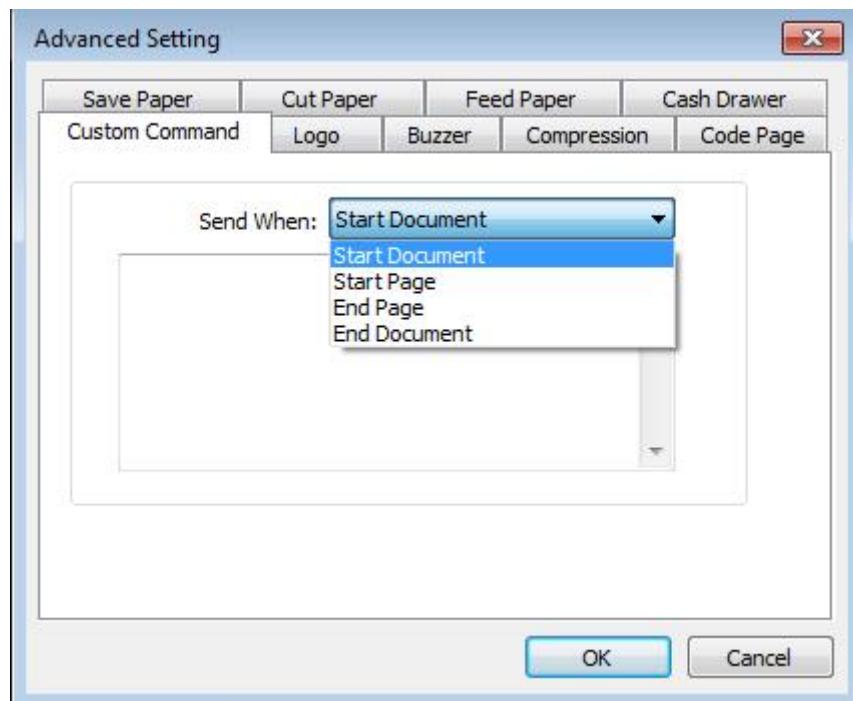
- Feed Paper



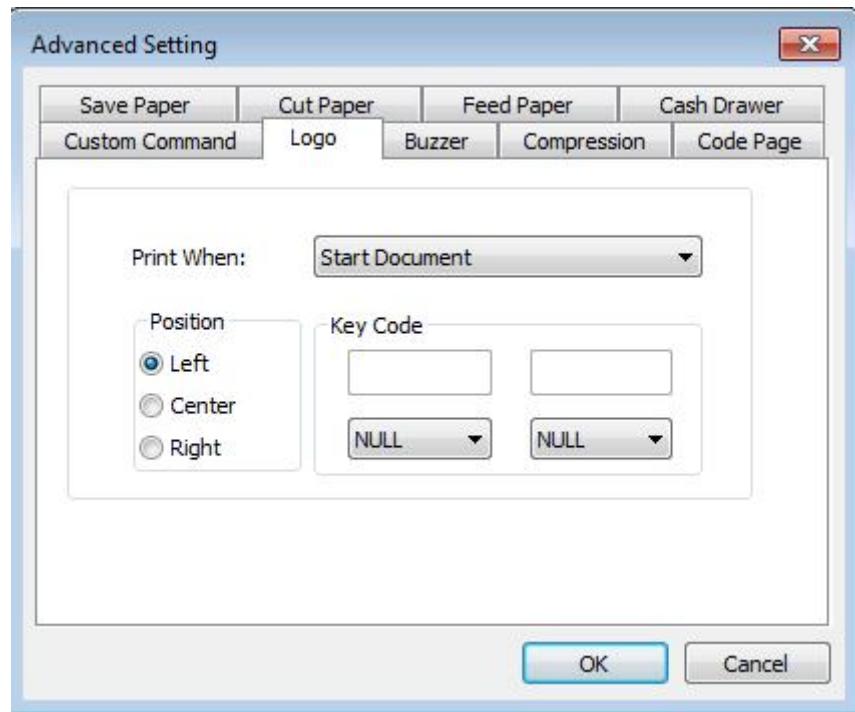
- Cash Drawer



- Custom Command

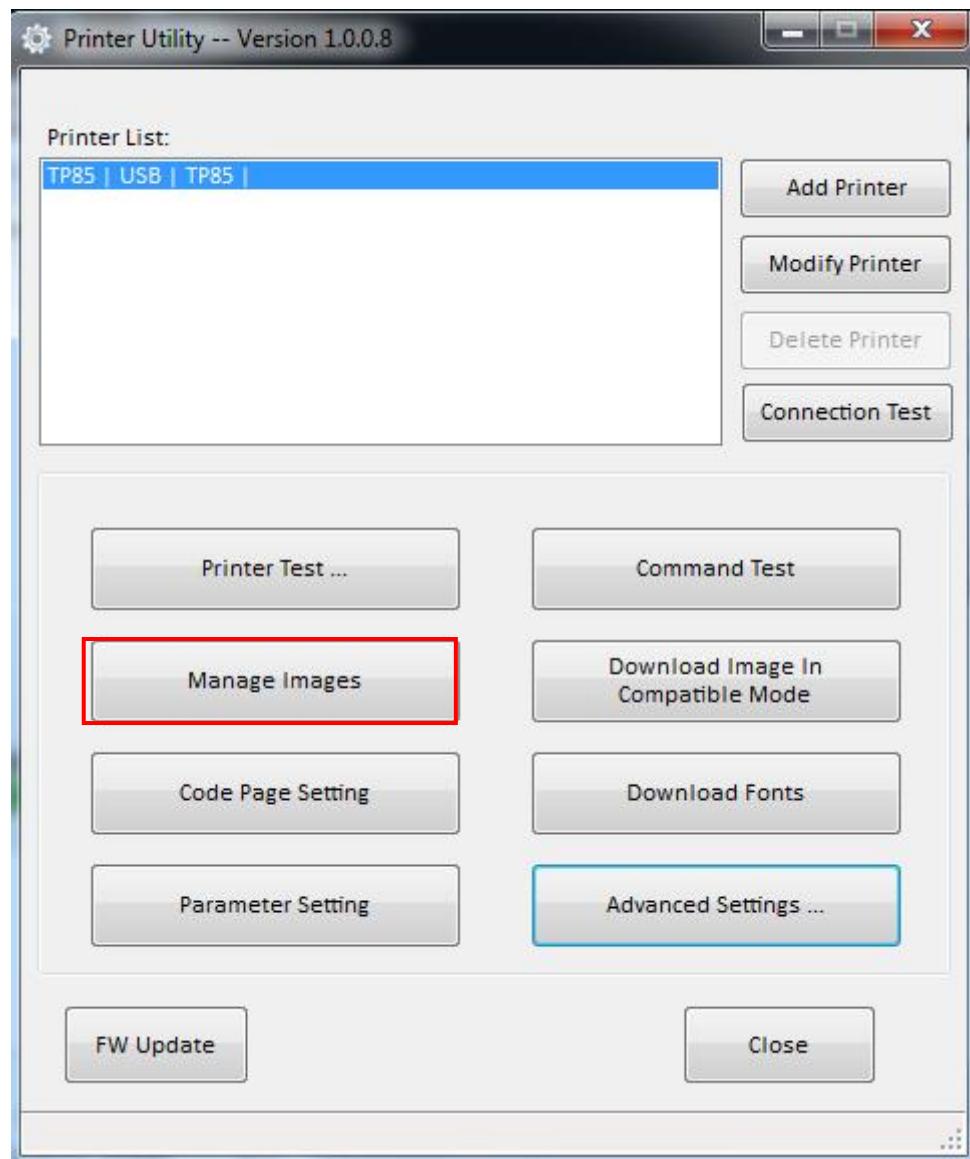


- Logo

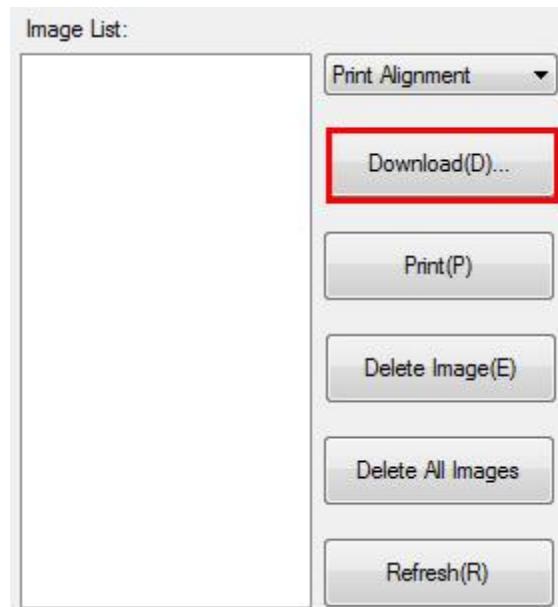


Note: this setting needs to be set in utility, here are the steps.

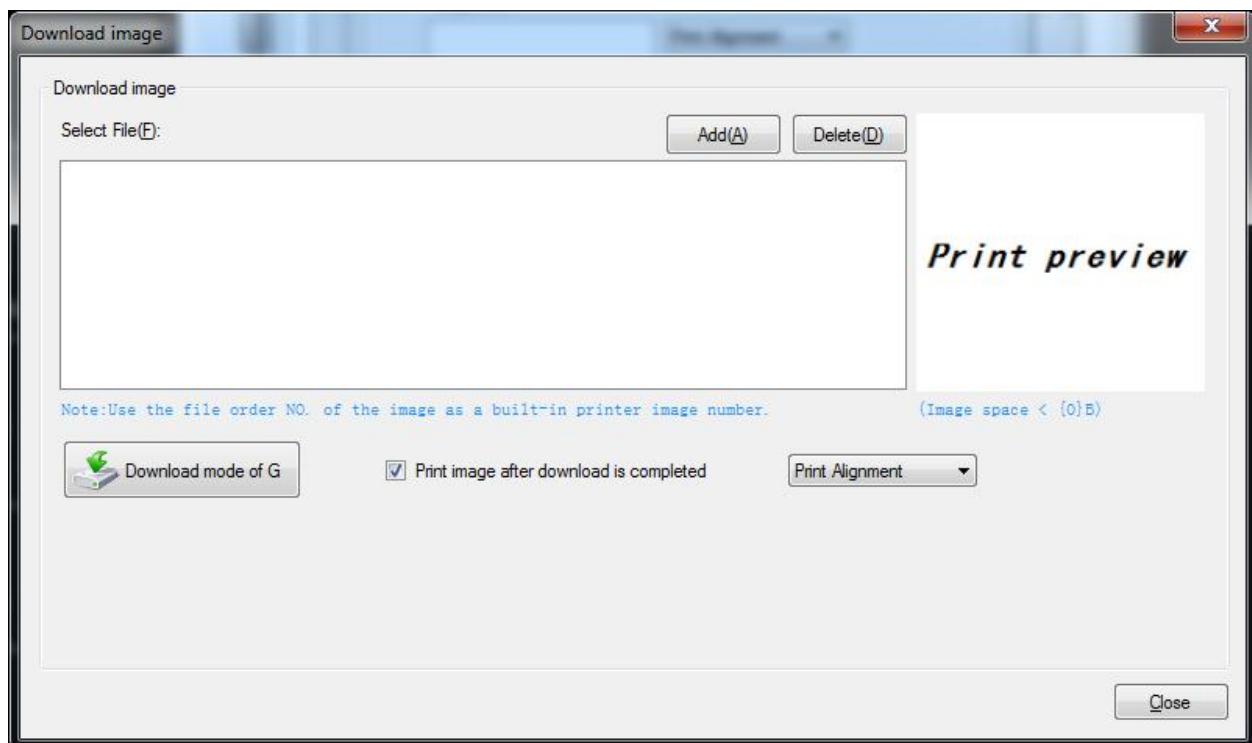
① Open the utility and click "Manage Images".

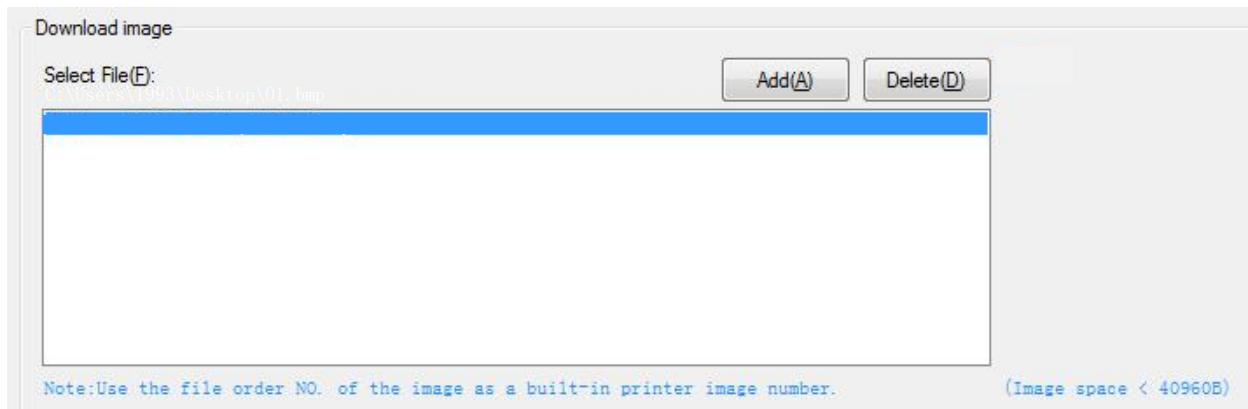


② Click "Download".

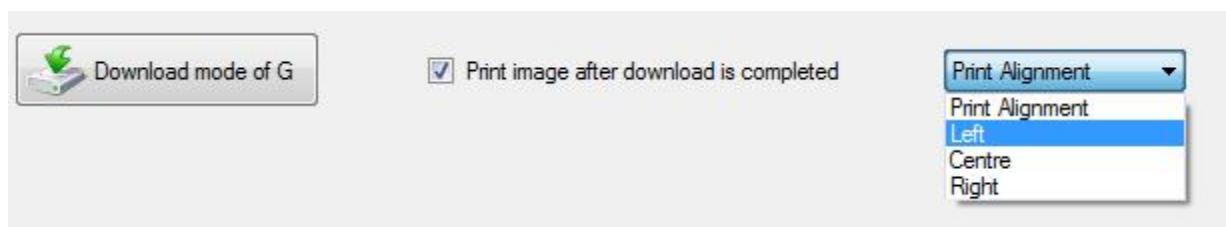


③ Click "Add" to add a logo. (BMP format is recommended)





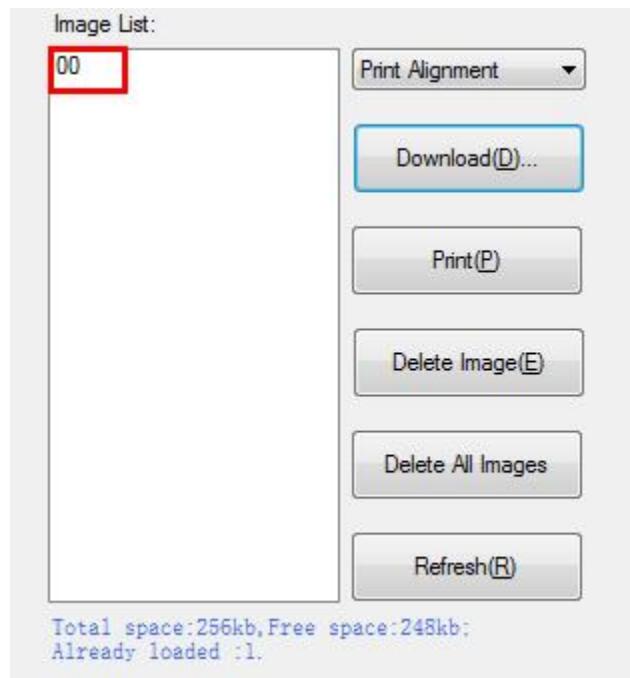
④ Select the print location, and then click "Download mode of G". (Such as: left print)



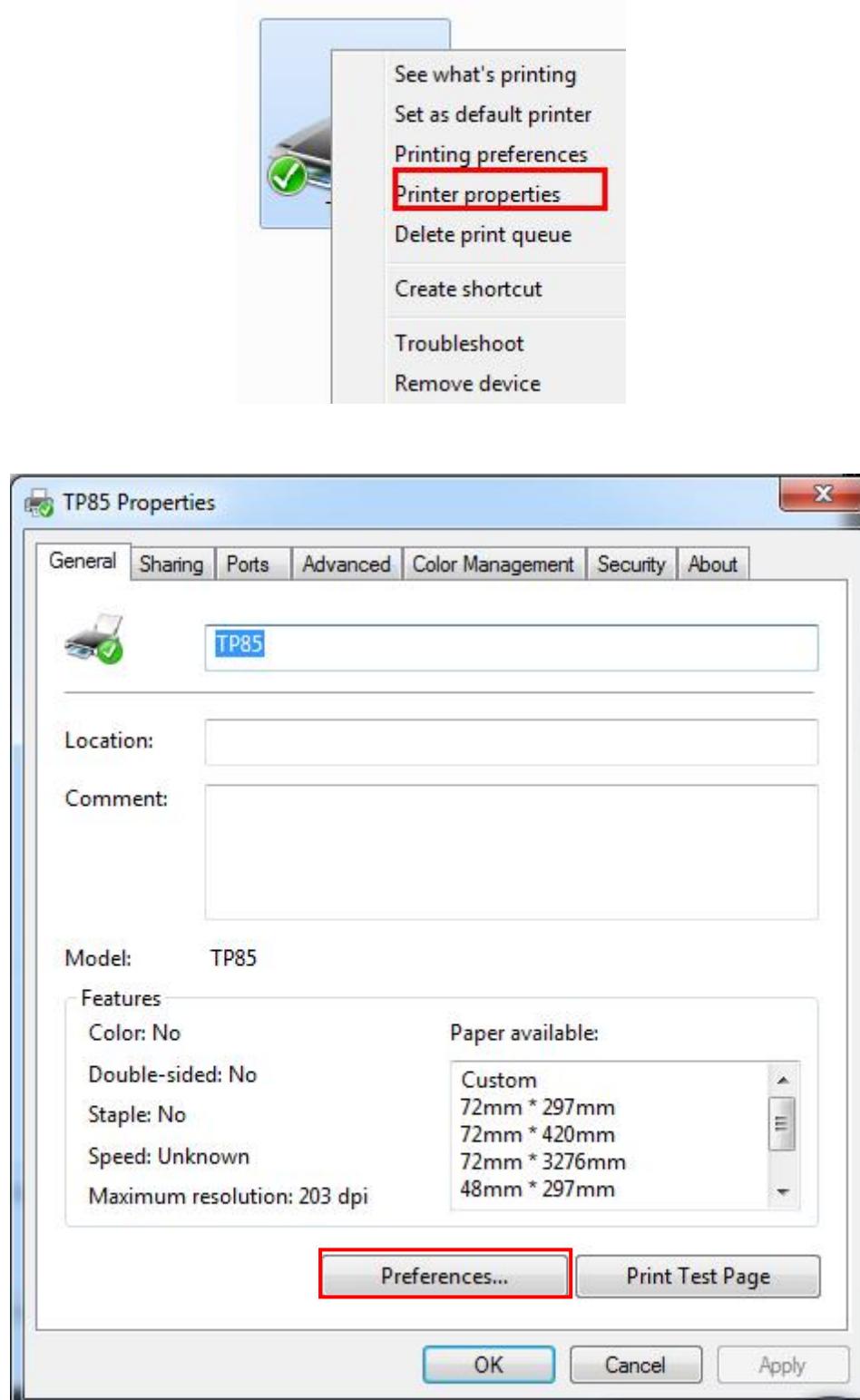
⑤ Return to image list to view the image number.



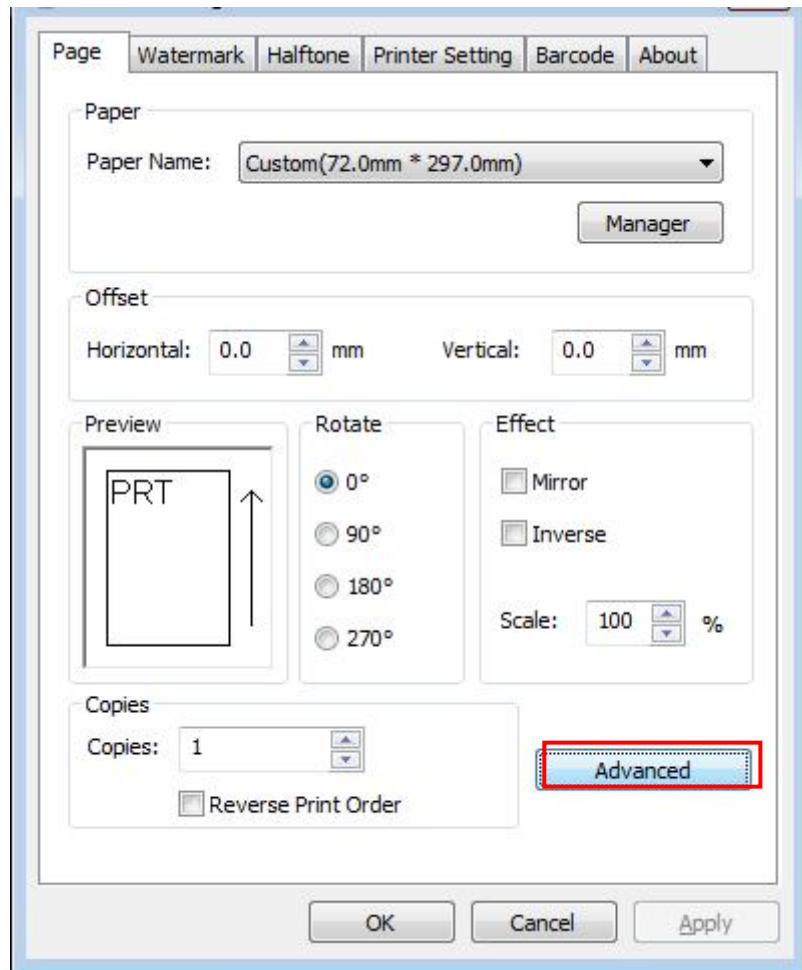
Note: each time click "Download mode of G", an image list number will be generated.

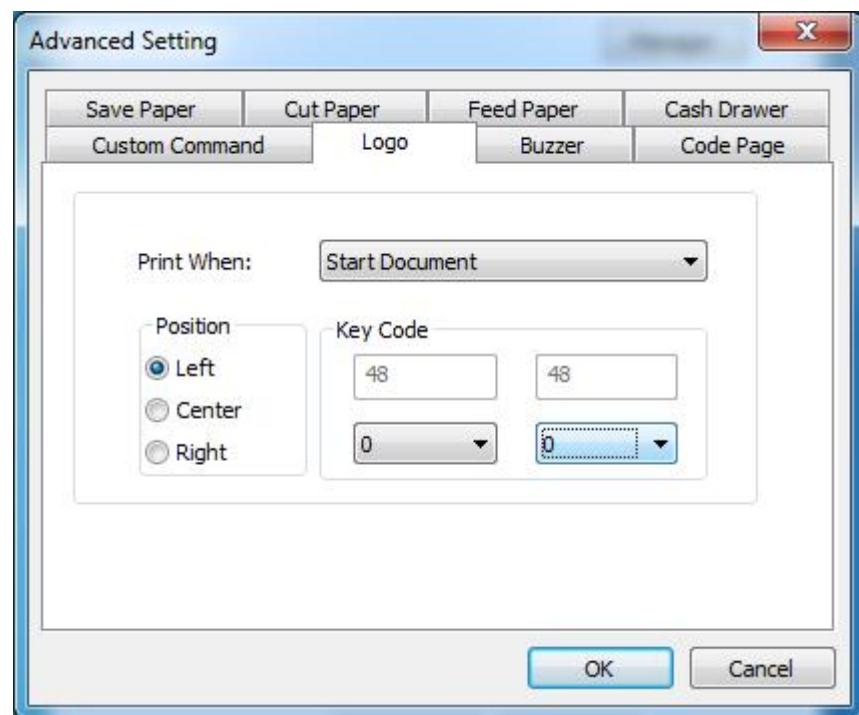


⑥ Select Printer properties in Devices and Printers, then click "Preference".

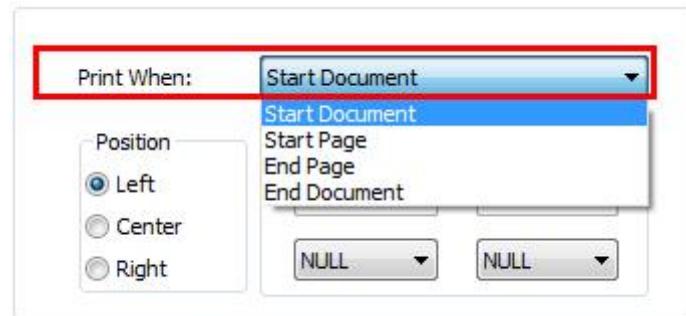


⑦ Click the “Advanced”, then click “Logo”.

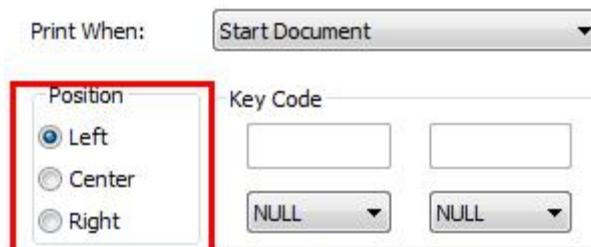




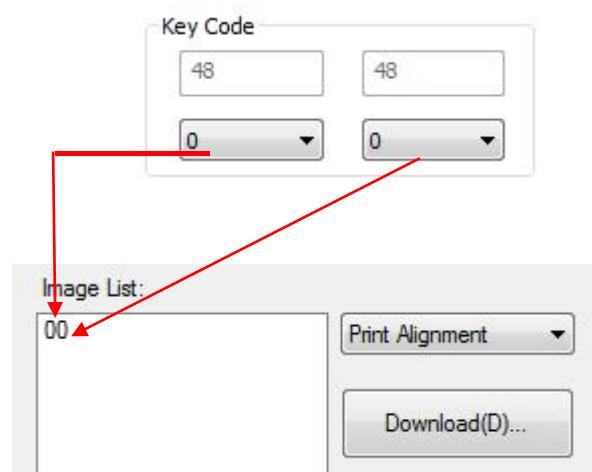
⑧ Set the printing time to print and click "OK". (Such as: Start Document)



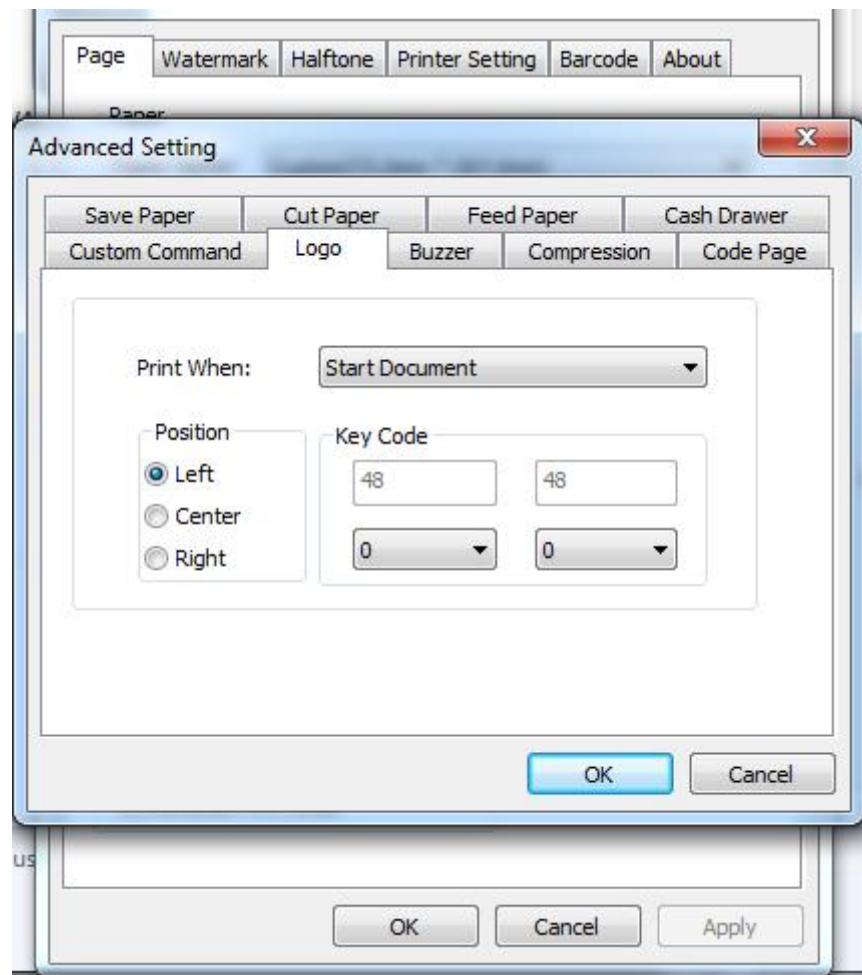
⑨ Return to the logo setting in driver, also select "Print left".



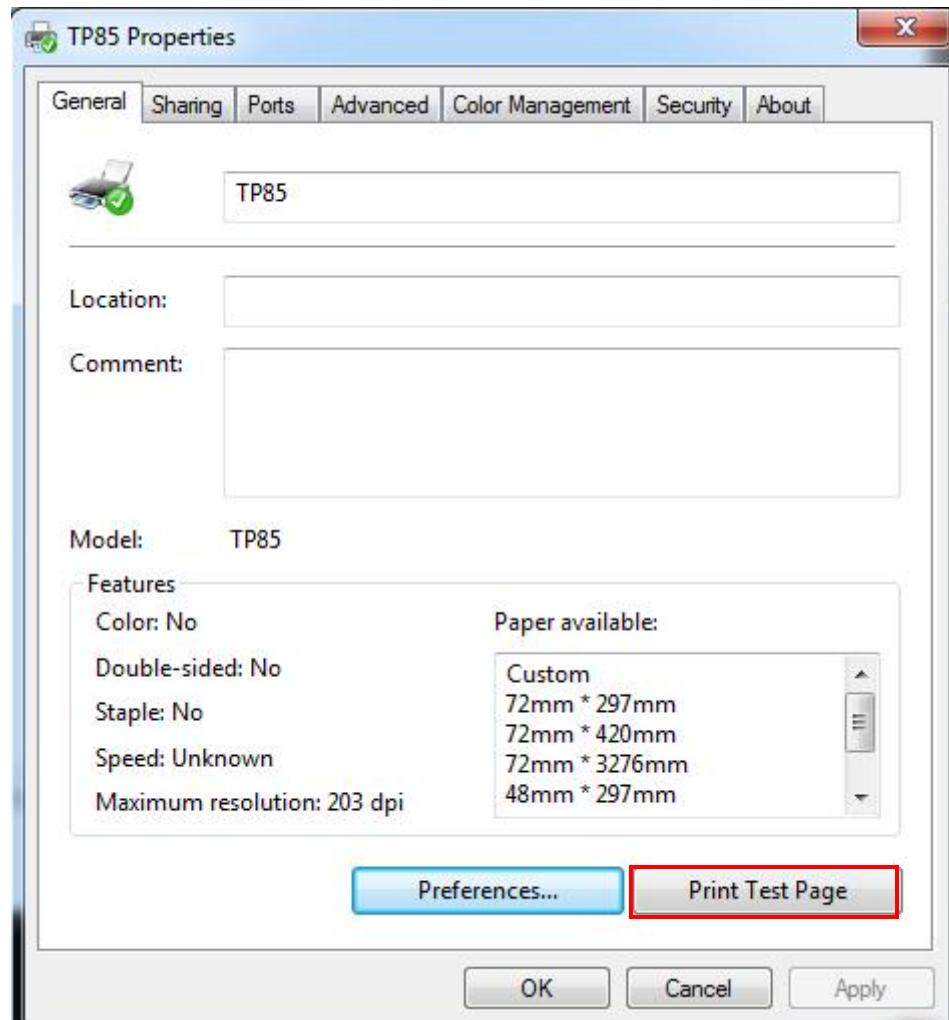
⑩ Set the key Code according to the image number. (Such as: 0 0)



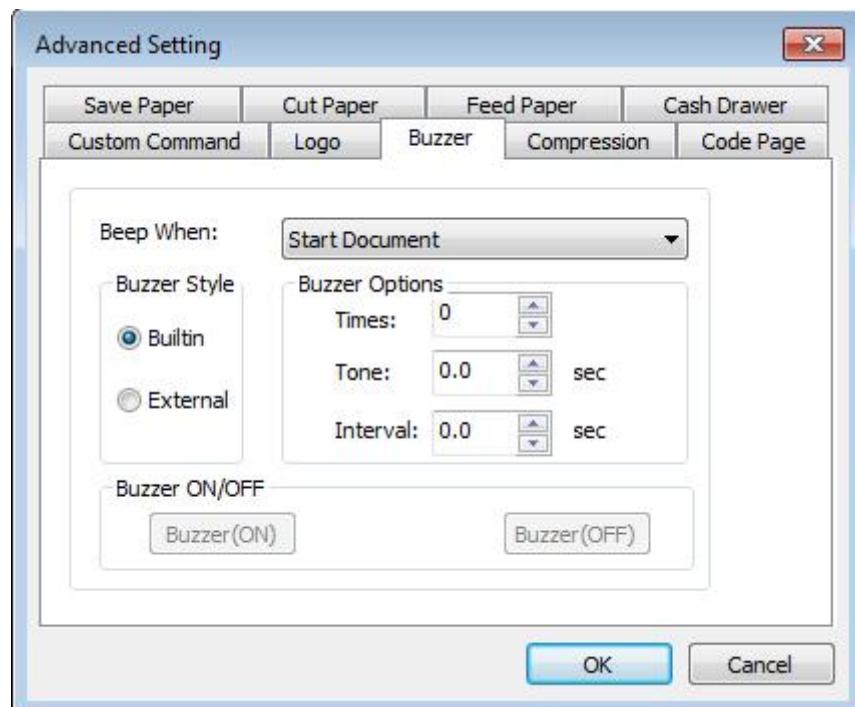
⑪ Then click “OK”.



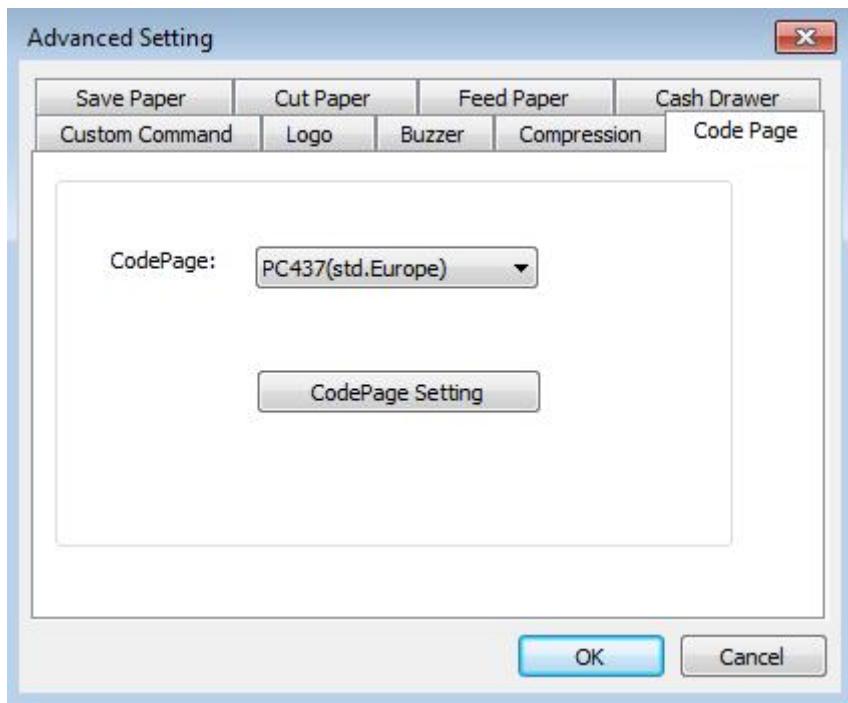
⑫ Click “Print Test Page” to view the printing effect.



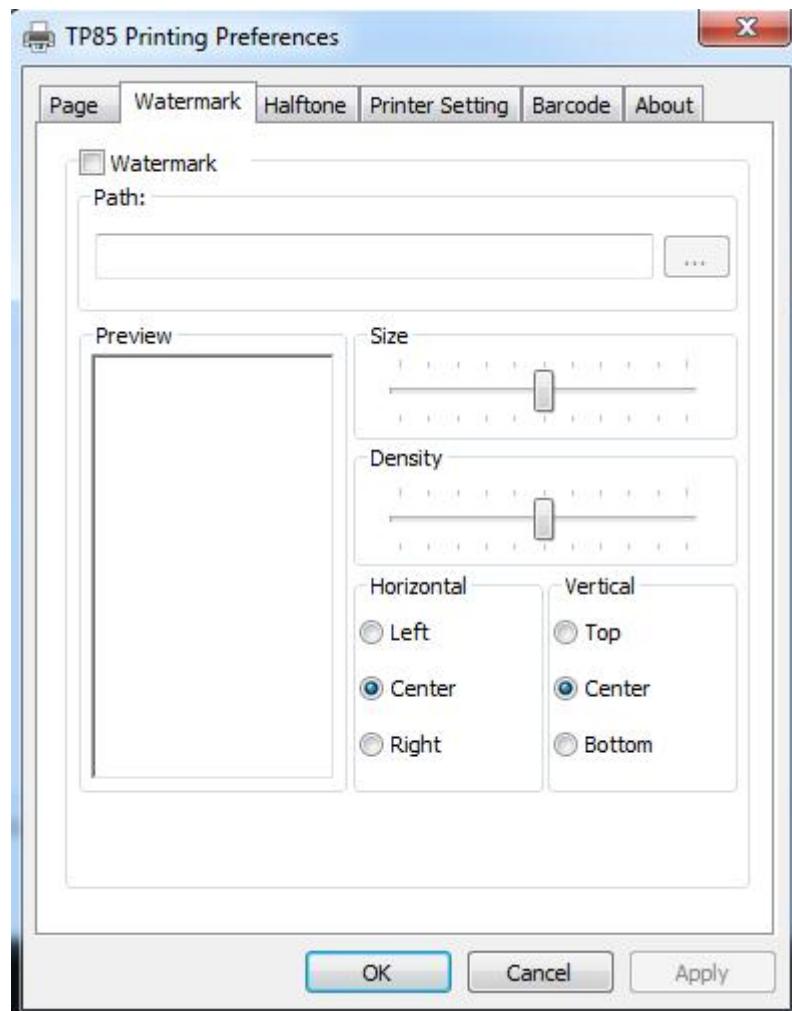
- Buzzer



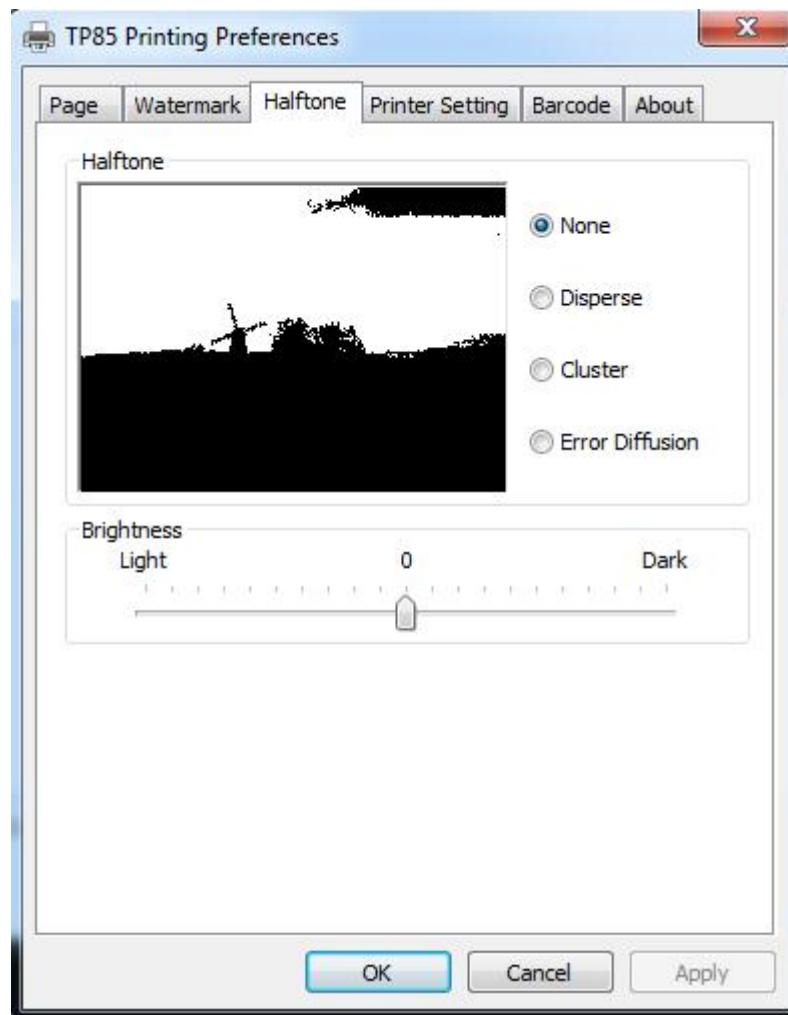
- Code Page



3) Click "Watermark". Set watermark to print.



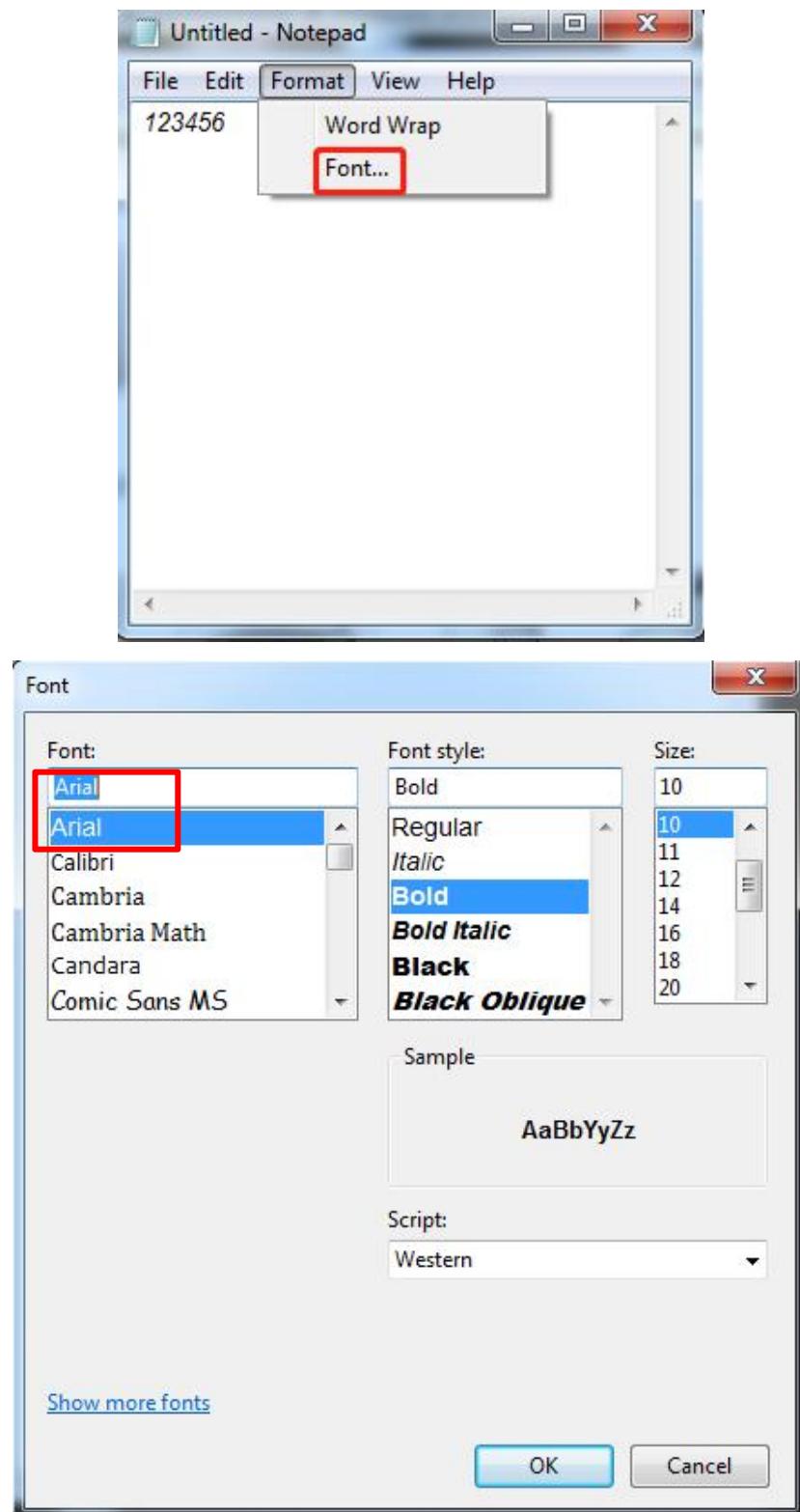
4) Click "Halftone" to set the halftone.



5) Set up the “Barcode”

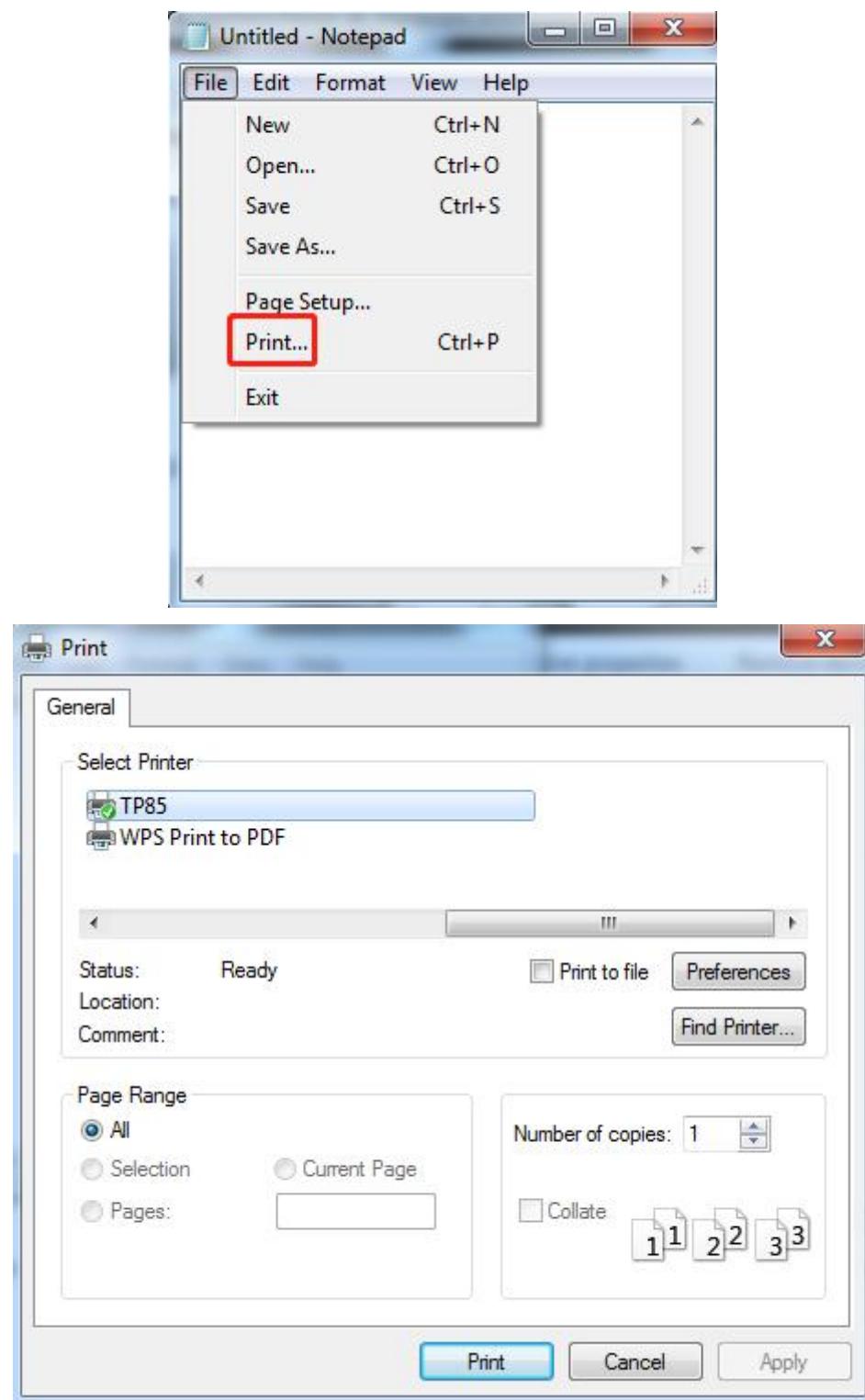
Assuming the font type of the main document is “Italics”, if you want to convert the data “123456” to the barcode printing, the steps are as follows:

- Set the data “123456” font type to a different font from the main document. Such as: Arial.

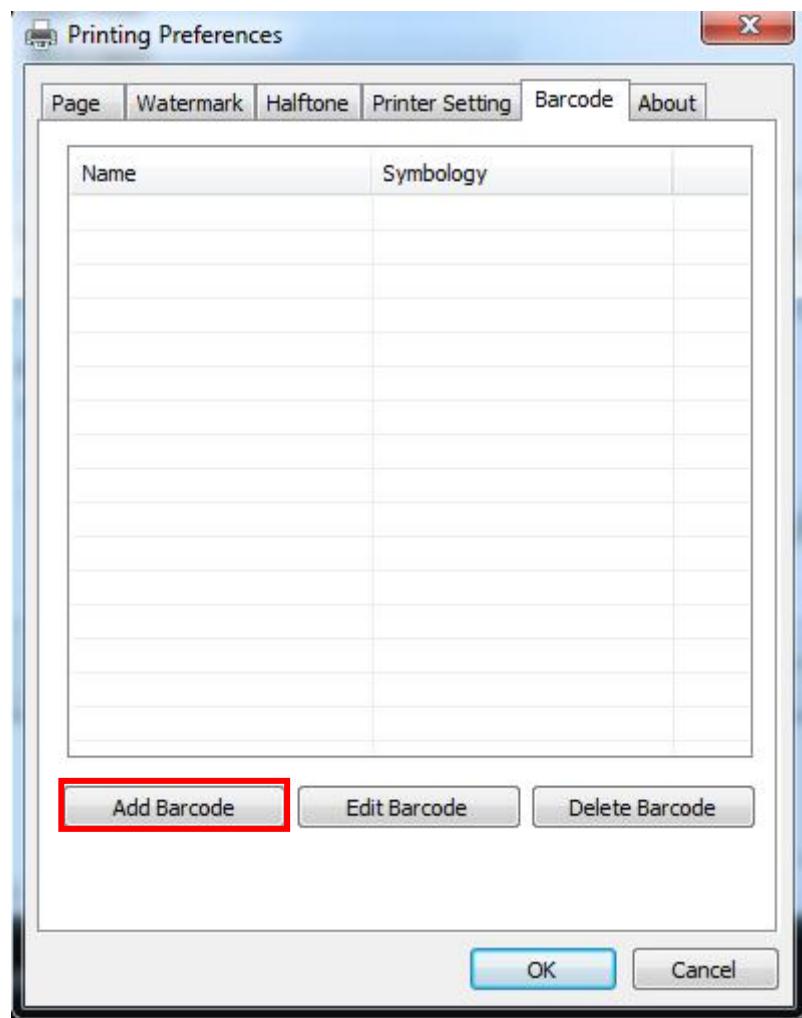


- Open the Preference.

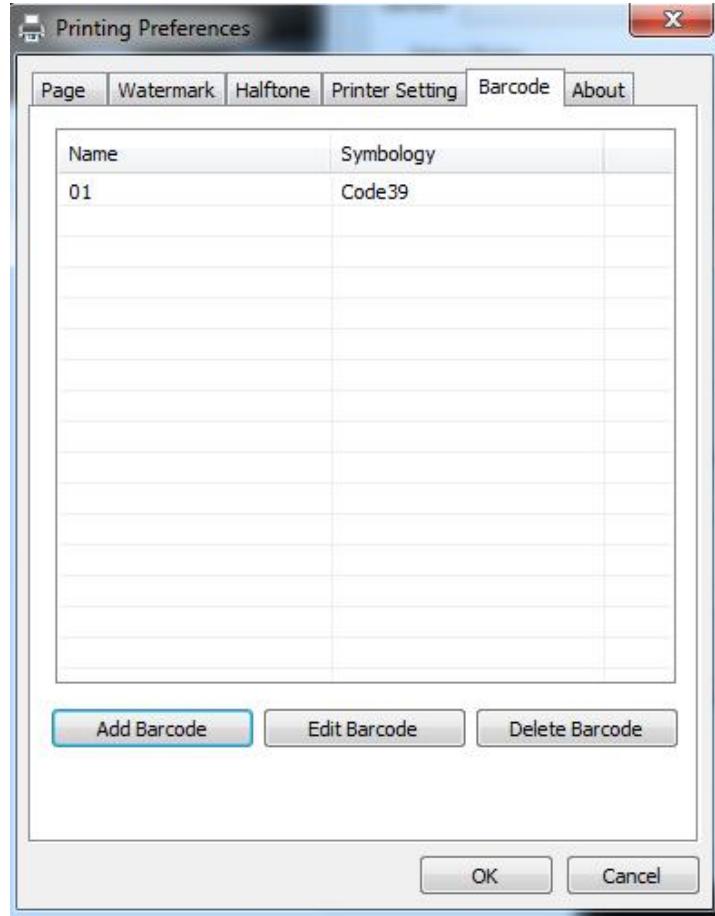
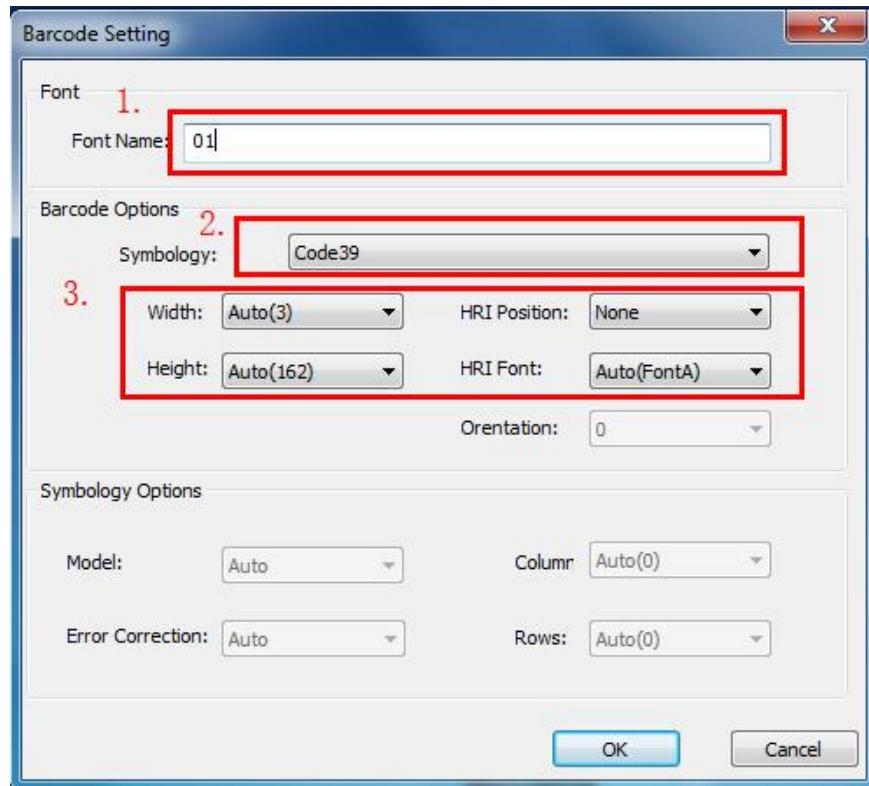
If the document is open, you can set it in the document: file-print-preferences.



① Add Barcode firstly.

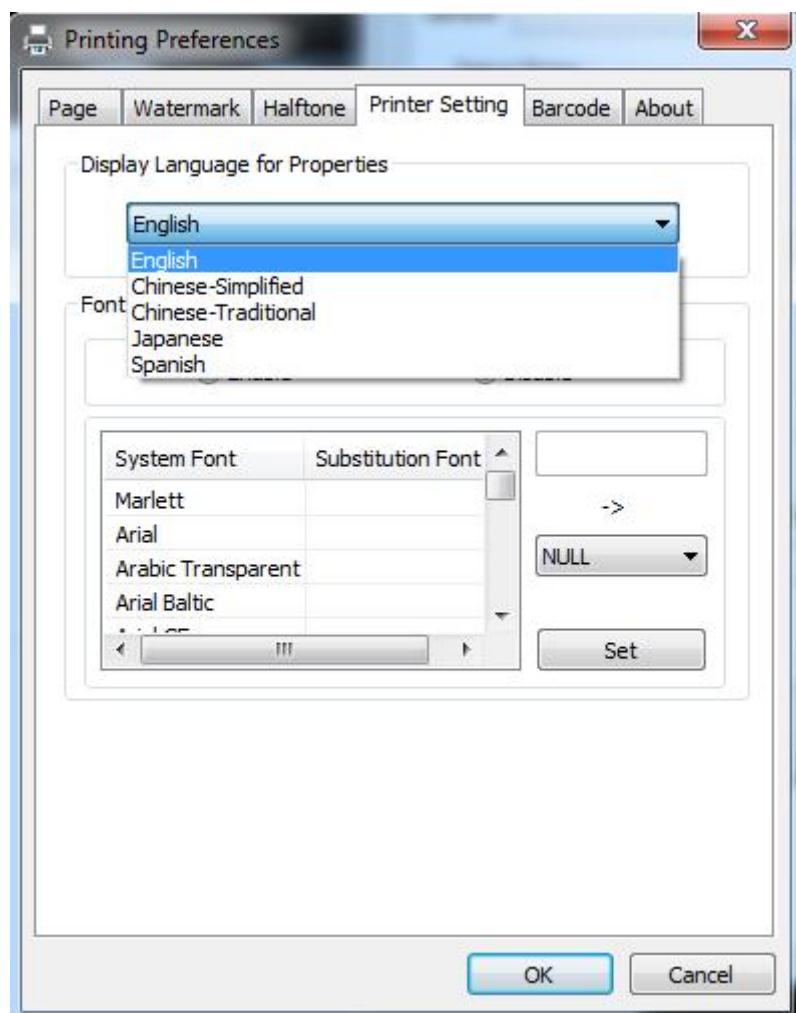


② Set the “Font Name” and the “Barcode Options”.



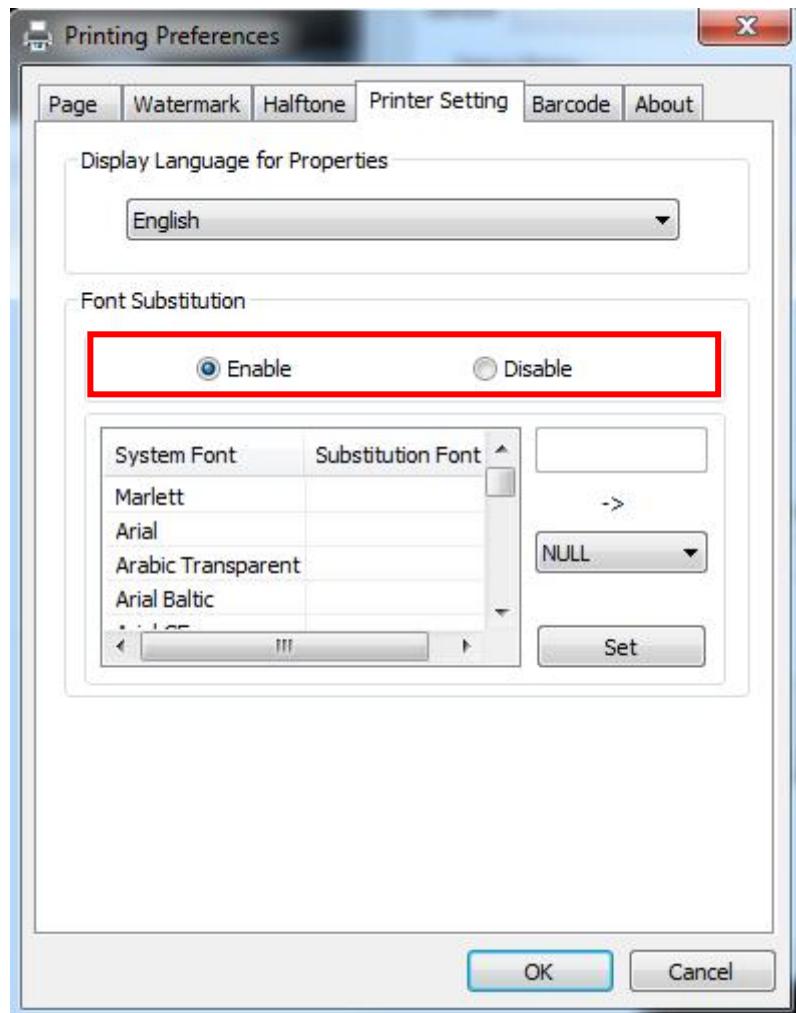
③ Click “Printer Setting”.

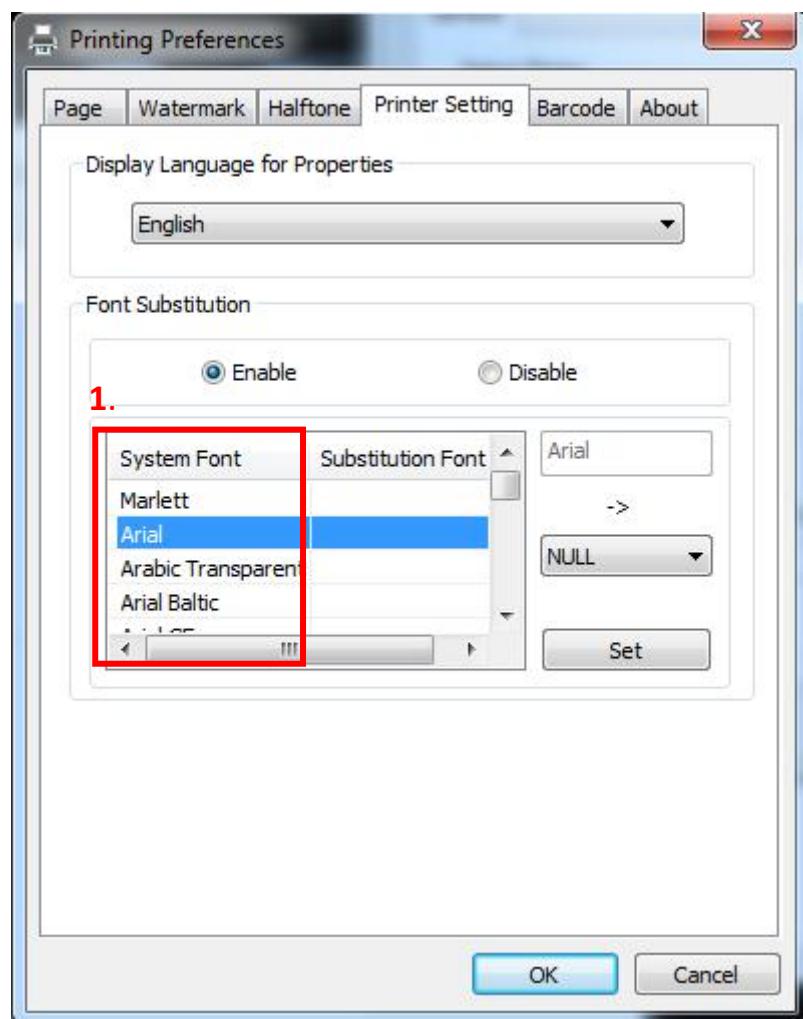
- Choose “Display Language for Properties”

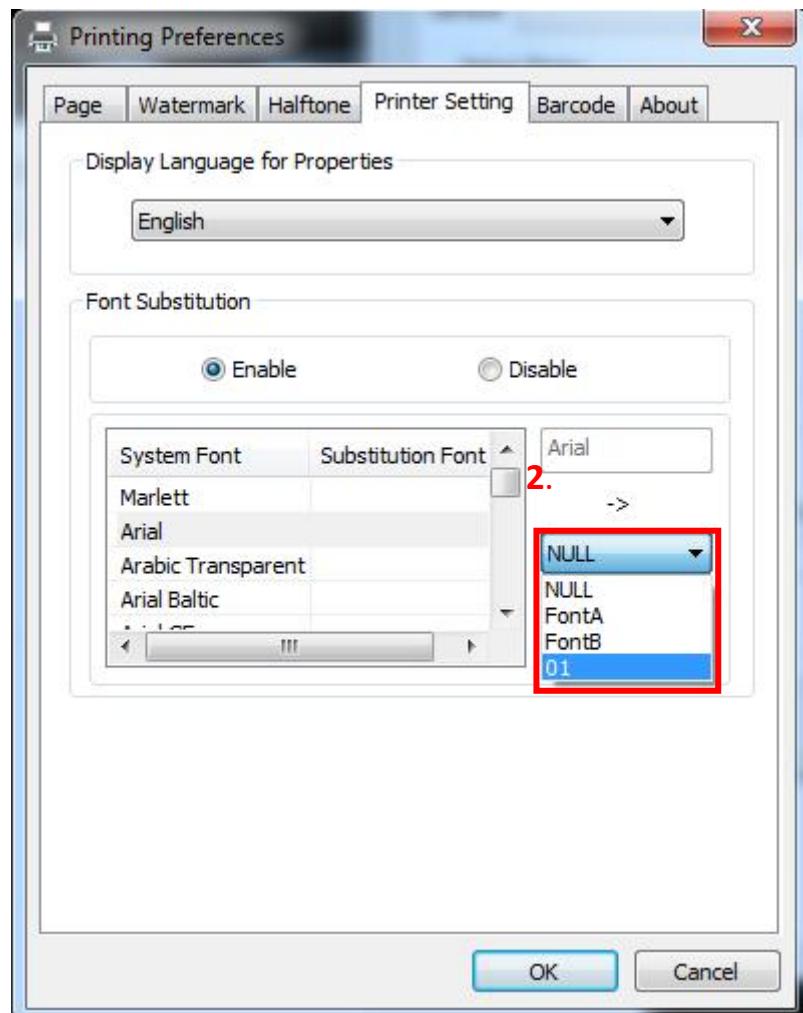


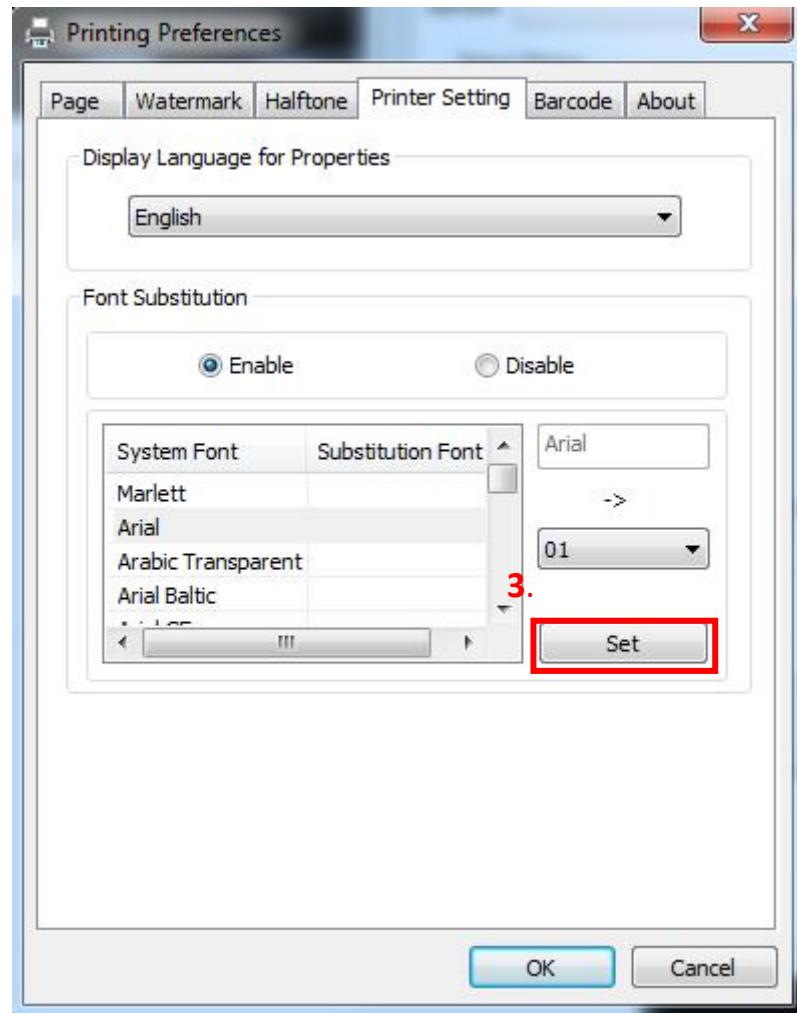
- Turn on “Font Substitution”, select the system text need to be replaced (for example, Arial), and then select the font you want to replace (for example, 01) and click “Set”, and the replacement font will display "01".

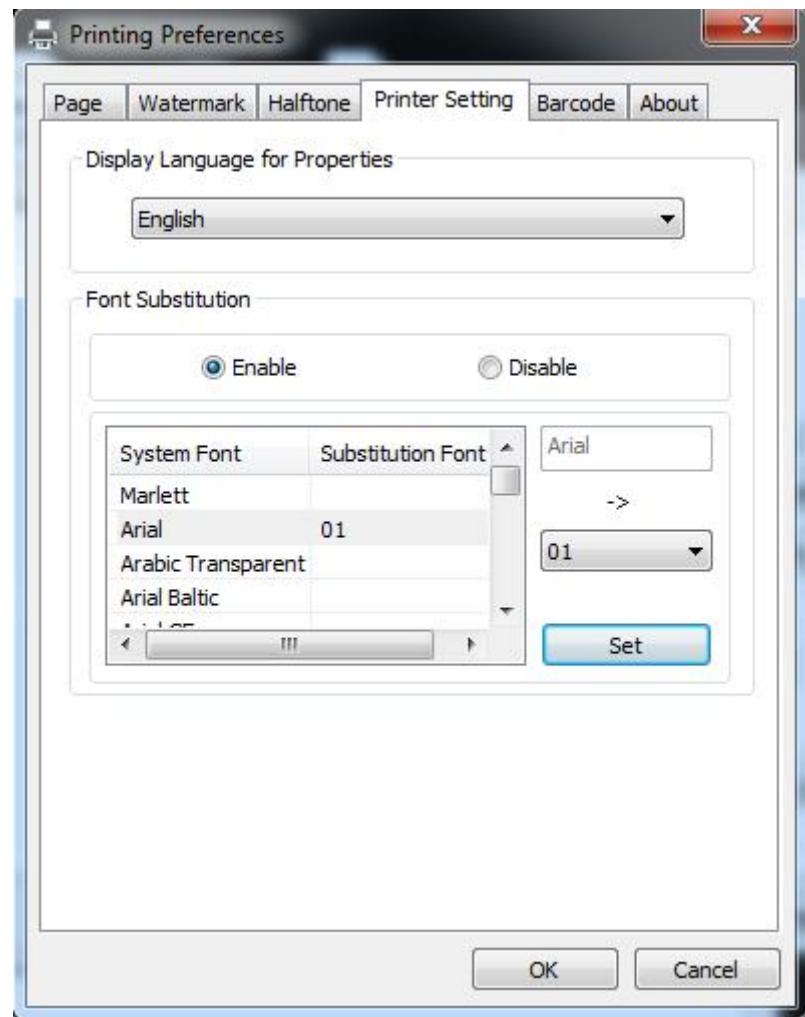
The steps are as follows:





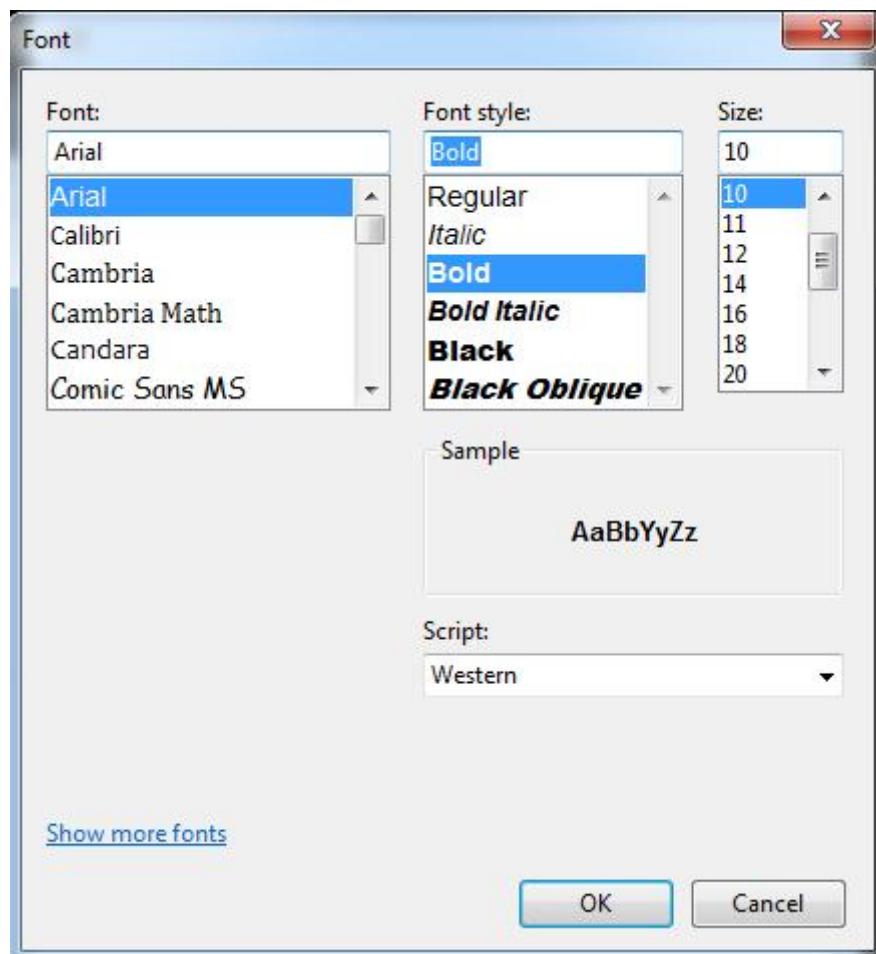




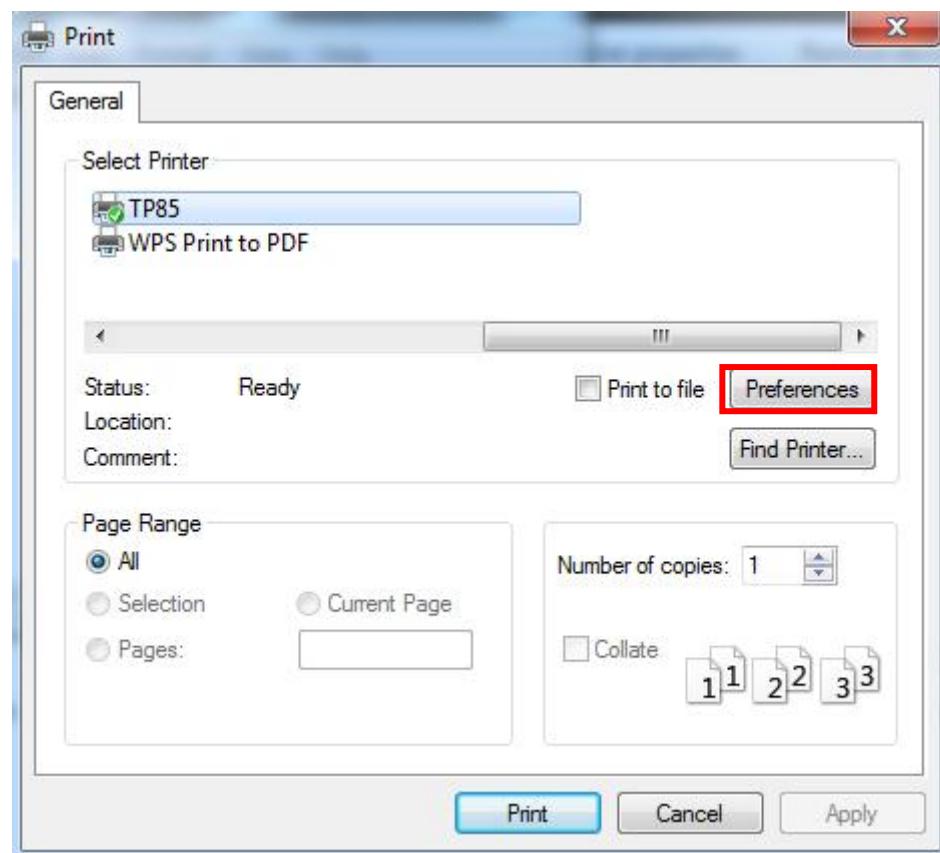


- If you do not have a barcode set, the action is as follows:

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

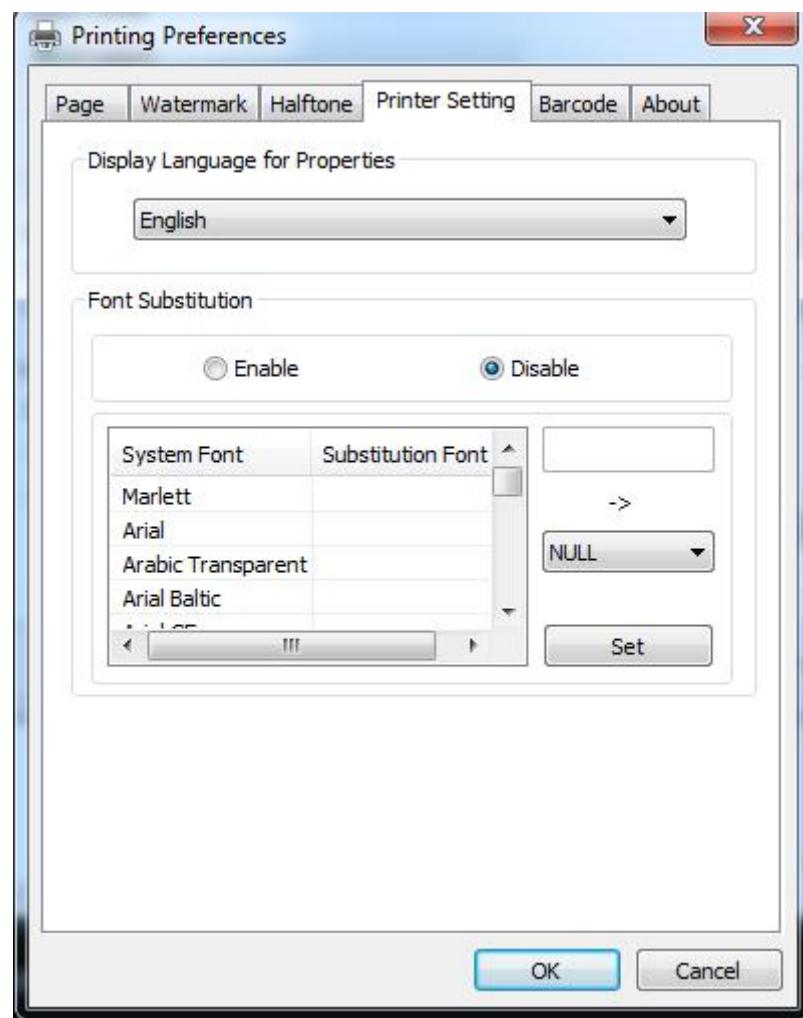


② Set the Printing preferences.

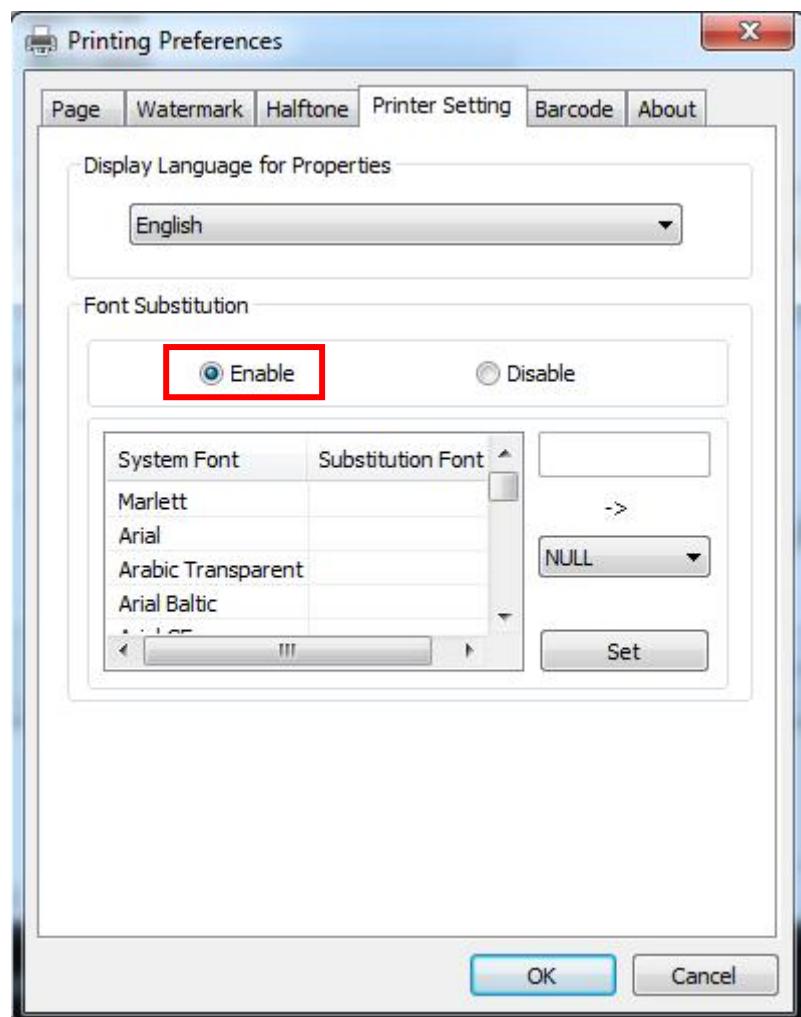


③ Click the “Printer Setting”.

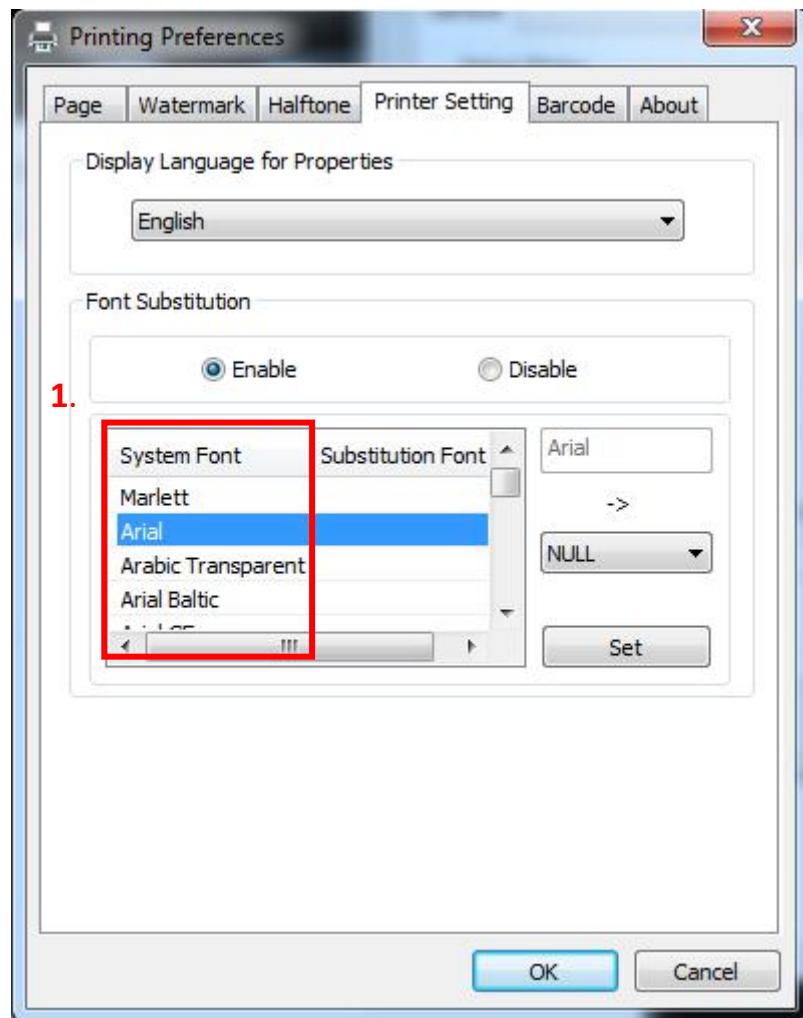
- Choose the “Display Language for Properties”.



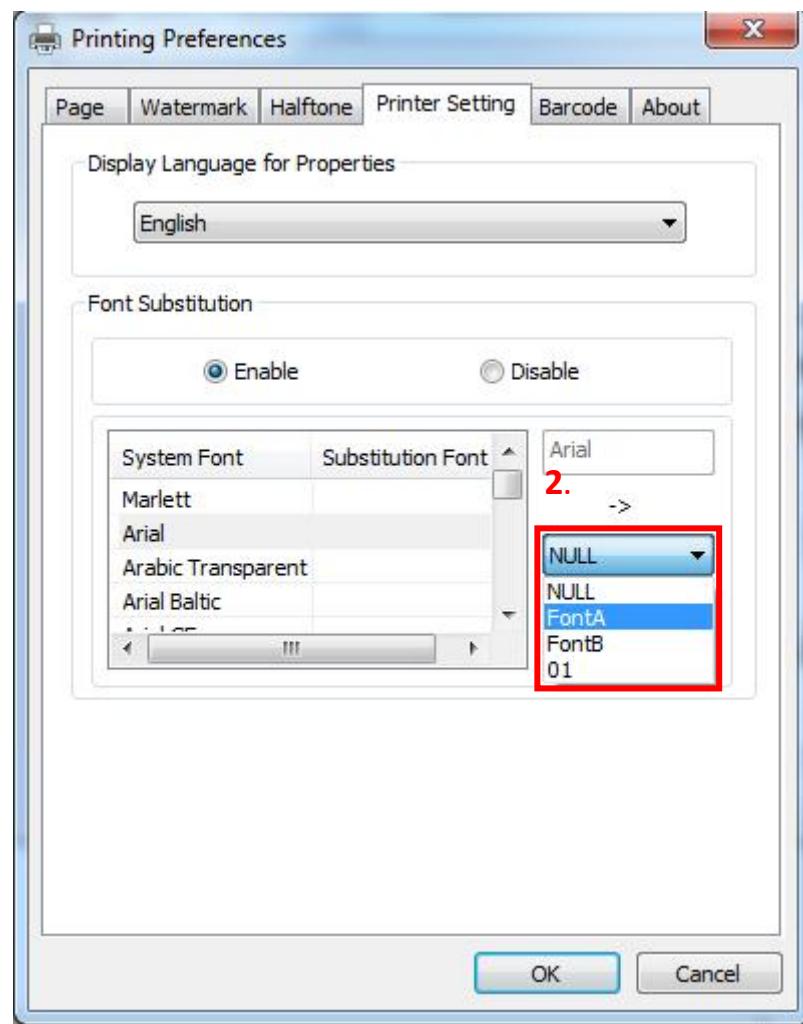
④ Turn on the “Font Substitution”.



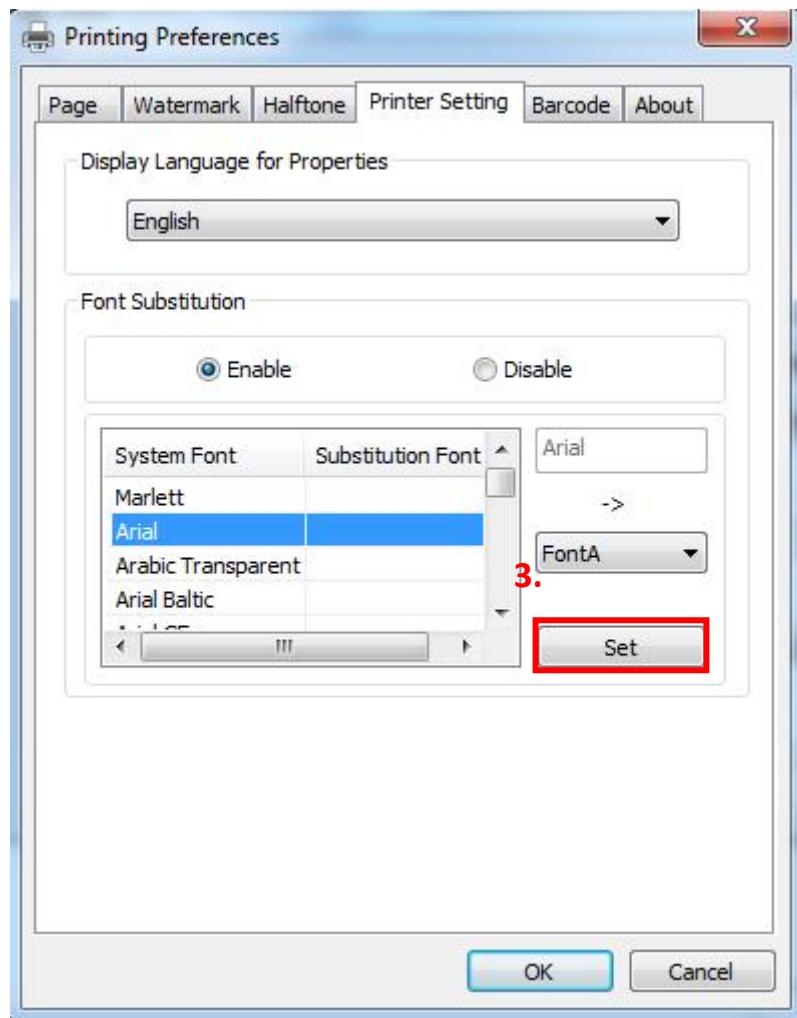
⑤ Select the “System Font”, for example: Arial.

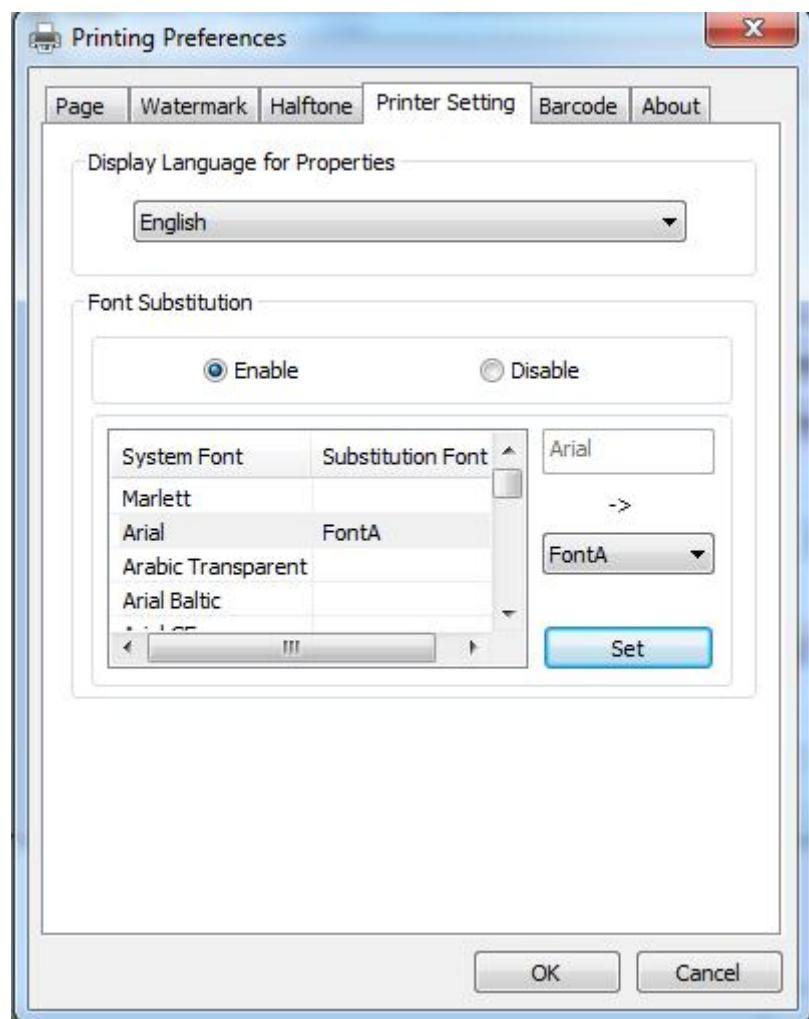


⑥ Select the font that you want to replace.



⑦ Click “Set”.

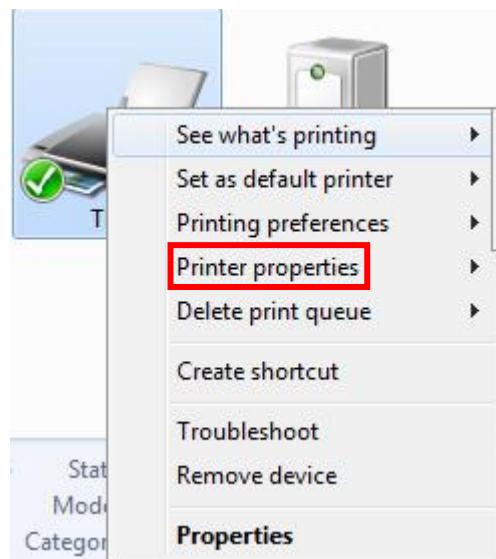




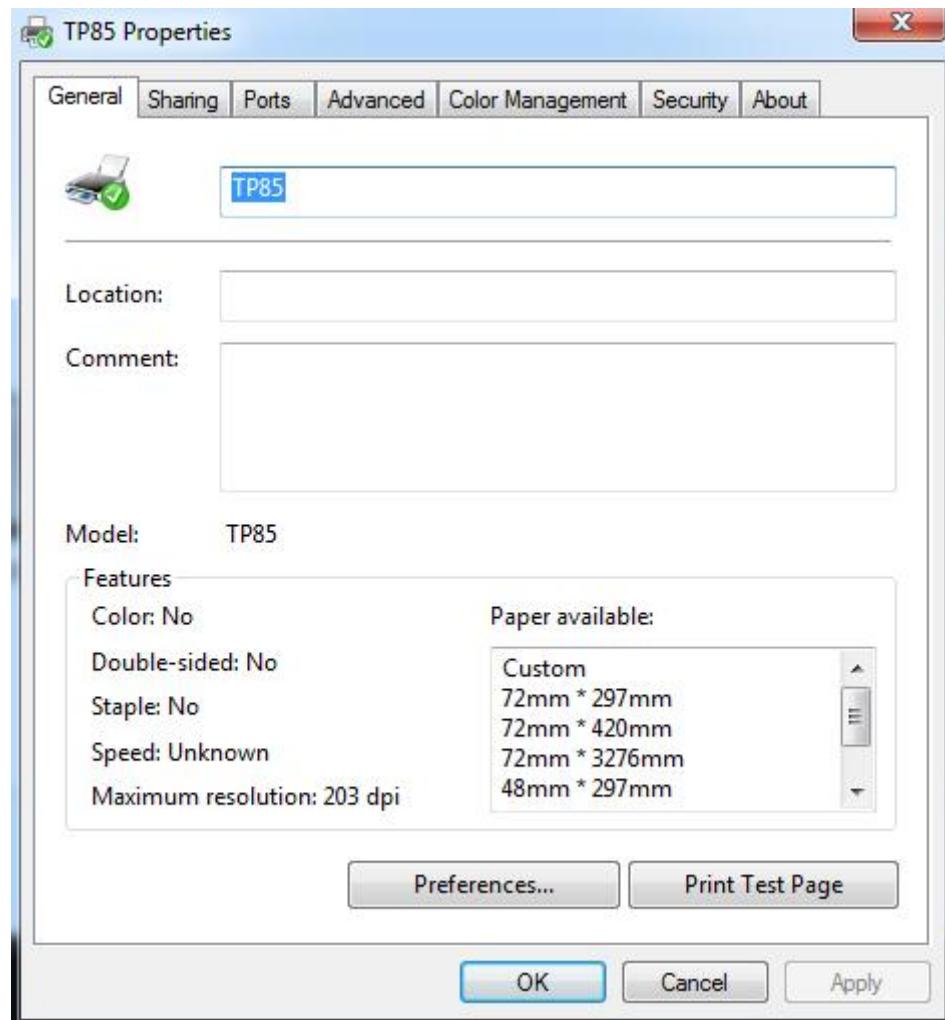
123456

9.5.2 Printer properties

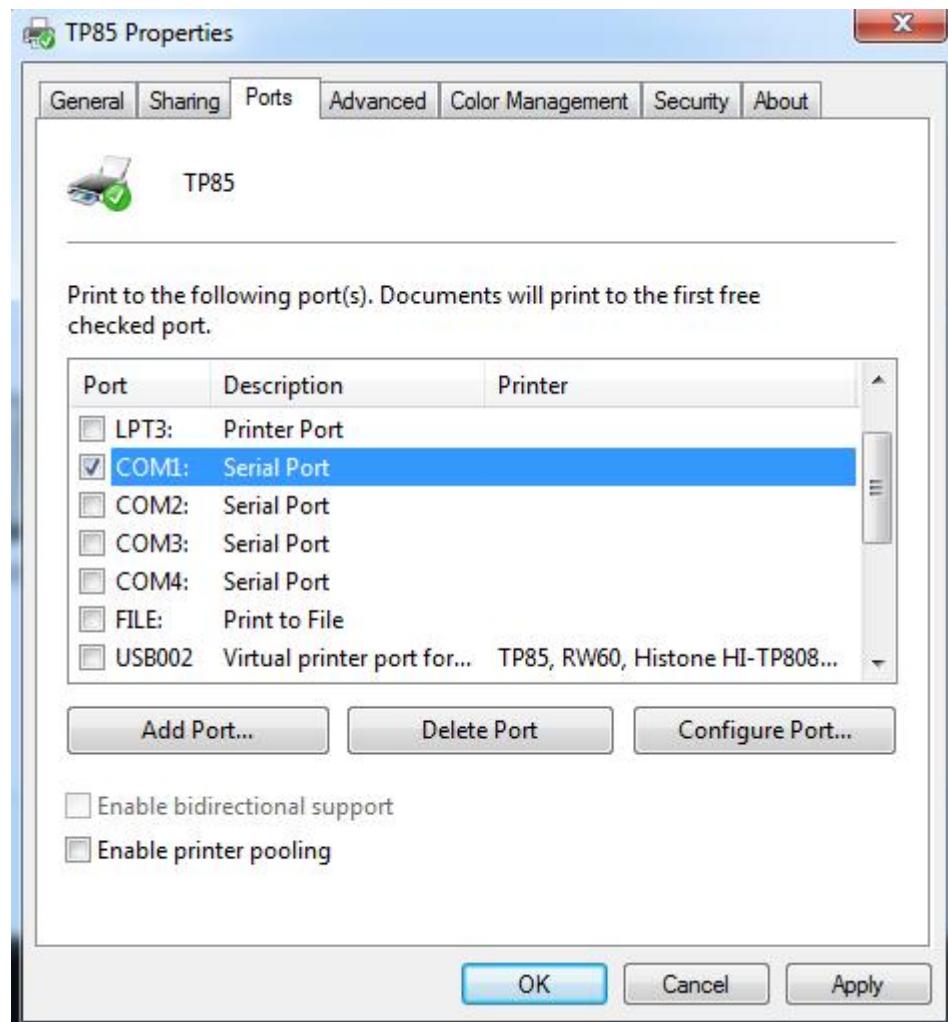
1) Click "Start" → "Devices and Printers". Right click "TP85" and choose "Printer properties".



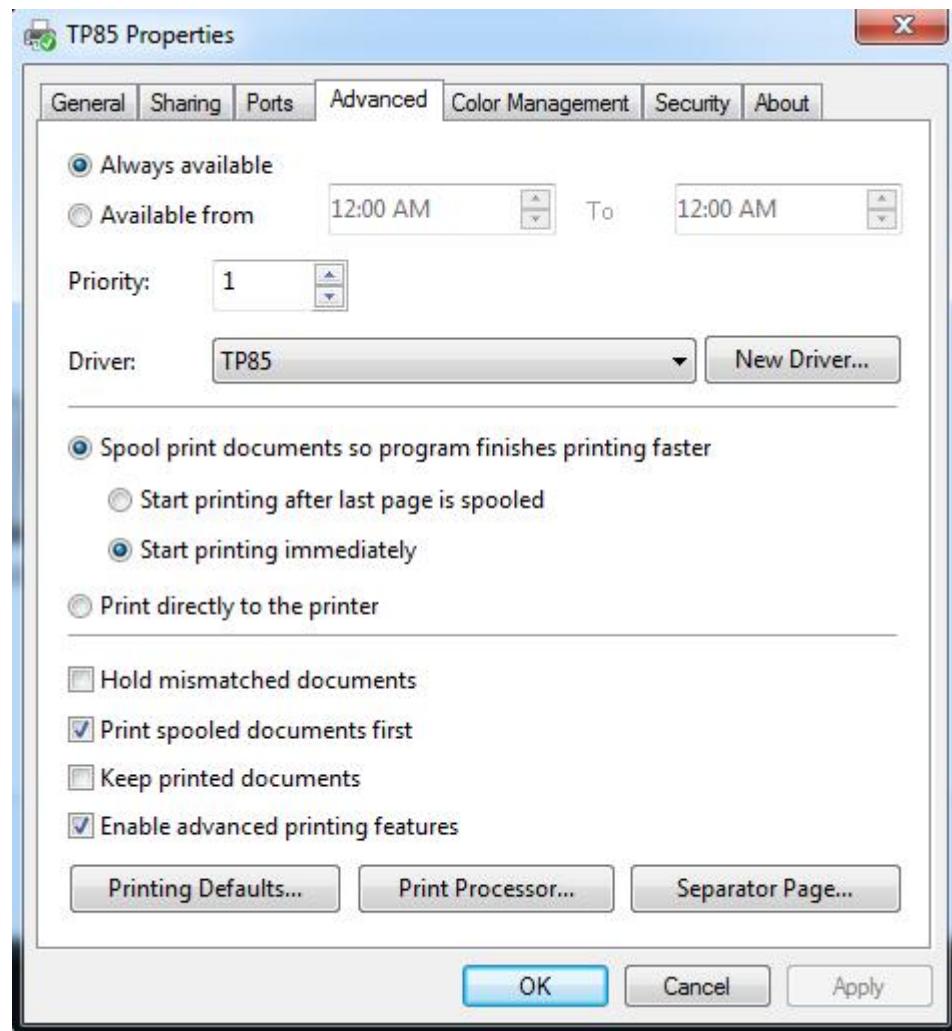
2) Choose “General”, click “Print Test Page”, then it will print the current settings.



3) Click "Port" to choose another port or add port.

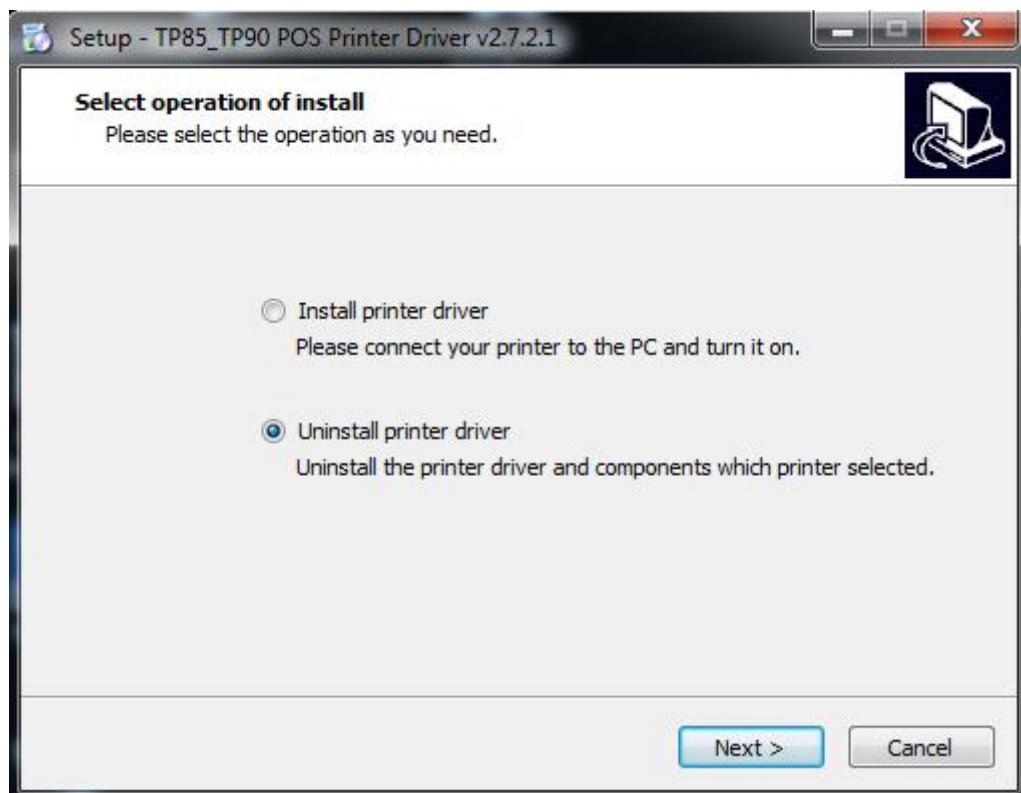


4) Click "Advanced" to set the available time for printing.



9.6 Uninstall Windows Driver

- 1) Double click Windows Driver.
- 2) Choose “Uninstall printer driver”, click “Next”.



3) Choose “TP85”, click “Next”. Then it is complete to uninstall.

