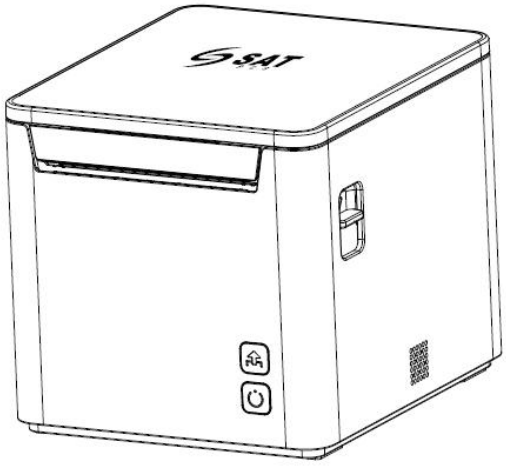
SAT Q23T

User Manual



www.satpcs.com

CONTENTS

Statement 5

Important Safety Instructions 6

1 OVERVIEW 8

1.1 Introductions 8

1.2 The Main Features 8

2 GETTING STARTED 9

2.1 Packing List 9

2.2 Appearance 10

3 SPECIFICATION 11

3.1 Printer Specification 11

3.2 Printing Media Specification 13

3.2.1 Continuous Thermal Paper Specification 13

3.2.2 Notices 13

3.3 Printing and Cutting Position 14

3.3.1 Printing position 14

3.3.2 Cutting Position 15

4 INSTALLATION AND USAGE 16

4.1 Media Loading 16

4.2 Power Connection 18

4.3 Cash Drawer Connection 19

4.4 LED Indicator and Beeper 19

4.5 Bluetooth/Wi-Fi Settings 20

4.5.1 Bluetooth Settings 20

4.5.2 Wi-Fi Settings 20

4.6 Print Test 20

4.6.1 Print Self-Test 20
4.6.2 Printing of Windows Driver Program 21
5 INTERFACES 21
5.1 USB 21
5.2 Cash Drawer Interface 22
5.3 Power Port Connector 22
5.4 Ethernet Interface 23
6 TROUBLESHOOTING 23
6.1 Printer Not Working 23
6.2 LED Indicator and Beeper Alarm 24
6.3 Troubles Occur During Printing 24
6.4 Problems Emerge During the Paper Cutting 24
7 PRINTER CLEANING AND MAINTENANCE 25
7.1 Cleaning Head 25
7.2 Cleaning Sensors, Roller and/or Paper Path 25
8. UTILITY TOOL FOR POS INSTRUCTION 26
8.1 Utility Tool Installation 26
8.2 Using Utility Tool 29
8.2.1 Add/Modify/Delete/Connect Printer 29
8.2.1.1 Add printer 29
8.2.1.2 Modify printer 31
8.2.1.3 Delete printer 33
8.2.1.4 Connection Test 34
8.2.2 Functions 36
8.2.2.1 Printer Test 36
8.2.2.2 Command Test 41

8.2.2.3 Manage Images 44
8.2.2.4 Download Fonts 48
8.2.2.5 Parameter Settings 49
8.2.2.6 Advanced Settings 58
8.3 Firmware Update 70
9 WINDOWS DRIVER INSTRUCTION 72
9.1 Information 72
9.2 Operating System (OS) Environment 72
9.3 Windows Driver Preparation 72
9.4 Windows Driver Installation 73
9.5 Detailed Windows Driver Setting 76
9.5.1 Printing Preferences 76
9.5.2 Other Settings 97
9.6 Uninstall Windows Driver 100
9.7 Specification 102

Statement

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 the continuous improvement of the product, the specifications, fittings, parts, designs and procedures described in the manual are subject to the actual machine without prior notice.

Important Safety Instructions

◆ **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.

◆ **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.

◆ **Other Precautions**

The copyright for this user manual and various other manuals is property of our company. Any copying or conversion into electronic form and saving of this material without the express written permission is strictly prohibited. Use of the information contained in this manual is not subject to any patent liability. This manual has been prepared with utmost care and attention to detail but may contain certain errors and/or omissions. Our company is not legally liable for any damages resulting from the use of the information in this manual. Our company and its affiliates are not legally liable (United States excluded) for any damages, loss, costs, and/or expenses that result from the breakdown, malfunction, and/or misuse of the product due to violation or neglect of the operation and maintenance information and instructions provided by our company, as well as from the unauthorized alteration, repair, and/or modification of the product by the user and/or third party. We are not legally liable for any damages and/or issues resulting from the use of options and/or parts that are not authentic or authorized products.

1 OVERVIEW

1.1 Introductions

SAT Q23T 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.

SAT Q23T can connect with other equipment through USB, Ethernet, Wi-Fi, Bluetooth, and cash drawer interfaces. And the printer drivers are available for the Windows 7/8/10, Windows Server 2008/2012/2016, Linux, Javapos, OPOS, MacOS operating system.

1.2 The Main Features

1) Low noise
2) High print speed
3) Easy paper loading
4) Cash drawer interface

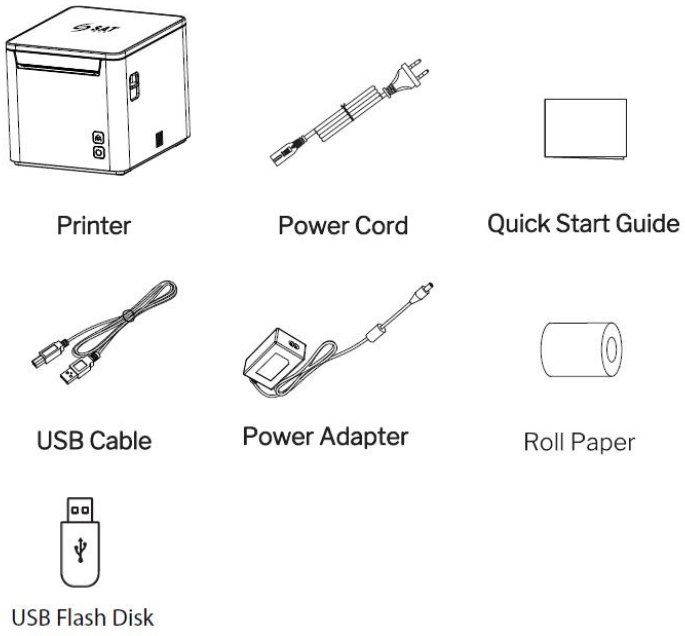
2 GETTING STARTED

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 are any items missing, please contact your local dealer.



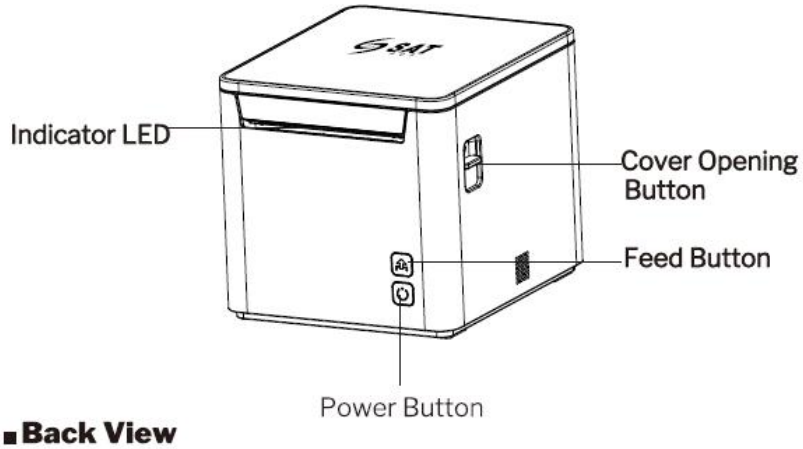
Notes:

1) The power adapter and power cord vary by country or region.

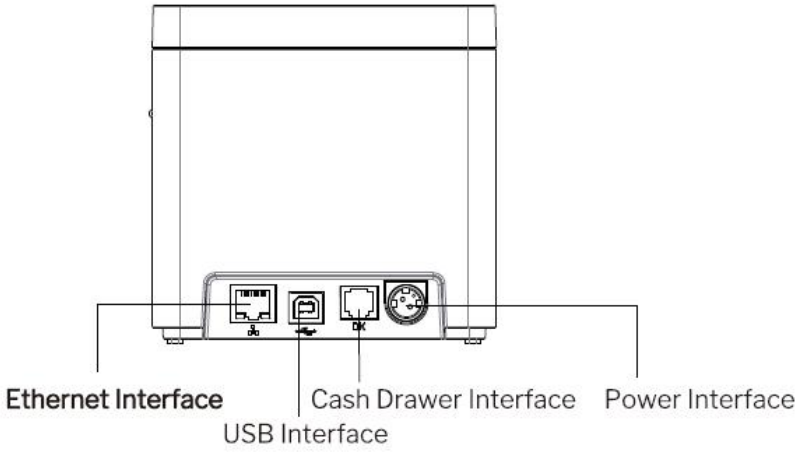
2) The items in the package are actually dependent on the order.

2.2 Appearance

■ **Front & Side View**



■ **Back View**



Note: Wi-Fi and Bluetooth interfaces are embedded in the printer optionally.

3 SPECIFICATION

3.1 Printer Specification

Item		Parameter
Printing Parameter	Printing Method	Direct thermal line printing
	Resolution	Default 203 dpi, 180 dpi can be emulated
	Print Width	72mm / 48mm
	Print Speed	Max. 230mm/s
	Print density	Adjustable from degree 1 to degree 4
	Print Direction	Vertical and horizontal
Interface	Default	Type-B USB 2.0, Ethernet, Cash drawer
	Optional	Wi-Fi, Bluetooth
Auto cutter		Full Cut/Partial Cut
Page mode		Supported
Memory	RAM	4MB
	Flash	4MB
Character set	Chinese	Simplified /Traditional (24X24)
	Alphanumeric	Font A 12×24,Font B 9×17
	Character Set	Chinese, International Character Sets
	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, WPC1258, MIK(Cyrillic), PC755(Latin 2), Iran, Iran II, Latvian, ISO-8859-1, ISO-8859-3, ISO-8859-4(Baltic), ISO-8859-5, ISO-8859-6(Arabic), ISO-8859-8, ISO-8859-9, PC856, PC3848(ABICOMP), MONGOLIAN, VISCII, CP1048
Graphics		Support bitmap printing with different density and user defined bitmap printing (Max. 196K for total)
Barcode	1D	UPC-A, UPC-E, EAN-8, EAN-13, CODE39, ITF, CODABAR, CODE128, CODE93
	2D	QR Code, PDF417
Detection	Sensor	Paper end, cover opening, TPH over-temperature
LED indicator		Green/Red/Orange

Item		Parameter
Power supply	Input	AC100V-240V 50/60HZ
	Output	DC 24V, 1.5A
Paper	Paper Loading	Easy-loading structure of side open cover
	Paper Type	Standard thermal paper
	Paper Width	79.5±0.5mm/57.5±0.5mm
	Paper Thickness	0.05~0.13mm
	Paper Roll Diameter	80mm Max.
Condition	Operating	0~45℃ / 5~95%RH No condensation
	Storage	-20~60℃ / 15~95%RH No condensation
Reliability	TPH Life	100km
	Cutter Life	1,000,000 times
Emulation		ESC/POS
Packing Information	Printer Dimension (W*D*H)	145mm*123.5mm*120.3mm
	Accessories	Power Adaptor, Power Cord, Quick Start Guide, USB Cable, Roll Paper, USB Flash Disk
Driver		Windows 7/8/10， Windows Server 2008/2012/2016 Linux, Javapos, OPOS, MacOS

3.2 Printing Media Specification

3.2.1 Continuous Thermal Paper Specification

Paper Type : Standard thermal paper

Paper Width : 79.5±0.5mm/57.5±0.5mm

Paper Outer Diameter : Max. 80 mm

Paper Thickness : 0.05~0.13mm

3.2.2 Notices

Notes:

1) Please use the recommended thermal paper or same quality paper, otherwise it will influence the printing quality and decrease the thermal printer head life;

2) Don't stick the paper on the core of paper roll.

3) If the thermal paper is polluted by chemical or oil, the thermal paper heat sensibility would decrease, which would influence the printing quality;

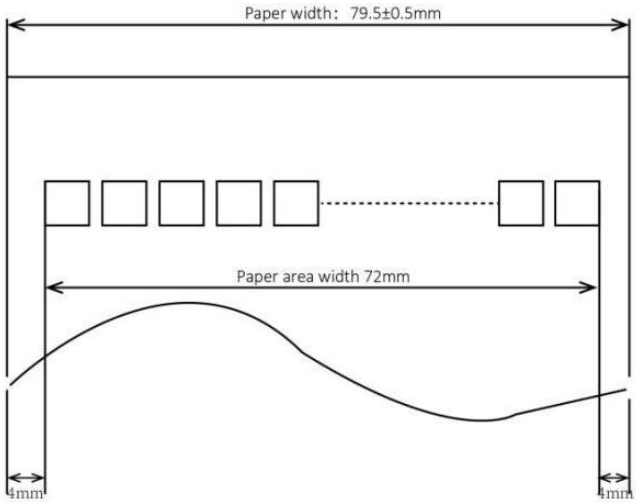
4) Don't use finger nail or hard articles to touch the surface of thermal paper, otherwise it will cause color fading;

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.

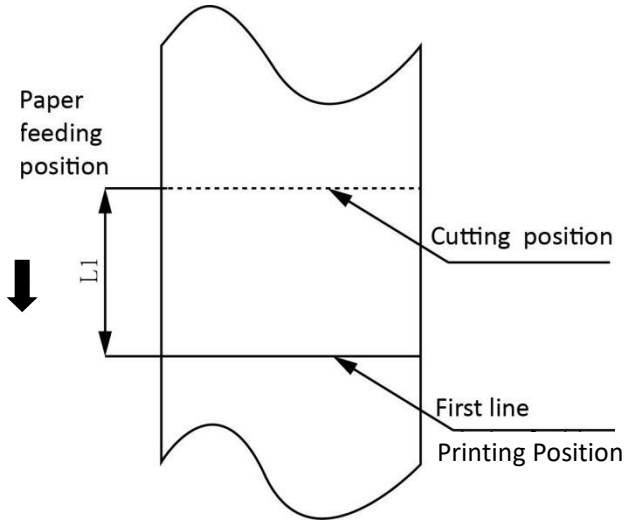
3.3 Printing and Cutting Position

3.3.1 Printing position

79.5±0.5 mm Print Paper



3.3.2 Cutting Position

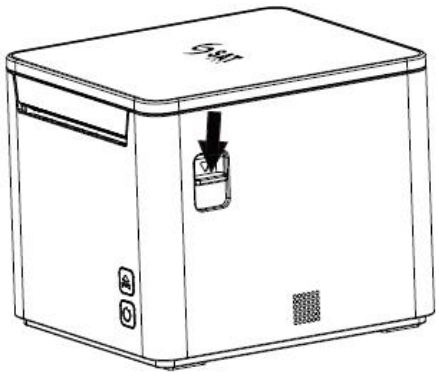


Type	Paper Cutting Position(L1)
SAT Q23T	8.5mm

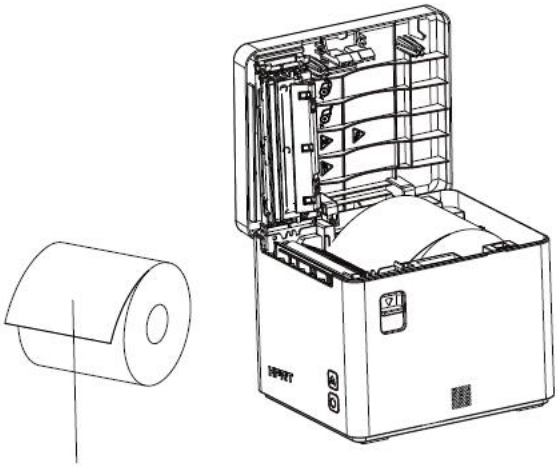
4 INSTALLATION AND USAGE

4.1 Media Loading

1) Press the cover opening button to open the top cover.

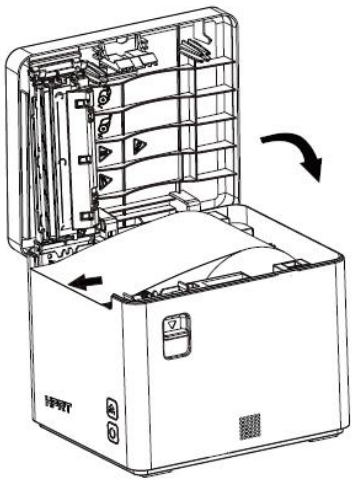


2) Load the roll paper in the correct direction.

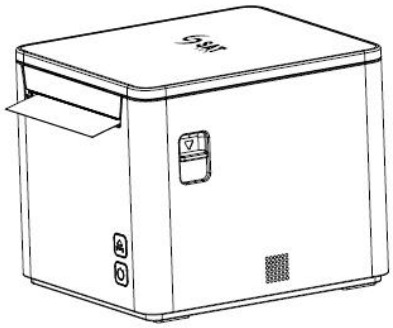


Printer Side (Thermosensitive Layer)

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



4) Tear the extra paper.



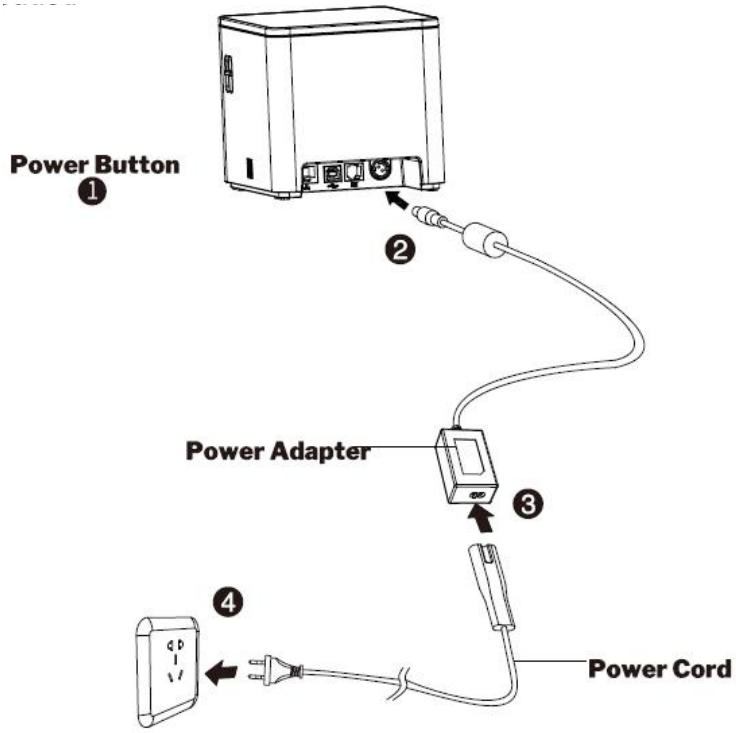
4.2 Power Connection

1) Make sure the printer power is turned off.

2) Connect power adapter with printer.

3) Connect power adapter with power cord.

4) Plug the other side of power cord into the socket outlet.



Notes:

1) The power adapter and power cord vary by country or region.

2) Disconnect or connect the power adapter by correct method, or damage may be caused.

3) Please choose AC 220V input voltage. If the input voltage is incorrect, the printer may be damaged.

Notes:

1) Please only use the power adapter recommended by supplier or equivalent products.

2) When disconnecting the power adapter plug, handhold plug connector shell 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 for a long time, disconnect the power supply of printer power adapter.

4.3 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.)

4.4 LED Indicator and Beeper

Function specification of indicated light and beeper.

Status	Indicator LED	Beeper
The printer works well	Solid Green	
Cover Opening	Solid Red	"Beep ,Beep--,Beep"
Paper End	Solid Red	"Beep, Beep, Beep"
Cutter Jam	Fast Flashing Red	"Beep--,Beep--,Beep--"
TPH over-temperature	Slowly Flashing Red	"Beep—"
Over-voltage / Low-voltage	Slowly Flashing Orange	"Beep—"
Wi-Fi attempting to connect	Fast Flashing Green	
Wi-Fi connection successful	Solid Green	

Note: The printer uses a thermistor to detect the temperature of the print head. If the temperature of print head is higher than 65℃, printer will send a warning. If the temperature of print head is higher than 70℃, printer will stop working until the temperature is lower than 60℃.

4.5 Bluetooth/Wi-Fi Settings

4.5.1 Bluetooth Settings

Default name: BT Printer-XXXX

Default password: NONE

Please refer to the *Bluetooth Connection Manual* for details

Note: This setting is only available for models with Bluetooth.

4.5.2 Wi-Fi Settings

Printer factory default Wi-Fi mode is AP mode with IP address “192.168.1.1” and SSID “POS WIFI”. After the PC or mobile phone is connected with printer successfully, users can set the parameter settings through utility tool.

Please refer to the *Wi-Fi Operation Manual* for details

Note: This setting is only available for models with Wi-Fi.

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 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.

4.6.2 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 “Ports” as the type you use.

3) Use the Windows Driver Program to print out the “Print Test Page”.

5 INTERFACES

SAT Q23T supports Ethernet, cash drawer, USB interfaces, Wi-Fi and Bluetooth interfaces.

Wi-Fi and Bluetooth interfaces are embedded in the printer optionally.

5.1 USB

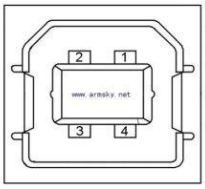


Figure 5-1

PIN NO.	SIGNAL NAME
1	VBUS
2	D-
3	D+
4	GND

5.2 Cash Drawer Interface

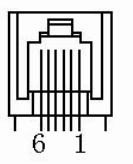


Figure 5-2

PIN NO.	SIGNAL NAME
1	FG
2	Drawer 1
3	DRSW
4	VDR
5	Drawer 2
6	GND

Electrical characteristics

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

Detection signal for drawer status： “L” = 0 ~ 0.5 V “H” = 3 ~ 5 V

5.3 Power Port Connector

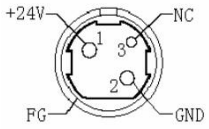
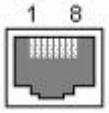


Figure 5.3

PIN NO.	SIGNAL NAME
1	+24V
2	GND
3	N.C
SHELL	F.G

5.4 Ethernet Interface



PIN NO.	SIGNAL NAME
1	TX+
2	TX-
3	RX+
4	n/c
5	n/c
6	RX-
7	n/c
8	n/c

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.

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 is not on, printer is not working	Printer has no power	Connect to the power supply
	Printer is not on	Turn on the printer
	Circuit board is broken	Contact with the dealer

6.2 LED Indicator and Beeper Alarm

Problem Description	Probable Reason	Solution
LED glows red and beeper alarms	Printer cover is open	Close the printer cover
	Paper end	Reload the roll paper
LED flashes red/orange and beeper alarms	Thermal print head is overheated	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
Blurred printing or spot	Incorrect roll paper loading	Check if the roll paper is loaded.
	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 is not feeding normally	Paper is jammed	Open the printer cover, and 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

Problem Description	Probable Reason	Solution
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.
	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: About the density setting, pls refer to Utility Tool for POS Instruction at chapter 8.

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 Server 2016
- Microsoft Windows Server 2012 (64 bit)
- Microsoft Windows Server 2008 R2

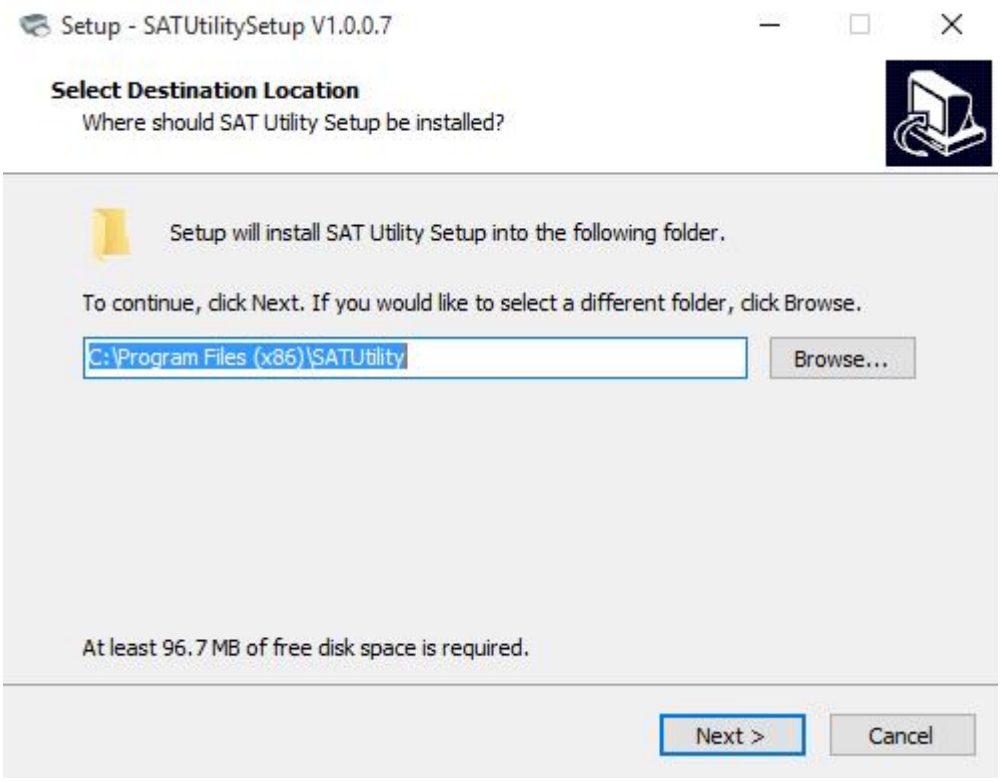
8.1 Utility Tool Installation

The following screens take Win 10 for example.

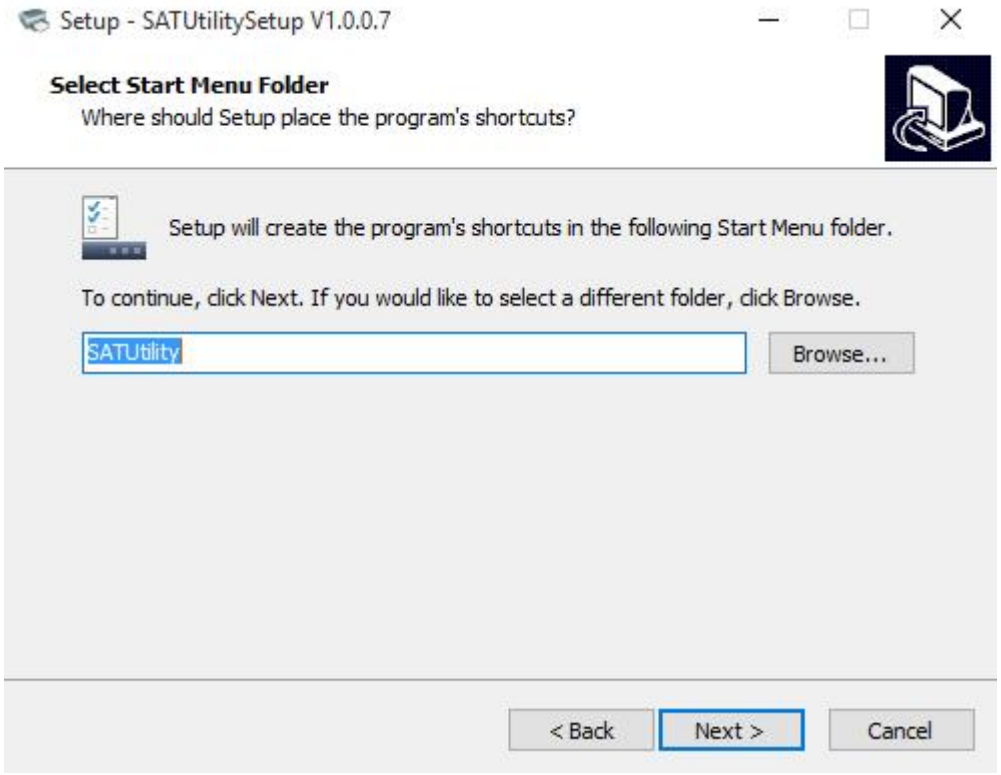
1) Open the installation package.

2) Choose “English” and click “OK”.

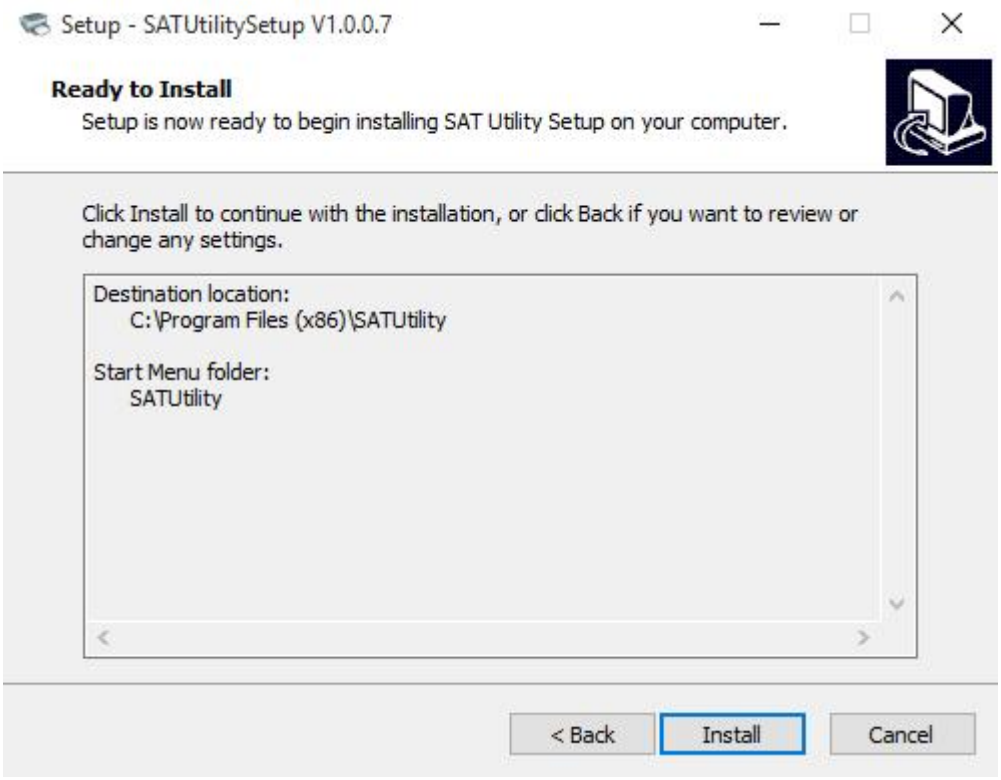
3) Select the destination location. Click “Next”.



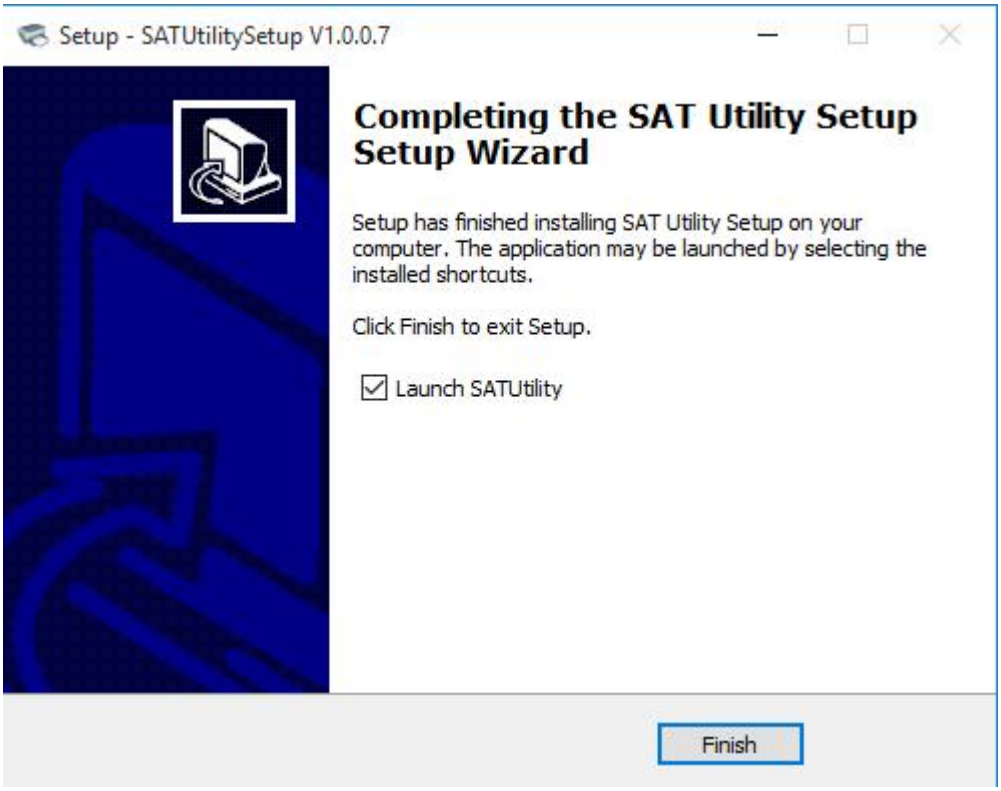
4) Select start menu folder. Click “Next”.



5) Click “Install”.



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



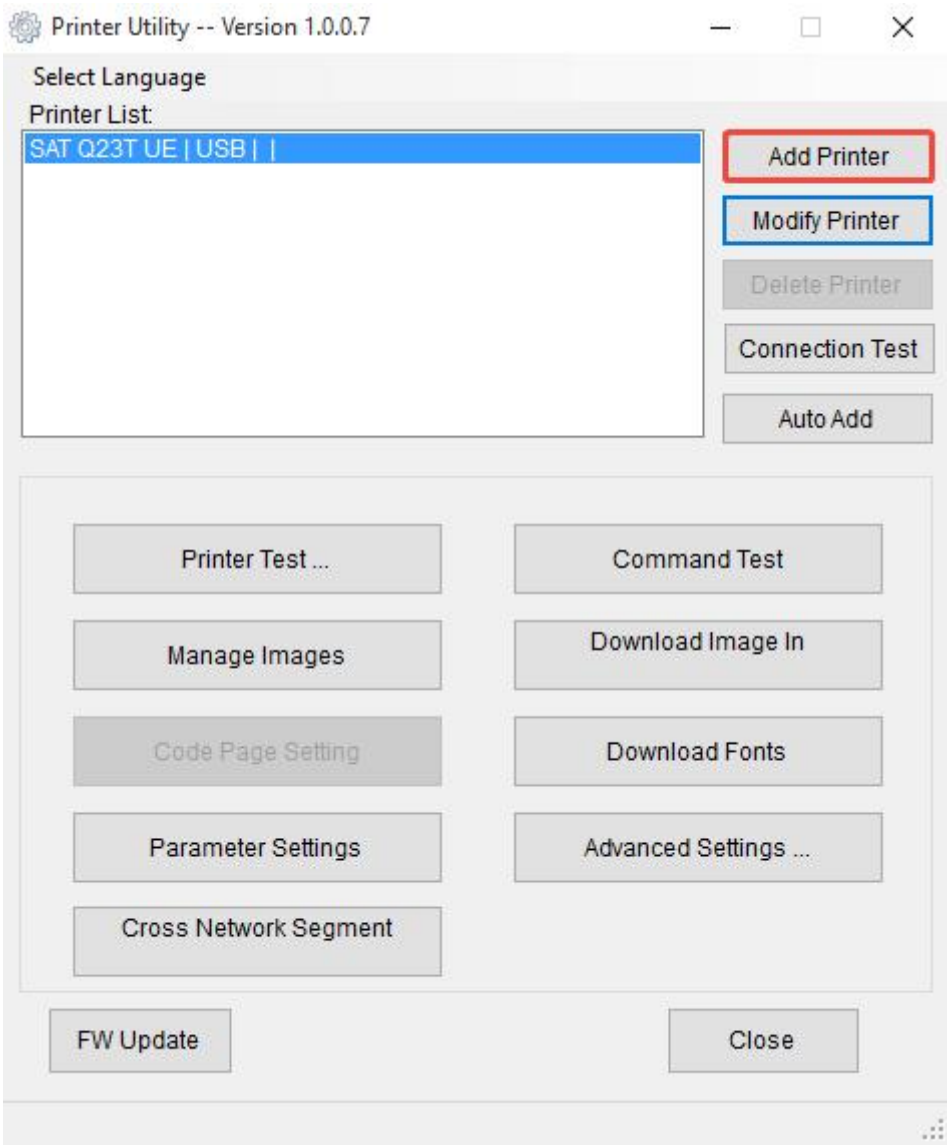
8.2 Using Utility Tool

Warning: In different operating system, screen has a slight difference. Please operate it according to the tips. Take SAT Q23T (Windows 10) for example.

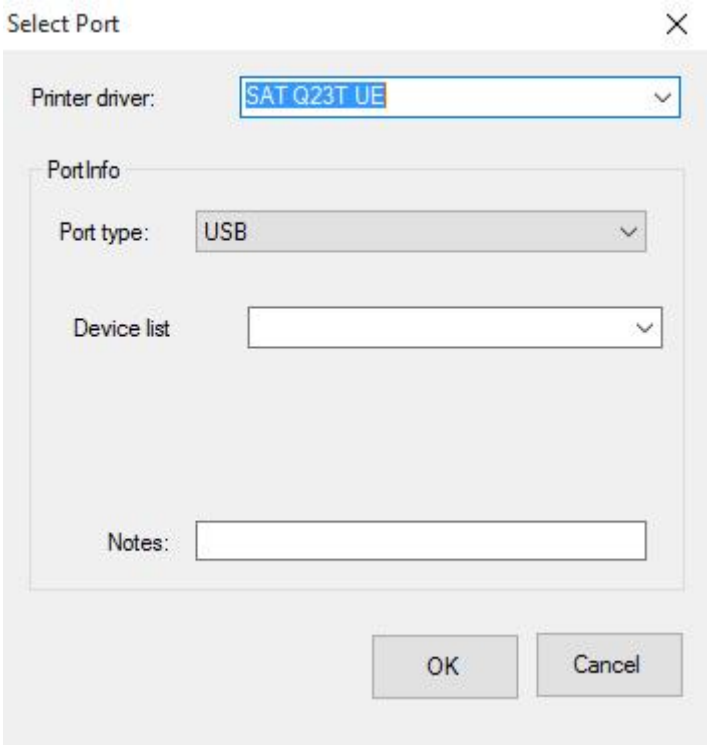
8.2.1 Add/Modify/Delete/Connect Printer

8.2.1.1 Add printer

1) Click ”Add Printer”.

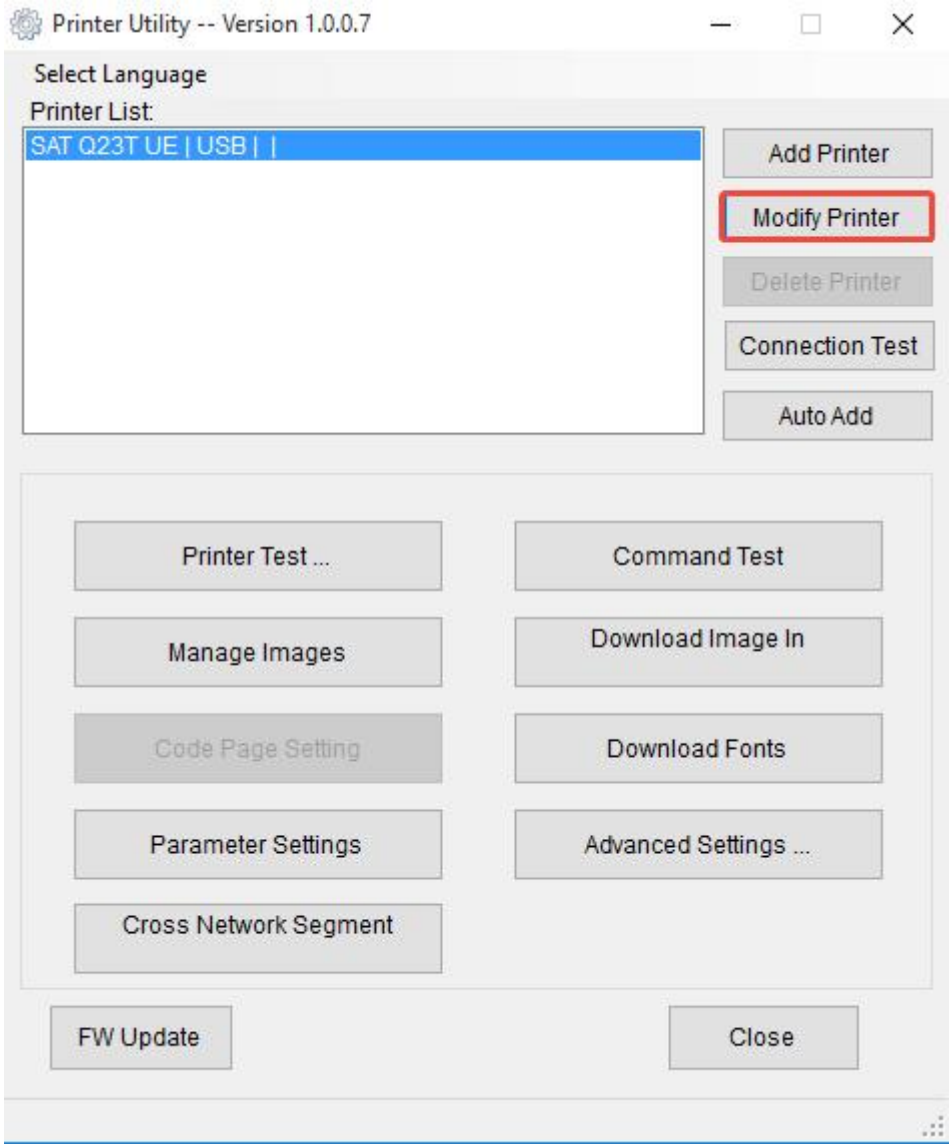


2) Choose the appropriate printer type and port. Then click “OK”.

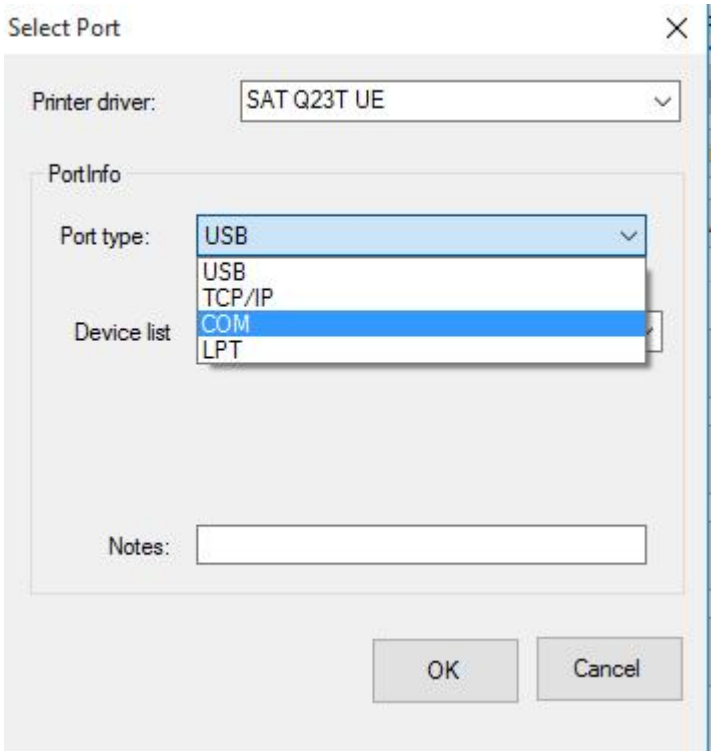


8.2.1.2 Modify printer

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



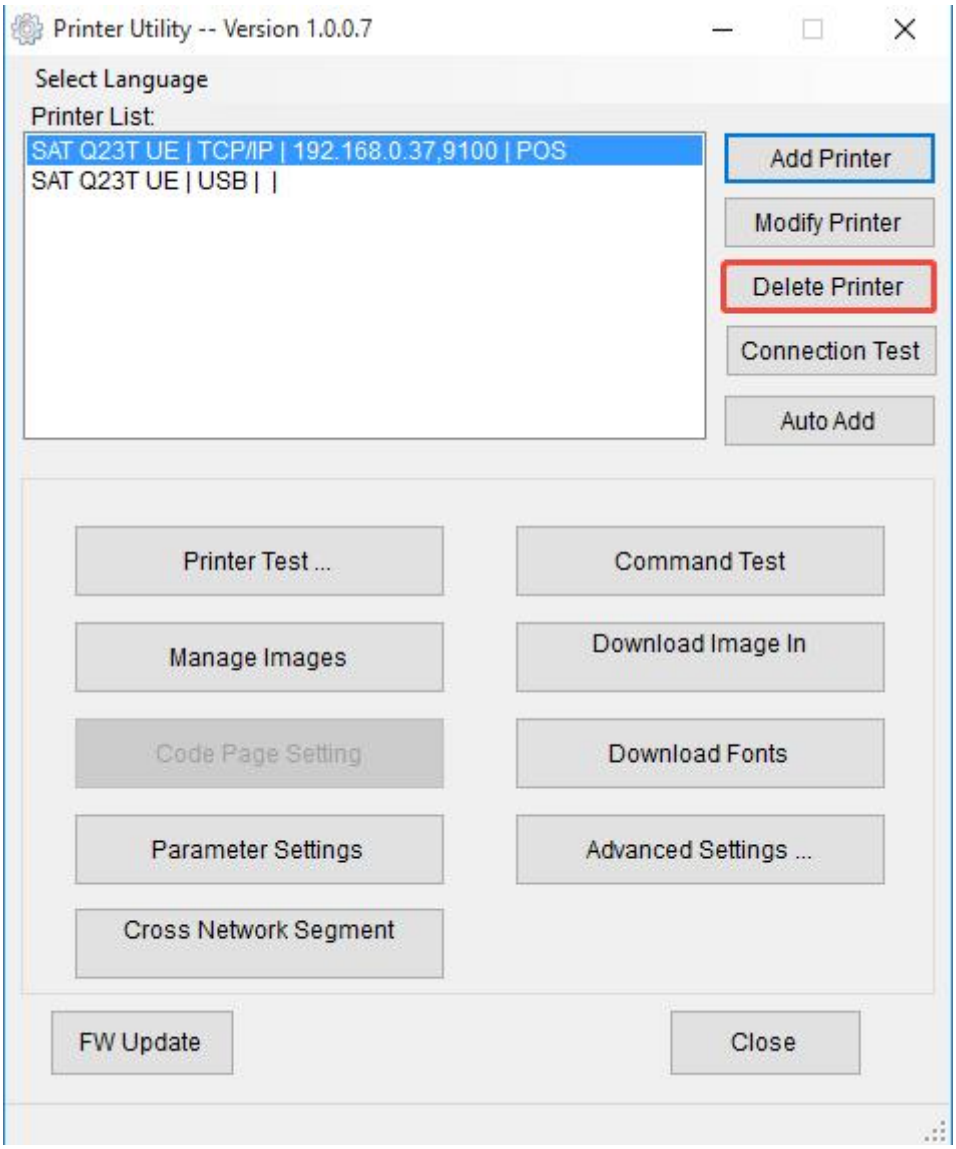
2) Choose the new printer and new port. Then click “OK”.



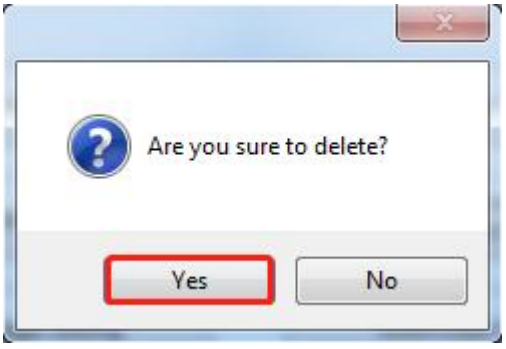
3) The new printer is added successfully.

8.2.1.3 Delete printer

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



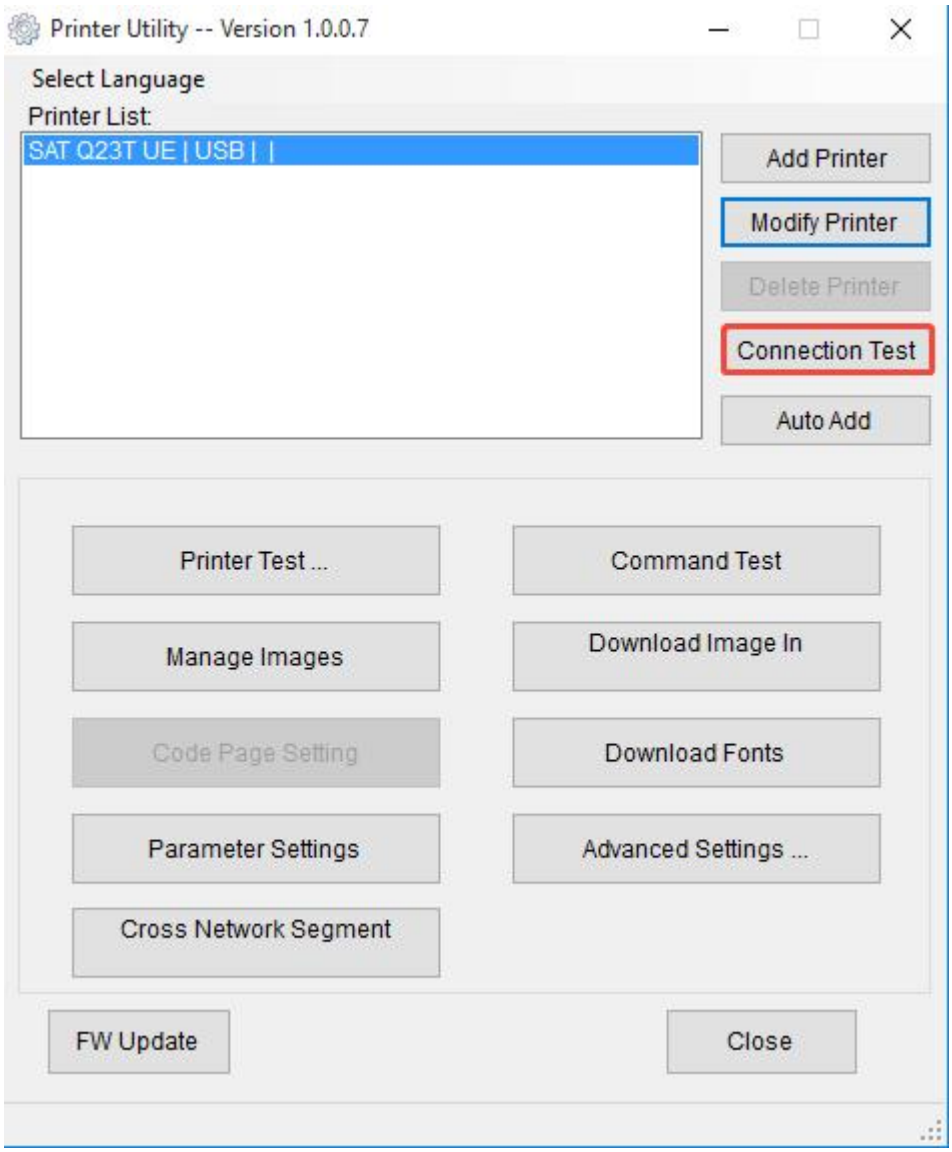
2) Click “Yes”, then the printer is deleted.



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

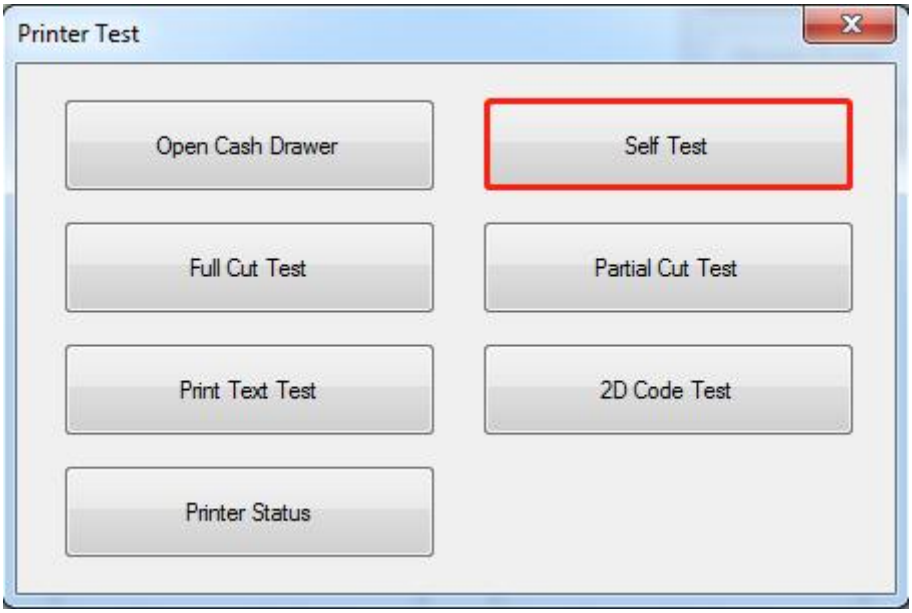
Printer Test contains the following items:

- Printer Test
- Command Test
- Manage Images
- Download Image In Compatible Mode
- Download Fonts
- Parameter Settings
- Advanced Settings

8.2.2.1 Printer Test

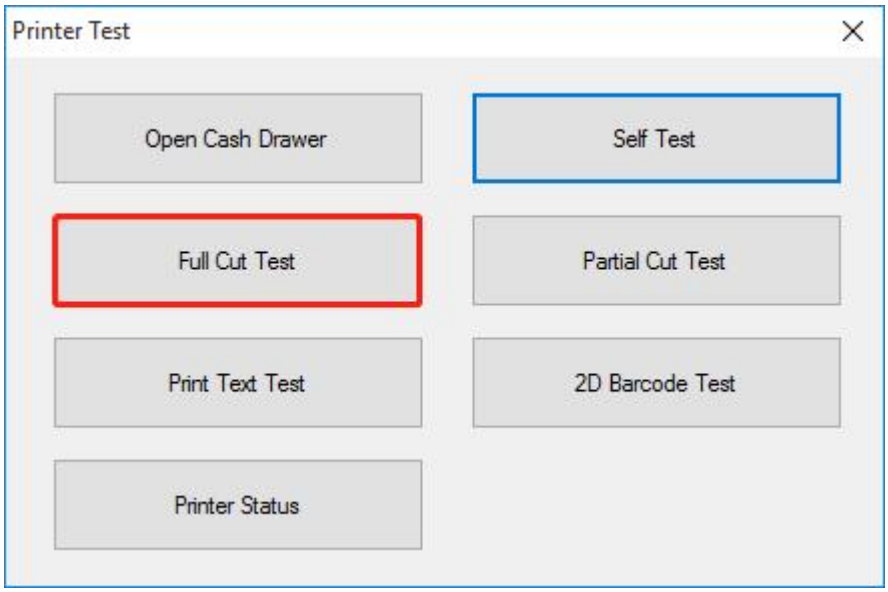
1) Self Test

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



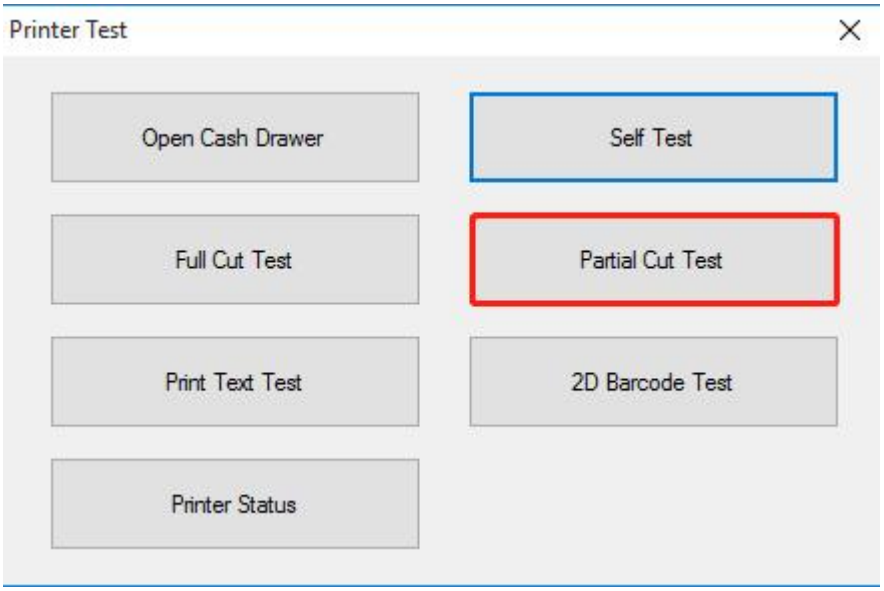
2) Full Cut Test

Click the full cut test and the paper will be cut automatically. Cutting method is full cut.

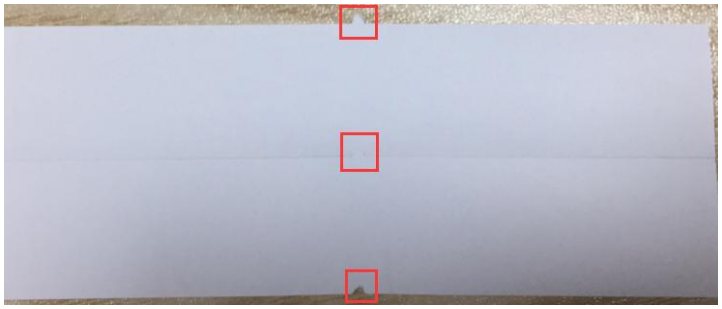


3) Partial Cut Test

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

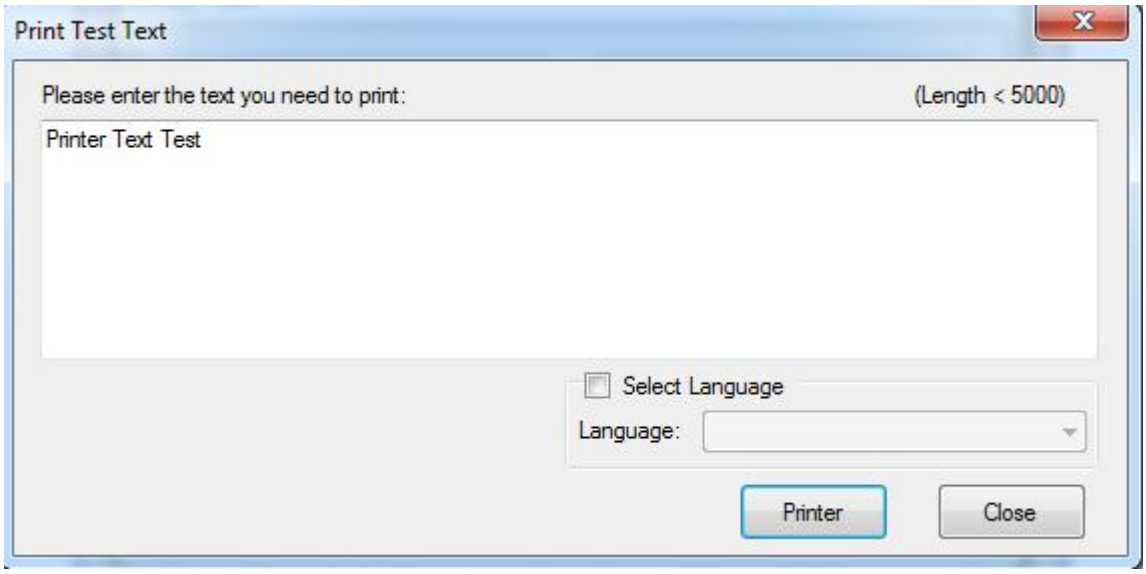


As shown in the figure:



4) Print Test Text

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

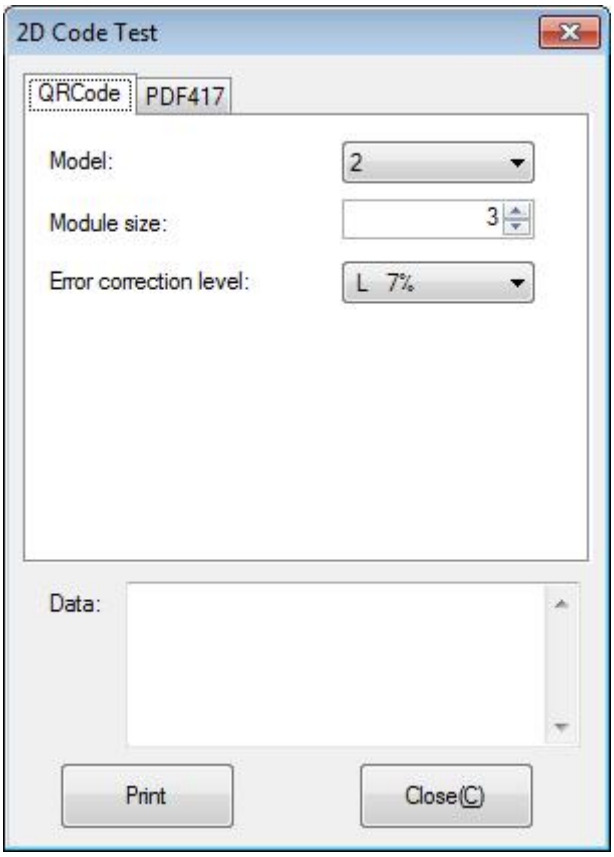


Note:

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.



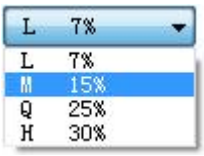
▲Model: 1~2

▲Module size: 1~16

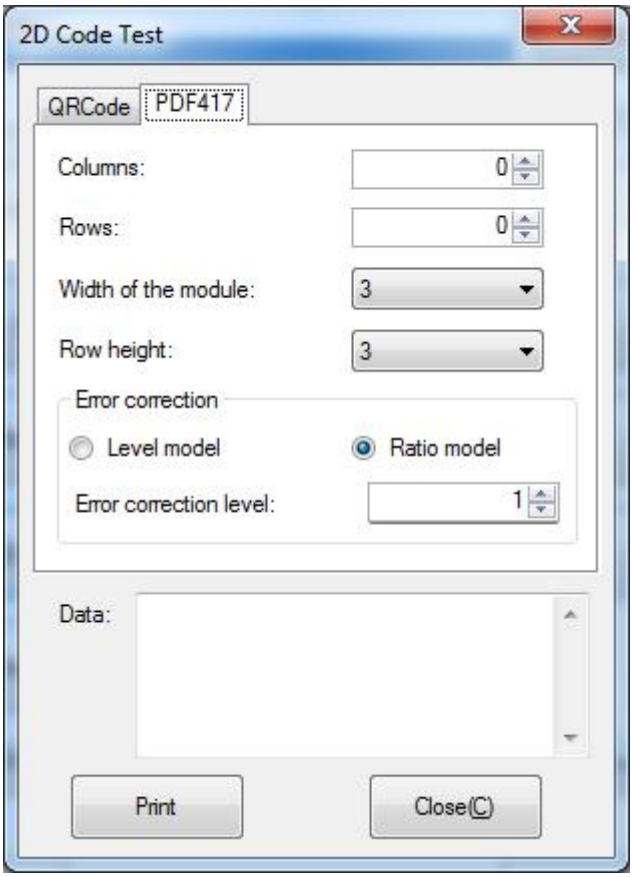
The larger the module value, the larger the printed QR code is, and the smaller the opposite.

▲Error correction level: 7%~30%

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



Click the PDF417 mode.

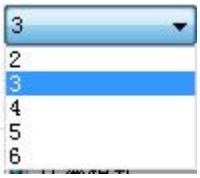


▲Columns: 0~30

▲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

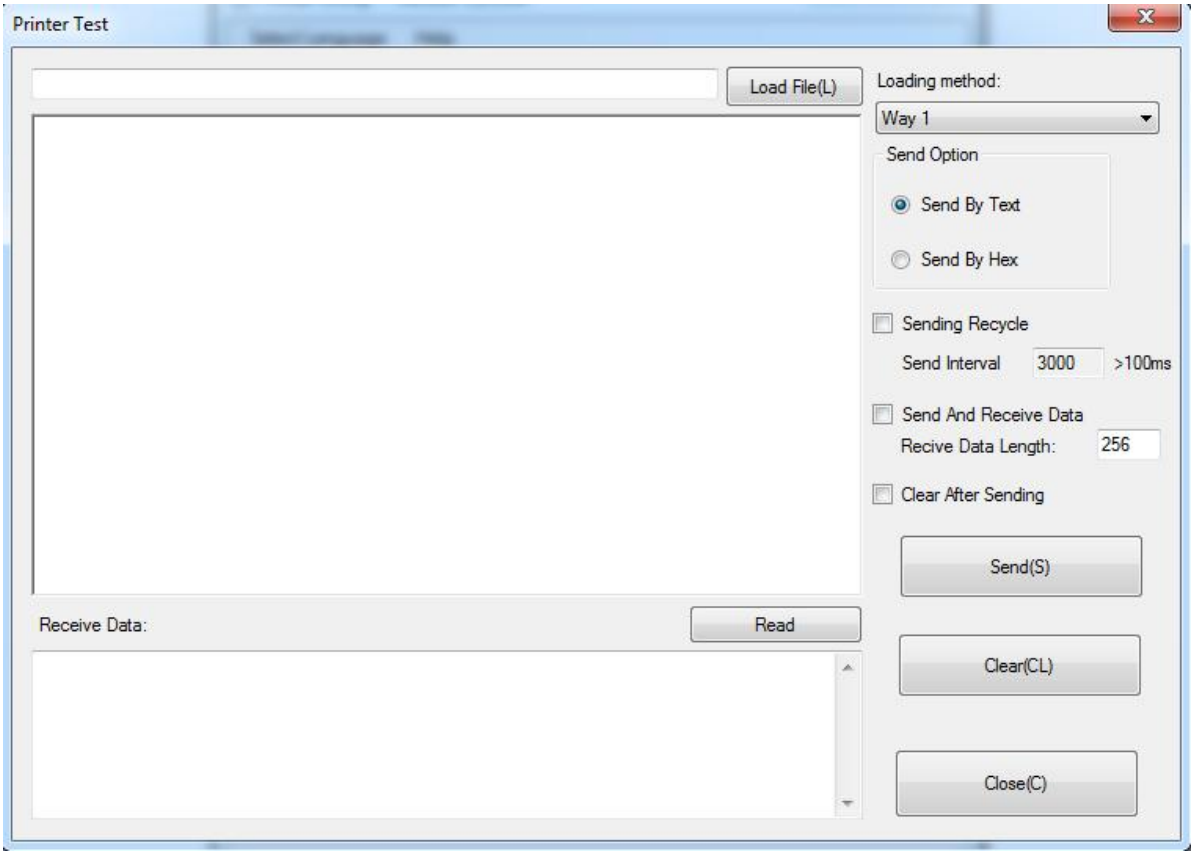
Level model: 0~8

Ratio model:0~40

8.2.2.2 Command Test

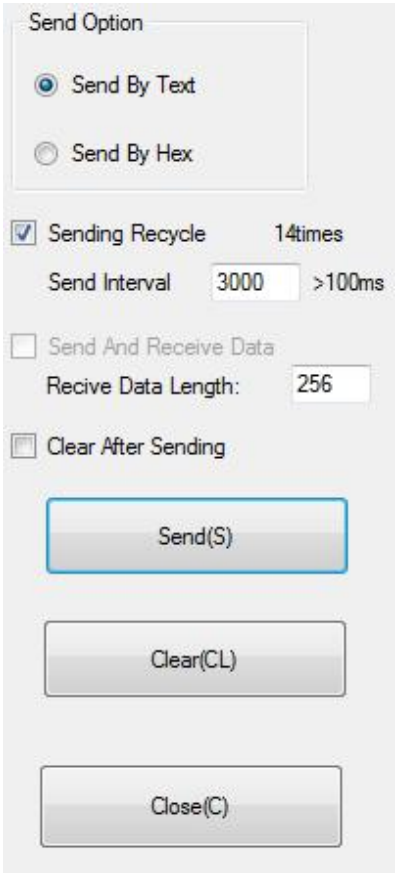
In the command test, you can send command to the printer. Input text or hexadecimal data. Select a file or enter a command in the input box.

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

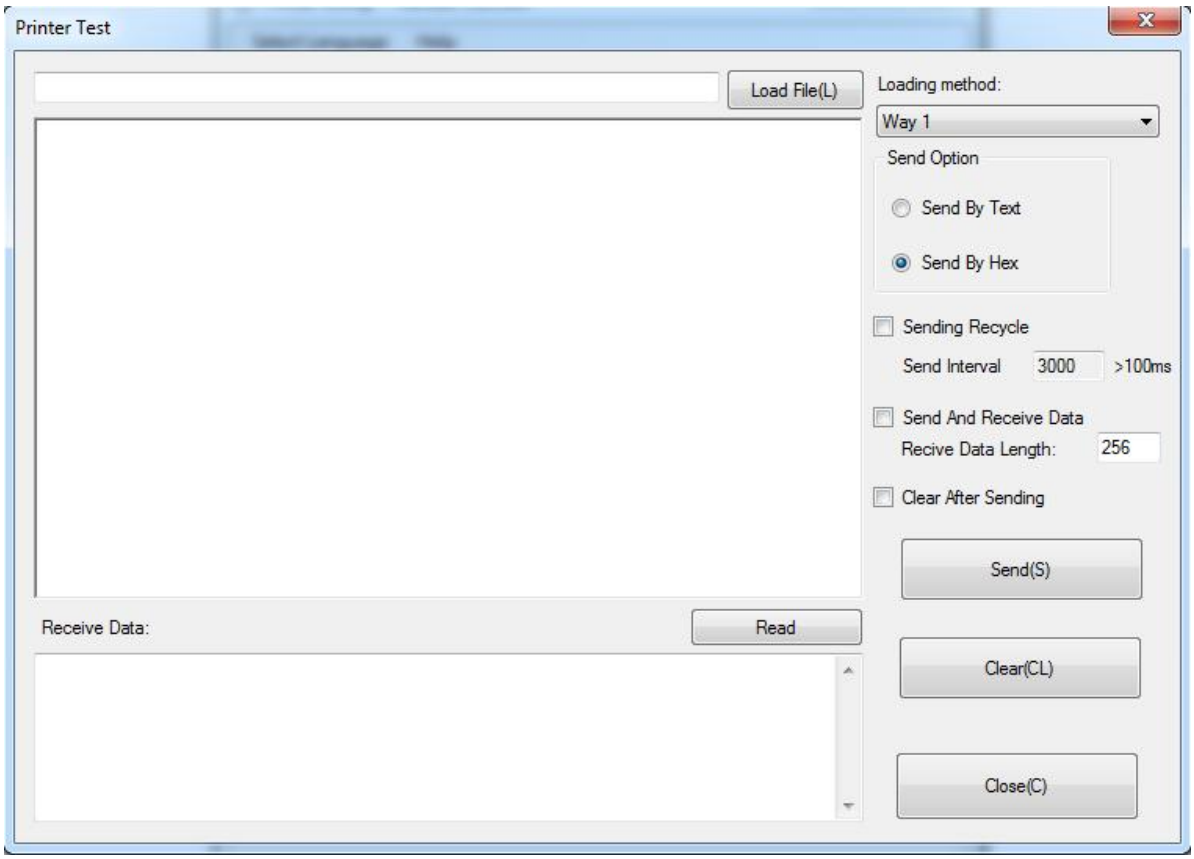


▲Sending Recycle:

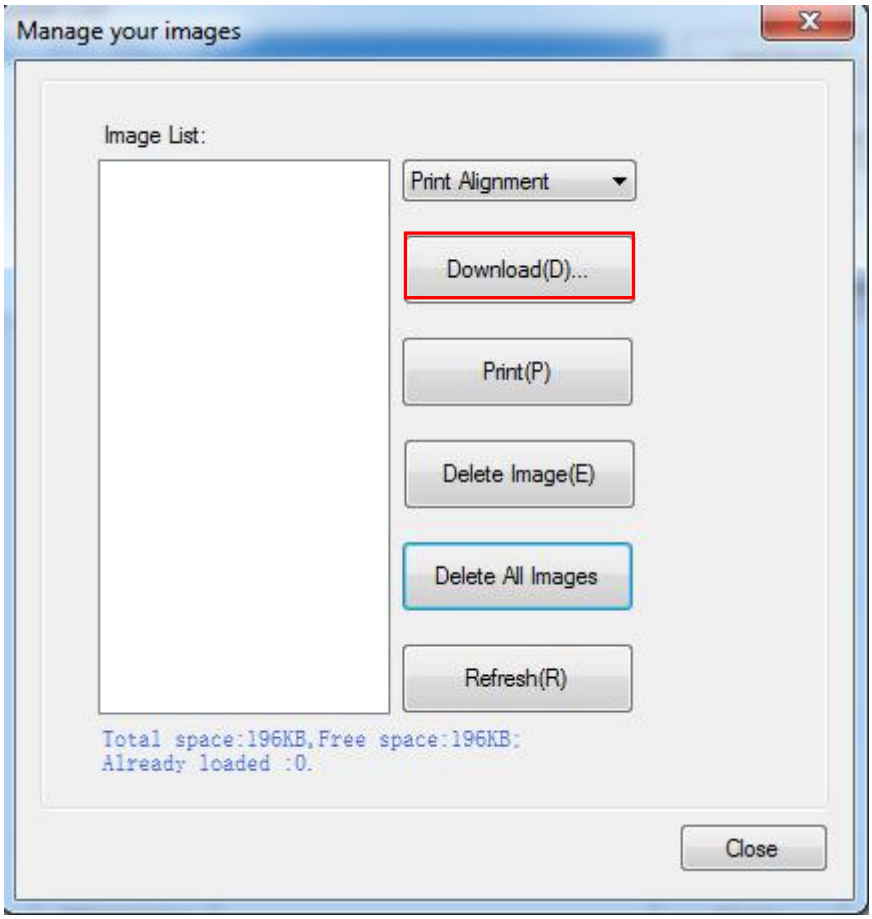
When the interval is set to 3000ms (you can set the interval as needed), then click “Send”, the printer starts to recycle printing. Click “SendStop” to stop the recycle printing.



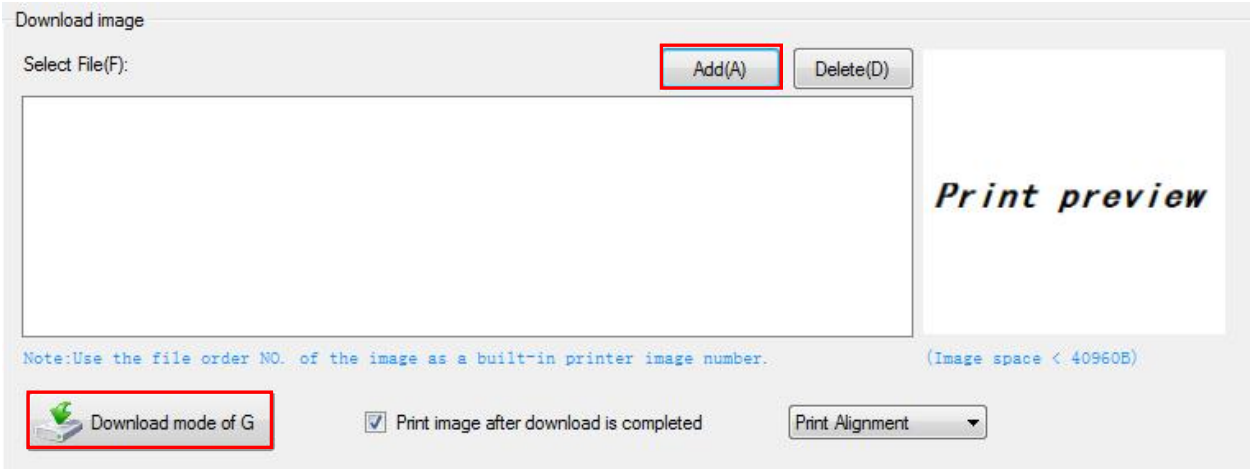
2）Click “Send by Hex”, input the content. (Convert text to HEX or send ESC command)



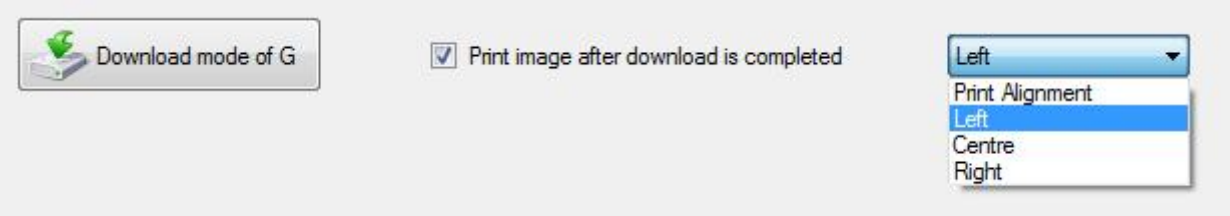
8.2.2.3 Manage Images

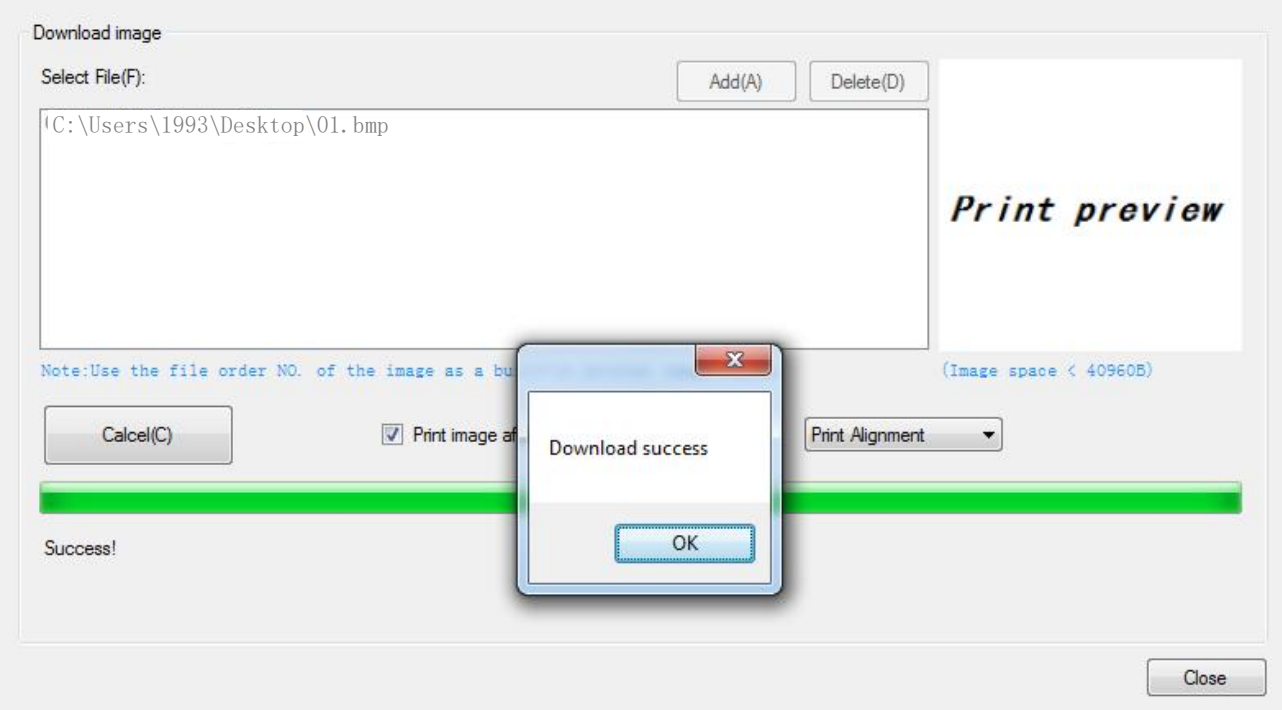


1) Click "Download" to add the image, if you want to print the picture, set the print location before clicking "Download mode of G" to print the picture. (It is recommended to use a picture in BMP format)



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

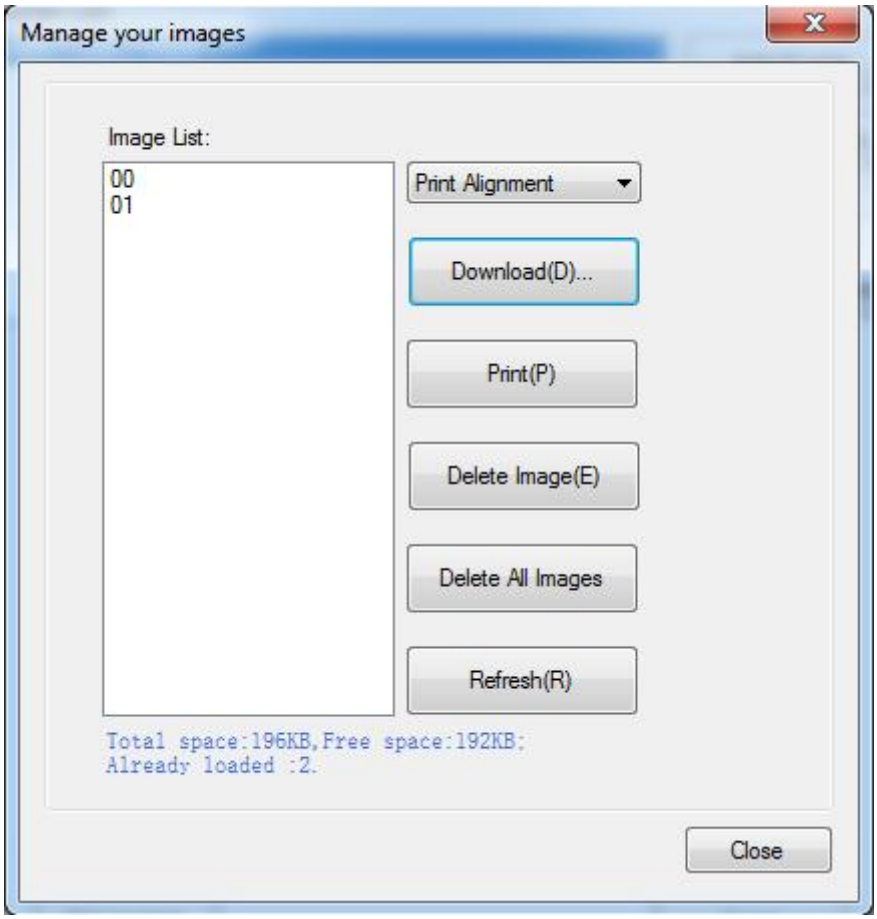




Note: Total memory for the bitmap is 196K.

3) Delete Image.

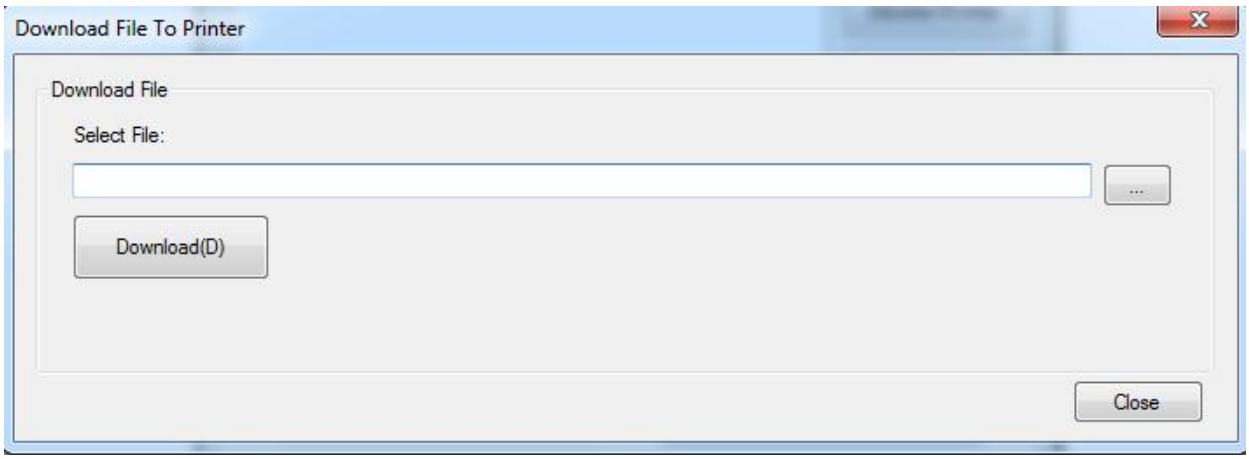
Note: Each time click "Download mode of G", an image list number will be generated.



Click the image list, select "Delete 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 Download Fonts

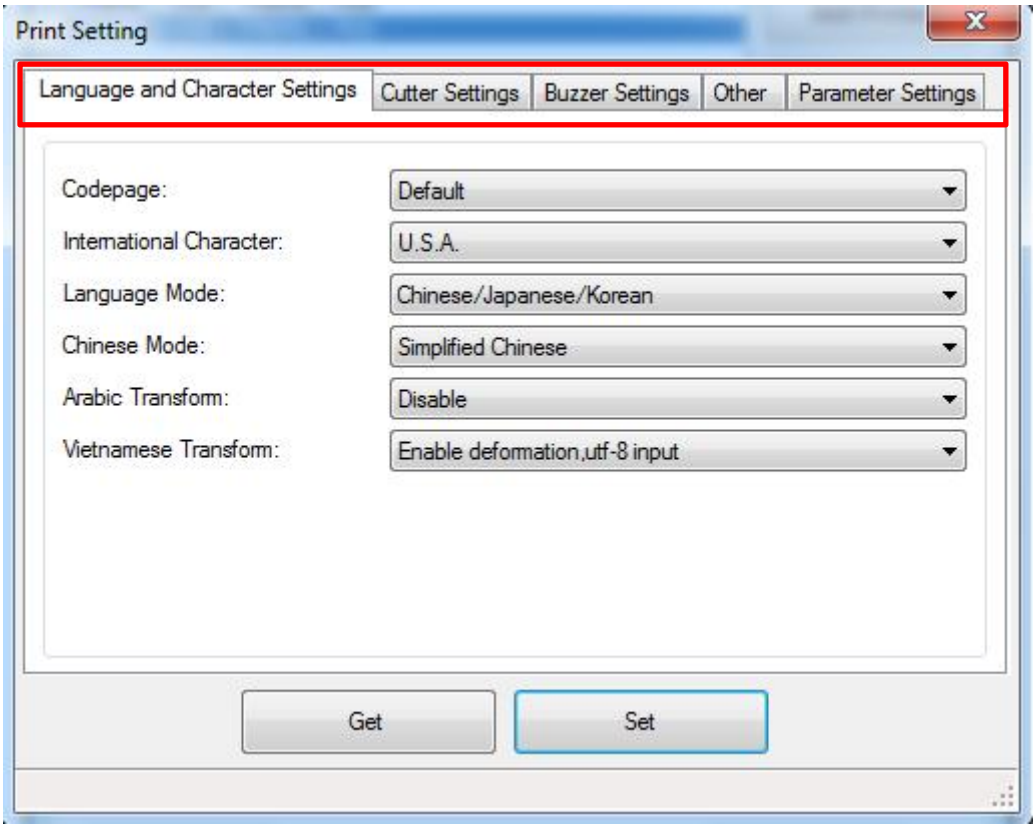
Select the font from the existing file and click "Download".



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

8.2.2.5 Parameter Settings

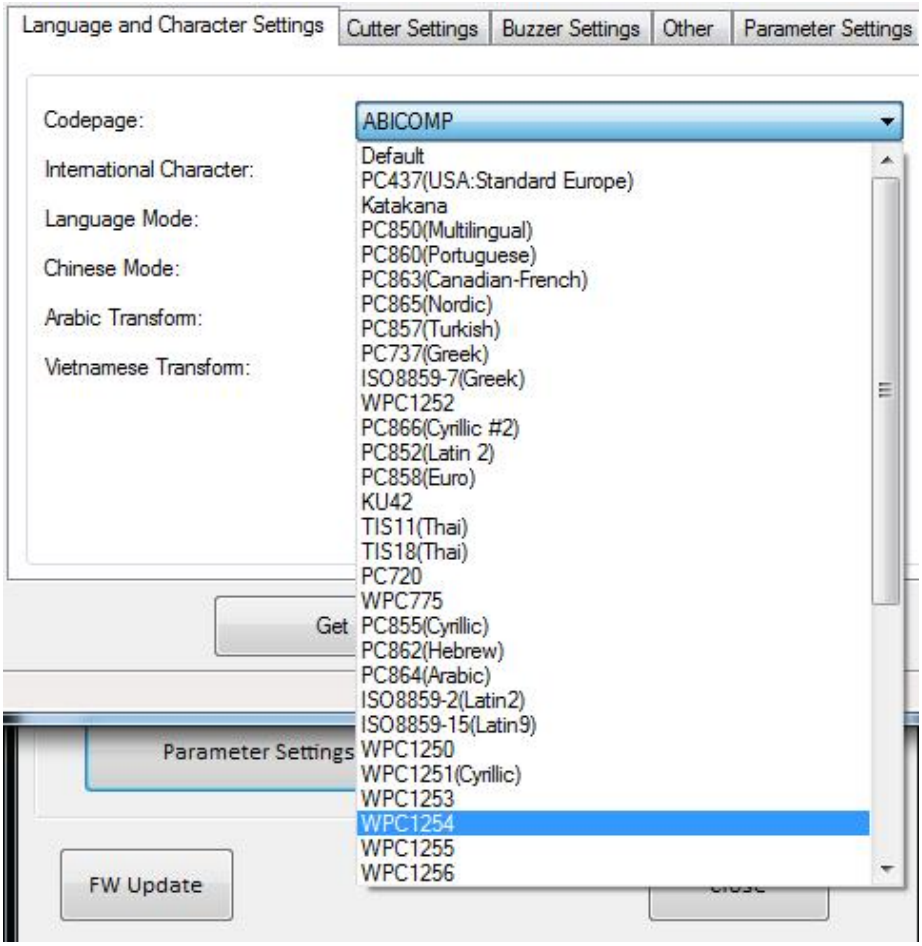
1) Click “Parameter Settings” to set “Language and Character Settings”, “Cutter Settings”, “Buzzer Settings” and “Other”.



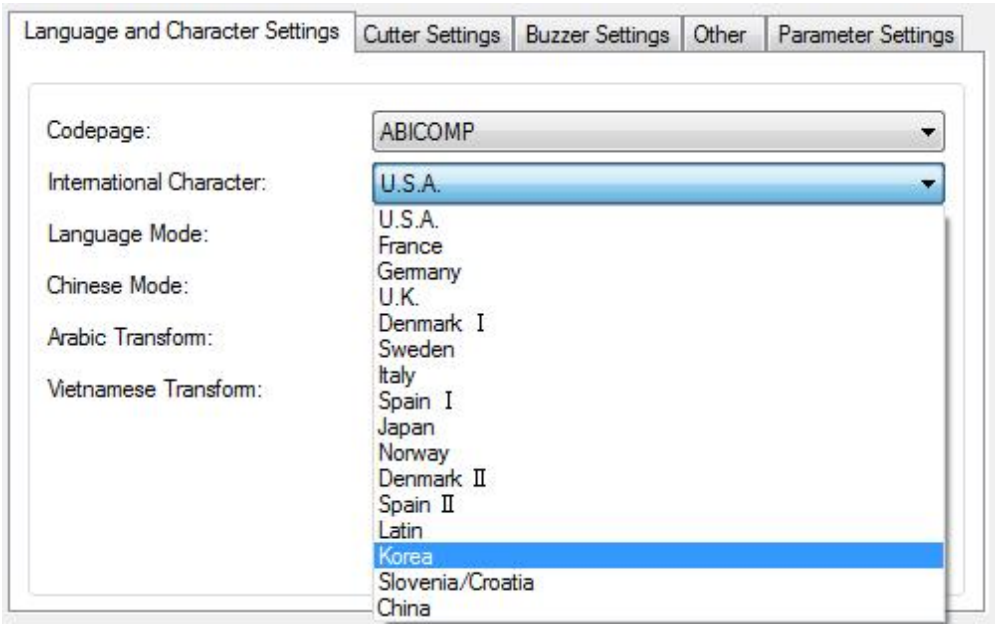
◆ *Language and Character Settings*

Click the items to set “Codepage”, “International Character”, “Language Mode”, “Chinese Mode”, “Arabic Transform“ and “Vietnamese Transform”.

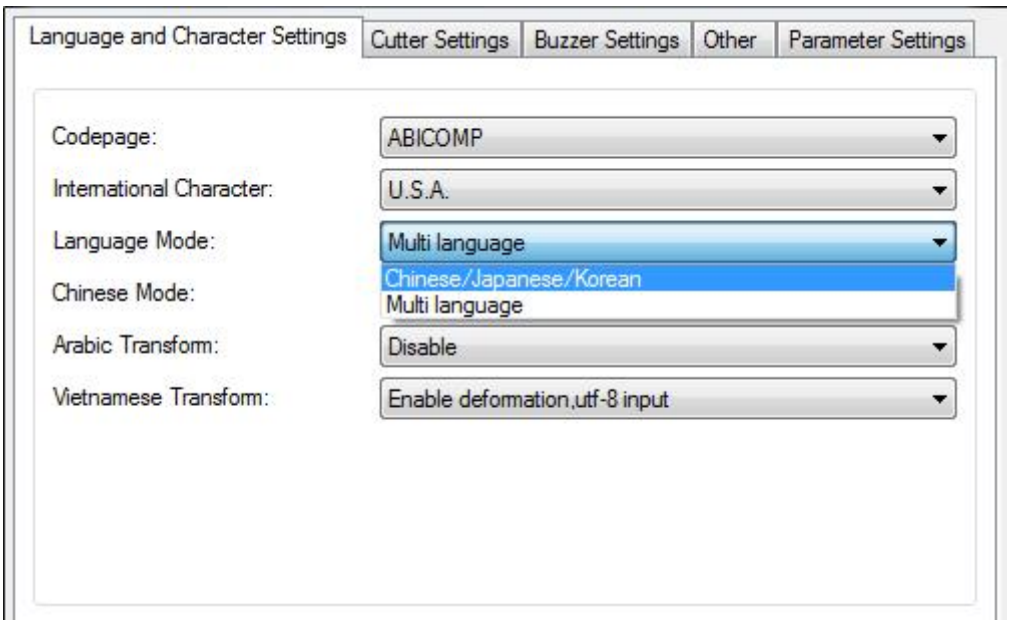
• Codepage



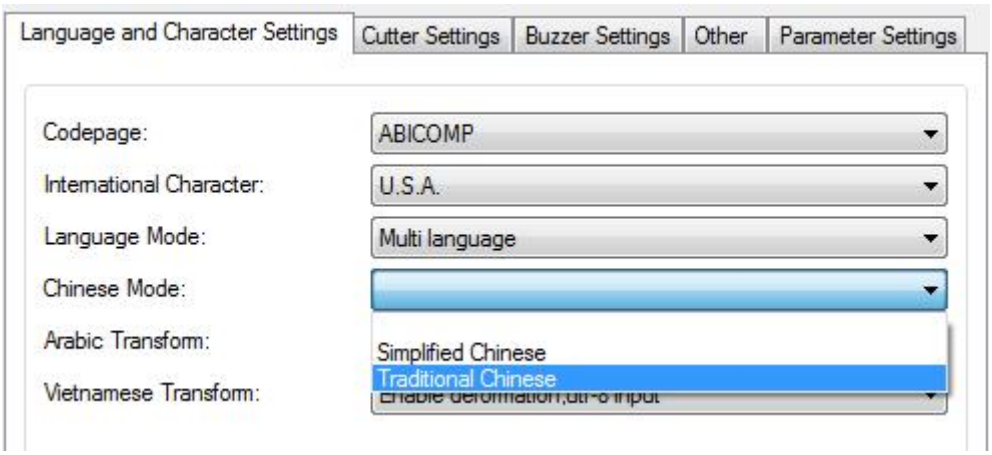
• International Character



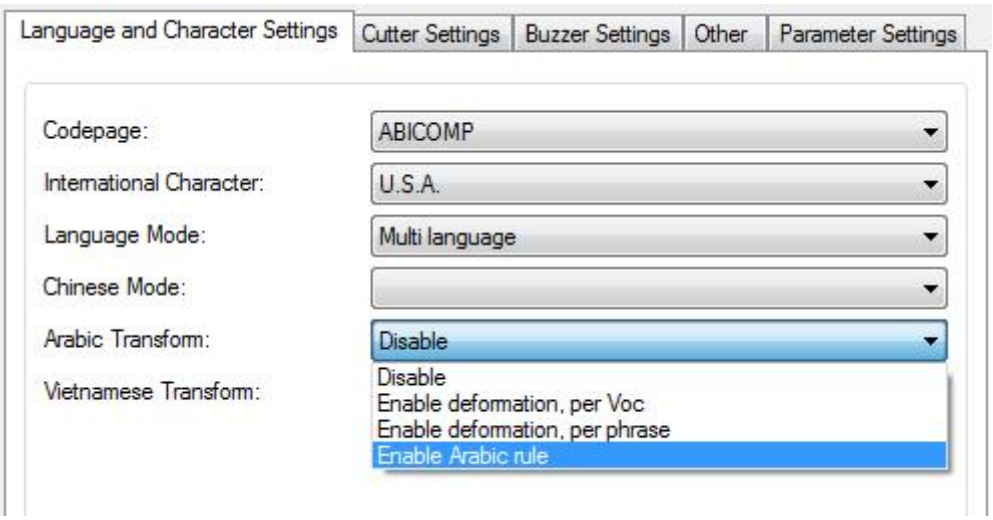
• Language Mode (The default mode is “Chinese/Japanese/Korean”)



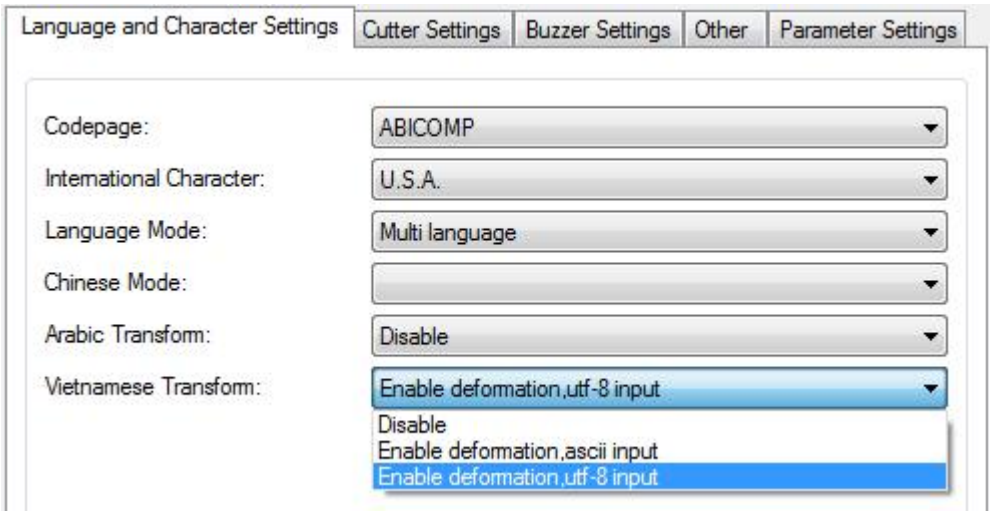
• Chinese Mode



• Arabic Transform

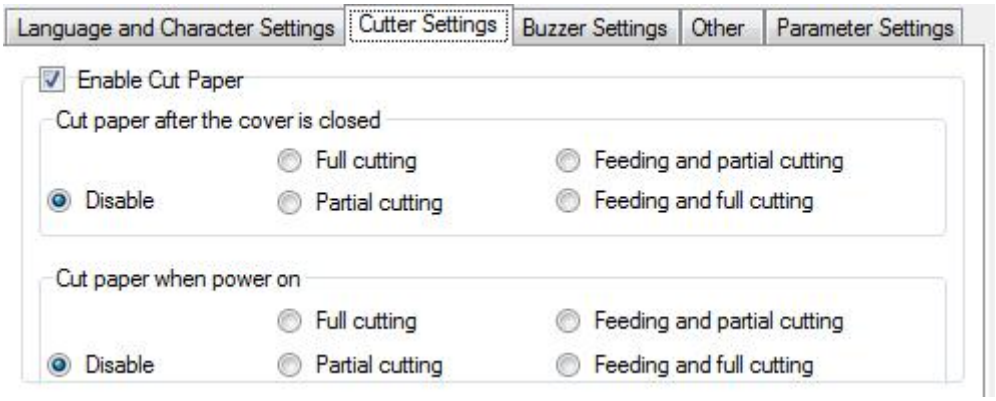


• Vietnamese Transform



◆ ***Cutter Settings***

Enable or disable “Cut paper after the cover is closed” / “Cut paper when power on”.



Enable “Cut paper after the cover is closed”:

When the printer closes the cover, it will automatically cut the paper.

Disable “Cut paper after the cover is closed”:

The printer does not cut the paper automatically after closing the cover.

Enable “Cut paper when power on”:

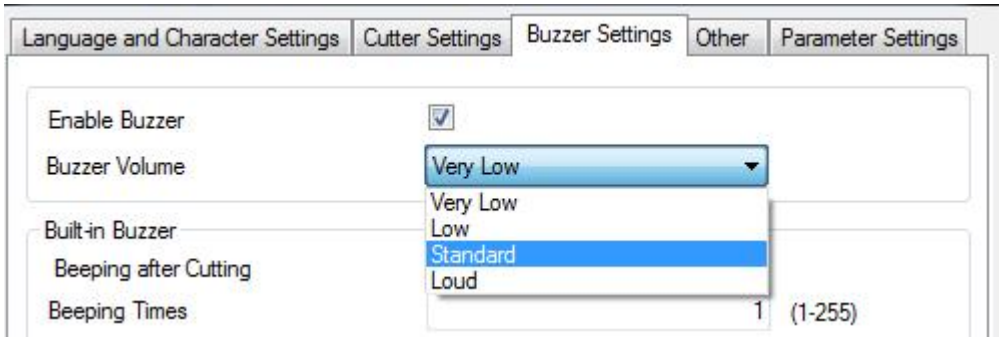
The printer will automatically cut paper when it is powered on.

Disable “Cut paper when power on”:

The printer does not cut paper automatically after it is powered on.

◆ ***Buzzer Settings***

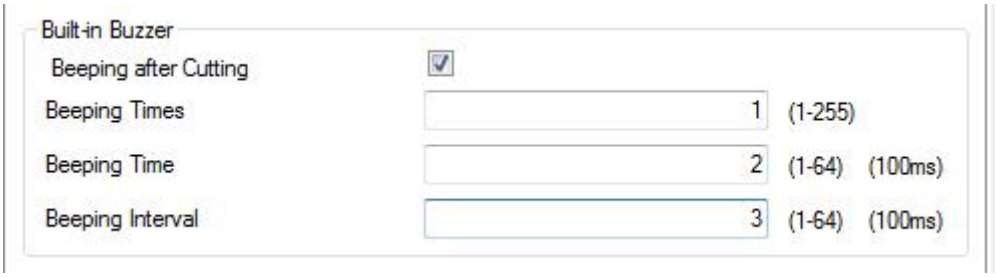
Buzzer Volume: Very Low/Low/Standard/Loud



Tick “Beeping after Cutting” (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.

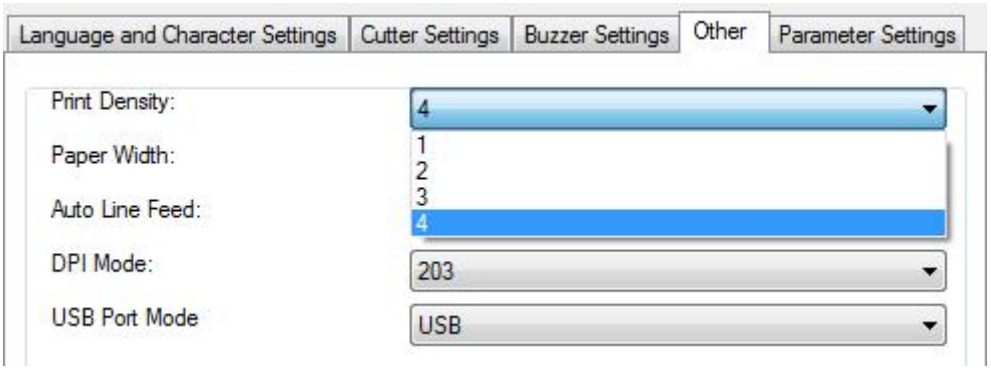


◆ ***Other***

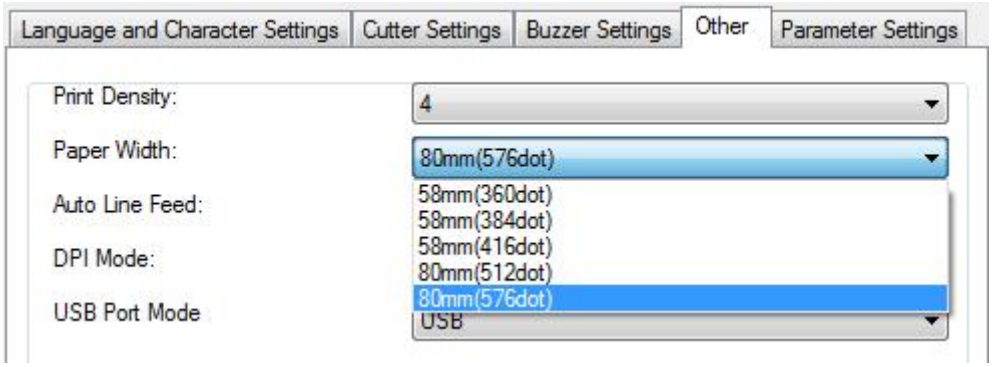
Click the items to set “Print Density”, “Paper Width”, “Auto Line Feed”, “DPI Mode”, and “USB Port Mode”

• Print Density (default “level 2”)

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

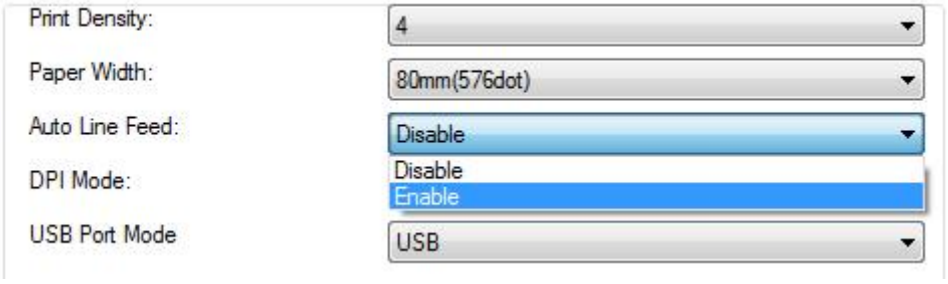


• Paper Width Setting

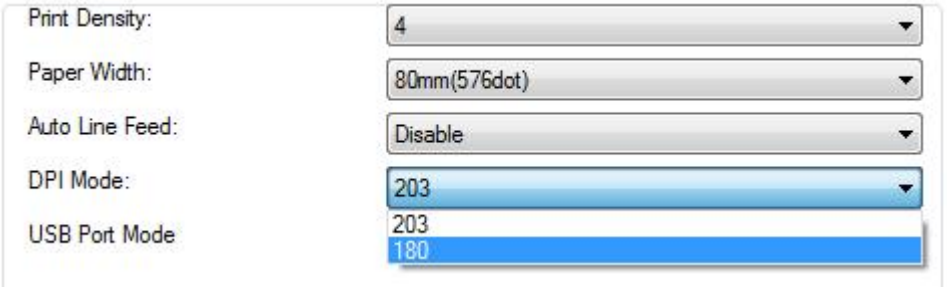


Note: Select the paper width above according to the paper print width.

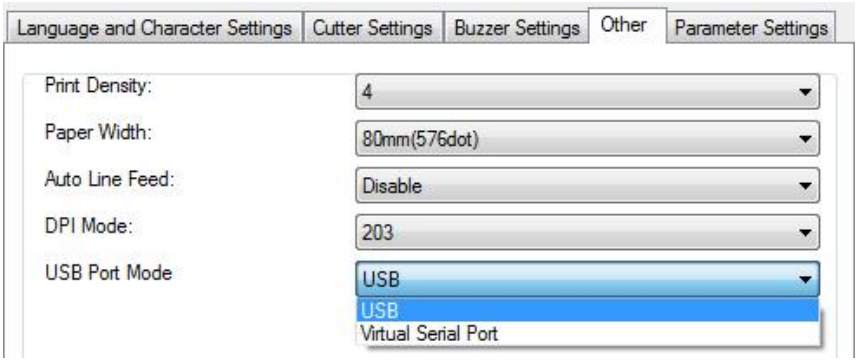
• Auto Line Feed



• DPI Mode (Default “203DPI”)



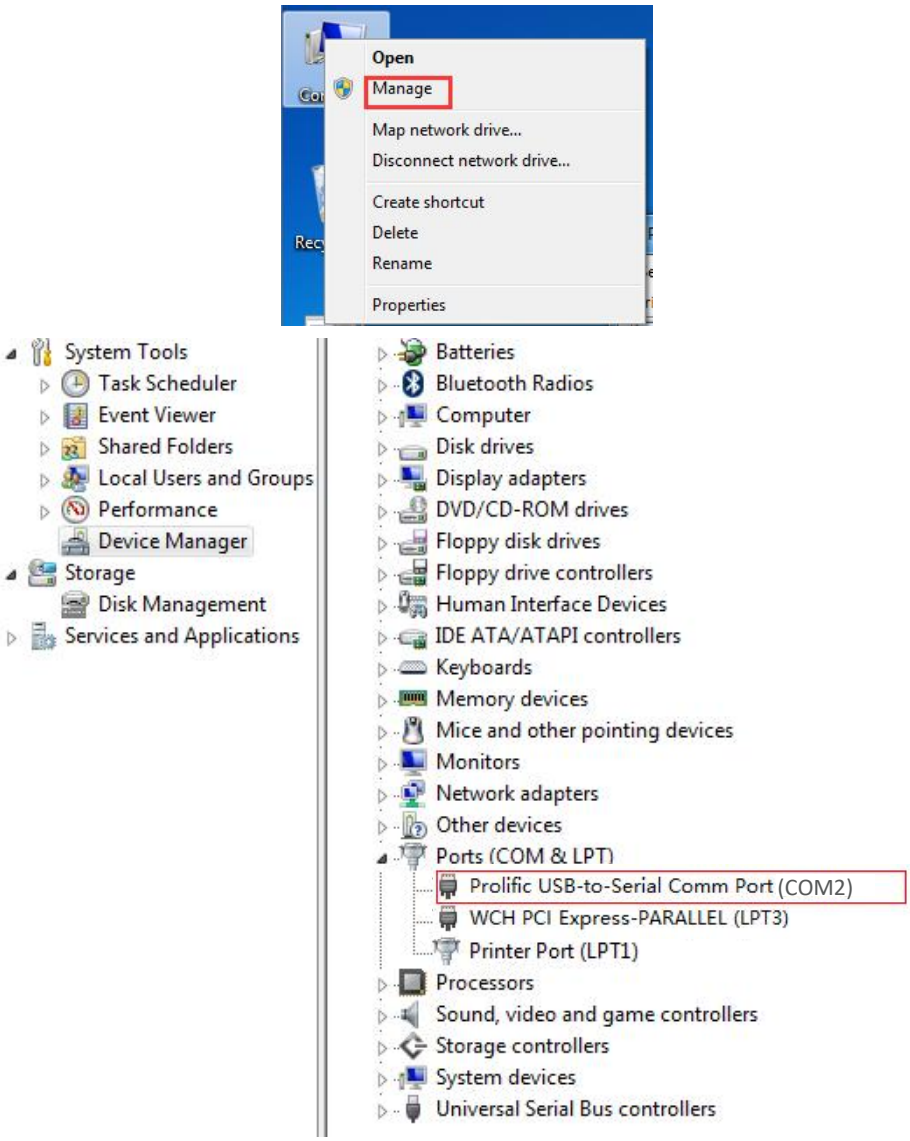
• USB Port Mode



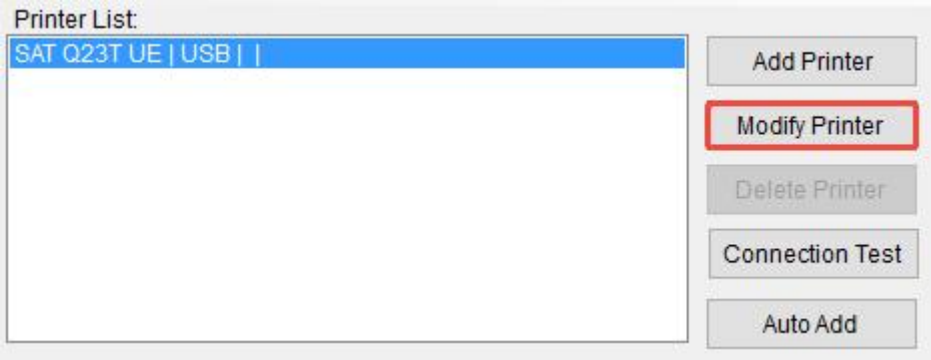
• Check the Virtual Serial Port

① Right-click the computer and select “Manage”.

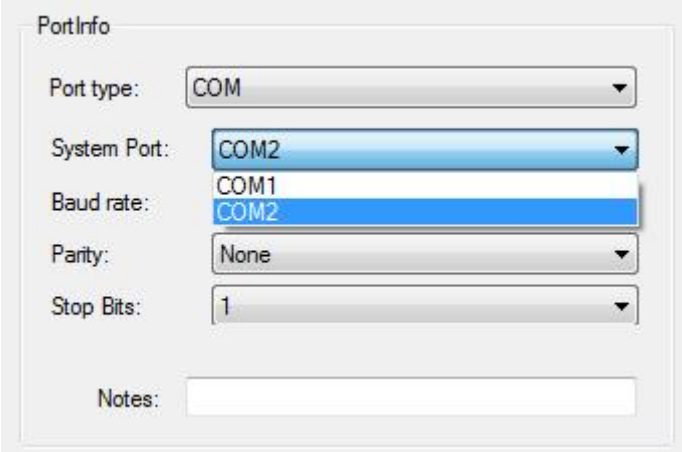
② Click "Device Manager" to view the virtual port. (such as: COM2).

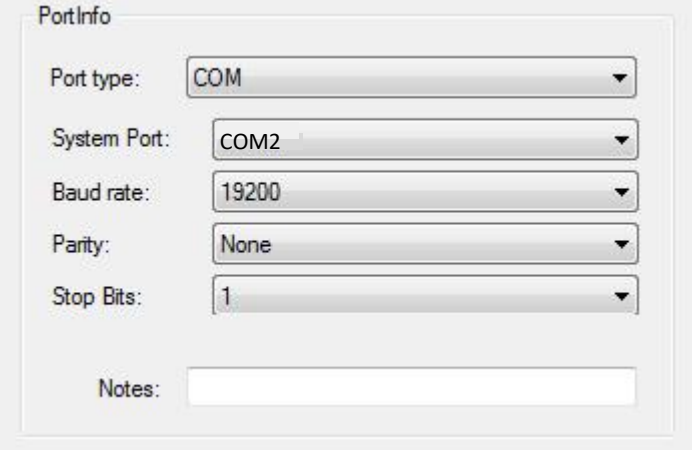


③ Return to the printer utility and click "Modify Printer".

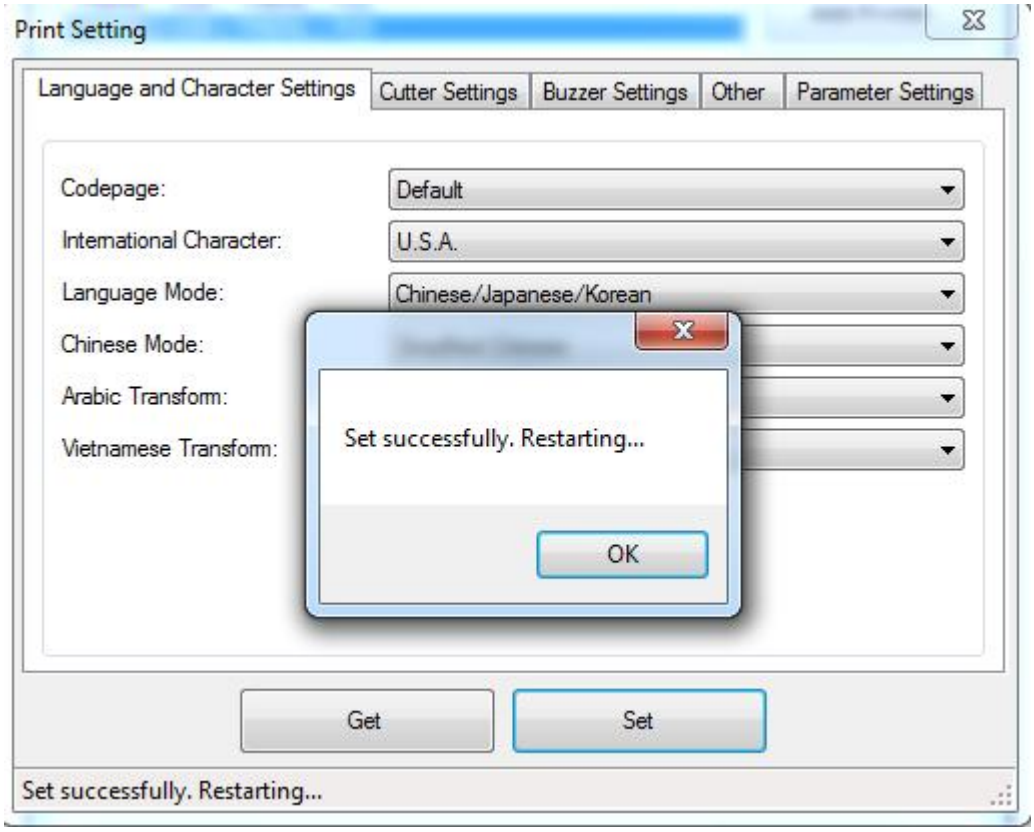


④ Change the port to "COM2".



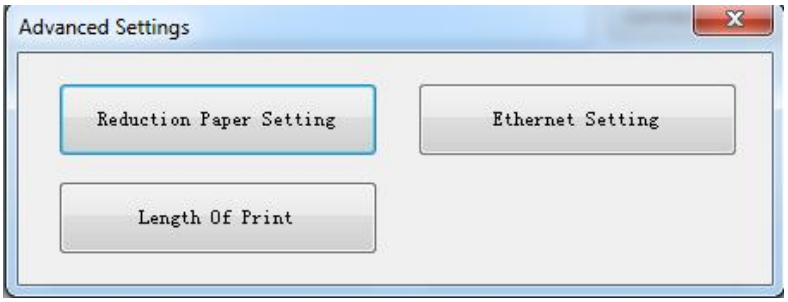


2) After finishing setting all the above parameters, click "Set", the printer would restart automatically, then the settings would take effect.



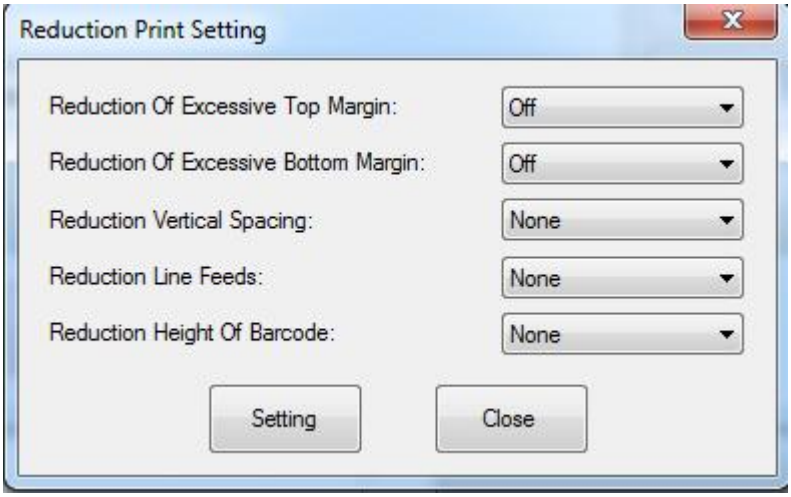
8.2.2.6 Advanced Settings

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.



◆ ***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.

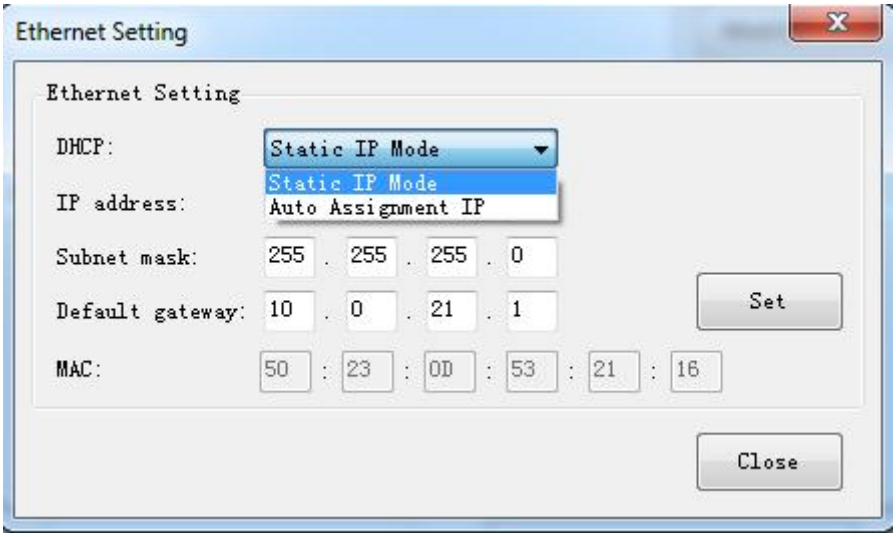
⑤ Reduction Height of Barcode: 25%~75%

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

◆ ***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:

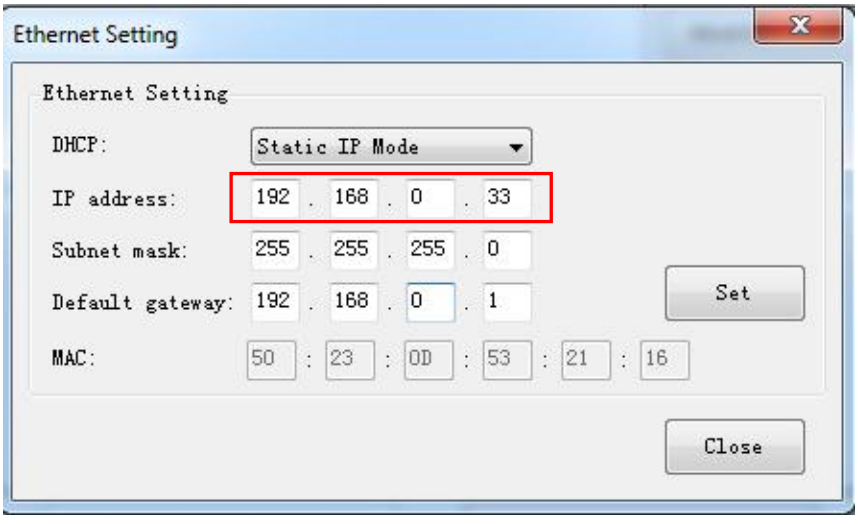


Figure ▪ Printer IP Address

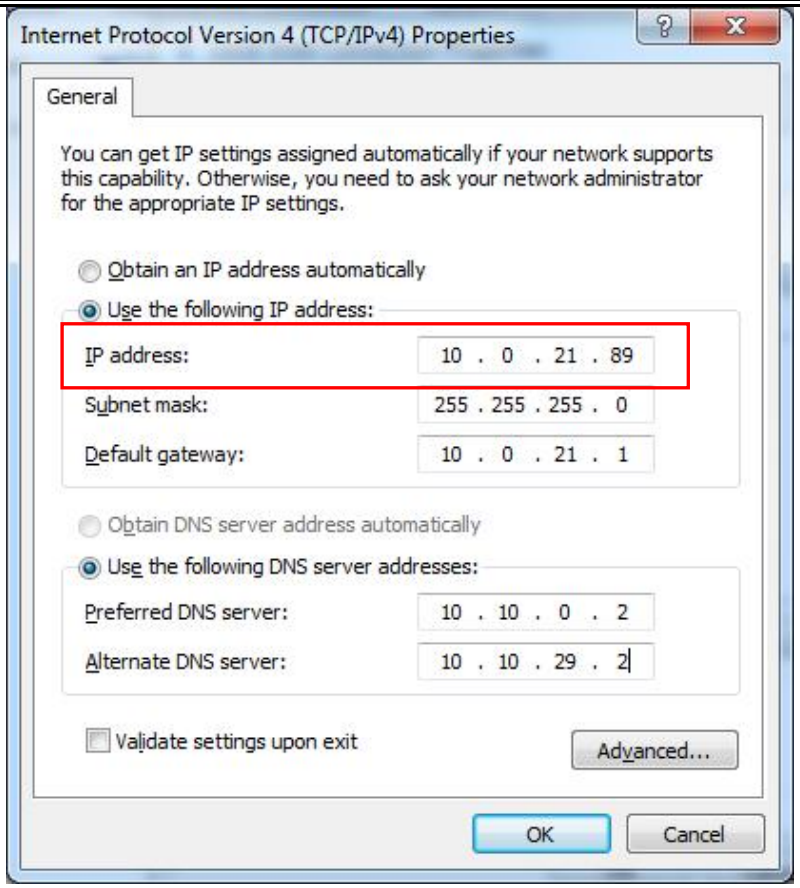


Figure ▪ Host IP Address

2) Set the same network segment.

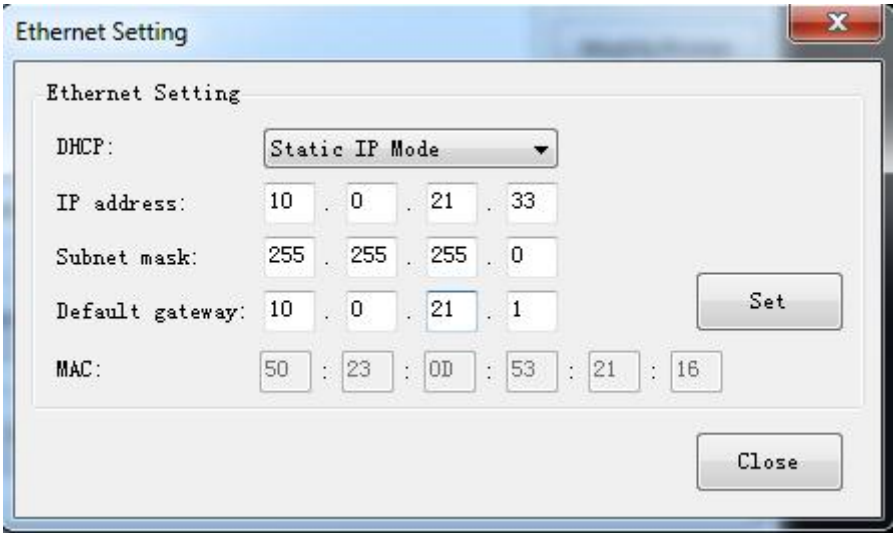
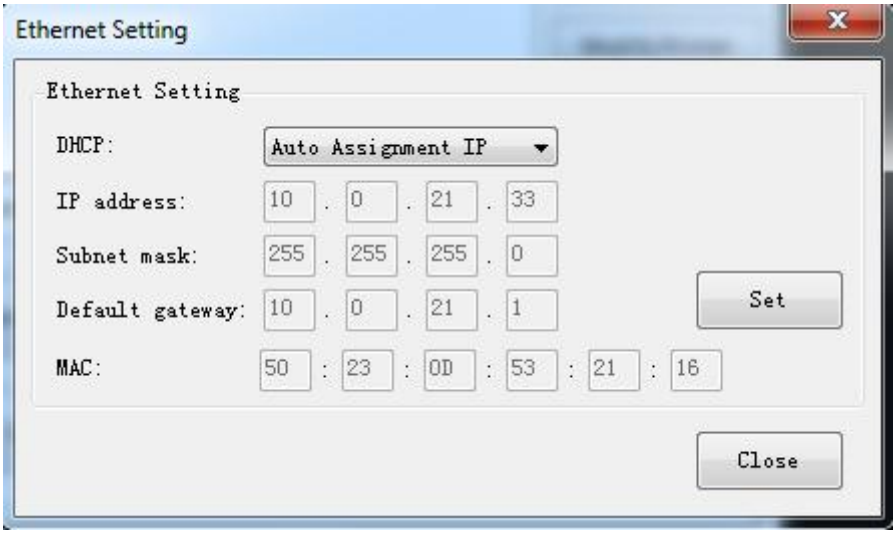


Figure ▪ Printer IP Address

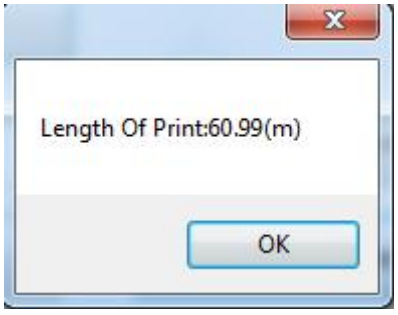
- Auto Assignment IP

  This mode automatically assigns the IP address to the printer.



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

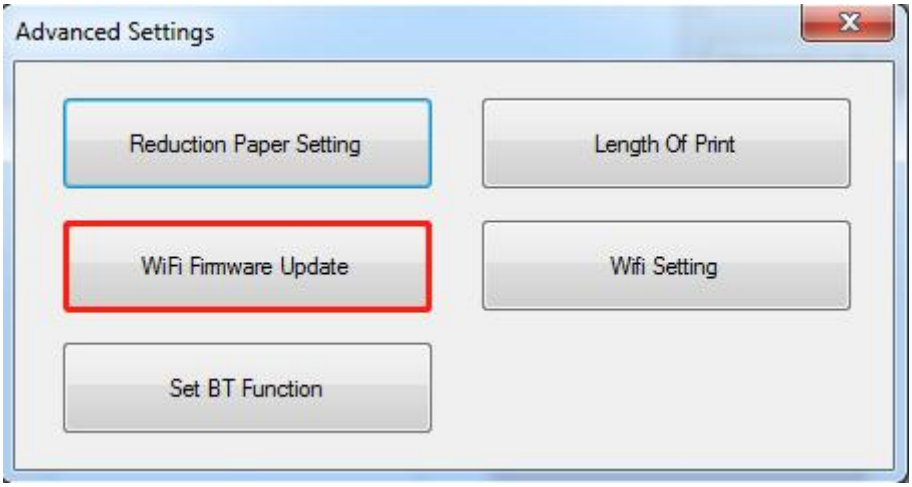
◆ ***Length Of Print***



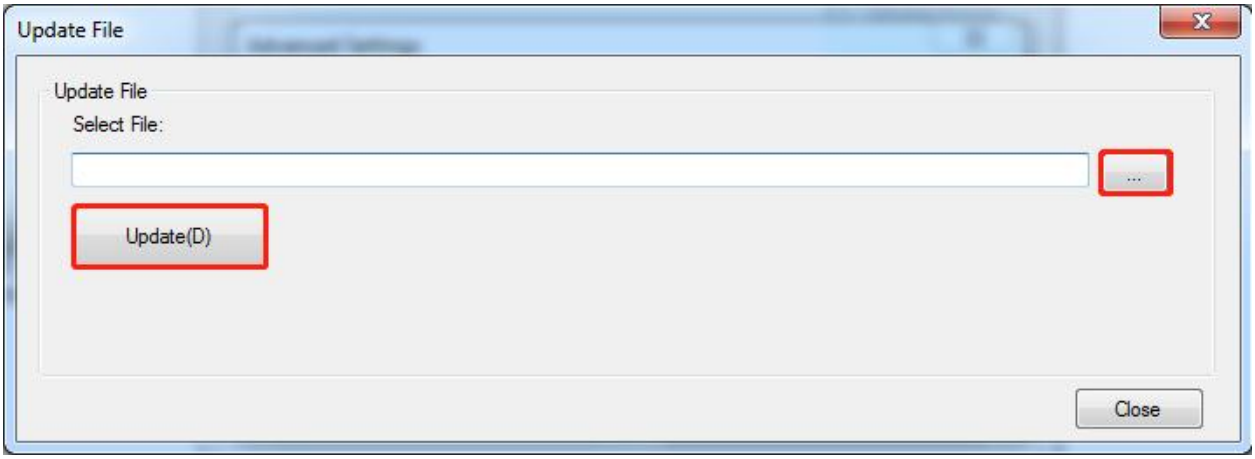
Click “Length of Print” to obtain the length of the paper that the printer has printed.

◆ ***Wi-Fi Firmware Update***

1) Click “WiFi Firmware Update”.



2) Click “...” to choose file and click “Update”.



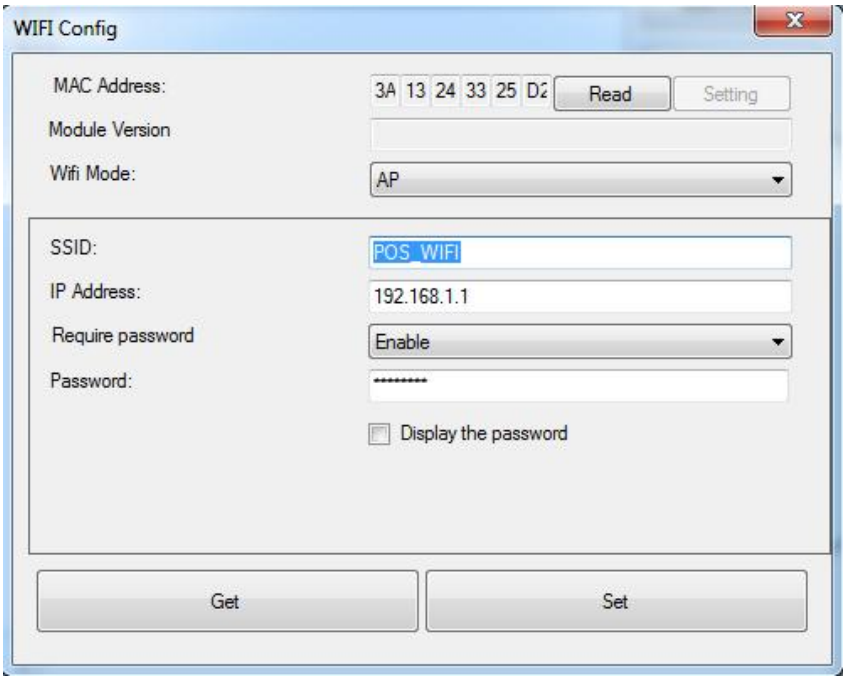
◆ ***Wi-Fi Setting***

Note: This setting is only available for models with Wi-Fi functionality.

The 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.

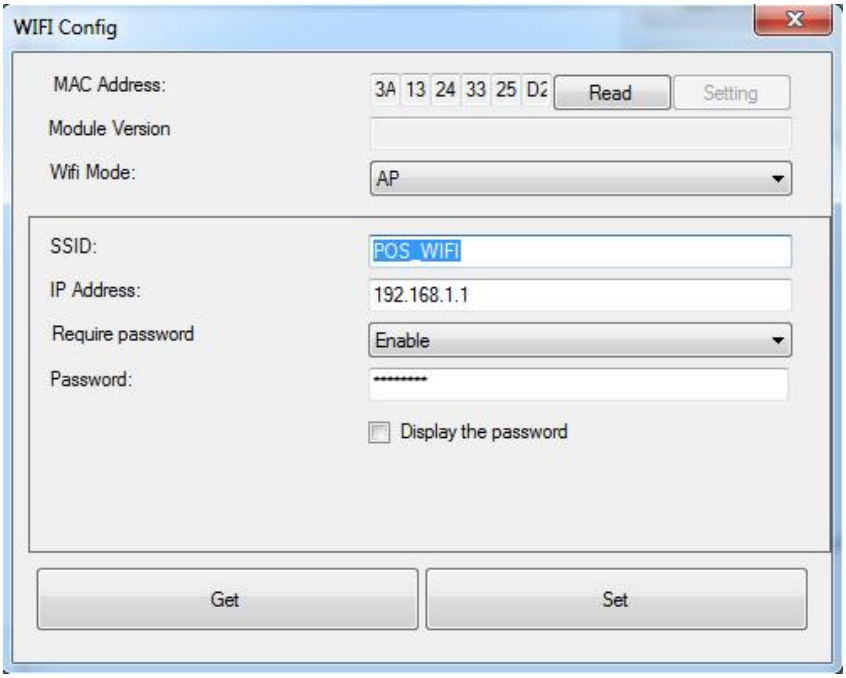
The setting is only available for those models with Wi-Fi function.



1. Click “Read” to obtain the current status of printer.

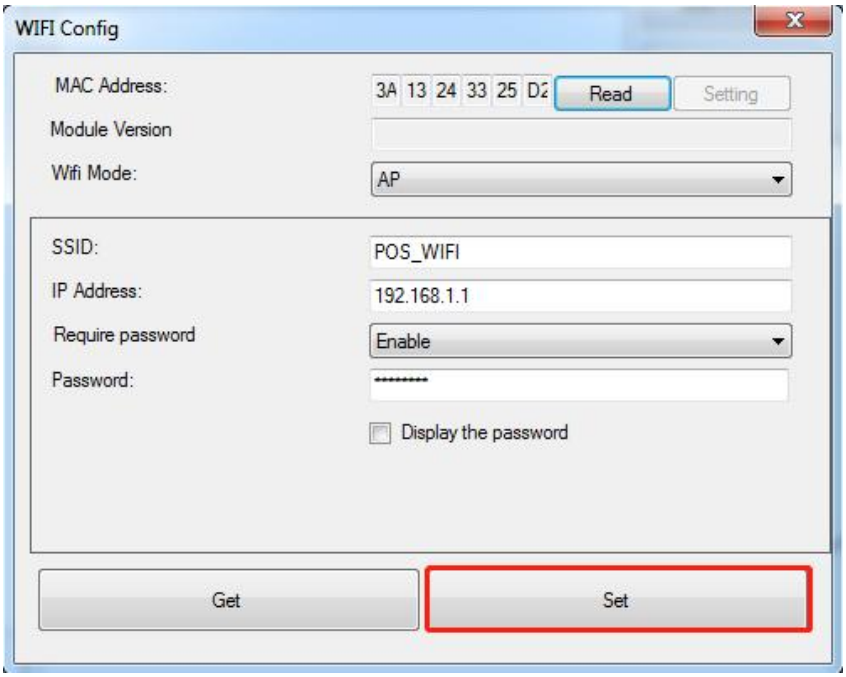
Wi-Fi Module supports AP mode and STA mode, and default as AP mode.

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



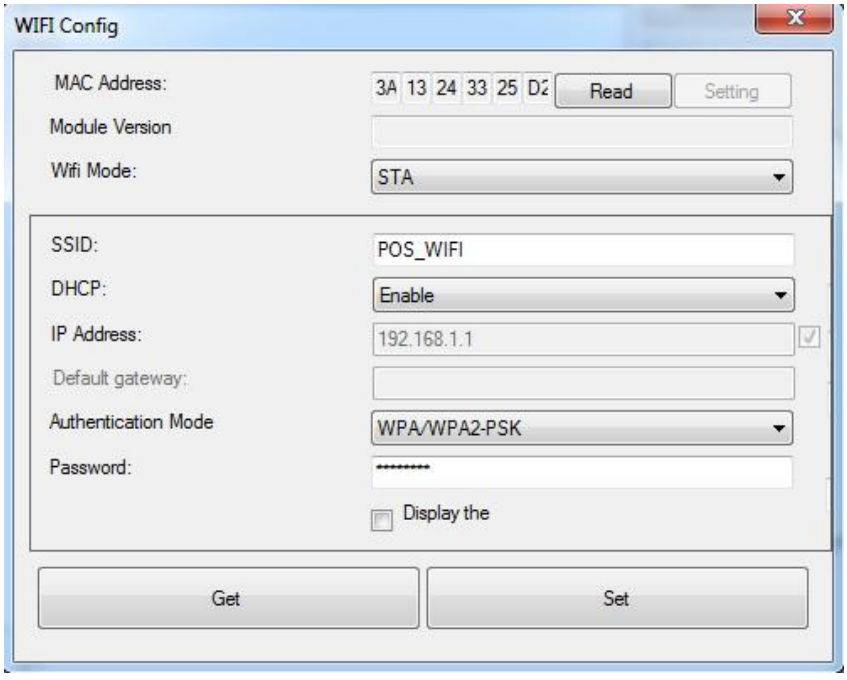
Module Version	Current Module Version
WiFi Mode	Supports “AP” mode and “STA” mode, and default as “AP” mode
SSID	Modifiable, default as “POS_WIFI”
IP Address	Modifiable, default as “192.168.1.1”

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



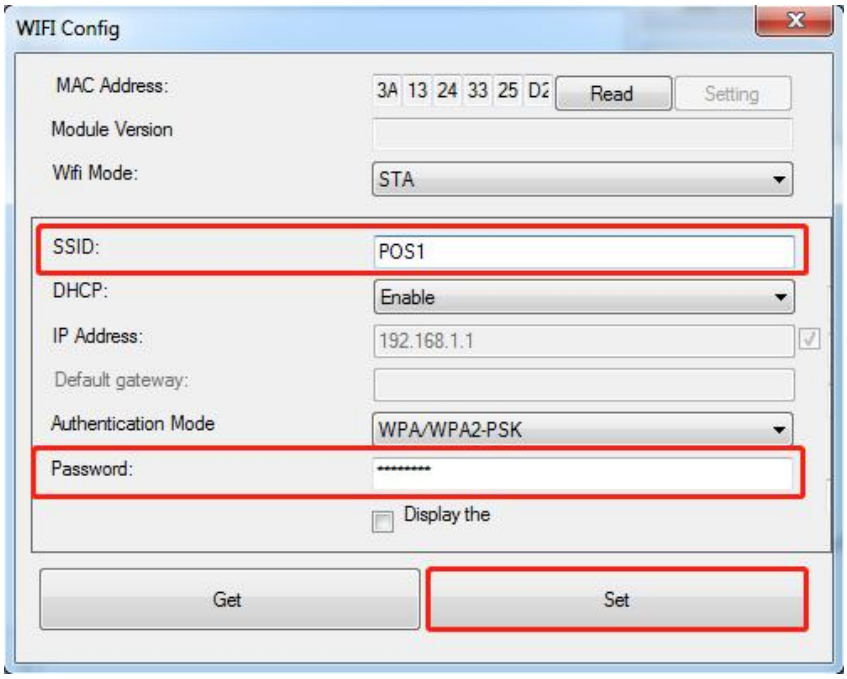
■ When using the STA mode, take the printer as a terminal. The PC or mobile devices and printer need to be on the same LAN.

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



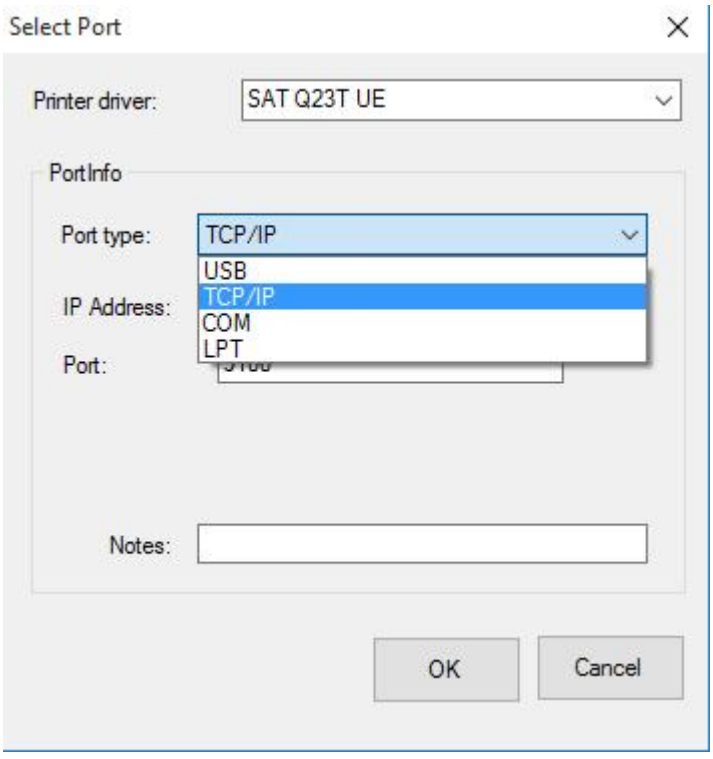
● Type a connectable “hot spot” in the SSID field, and type in the password of Wi-Fi that you want to connect to.

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



SSID	The SSID name that is modified by the available “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
Default gateway	When DHCP is at Enable status, default gateway will be allocated automatically, no need to do the setting; When DHCP is at Disable status, default gateway can be input
Subnet mask	When DHCP is at Enable status, subnet mask will be allocated automatically, no need to do the setting; When DHCP is at Disable status, subnet mask can be input

- 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.

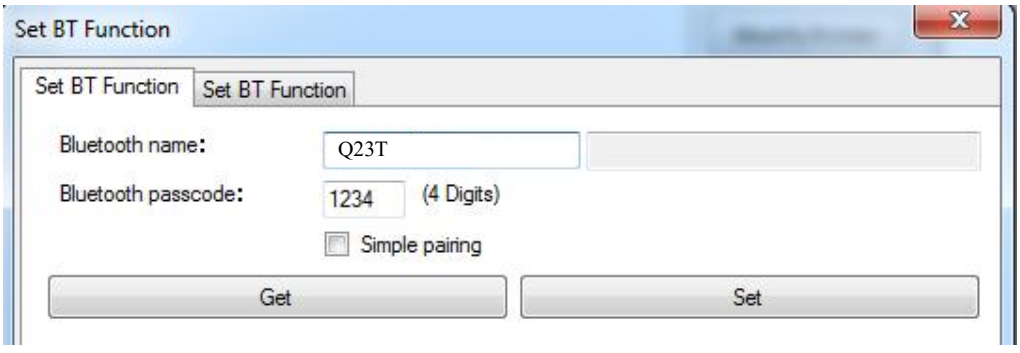
Notes: When the printer is failed to connect with its master devices, please check if the settings are correct, and please check if the master devices and the printer are on the same network segment. When parameter setting error occurs, which leads to the failed connection, please reset the Wi-Fi parameter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

For SAT Q23T (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.

◆ ***Set BT Function***

Note: This setting is only available for models with Bluetooth functionality.

In the below window, type in the new Bluetooth name and password, then click “Set” and restart the printer to take it into effect.

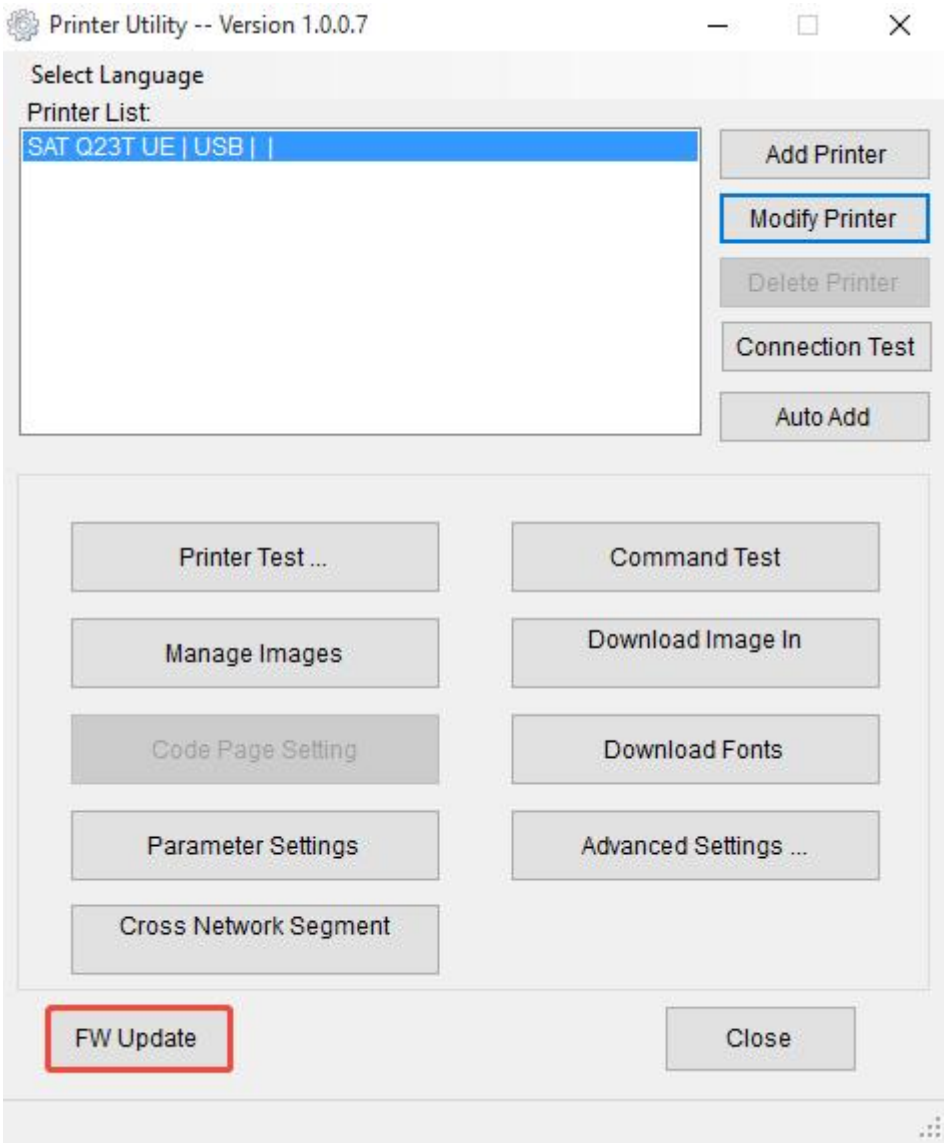


Note: when “Simple pairing” is ticked, the password is not needed for Bluetooth connection.

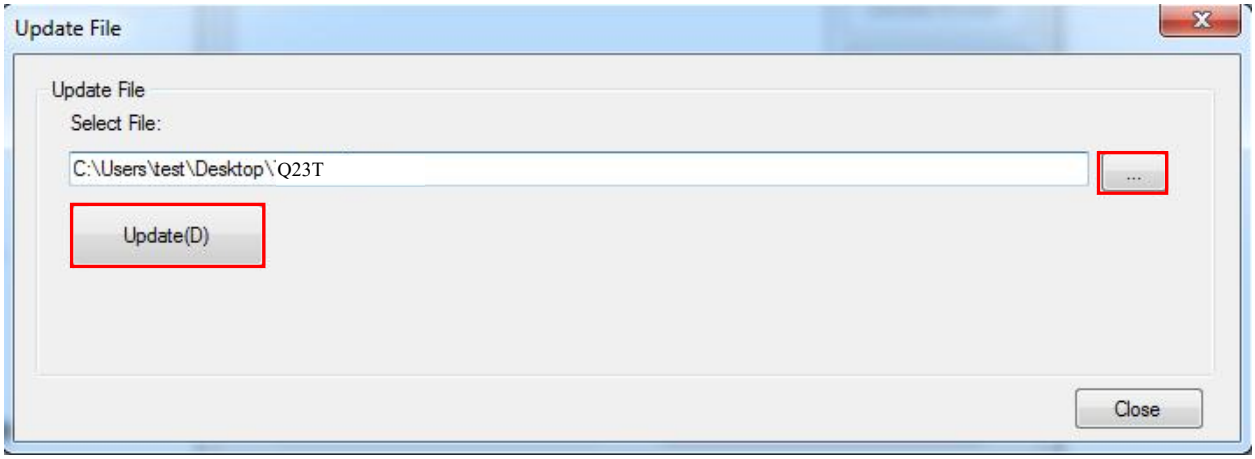
When “Simple pairing” is not ticked, the password is needed for Bluetooth connection.

8.3 Firmware Update

1) Click “FW Update”.



2) Add the “bin” file, and click “Update”.



3) Update success.

4) Restart the printer.

9 WINDOWS DRIVER INSTRUCTION

9.1 Information

This Windows Driver 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 Server 2016
- Microsoft Windows Server 2012 (64 bit)
- Microsoft Windows Server 2008 R2

9.3 Windows Driver Preparation

The Windows Driver installation file name is: SAT POS Printer Driver vX.X.X.X.exe

9.4 Windows Driver Installation

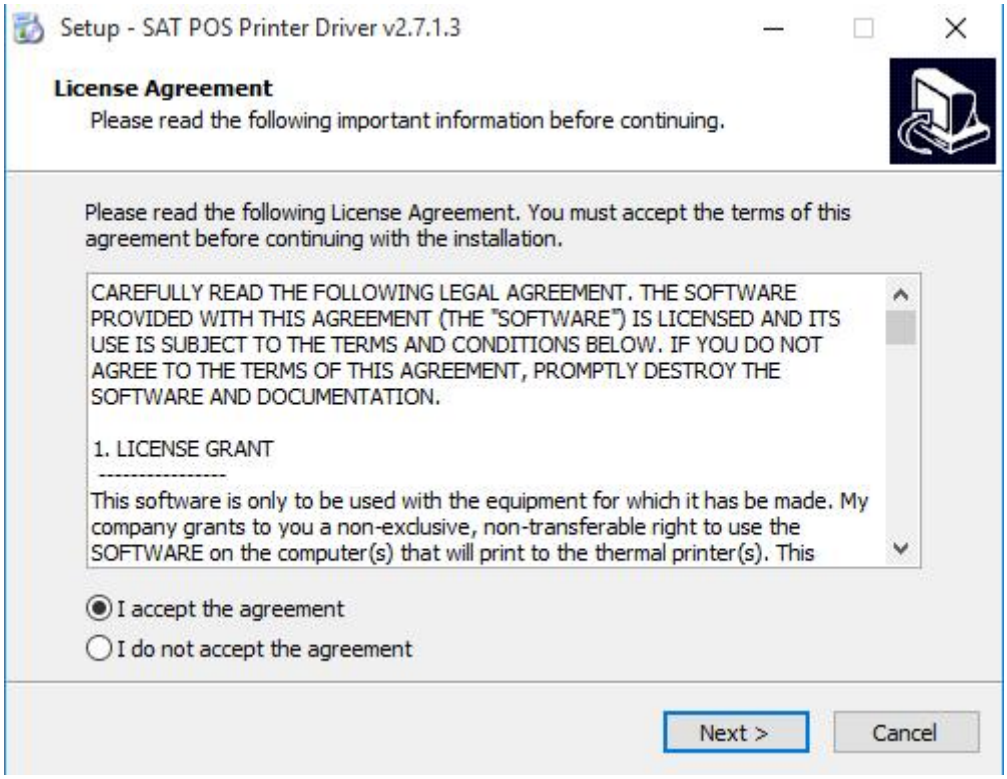
Warning:

Under different operating system, the screen has slight difference. Please operate it according to the tips. Take SAT Q23T (Windows 10) as example.

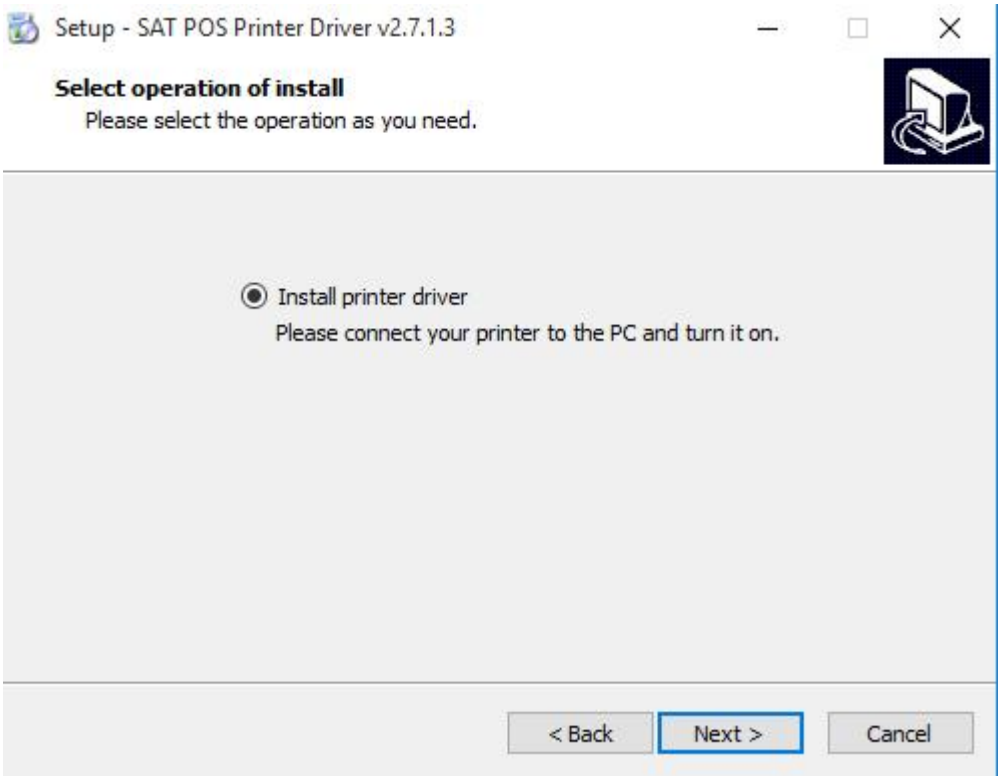
1) Double click Windows Driver.

2) Choose the language “English”, and click “OK”.

3) Choose “I accept the agreement” and click “Next”.

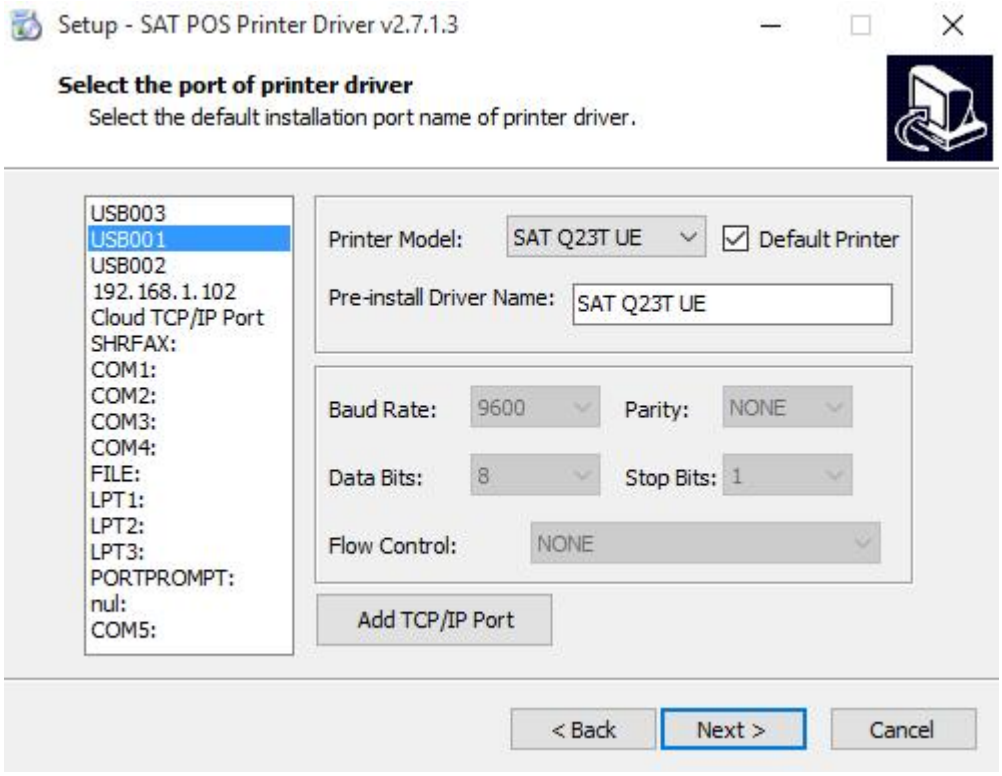


4) Click “Next”



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) Choose the matched type and port (USBxxx is for USB port, COMx is for serial port). Choose the type and port of driver, such as “SAT Q23T”, “USB001”. Click “Next”.



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

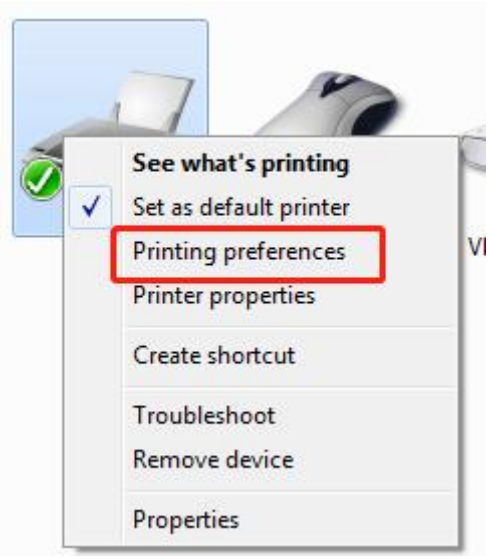
7) After installation, the icon will be found in “Start” → “Settings” -> “Devices” -> “Devices and printers”.

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

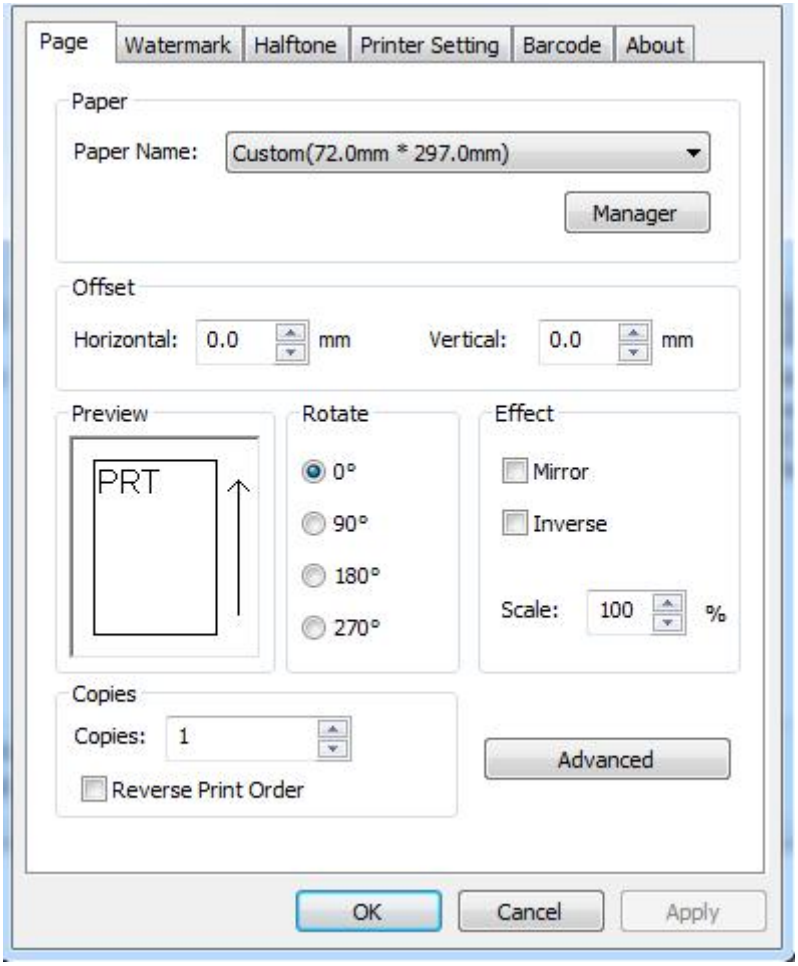
9.5.1 Printing Preferences

1) Click “Start” → “Devices and Printers”. Right click “SAT Q23T” and choose “Printing preferences”.

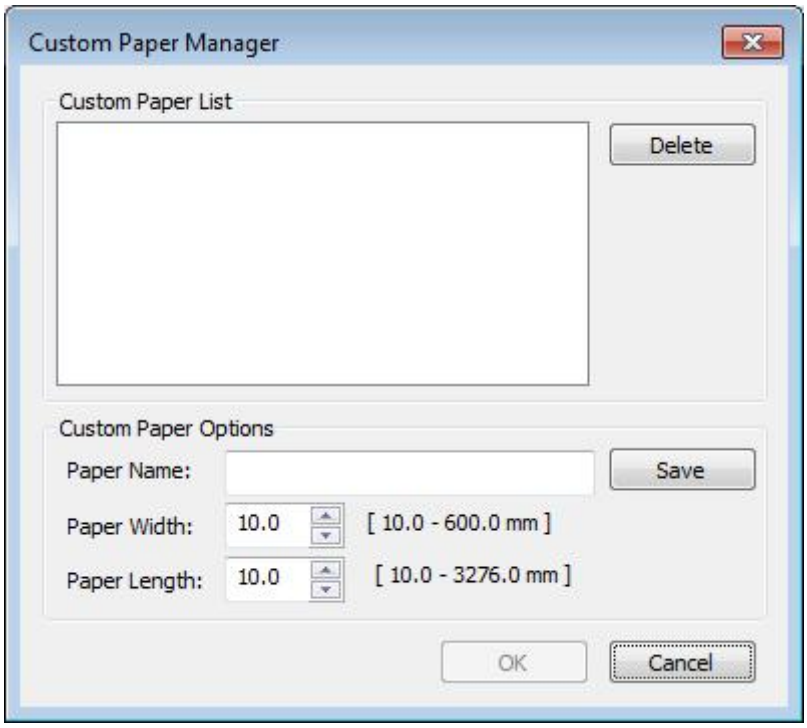


2) According to the different needs, choose “Paper”\“Offset”\”Rotate”\”Effect”\

”Copies” in “Page”.

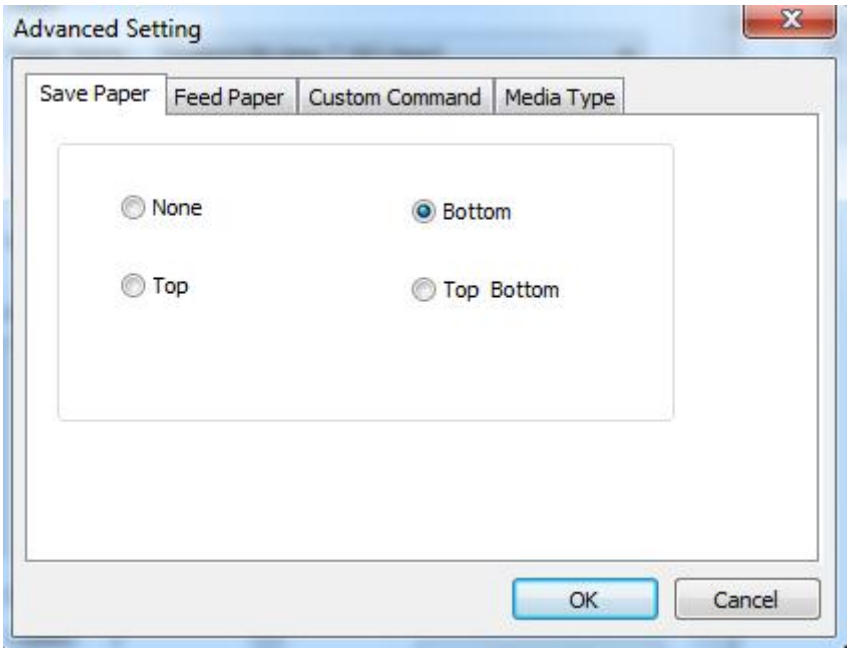


●Click on “Manager”, add or delete paper.

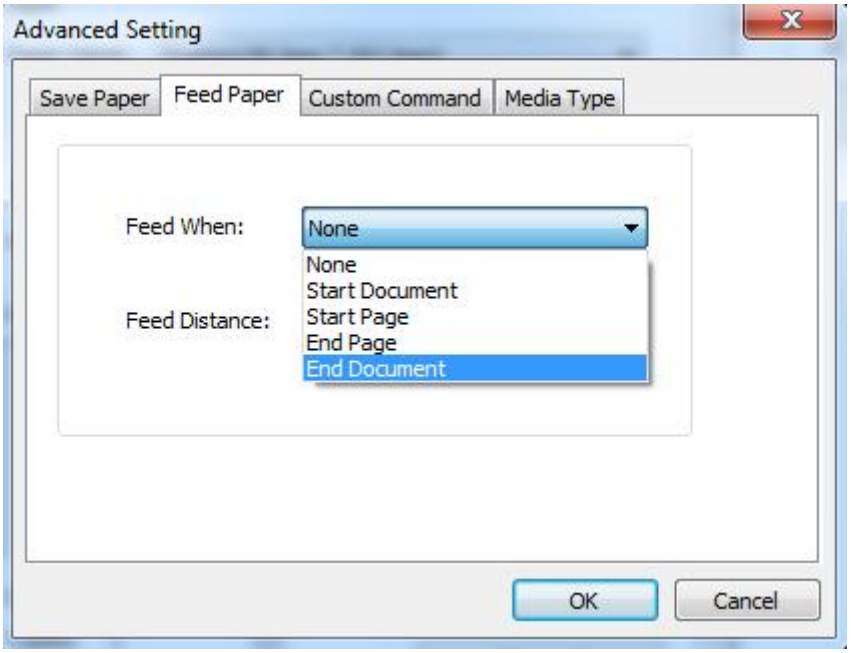


●Click on “Advanced” to set “Save Paper”, “Feed Paper”, “Custom Command”, and “Media Type”.

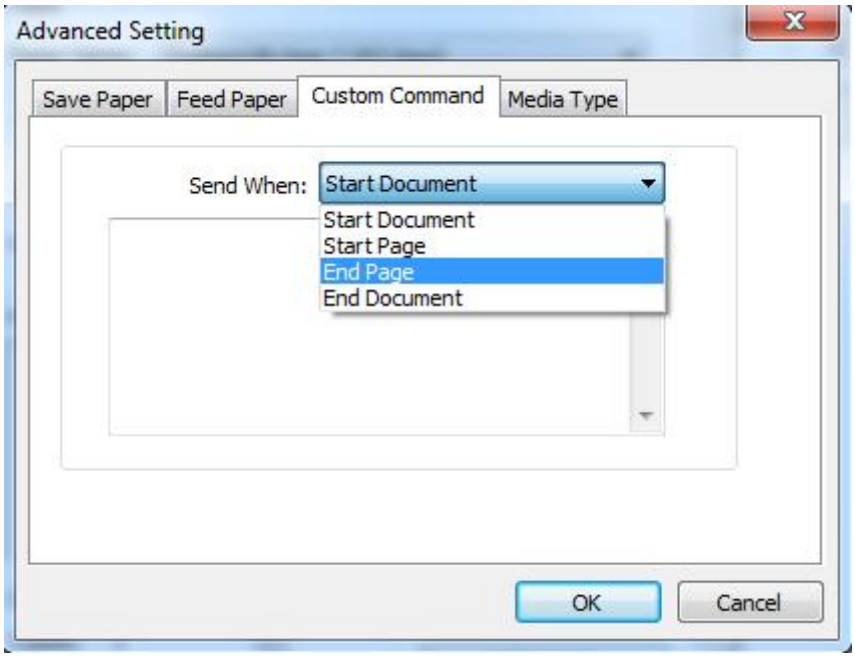
- Save Paper



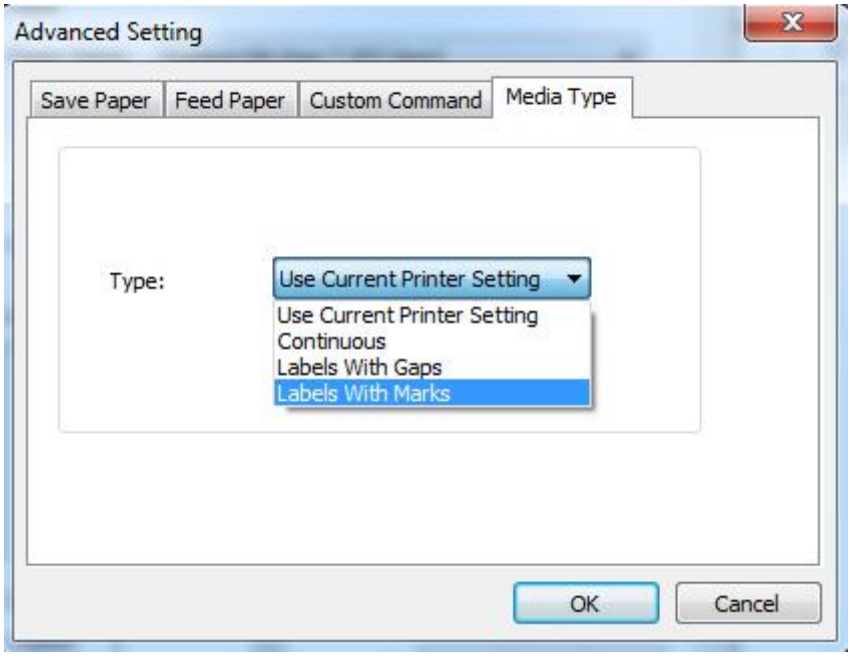
- Feed Paper



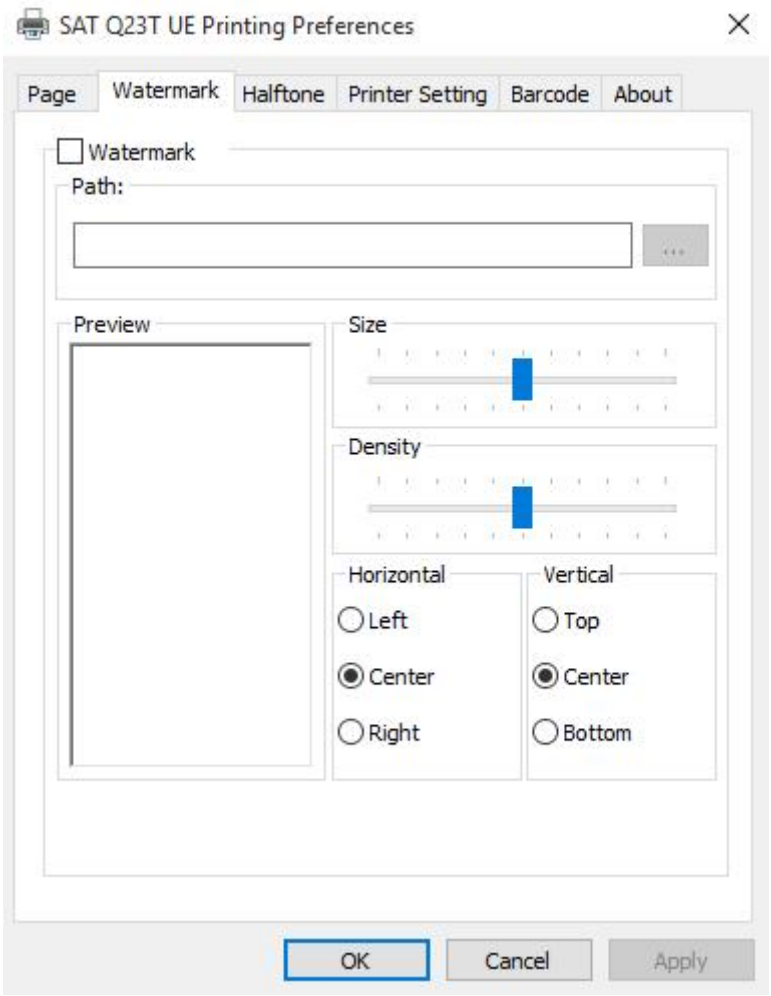
- Custom command



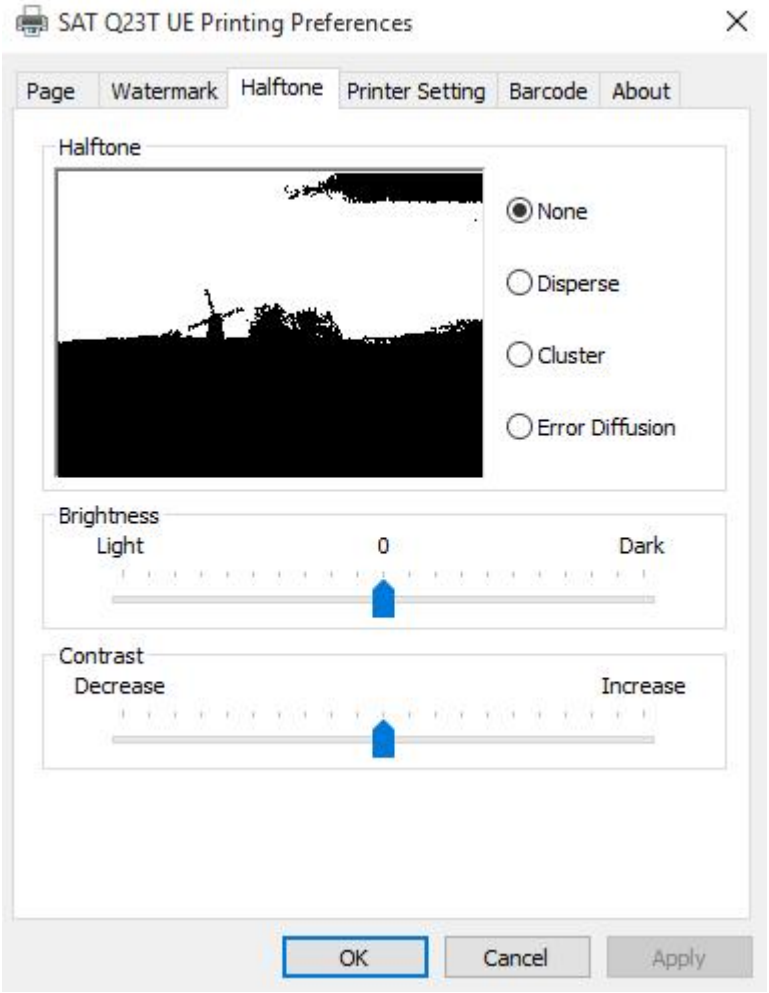
- Media Type



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



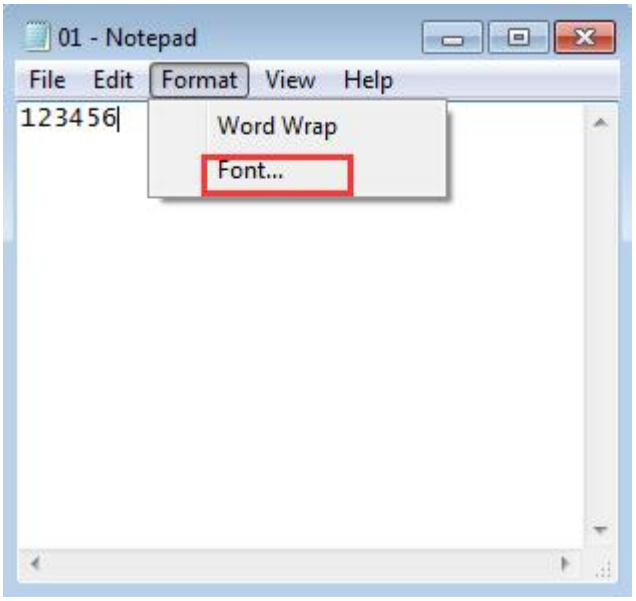
4) Click “Halftone” to set the halftone.

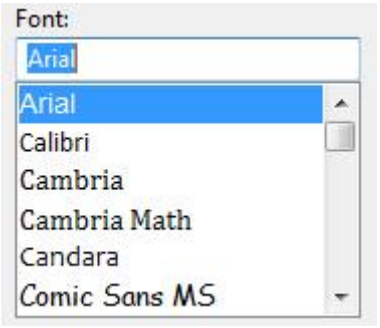


5) Set up the “Barcode”.

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:

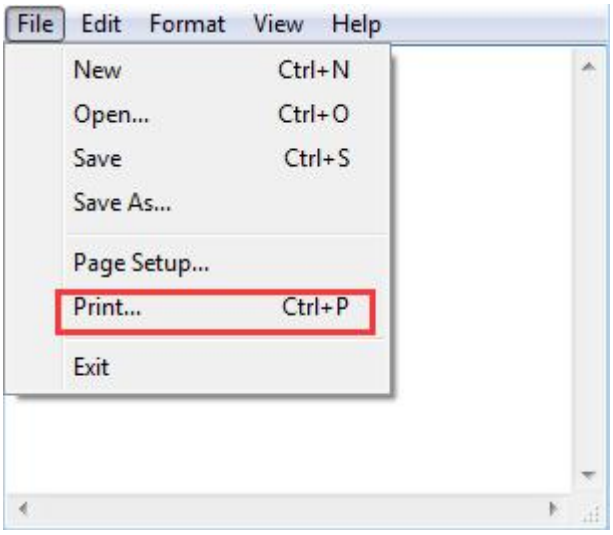
- Sets the data "123456" font type to a different font from the main document. Such as: Arial.

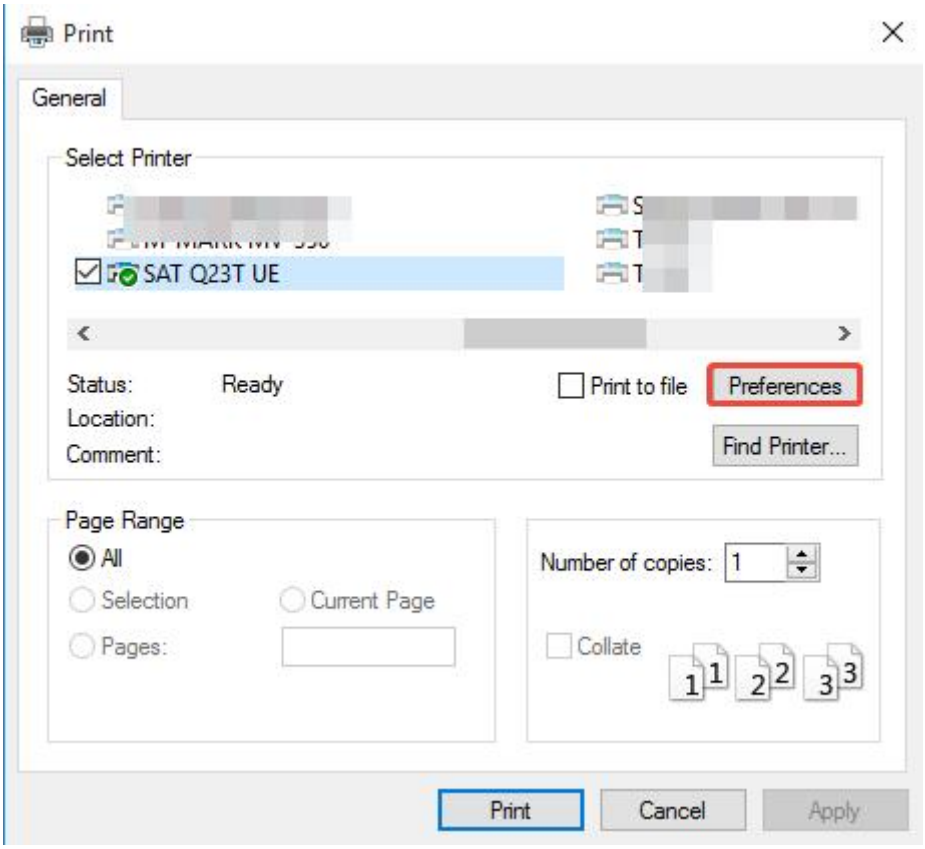




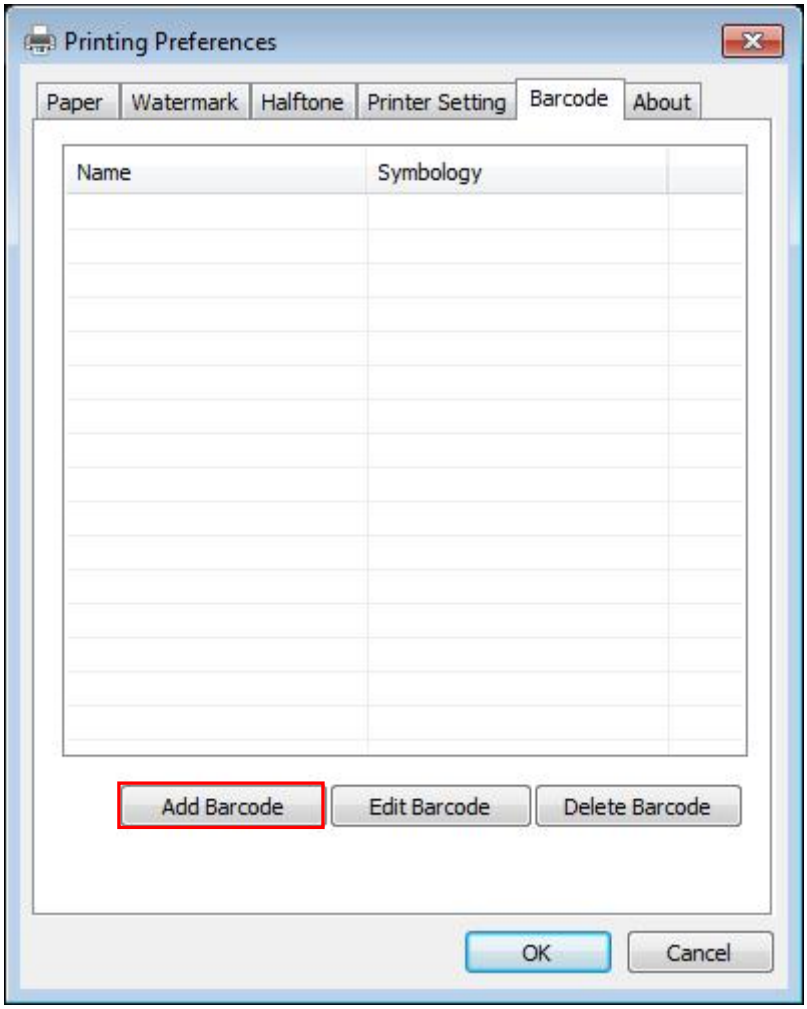
- Open the Preference.

If the document is open, you can set it in the document: File-Print-Preferences.

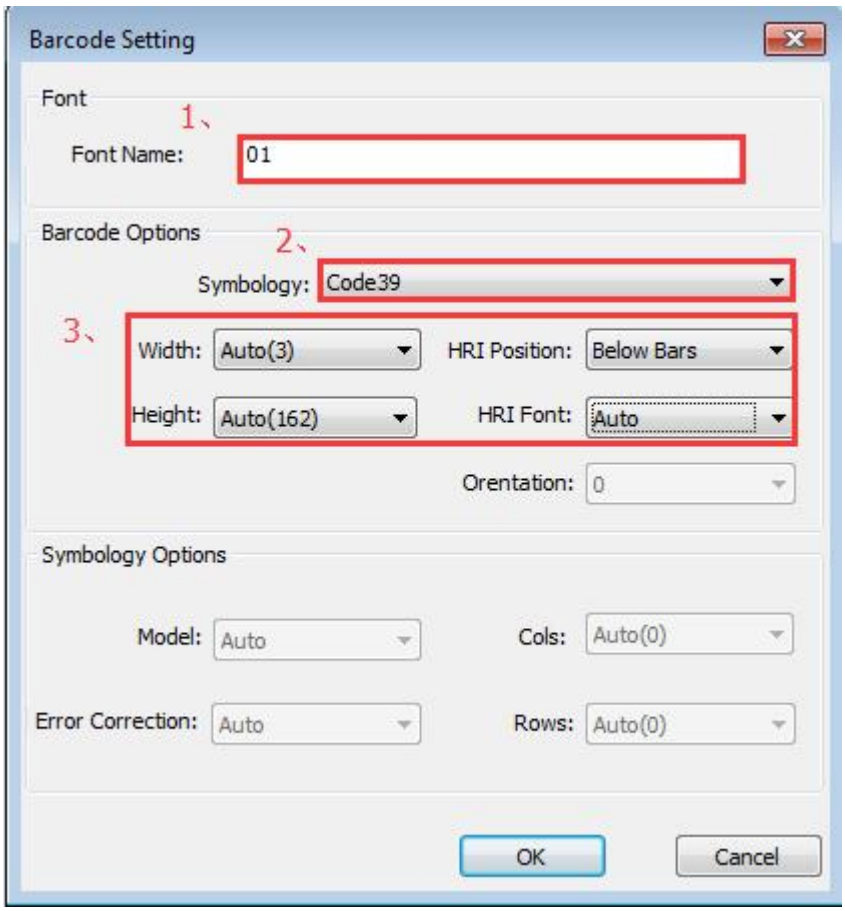


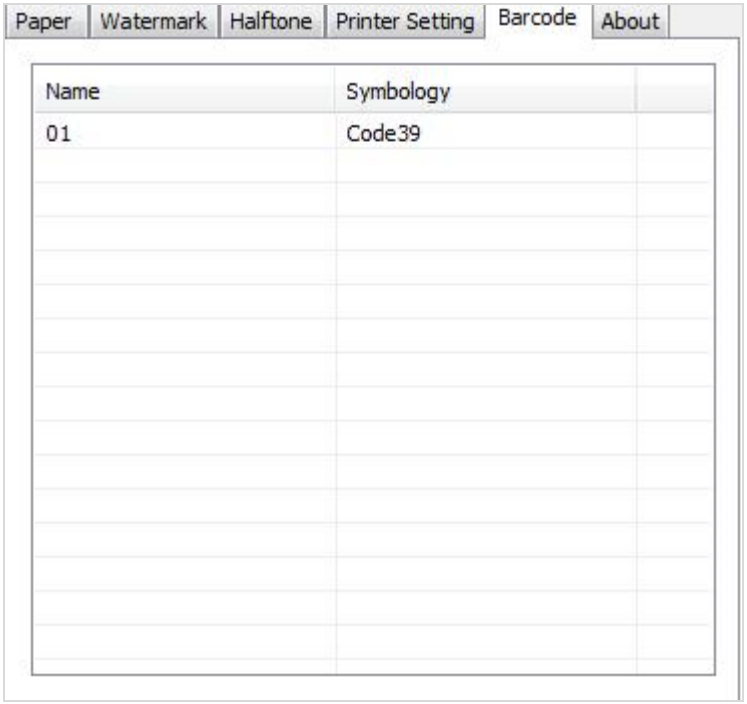


1) Add Barcode firstly.



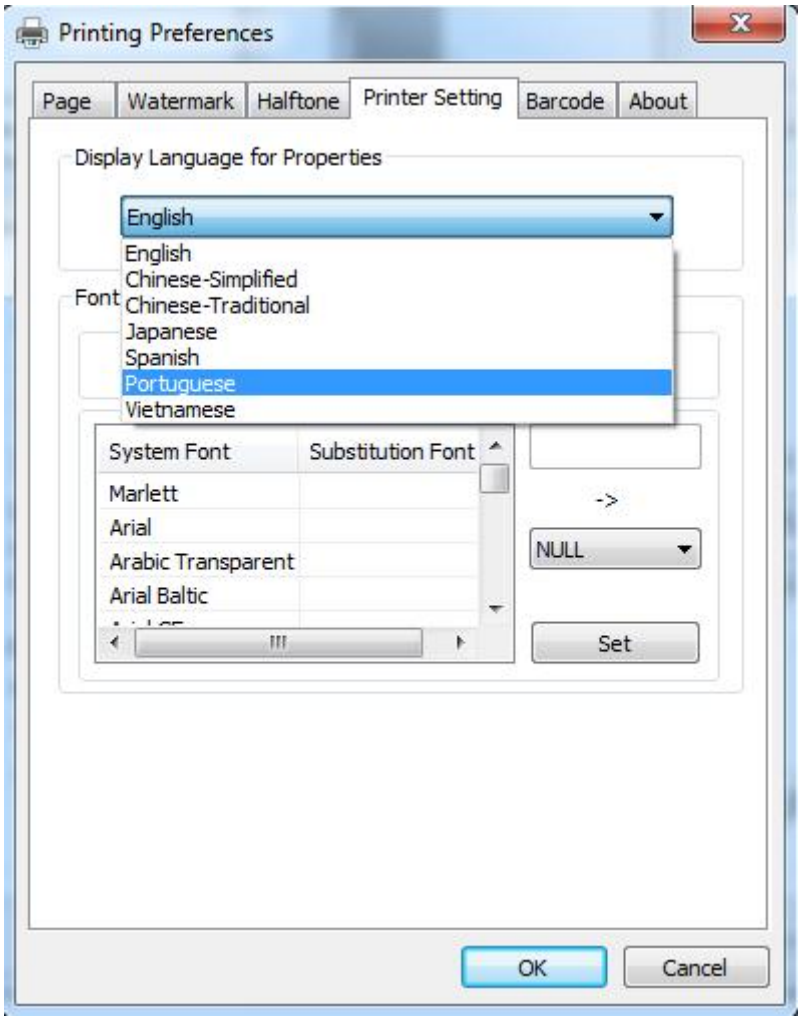
2） Set the “Font Name” and the “Barcode Option”.





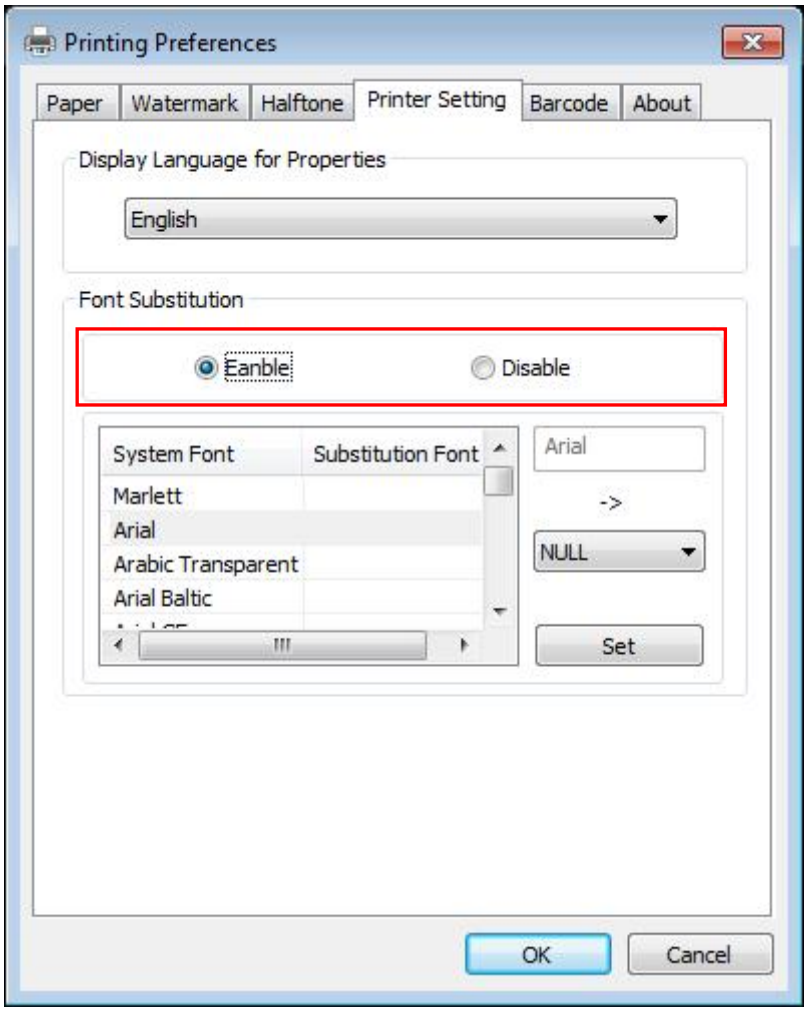
3) Click the “Printer Setting”.

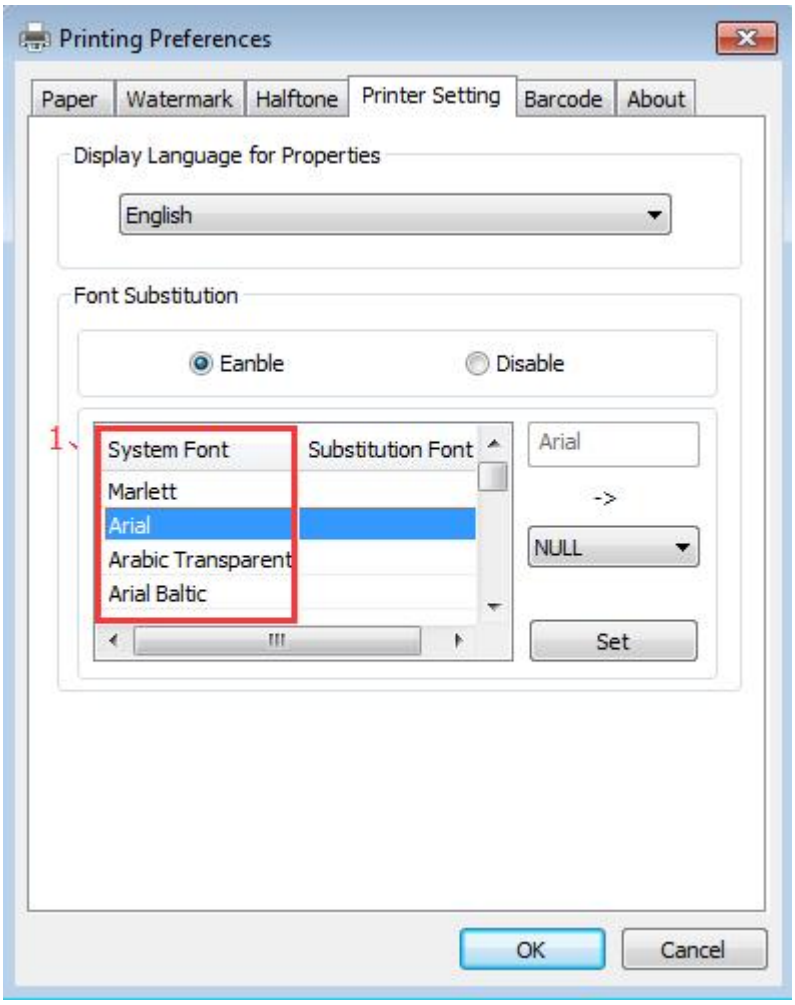
- Choose the “Display Language for Properties”

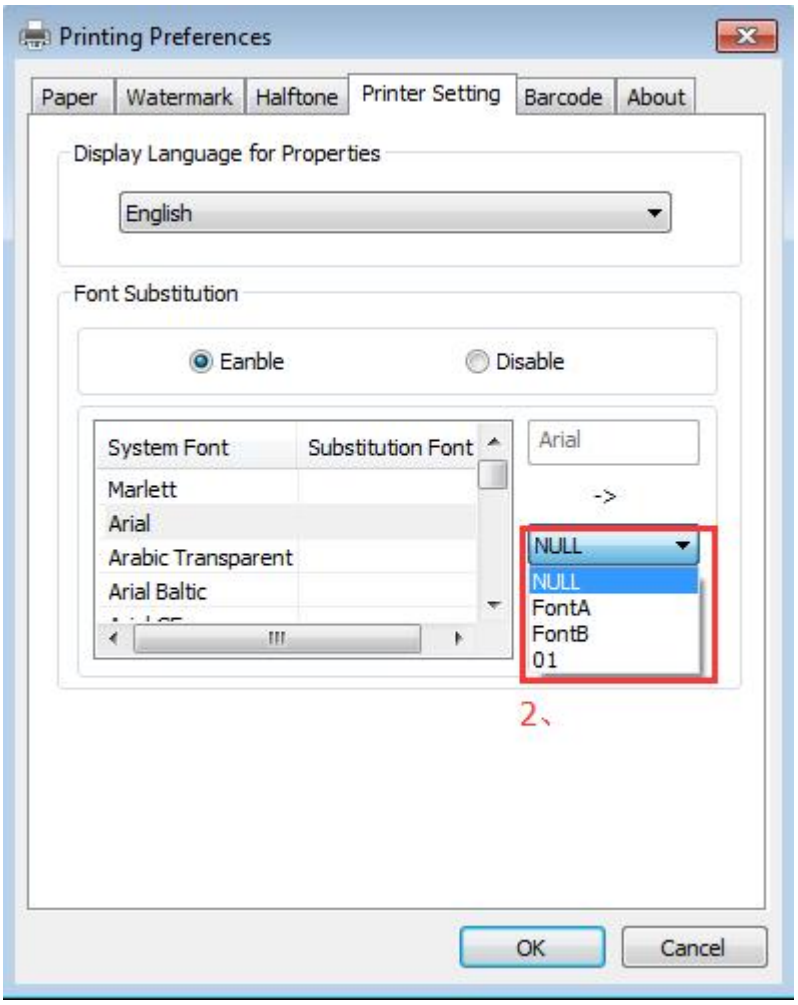


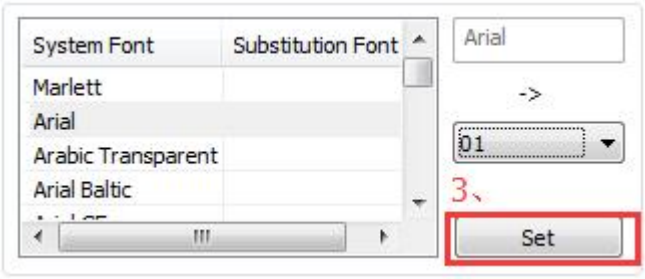
• Turn on the “Font Substitution”, select the system text need to be replaced (for example, Arial), and then select the font you want to replace (for example, 01) and click Settings, and the replacement font will display "01".

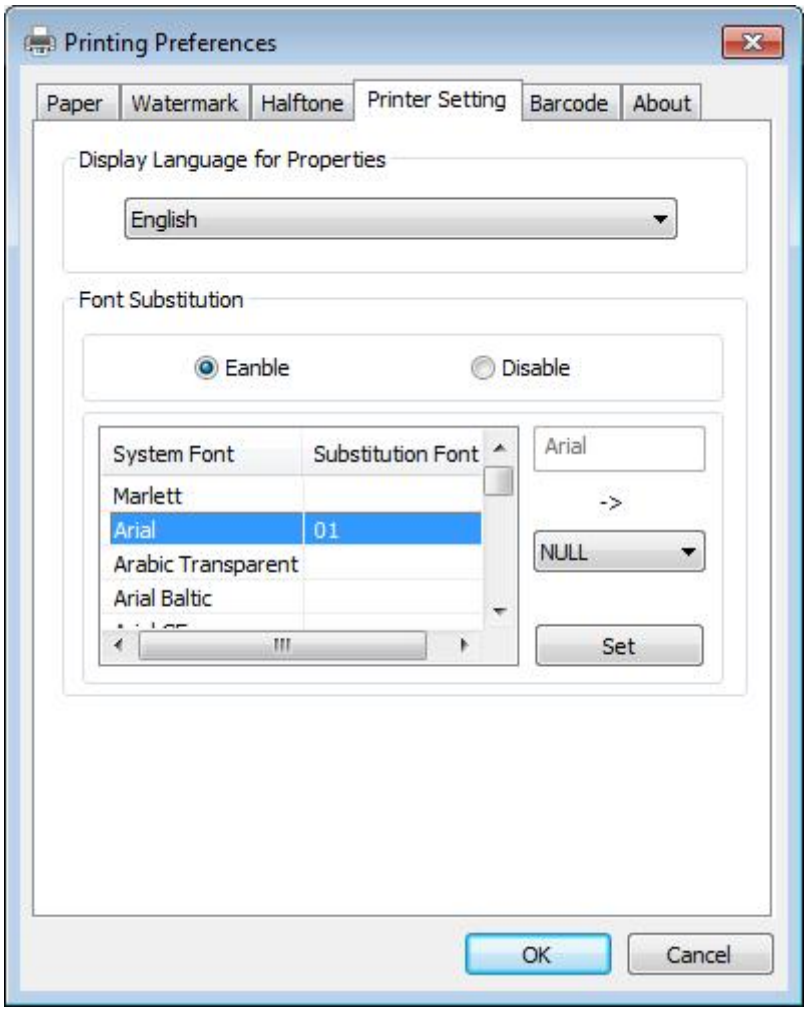
the steps are as follows:




Printing Preferences
Paper
Watermark
Halftone
Printer Setting
Barcode
About
Display Language for Properties
English
Font Substitution
Eanble
Disable
1、
System Font
Substitution Font
Marlett
Arial
Arabic Transparent
Arial Baltic
Arial
->
NULL
Set
OK
Cancel


Printing Preferences
Paper
Watermark
Halftone
Printer Setting
Barcode
About
Display Language for Properties
English
Font Substitution
Eanble
Disable
System Font
Substitution Font
Marlett
Arial
Arabic Transparent
Arial Baltic
Arial
->
NULL
NULL
FontA
FontB
01
2、
OK
Cancel

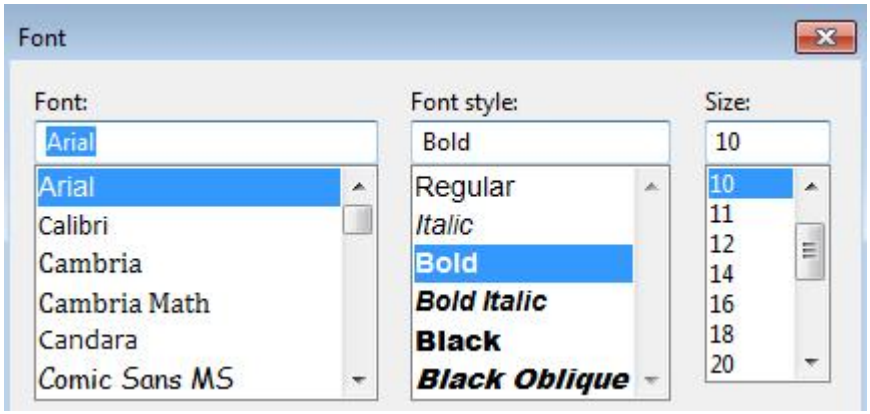

System Font
Substitution Font
Marlett
Arial
Arabic Transparent
Arial Baltic
Arial
->
01
3、
Set


Printing Preferences
Paper
Watermark
Halftone
Printer Setting
Barcode
About
Display Language for Properties
English
Font Substitution
Eanble
Disable
System Font
Substitution Font
Marlett
Arial
01
Arabic Transparent
Arial Baltic
Arial
->
NULL
Set
OK
Cancel

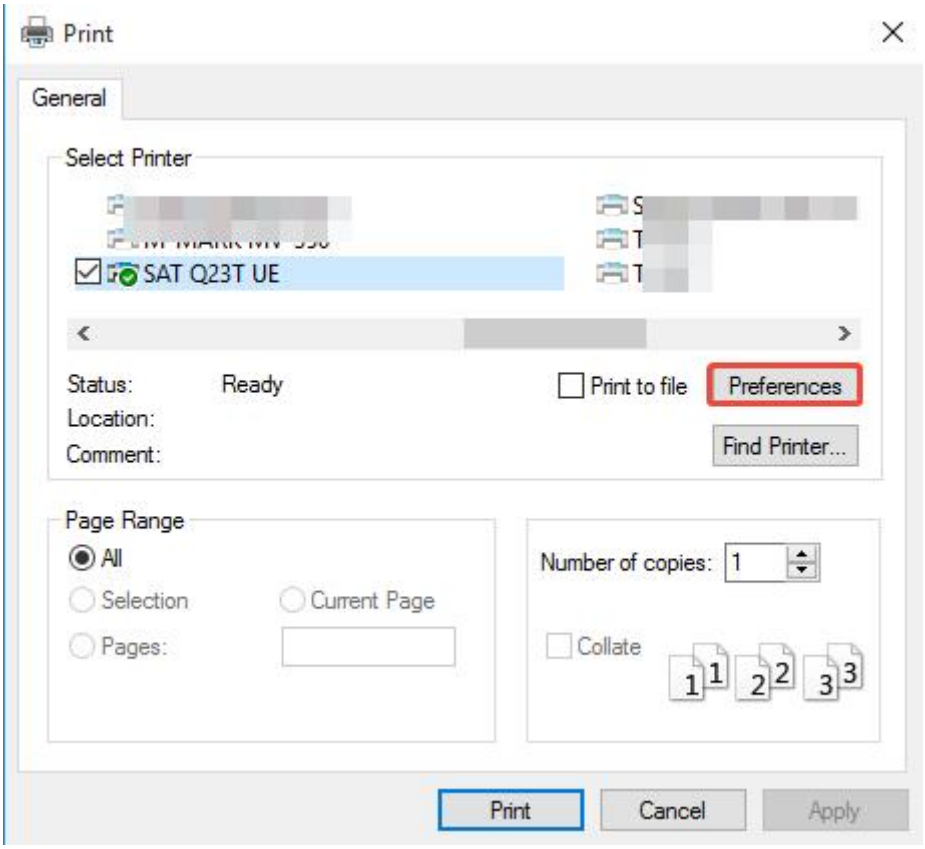
* 1 2 3 4 5 6 *

- 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:

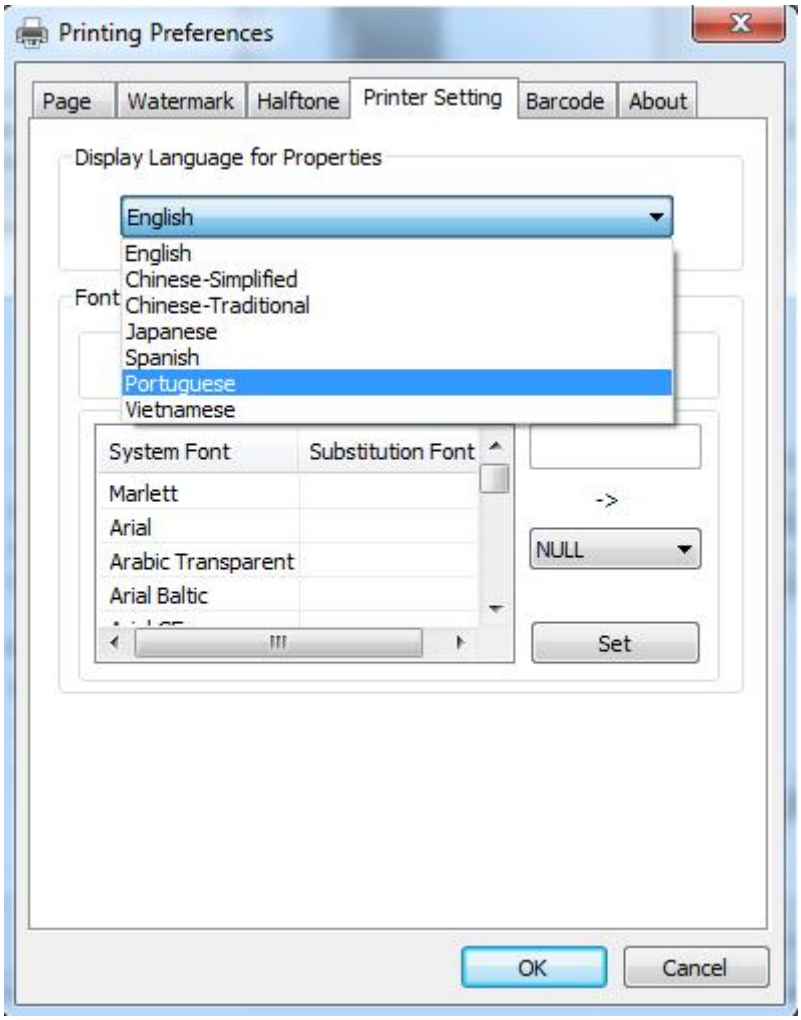


2) Set the Printing preferences.



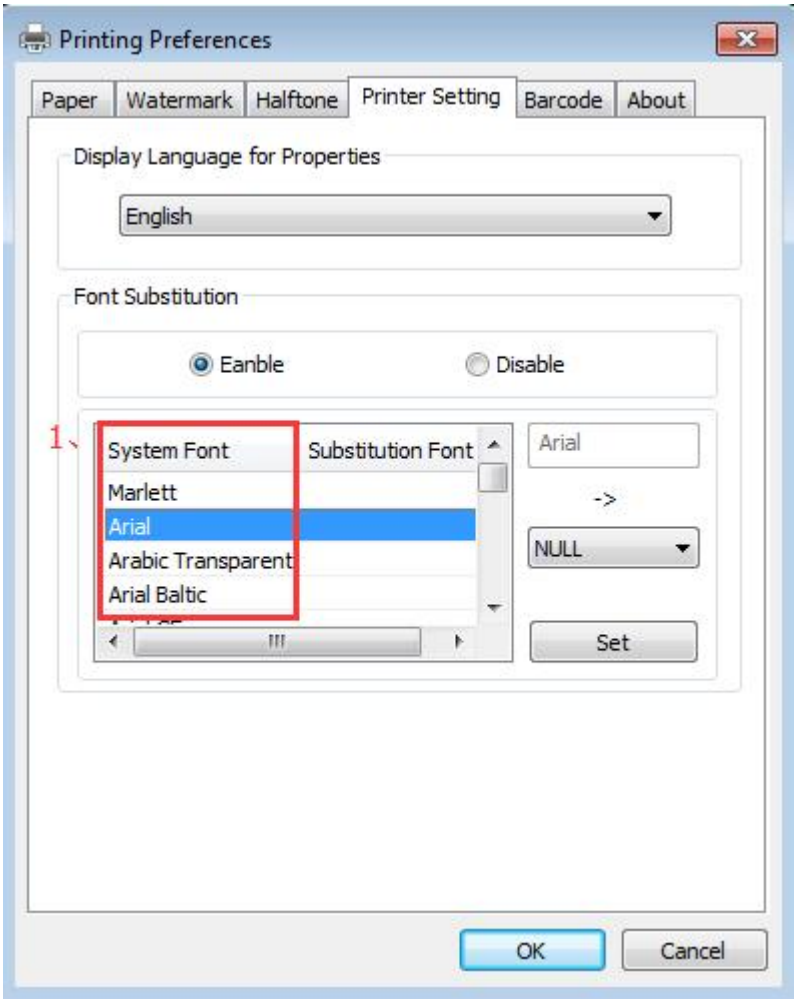
3）Click the “Printer Setting”.

- Choose the “Display Language for Properties”.

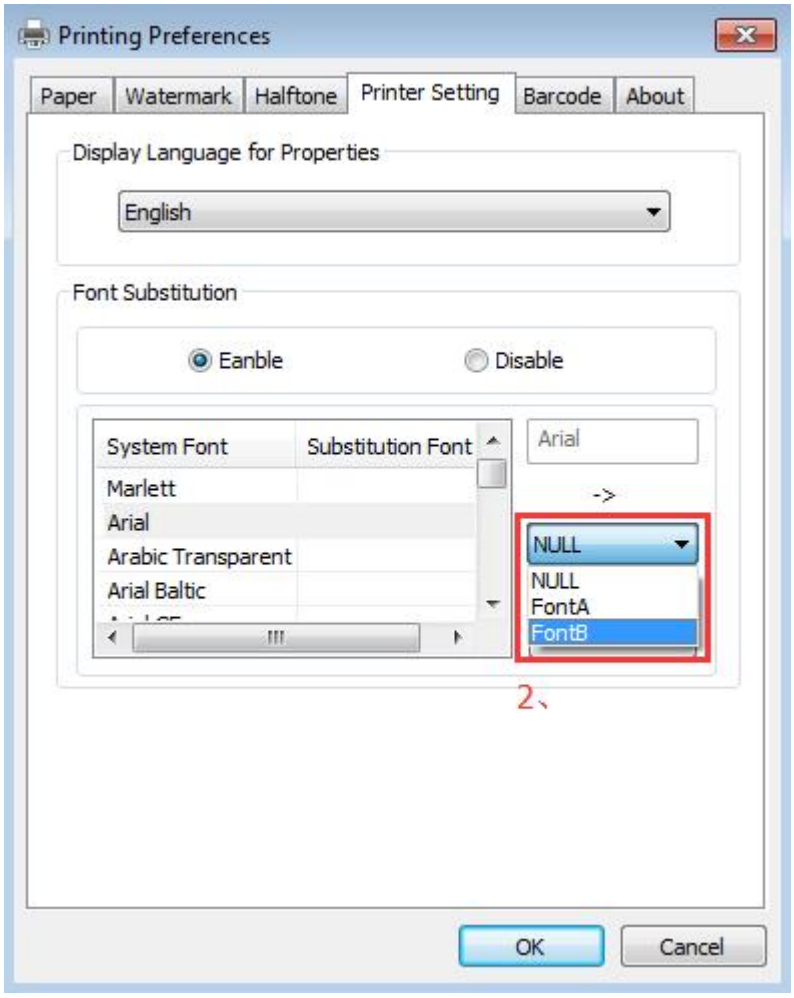


4）Turn on the “Font Substitution”.

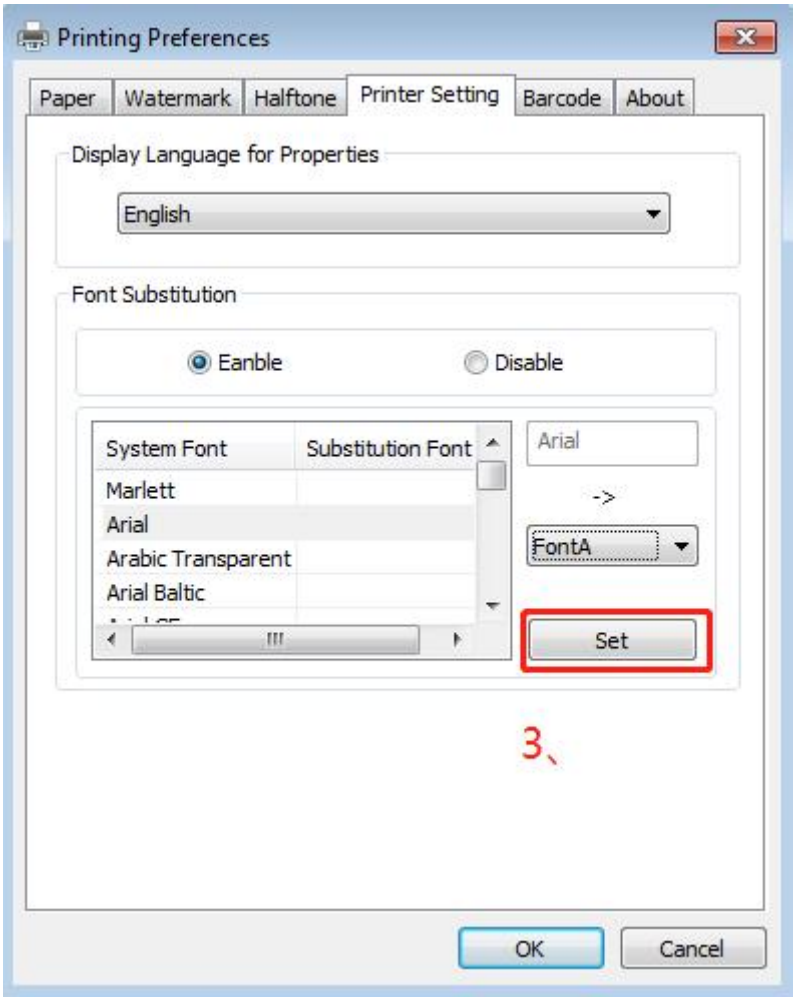
5）Select the “System Font”, for example: Arial.

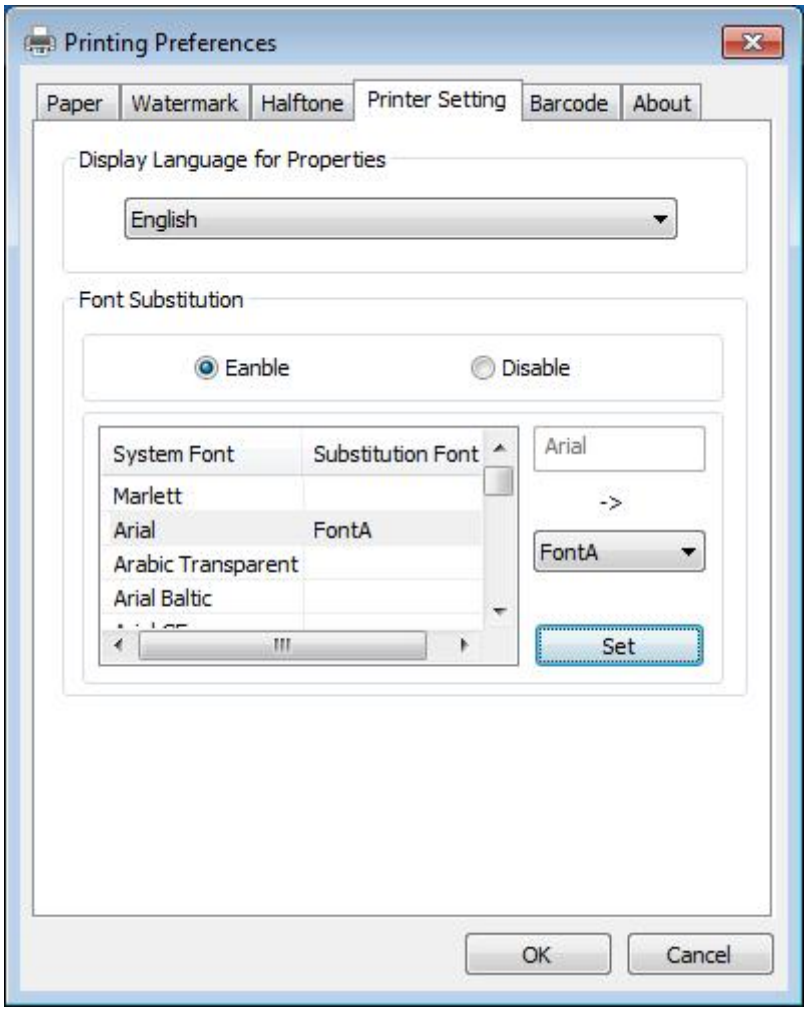


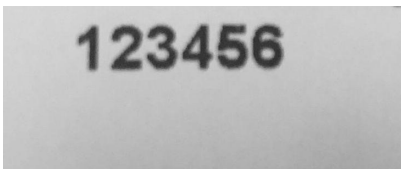
6) Select the font to that you went to replace.



7) Click “Set”.

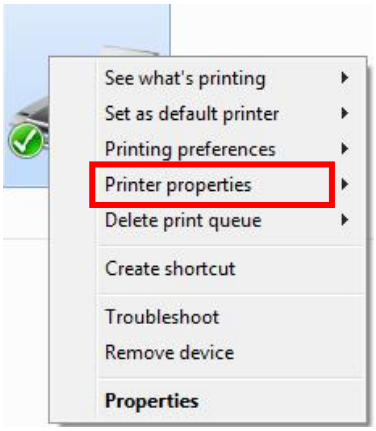

Printing Preferences
Paper
Watermark
Halftone
Printer Setting
Barcode
About
Display Language for Properties
English
Font Substitution
Eanble
Disable
System Font
Substitution Font
Marlett
Arial
Arabic Transparent
Arial Baltic
Arial
->
FontA
Set
3、
OK
Cancel


Printing Preferences
Paper
Watermark
Halftone
Printer Setting
Barcode
About
Display Language for Properties
English
Font Substitution
Eanble
Disable
System Font
Substitution Font
Marlett
Arial
FontA
Arabic Transparent
Arial Baltic
Arial
->
FontA
Set
OK
Cancel

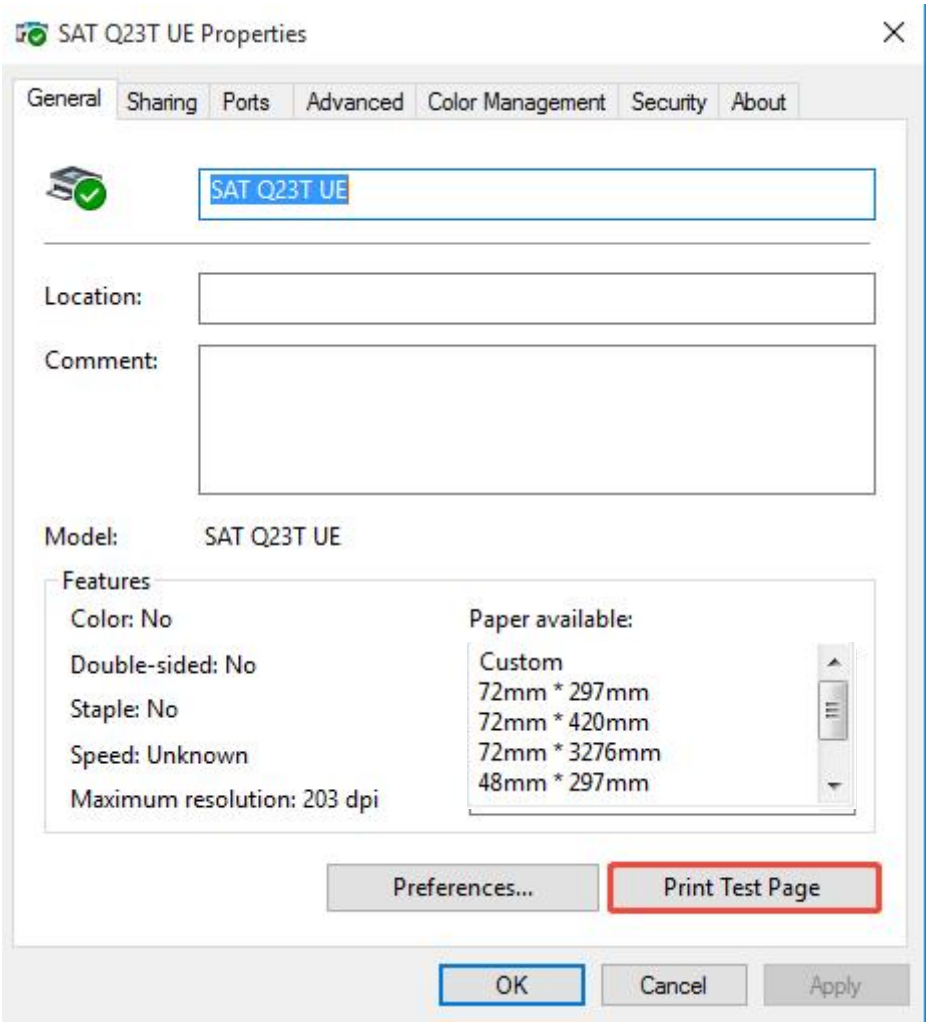

123456

9.5.2 Other Settings

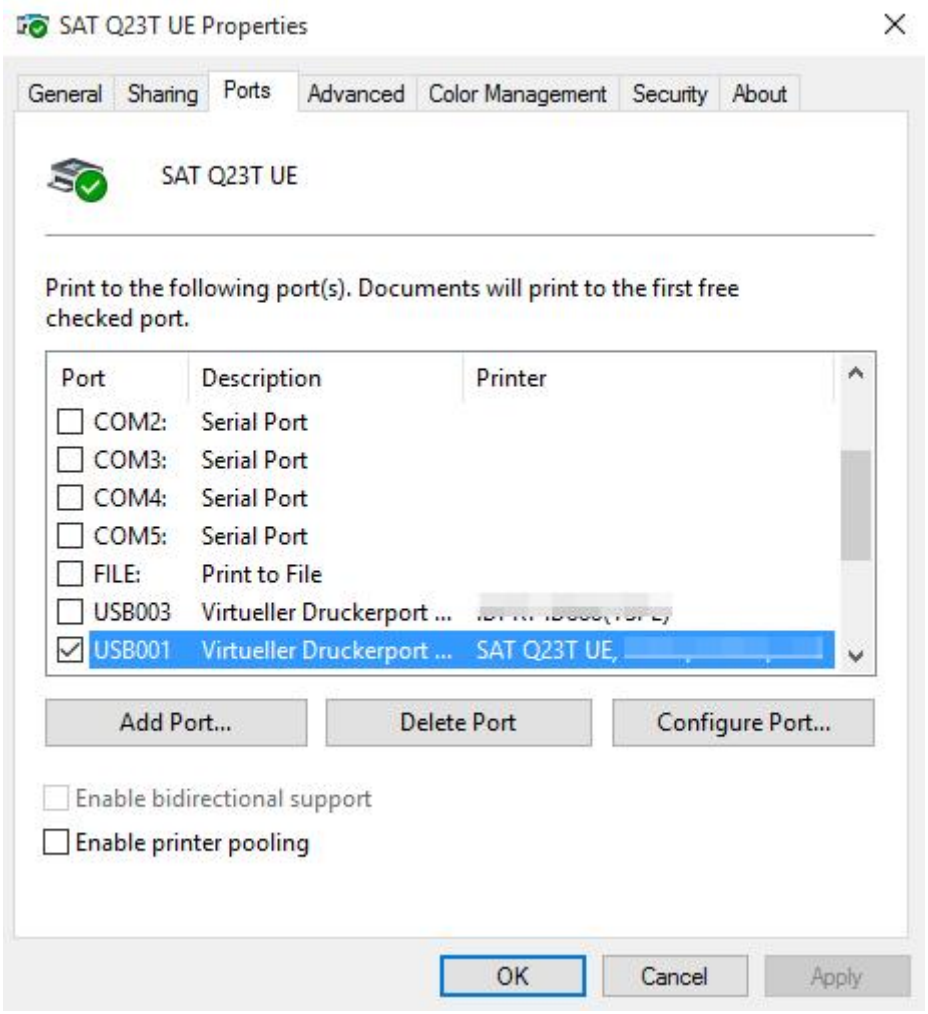
1) Click ”Start”→“Devices and Printers”. Right click “SAT Q23T” and choose “Printer properties”.



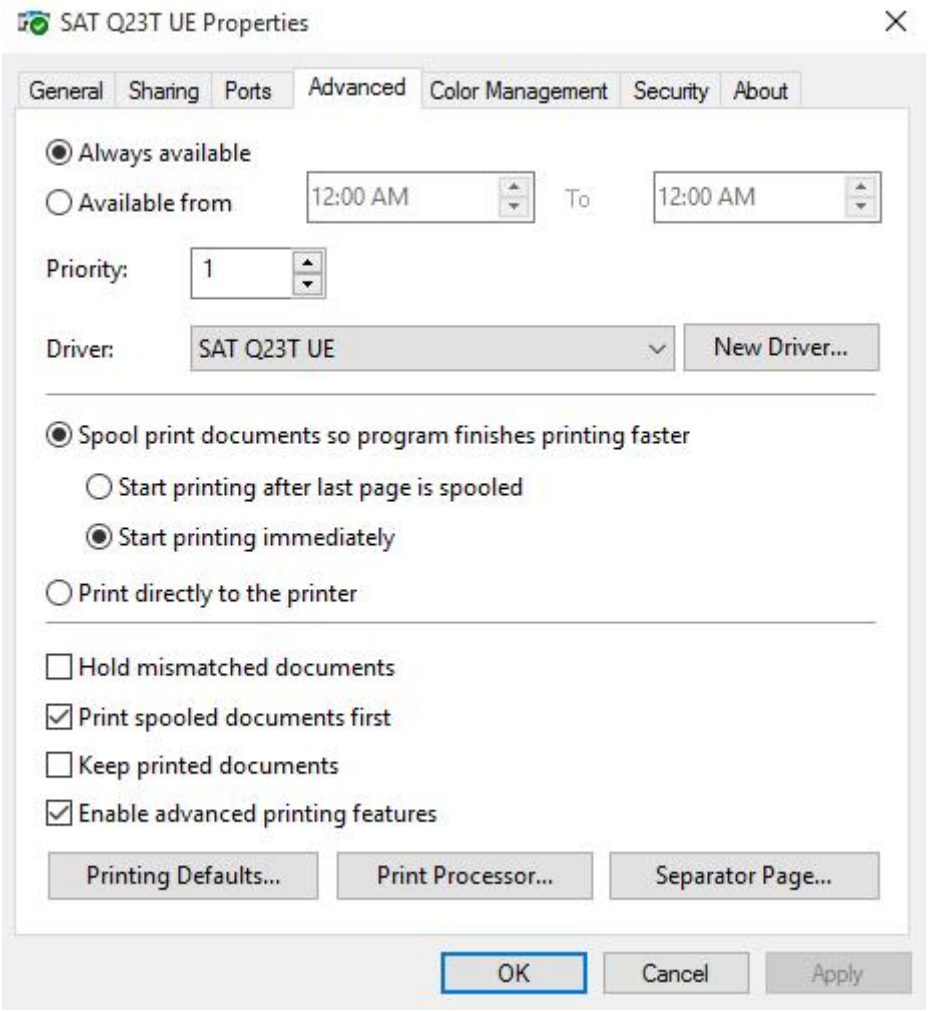
2) Choose “General”, click on “Print Test Page”, then it will print the current settings.



3) Click “Ports” to change the other connecting port.



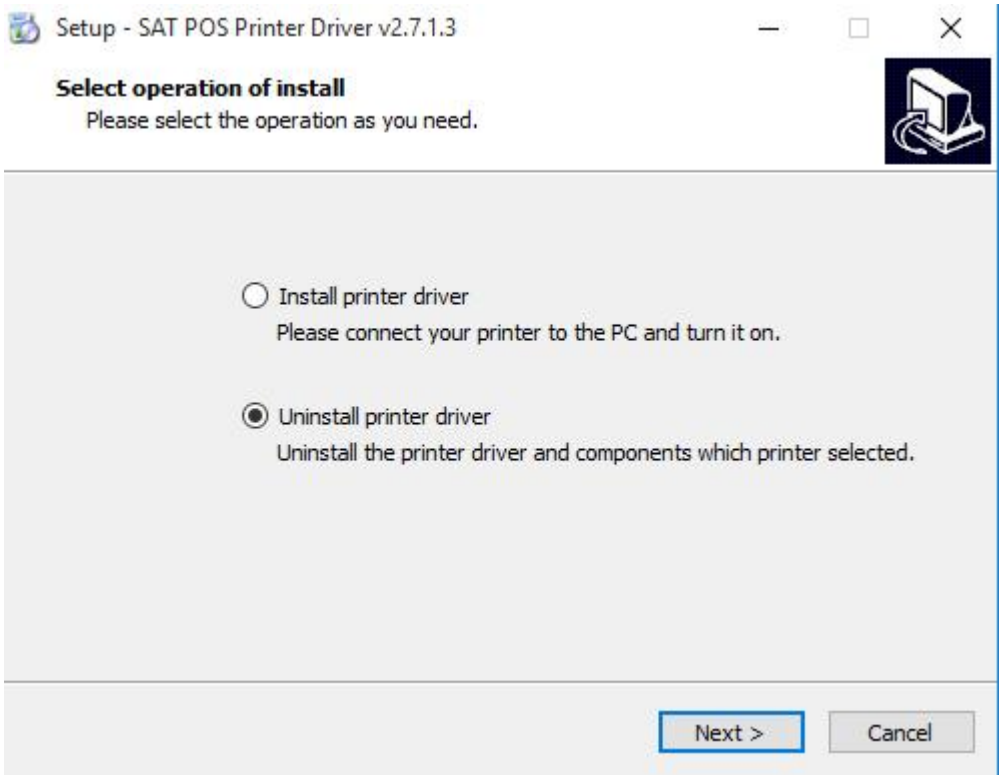
4) Click “Advanced” to set the available time for using.



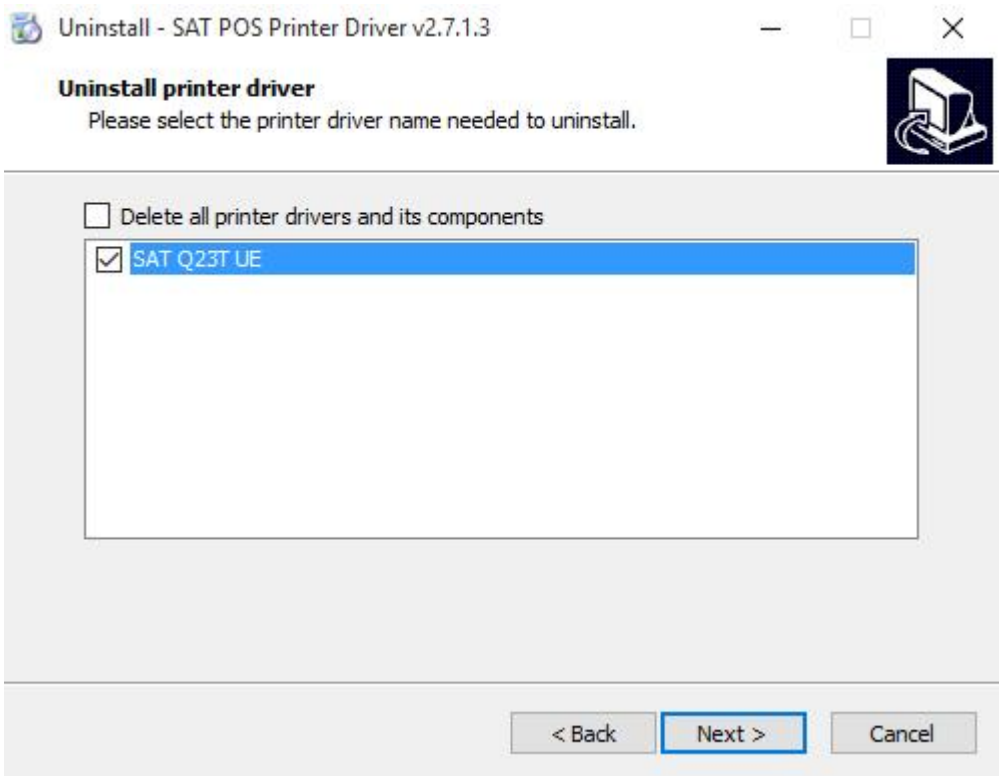
9.6 Uninstall Windows Driver

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

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



3) Choose “SAT Q23T”, then click “Next”



4) Then it is complete to uninstall.

9.7 Specification

Resolution:

203×203dpi

Paper Size:

Custom（72.0mm * 297.0mm）

72mm * 297mm

72mm * 420mm

72mm * 3276mm

48mm * 297mm

48mm * 420mm

48mm * 3276mm