80MM Portable MINI Thermal Printer

Instruction Manual

(This manual applies to 80-II type version, and if you want to get the version of the machine , please print the self-test page title prevail through the machine)

Version

April, 2015

Notice

• All rights reserved. Reproduction of any part of this manual in any form whatsoever, without manufacturer's express permission is forbidden.

• The contents of this manual are subject to change without notice.

• All efforts have been made to ensure the accuracy of the contents of this manual at the time of going to press. However, should any errors be detected, manufacturer would greatly appreciate being informed of them.

• The above notwithstanding, manufacturer can assume no responsibility for any errors in this manual.

Declaration

We have been carefully handling the manual and trying our best to ensure the accuracy of the contents of this manual. But we still can't promise it is always correct due to our products are being improved and updated all the time. The contents of this manual will be updated without notice at any time.

All of our products must be used under environments/locations which are taken care by human being. We are not responsible for any loss or damages caused by any accident while the products are used without taken-care by human being. If there are any products failures caused by human behaviors or natural disaster, we will not provide or just provide partial free maintenance.

Please contact local agents for the latest information of the products.

Notes on safety

This section presents important information intended to ensure safety and effective use of the printer. Please read carefully.

➢ Be sure to use the specified battery and power source provided by our company. Connection to an improper power source may cause fire , explosion or damage to the printer.

➢ Don't put the battery into the fire or water, don't disassemble or modify the battery, don't be short circuit, otherwise may result in injury or fire even explosion.

➢ Please don't open the paper room cover when it is printing or just when printing is over, do not touch the print head with hand or body, overheat may cause scald.

Notes on using

1、 Do not store the printer in hot and humid conditions.

2.、The lithium battery have a character that if it is not used for several months, it possibly can't be charged ever. So for that, we suggest to use the adapter what less than 1A for charging .

3、The printer's power adapter is to be connected to a stable power 110~220Volts, please do not use other devices on the same power socket, to avoid voltage fluctuations.

4、Avoid water or conductive material (for example: metal). If water is present on the surface please turn off the power immediately.

5、Please ensure that a thermal paper roll is always inserted in the printer to avoid damaging the printing roller and the printer head.

6、Please ensure that your printer is serviced and repaired by a qualified technician. No responsibility is taken for misuse and/or non-qualified servicing.

7、In order to ensure print quality and longevity of your printer, please ensure that only good quality thermal paper rolls are used.

8、Please keep this manual in a safe place, where it can be accessed easily and used for your reference.

1.Features & Application area

一. Features

- It can print 80mm width thermal paper

- Paper dimensions 40mm

- High-speed,Clear printing

- Super power lithium electricity, standby time can reach 5-6 days

- Auto sleep, auto awake, save electricity

- small size、light weight、reliable performance、simple to connect、 easy to use

二. Application area

Compared to the traditional thermal receipt printer, Mini printer has smaller body, more reliable capability, more steady printing and portable advantages. The Mini printer can work on a lot of locations, such as the TAXI bill printing, administrative fees receipt printing, post receipt printing, restaurant ordering information printing, online payment information printing, etc. With the rapid popularity of smart-mobile, Mini printer will be more widely used in the near future

2.Specification

Printing Method: Direct Line Thermal

Speed: 70mm/sec

Reliability TPH Life: 100000000 pulse / dot or 100km

Resolution: 203DPI (8dot/mm)

Printing Width: 72mm (576dot)

Paper Width: 79.5±0.5mm

Paper thickness: 0.06-0.08 mm

Roll Diameter: φ≤40mm

Power: rechargeable lithium battery/NI-MH battery

Battery: 7.2VNiMh, 2000mAh

Charging method: external charger

Print parameters: support to download the Logo trademark

FontA:12*24dots,1.5(W)*3.0(H)mm

FontB: 9*17dots, 1.1(W)*2.1(H)mm

Simplified/Traditional:24*24dots,3.0(W)*3.0(H)mm

Printing Chinese character: Chinese: simplified Chinese 24x24 point. support 18030 font library, support Taiwan and HK traditional(complex font) ANK: ANK characters

Extended character table:

OEM437/Katakana/OEM850/OEM860/OEM863/OEM865/West Europe/Greek/Hebrew/EastEurope/Iran/WPC1252/OEM866/OEM852/OEM858/IranII/Latvian/Arabic/PT1511251/OEM747/WPC1257/Vietnam/OEM864/Hebrew/WPC1255/Thai

Emulation: ESC/POS command

Line spacing: 3.75mm (Default)

Interface: Serial, USB, Bluetooth 2.0/Two-mode Bluetooth (optional), WIFI (optional)

Driver: Win200/Win2003/Win2000/WinXP /Win7/WIN8/LINUX/Android

Working Temperature: -10～50℃

Humidity: 10～90%

Weight: 260g

Barcode Types:

1DBarcode:

UPC-A/UPC-E/JAN13(EAN13)/JAN8(EAN8)/CODE39/ITF/CODABAR/CODE93/CODE128

3.Appearance

POWER DISPLAY

ERROR

CHARGE

PAPER OUT

POWER KEY

FEED KEY

MODE KEY

SUPPLY HUB

USB

COM
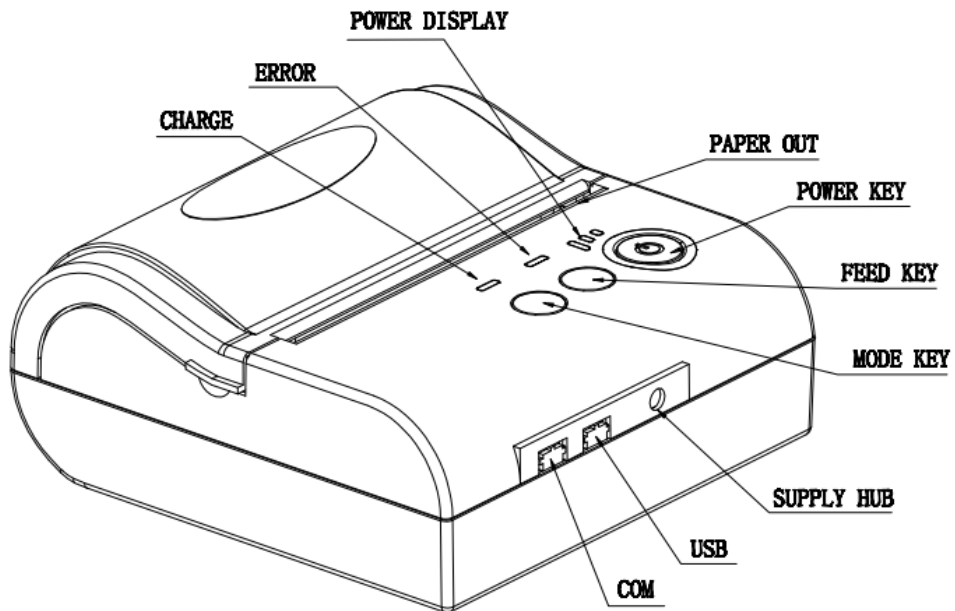
Size：103*100*46 mm

Weight：260g(With Battery)

4.Communication Interface

- 1. **RS232(COM) : standard RS232 Communications Protocol**

- 2. **USB : standard USB Communications Protocol**

- 3. **Bluetooth 2.0: General Bluetooth2.0 Communication Protocol**
  Two-mode Bluetooth: General Bluetooth2.0 / 4.0 Communication Protocol

- 4. **WIFI: Standard 802.11b/g/n Protocol**

4-1. RS-232 Serial (COM) Interface

RS-232 is developed according to the EIA standard asynchronous transmission, the specifications are as following:

Data transmission: serial interface

Synchronization: asynchronous

Signal Level: RS-232 level, logic 1:-5.4v, logic 0 : +5.4v

Hardware Flow Control: None

Baud rate: 2400pbs to 115200pbs is optional

Data word length: 8 bits

Stop bit: 1bit

Parity: None

Users can get the current baud rate from the printer self-testing page.

Serial cable: We have made the cable specially using mini port like Mini USB port which connects the printer .The following picture shows the signal definition of the RS-232 Serial interface:

The connection between the printer and host follows the following rules:

Printer	Host
TXD	RXD
RXD	TXD
GND	GND

However, the printer usually works only on receiving data, it doesn't have to respond anything

back to the host , then TXD signal can be ignored , and then the connection can be sampled as following:

Printer	Host
RXD	TXD
GND	GND

4-2. Bluetooth Connection

Bluetooth is a proprietary open wireless technology standard for exchanging data over short distances (using short-wavelength radio transmissions in the ISM band from 2400–2480 MHz) from fixed and mobile devices, creating personal area networks (PANs) with high levels of security.

4-2-1. Bluetooth specification

Using blueCore4-Ext chipset, fully compatible with Bluetooth 2.0;

High-sensitivity receive signal, small size, lower consumption

Supporting 1200bps ~ 1382400bps variety of baud rate;

Supporting SPP agreement, the maximum transfer speed is up to 3Mbit / s;

4-2-2. Use "AT" command to modify Bluetooth Module's parameters

Notice: The following changes can't be done by user, these should be done in factory by Manufacturer. So if user wants to change these parameters, please inform our sales person before ordering our printers.

Modify name---Send character string "AT+NAMEXXXX, feedback "Okname";

For example, if you want change name to "LY58", please send string "AT+NAMELY58".

Modify PIN code--- Send character string "AT+PINXXXX, feedback "Oksetpin";

For example, if you want change PIN code to "8888", please send string"AT+PIN8888".

(Note: Default PIN code is "1234", you only can reset PIN code with four figures.)

Clear Bluetooth address--- Send character string "AT+CLR00", feedback "Okclear";

Modify baud rate--- Send character string "AT+BAUDX, feedback "Ok+current baud rate";

X represents the baud rate code, as following:

1-----1200	7------57600
2-----2400	8------115200
3-----4800	9------230400
4-----9600	A------460800
5-----19200	B------921600

6------38400   C------1382400

For example, if you want to change baud rate to 115200bps, please send string "AT+BAUD8".

4-2-3. Build connection.

1. Turn on the printer;

2. Search for the Bluetooth device with host device;

3. If there are other Bluetooth devices, please select "LY58"(for example) printer;

4. Enter default pairing code "1234"

5. Pairing succeed.

4-3. USB Interface

The printer is connected by standard Mini USB cable(included in accessories) for communication. The USB type belongs to slave device type.

5.The installation of the paper roll

The printer use 80MM thermal paper, and adopt to easy paper loading. So the paper is very convenient install.

Paper diameter Max 40mm.

Thermal paper installation method is as follows:

（1） Open the printer top cover

（2） Thermal Paper as follow Graph to put into paper storehouse
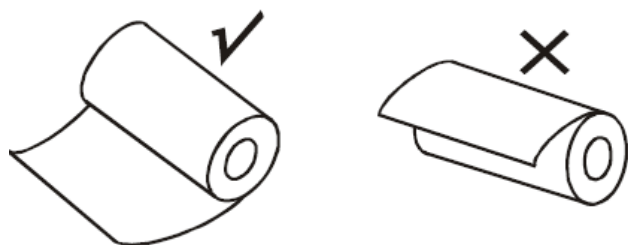
（3）Put out a little of the paper outside printer,then close the top cover.

（4）Use paper sawtooth tear off redundant paper

Button Operating Instructions

▐▐▐▌（Green Light）	ERROR（Red Light ）	CHARGE（Red Light/Green Light)	Printer Status
OFF	OFF	OFF	Printer Close
Flash	OFF	OFF	Printer dormant
ON（Always）	OFF	OFF	Printer open and have paper
ON（Always）	Flash	OFF	Printer Open , without paper
		CHARGE（Red Light)	Charged with Battery
		CHARGE（Green Light）	Full of Battery
Display 1 or 2 shelf			Low power of Battery
Hold down power for 3 seconds			Printer OPEN/OFF
Under power on, the paper feeding begins when press 【FEED】 button			the printer paper feed
Power off the printer, then hold down the 【FEED】 button and press the power button at the same time. Wait 2 seconds ,then loosen the 【FEED】 button,the current setting will be printed out.			The printer Self test
Power off the printer, then hold down the 【FEED】 button and press the power button at the same time. Wait until the power indicator & 【ERROR】 led are both on, and then 【ERROR】 led goes off, then loosen the 【FEED】 button, the language setting status will be printed out.			Transformation in both English and Chinese
Power off the printer, then hold down the 【FEED】 button and press the power button at the same time. Wait until the power indicator & 【ERROR】 led are both on, and then 【ERROR】led goes out, after, 【ERROR】led goes on again ,then loosen the 【FEED】 button, the density setting status will be printed out. (It has three levels setting for printing density, it is a circle Low level→Middle level→High level→Low level…, Please switch the density			Set printing density

status by repeating operation presented above.)	
Power off the printer, hold down the【MODE】button and press the power button at the same time. Wait until the power indicator &【ERROR】led are both on, and then 【ERROR】led goes out, then loosen the【MODE】button. The printer turns into the hexadecimal printing mode and print the presentation.Way to quit hexadecimal printing : The way to quit hexadecimal printing mode is switch off the printer .	Hexadecimal printing

6.The Bluetooth configuration

Step1: Make sure your device (like PC, Note Book) has Bluetooth function, then once the Bluetooth for your device is activated, you will see the Bluetooth sign showed in the right bottom side of your device(like PC) screen.

*Step2:*Power on the Bluetooth printer.

*Step3:*To add the Bluetooth printer, please left-click the →click "**Add a Bluetooth Device**" ,then you will enter wizard screen , please choose "**My device is set up according and ready to be found**"→click "**Next**"(showed as below).

Step4:if you can see screen as below,then the device is searching the bluetooth printer,please wait.
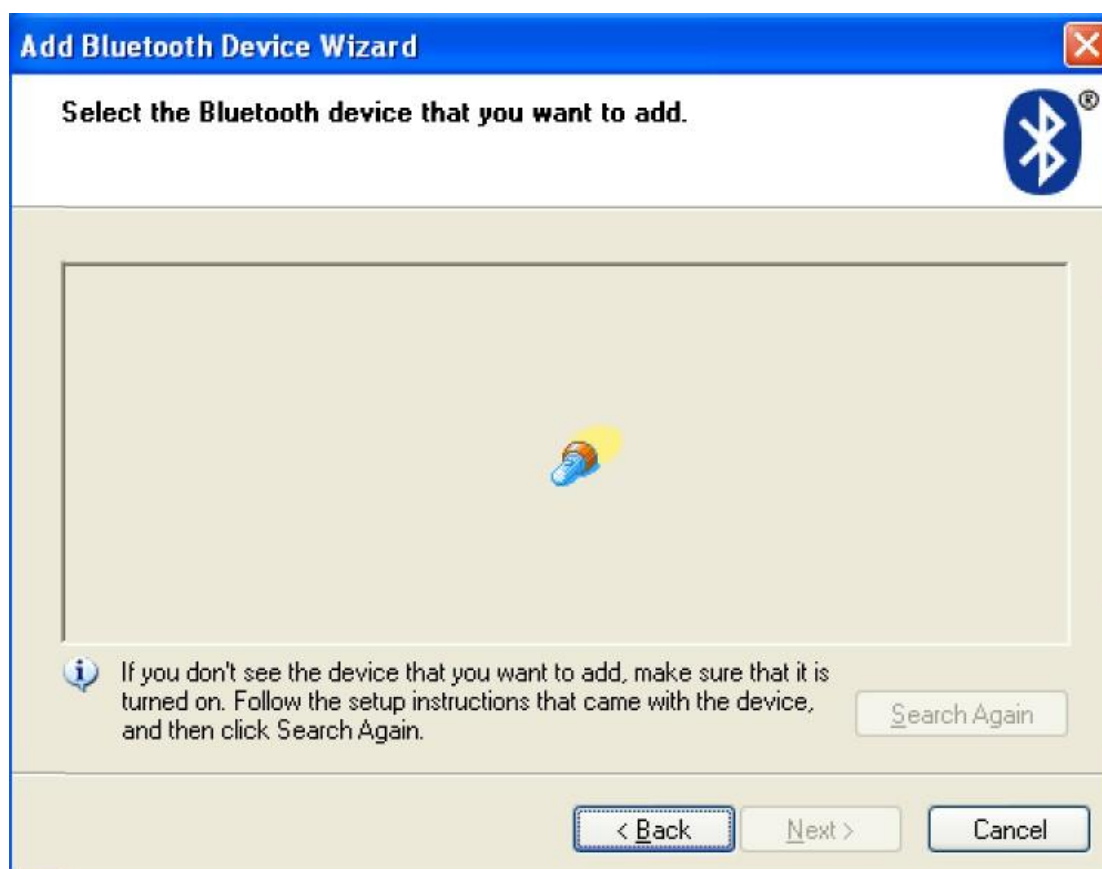
*Step5:*Once the Bluetooth printer is found. You can see it listed on the screen, Here, for example, "BlueTooth Printer" is successfully found. Please click "BlueTooth Printer" ,→ click "**Next**"

*Step6:*Choose "**Let me choose my own passkey**", then enter "**1234**"(this is factory default passkey, if you want to change it, you have to inform us to set the new passkey for you in our factory before shipping),then click "**Next**".
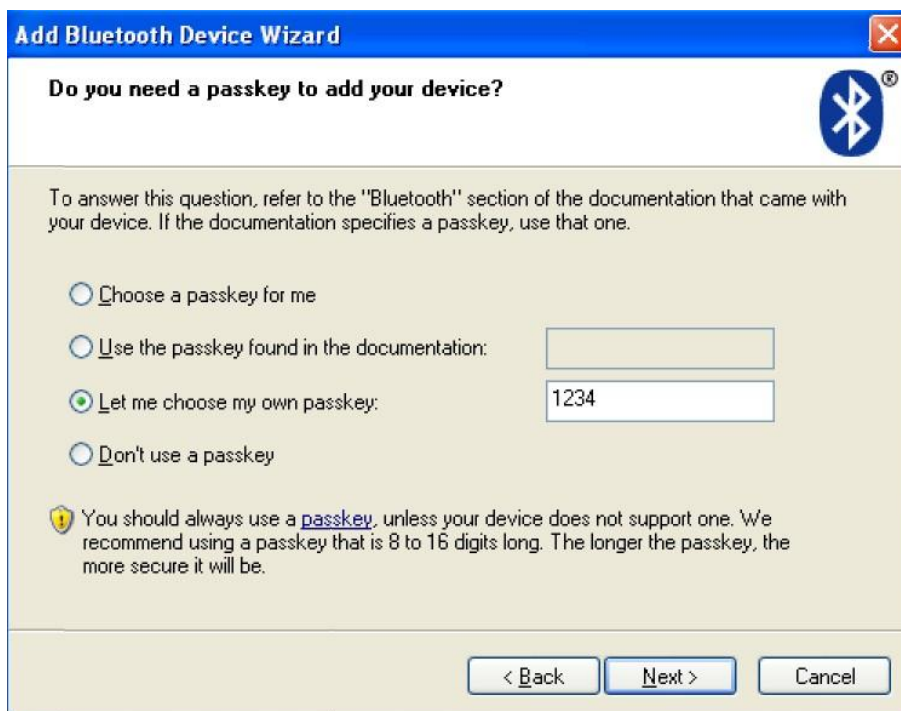
*Step7:*if you can see the screen as below, that means the Bluetooth printer is already connected. Please notice the assigned COM ports ,then Click"**Finish**".

Step8: Now if you want to test if the printer is OK to print, you could use a com tool , and send printed data to **Outgoing COM port**(here, it is **COM5**).

(Com tool setting is 9600,N,8,1.)

To modify Bluetooth name or modify the pairing password, please open the attachment CD to find the folder : Tools - Bluetooth settings tool (see Bluetooth Settings tool operating instructions).

7.Operating Manual for Android OS

This manual applies to all of our android OS compatible printers (both 58mm & 80mm width printer)

Currently, the common communication ports we used for android OS are (USB、Ethernet、Bluetooth and WiFi)

If you want to use Android Device connected with our printer, first of all make sure that printers can be supported Android Operate System, proceed as follows (Bluetooth as example):

Step 1:

- Insert the CD driver disc into the CD-ROM, connect your cell phone with your computer;

Step 2:

- Find the File Named " SDK" from the CD driver, Then follow the path : " BLUETOOTHDEMO ----bin----PrintDemo.APK " , install it in your Android phone. *(Default pairing password for Bluetooth connection is " 1234")*

Step 3:

- Connect your cell phone with our printer once installation done .

Step 4:

- Find this icon and open it. (Ethernet interface need to enter the IP, you can get it from the self-test page, WIFI need to enter your IP of own setting), click on the "Connect Printer" after the connection successfully, click on the "Print Test Page", the printer will work.

If you use the "Ethernet interface", "USB", "WIFI" communication, set "BluetoothDEMO" from "Step 2" into the corresponding "NETDEMO", "USBDEMO" and "WIFIDEMO".

Customer can get all the original code from below path if you need to develop your own APK (Path is: src ▸ com ▸ zj ▸ printdemo)

8.How to use the ports of USB/Serial

8.1 USB port to be used (if you choose a USB print)

1. Open the Printer Properties screen, and then select the "Port" item, as shown below:
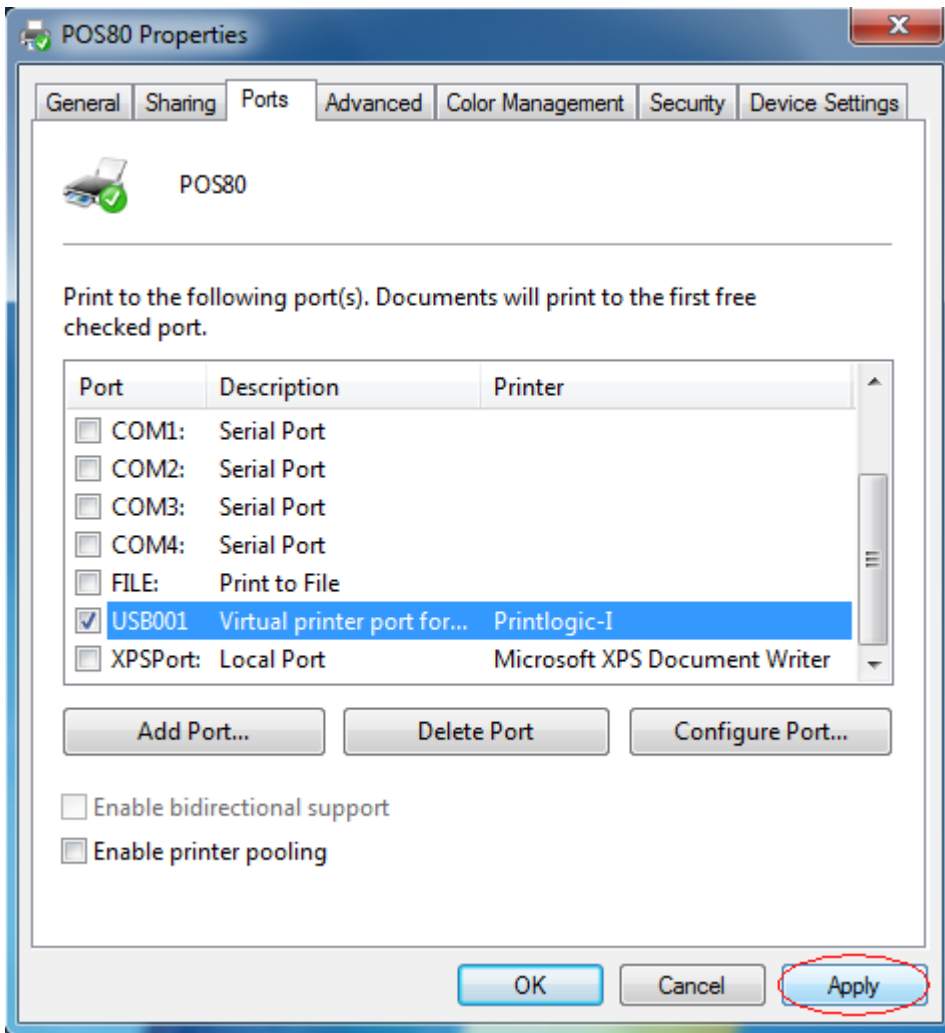
There you will see"USB001" option, if your computer has other USB printer to be used, preference is not occupied "USB00X" port, click Apply.

Note:

Ensure the printer is power on and USB cable connects to the computer for the 1st time used. Or we can not find " USB001" ; check if we can find " USB Print supporting "in below location :Path: My Computer - Properties - Management - Devices Manager - Universal Serial Bus Controller), if not , please recheck the cable and printer connecting way.

2. Return to the "General" tab, click "Print Test Page" as shown below:
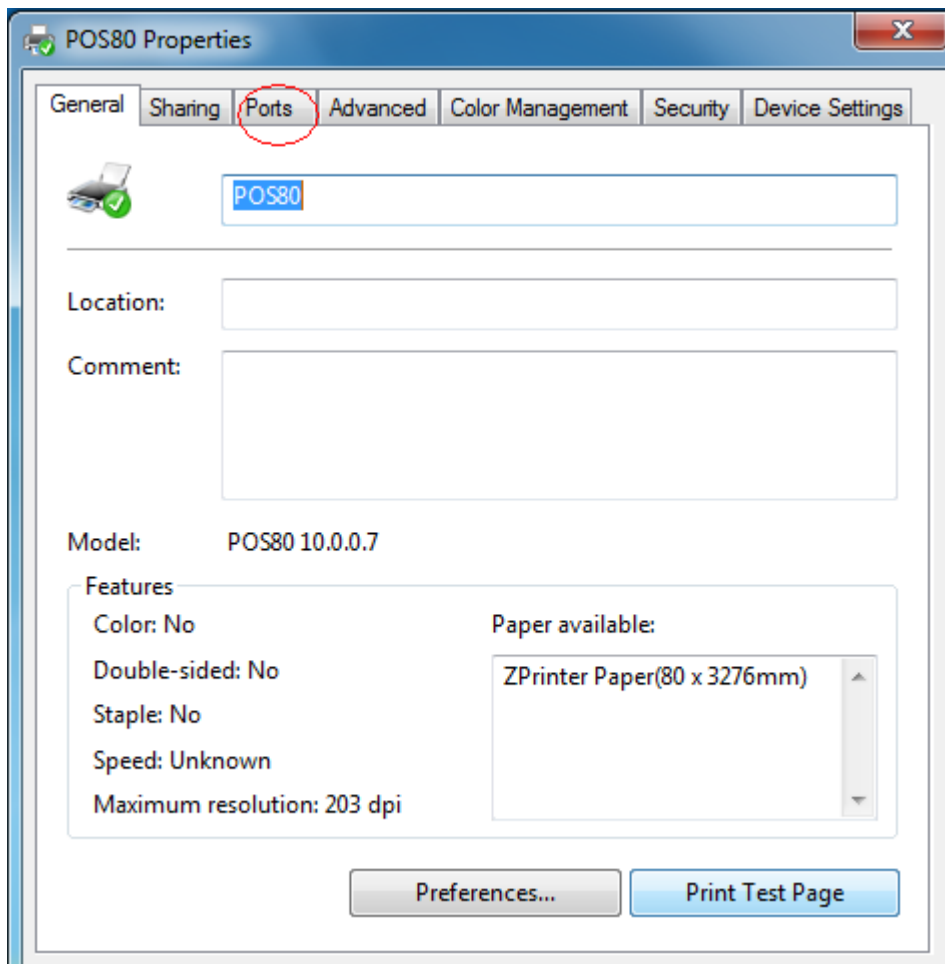
If the printer prints a normal page, then it shows that the work was successful.

Note: If the printer prompts "Print Error", please return to the "port" option from the "USB001" started trying to choose, until you can printer can print properly.

8.2 Serial port to be used (if you choose a serial print)

1. Open the Printer Properties screen, and then select the "Port" item, as shown below:
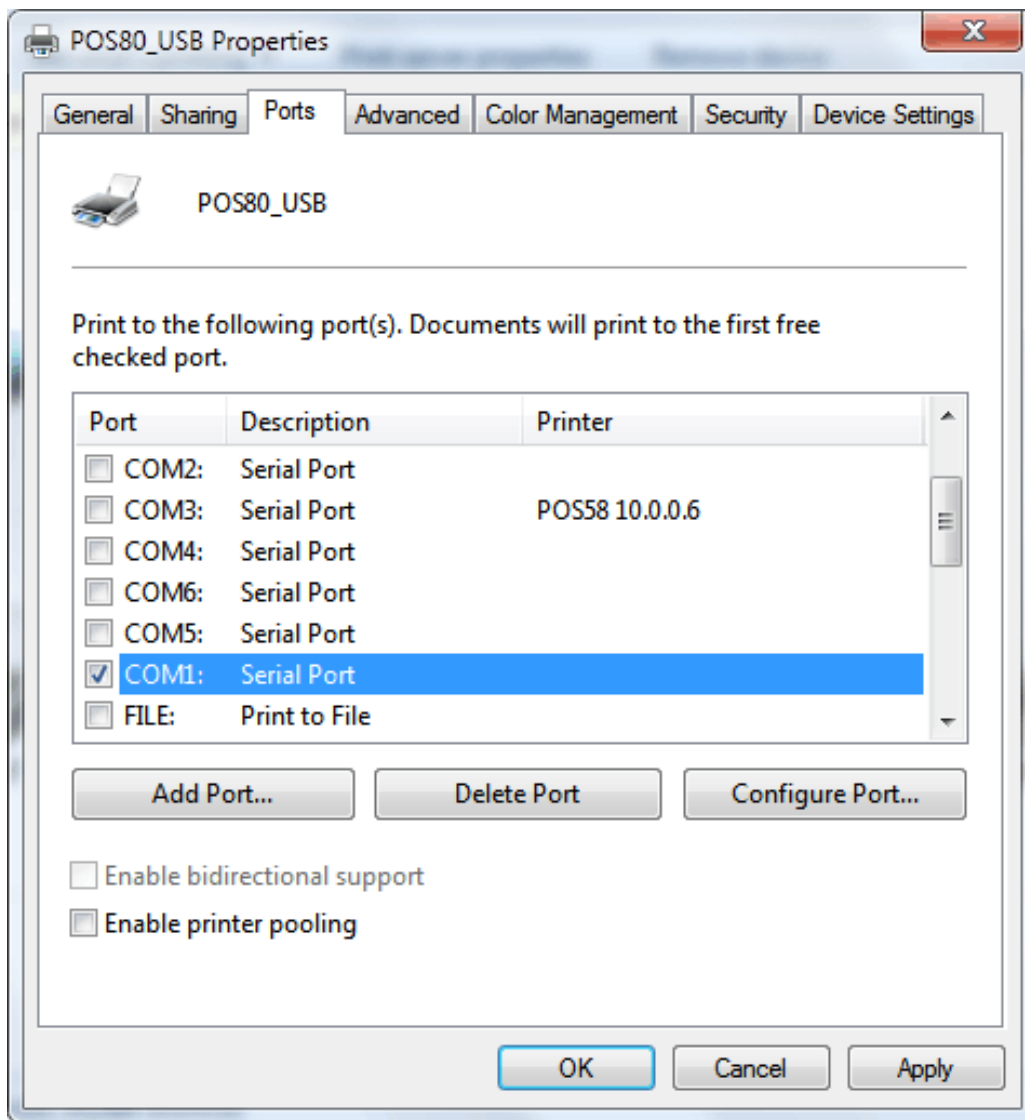
2. Select the list of ports "COM1" → "Configure Port", the printer factory default settings as shown below:
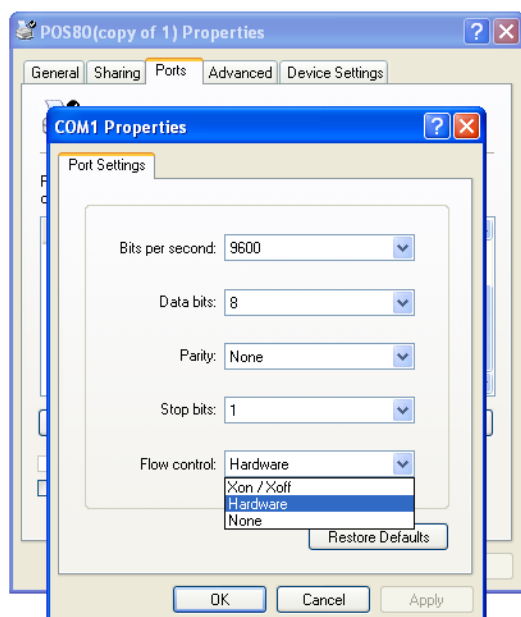
You can see the setting parameters of serial port from self-test page, Click "Apply", then click "OK" (Note: This setting must consistent with the setting parameters of serial port from the printer self-test page, otherwise it will be garbled case) appears as shown below:
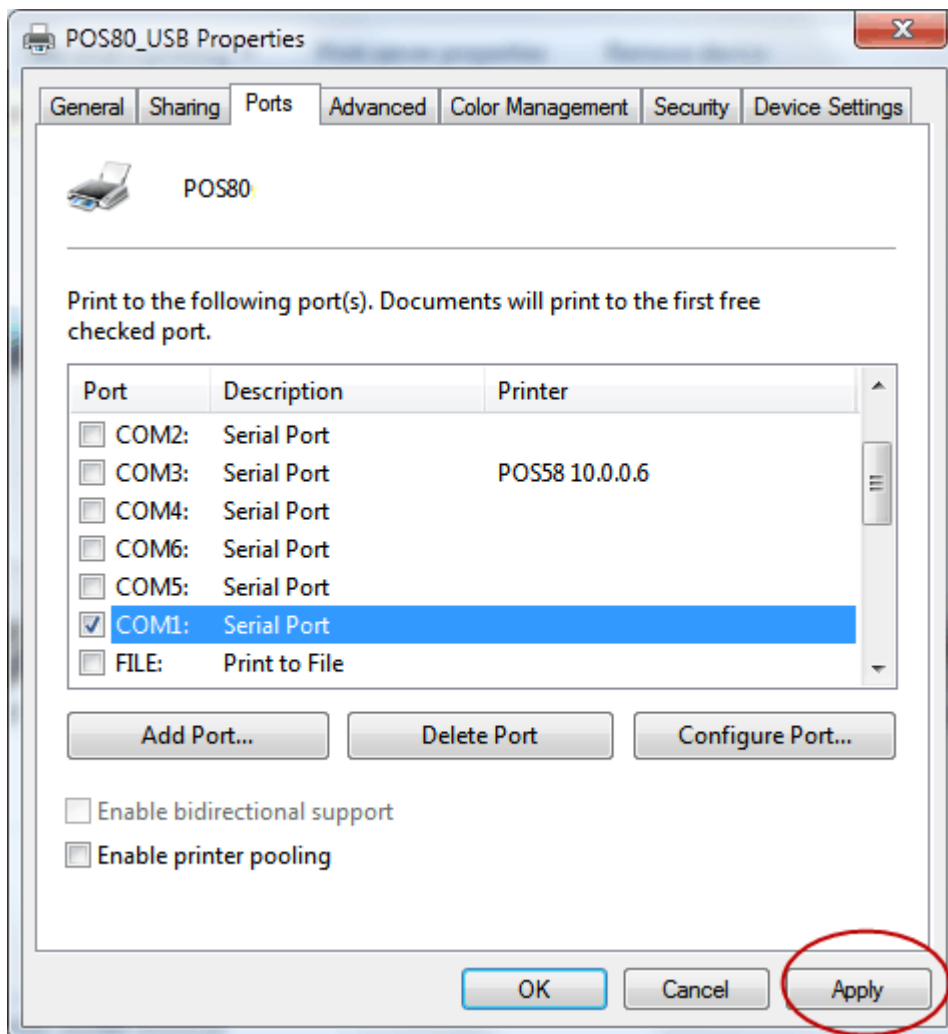
Click "Apply" again.

3. Return to the "General" tab, click "Print Test Page" as shown below:
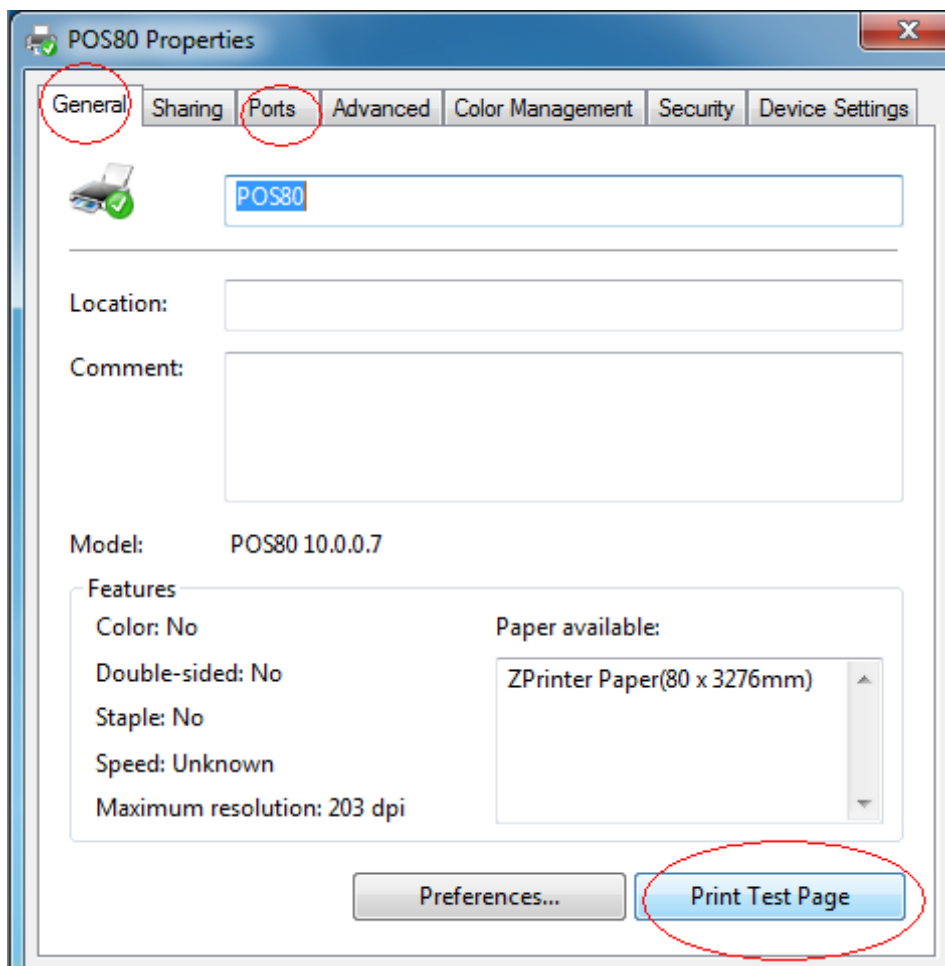
If the printer prints a normal page, then it shows that the work was successful.

If you feel the print speed is slow, please click on the "Device Settings" →

"Print Mode" → Choose "soft font" button as shown below:
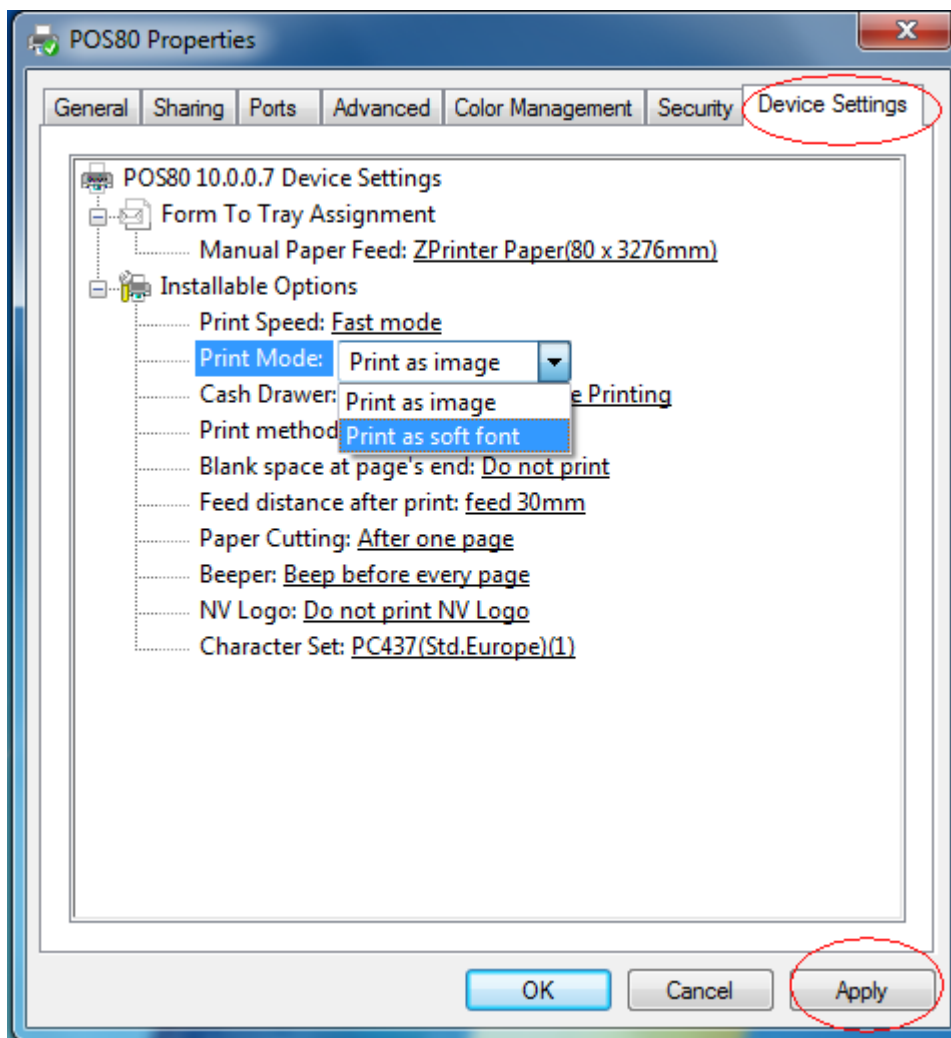
9.The WIFI configuration

80mm MINI Portable Bluetooth Printer WIFI parameters configured through a Browser, the steps are as follows:

1. Plug and switch on the printer;

2. Find the wireless network and link it. Then find the file named " HF-A11" and link it – Next ;

3. Put the IP address (10.10.100.254) into the browser address bar, press enter we can see below window;
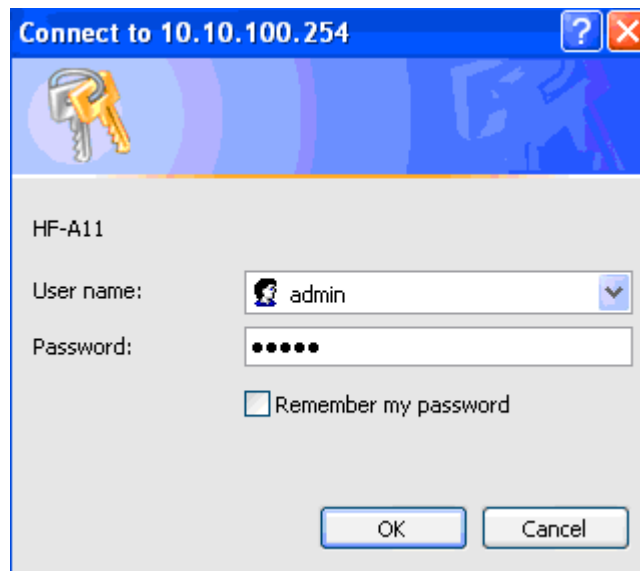
Choose admin for the user name and default password is also admin. Press ok and then Next.
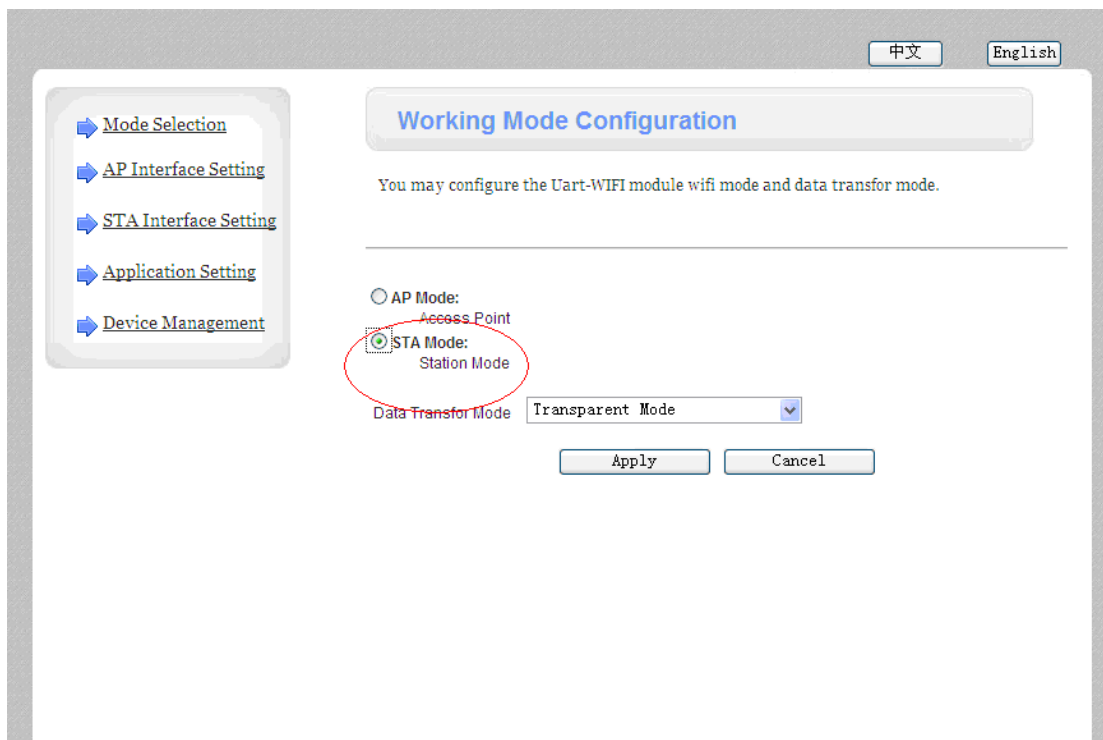
> Select " Station Mode ", Choose "Transparent mode". Refer to above jpg.
And click "Apply" .

Note: When the module is selected to STA mode (NIC), then re-start the module, you can not reuse the wireless configuration, SSID number can not be found.

4. Select " STA interface Setting " as below;
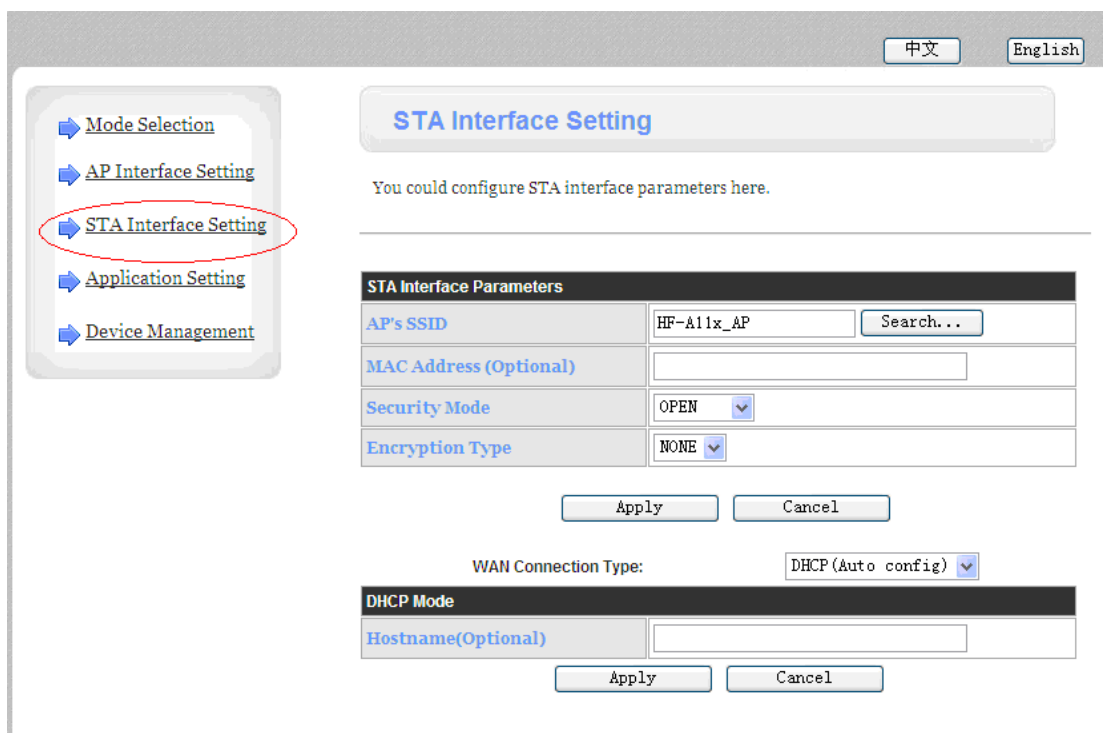
Then click " Search" and we can see and choose the wireless devices
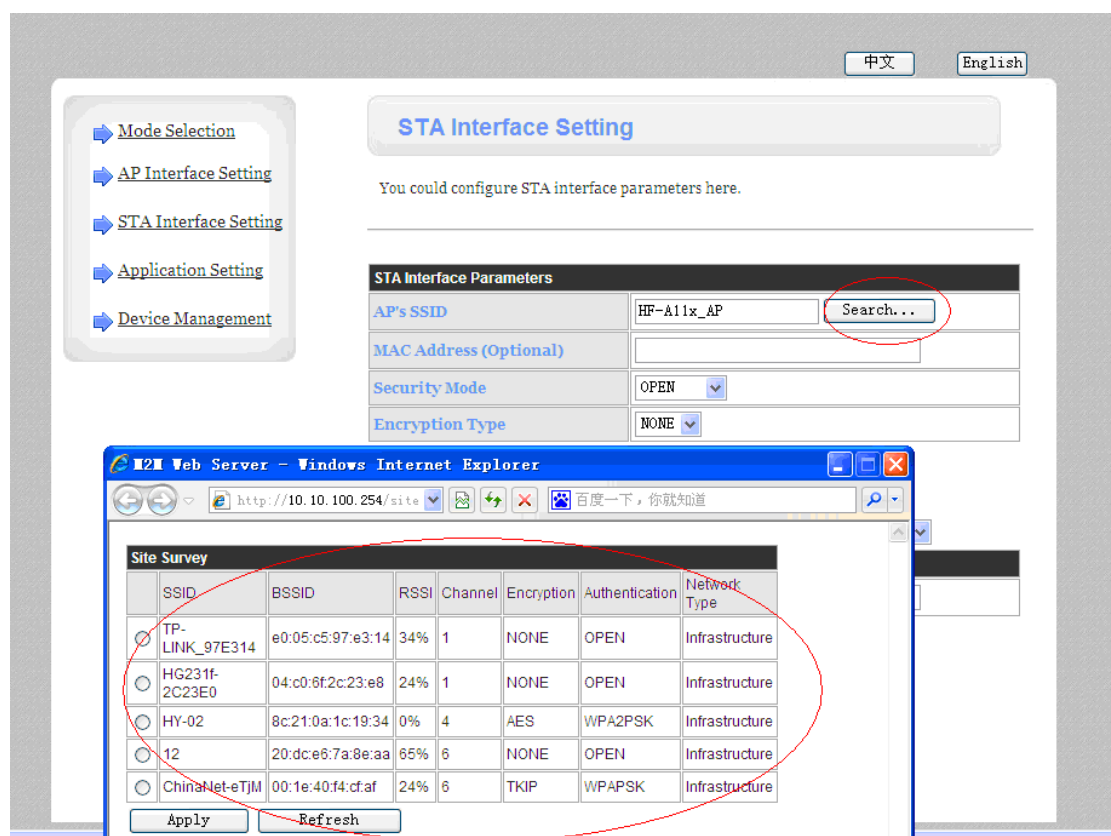
> Here is the wireless devices available for use.

5. Choose the desired device as below
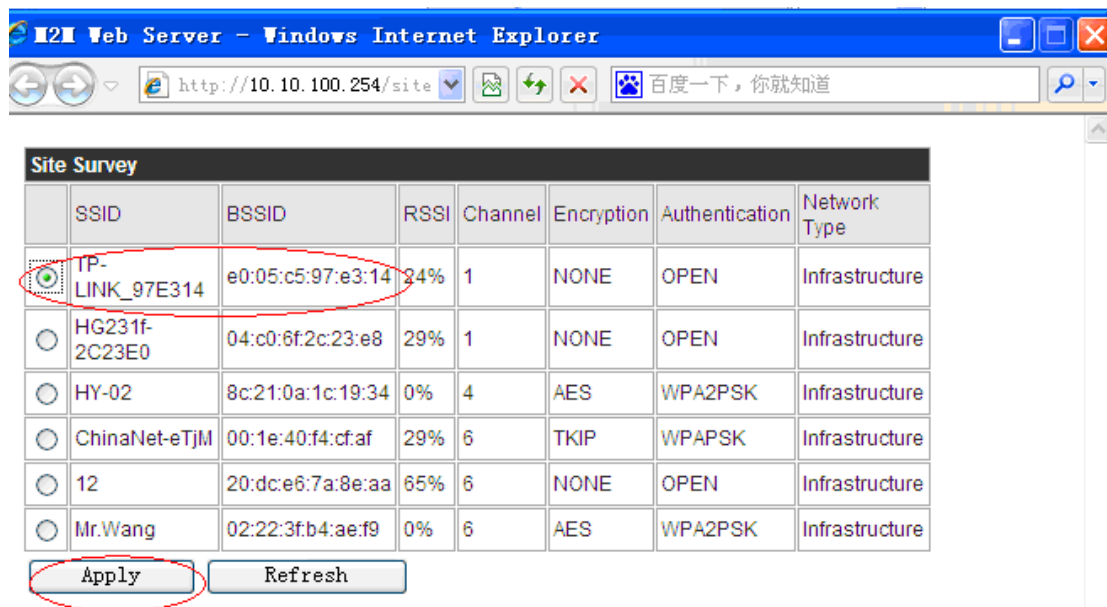
> Click " Apply"

6. Enter the correct configuration in the dialogue as below jpg shows.

> Click " Apply " after all these configuration steps ;

7.Select " Serial and other settings " as below;

> Click "Apply" after all setting done.

8. Restart the module as below;

M2M Web Server

Rebooting...

> Module configuration done

9 . Computer "Start" ⟶ " Run" Input word "CMD"，we have below dialog：


```
C:\WINDOWS\system32\cmd.exe

Microsoft Windows XP [版本 5.1.2600]
<C> 版权所有 1985-2001 Microsoft Corp.

C:\Documents and Settings\Administrator>
```
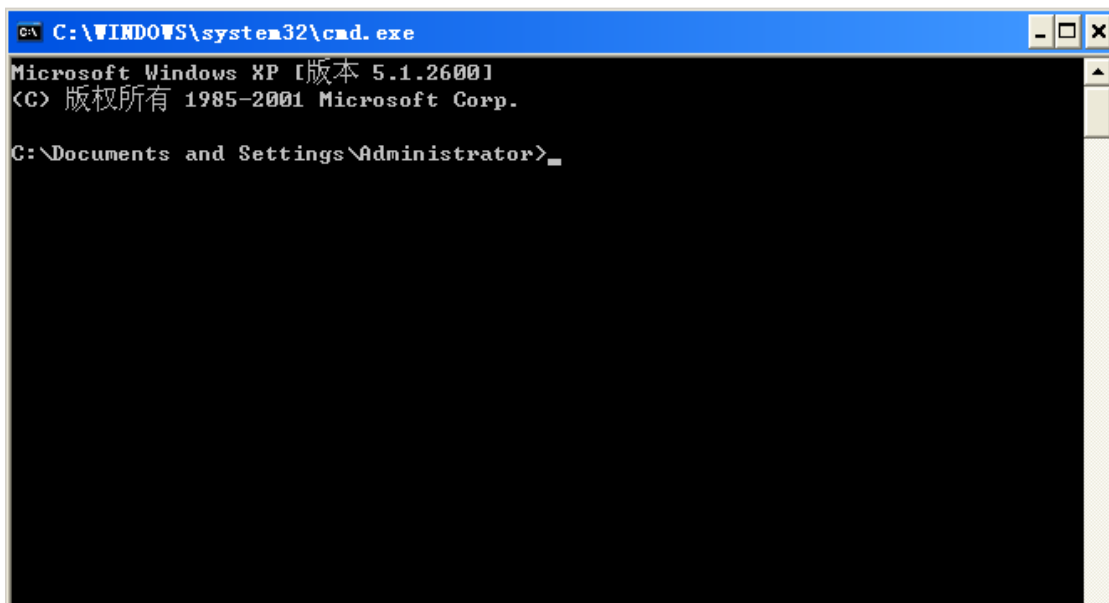
> Input "ping 192.168.1.105 -t" as below


```
C:\WINDOWS\system32\cmd.exe

Microsoft Windows XP [版本 5.1.2600]
<C> 版权所有 1985-2001 Microsoft Corp.

C:\Documents and Settings\Administrator>ping 192.168.1.105 -t
```
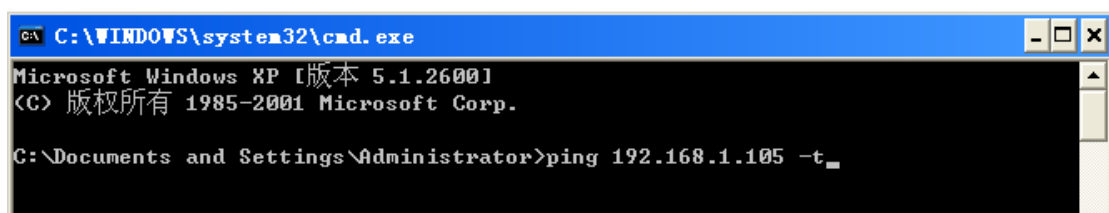
> Press "Enter"

If details shows as below , means connection is Ok ;

```
C:\WINDOWS\system32\cmd.exe - ping 192.168.1.105 -t

Microsoft Windows XP [版本 5.1.2600]
<C> 版权所有 1985-2001 Microsoft Corp.

C:\Documents and Settings\Administrator>ping 192.168.1.105 -t

Pinging 192.168.1.105 with 32 bytes of data:

Reply from 192.168.1.105: bytes=32 time=61ms TTL=255
Reply from 192.168.1.105: bytes=32 time=1ms TTL=255
Reply from 192.168.1.105: bytes=32 time=3ms TTL=255
Reply from 192.168.1.105: bytes=32 time=2ms TTL=255
Reply from 192.168.1.105: bytes=32 time=86ms TTL=255
Reply from 192.168.1.105: bytes=32 time=1ms TTL=255
Reply from 192.168.1.105: bytes=32 time=2ms TTL=255
Reply from 192.168.1.105: bytes=32 time=1ms TTL=255
```

Return to the Drive "Properties",
find the "Port" - "Add Port",
this IP address should be same
as the added network

10.Driver Install

The first thing is to connect the usb cable between the printer and the computer,and power on the printer.

The second thing is to find the printer driver named "setup.exe" included in the CD,and double-click on it. Then we are entering the installing screen. Follow the steps in order:
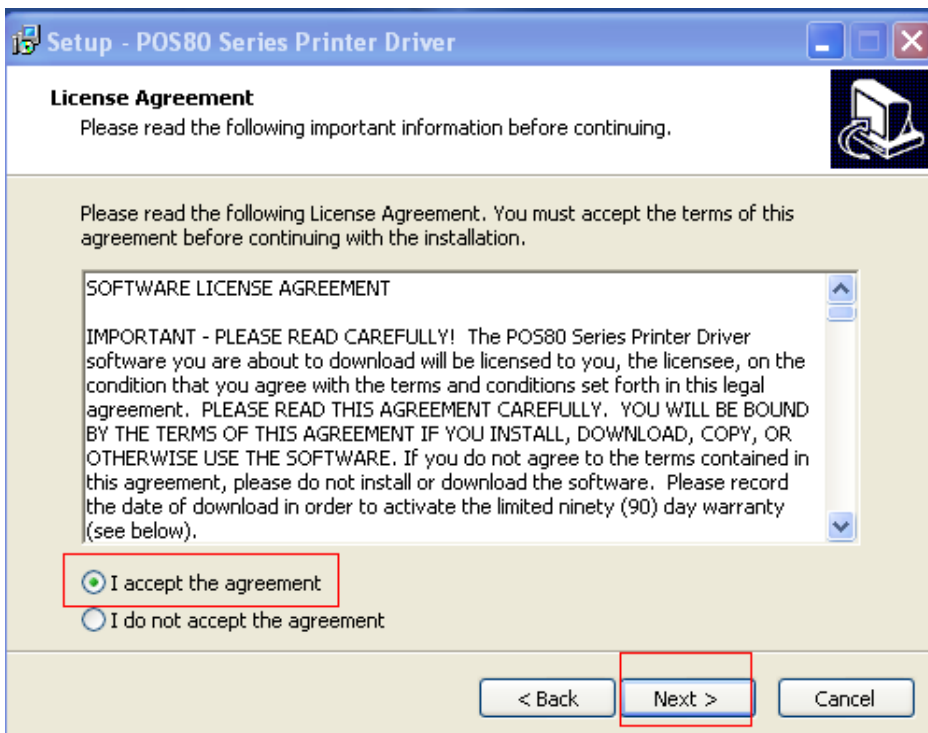
*Step1:*select the language you want. We recommend that choose "English" as the language. Then click on "OK" to continue.
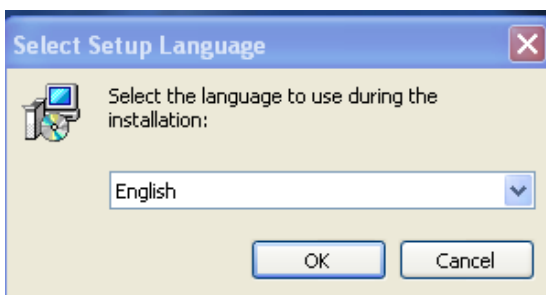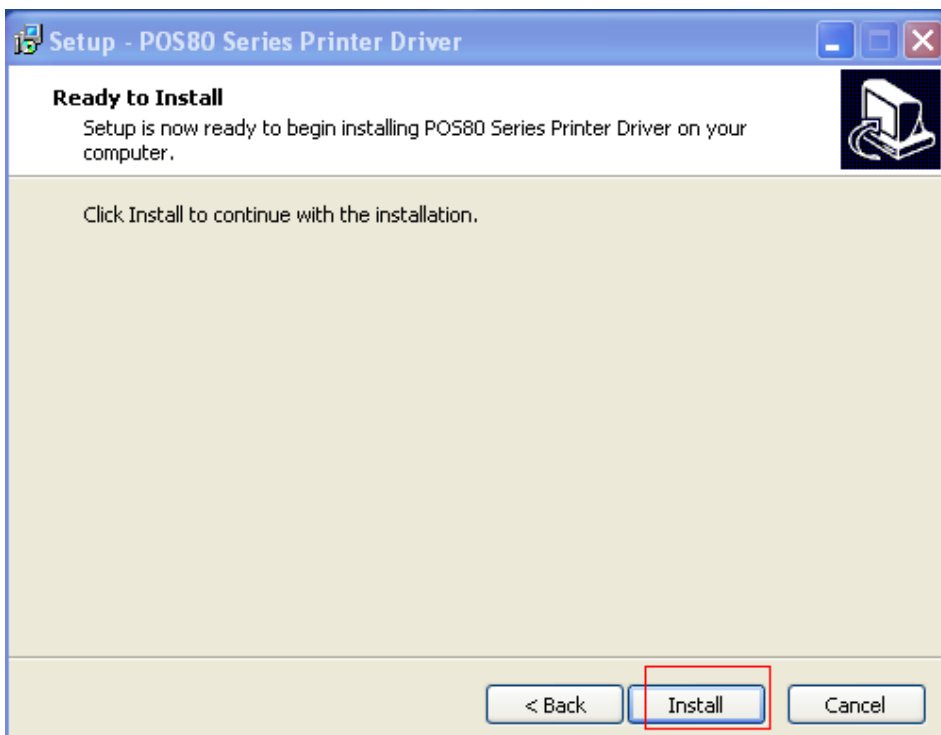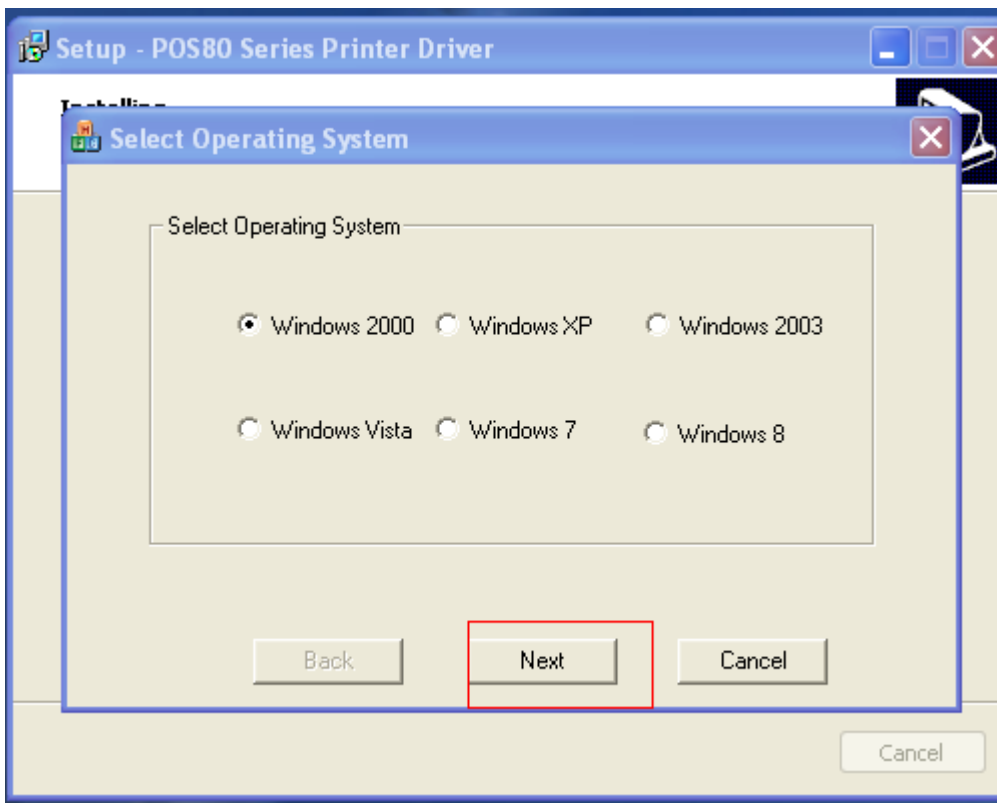

*Step2:*click on "Next" to continue.
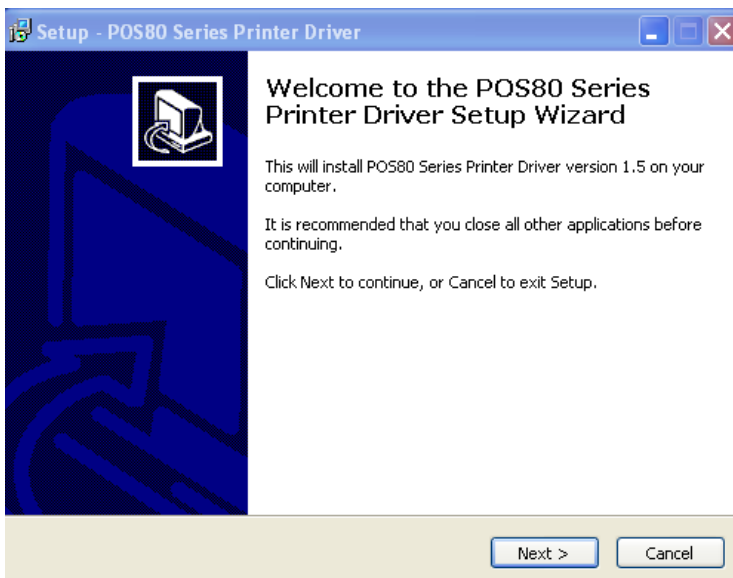
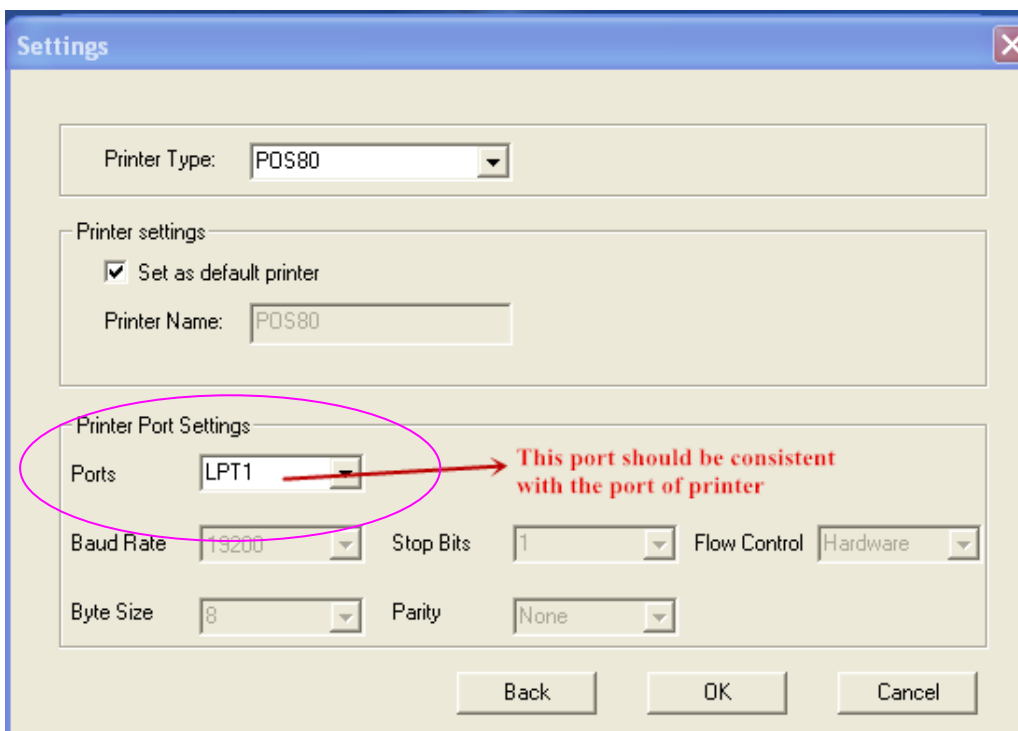*Step3:*Select the agreement option as below, and click on "Next" to continue.

Step4: Click on "install" to continue.

Step5: Select the Operating System you are using, then click on "Next" to continue.
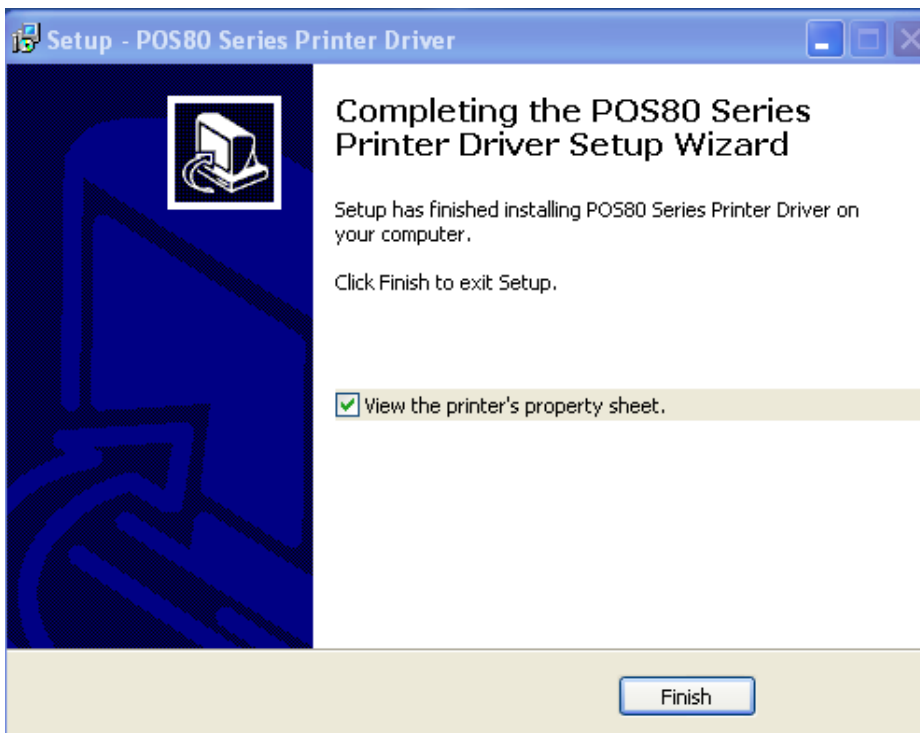
Step6: In this setting screen, you just have to set option "Printer Port Settings".
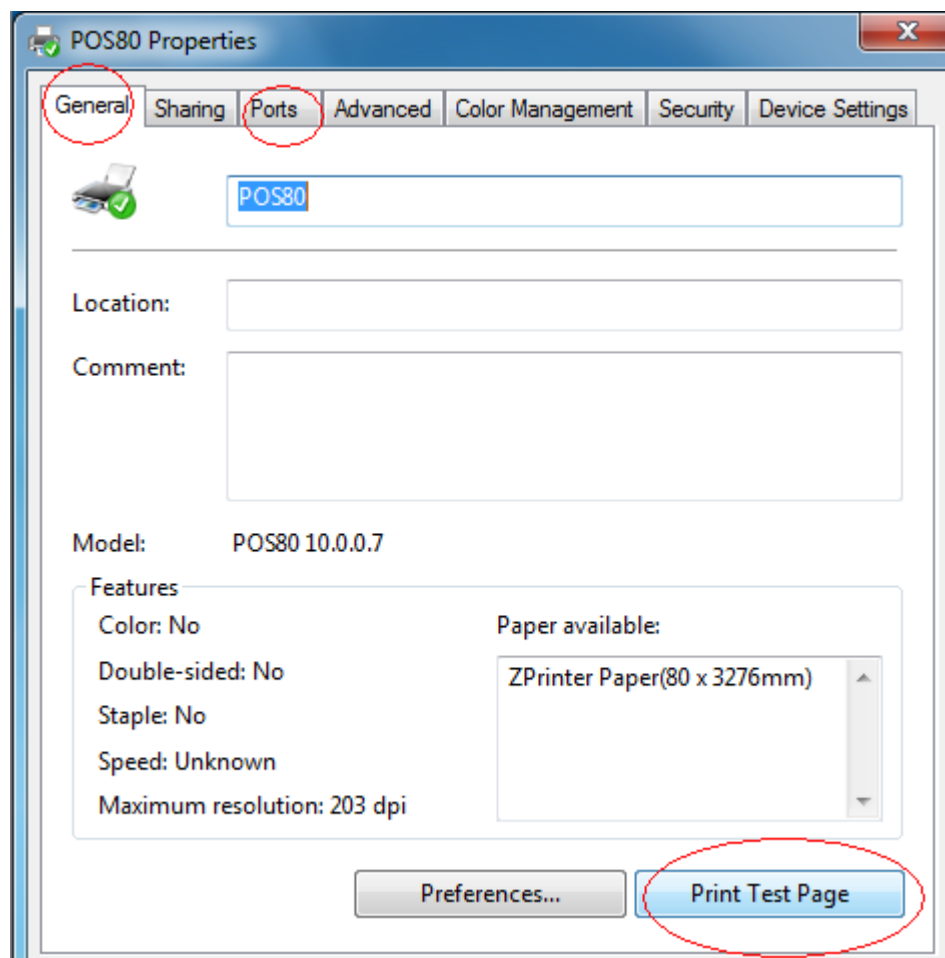

Ports: choose "USB001",and then click "OK" to continue

Step7: Just click on "Continue Anyway" to continue.

Step8: Go to the Device properties of printer, select the port as same as printer port in the "Ports" option, you can select the printer functions in the Device Settings. In the "General" Options - "Print Test Page" Verify OK or not.
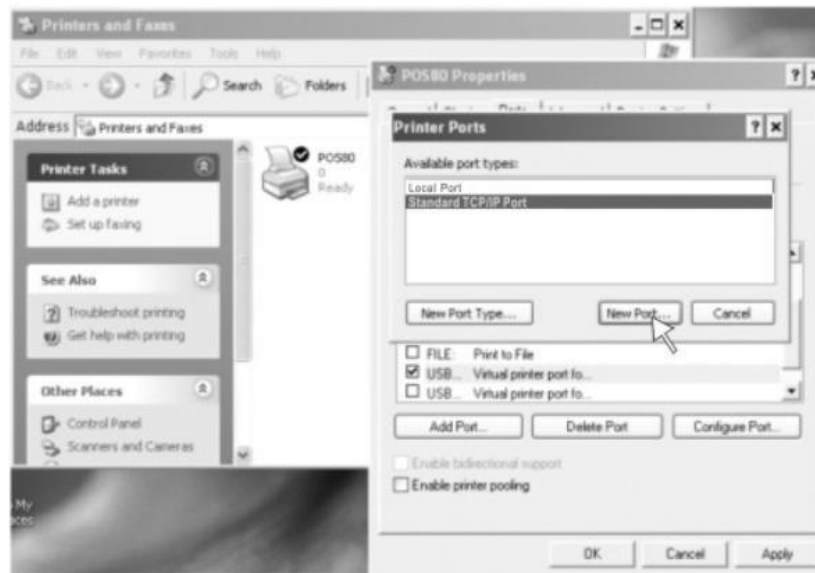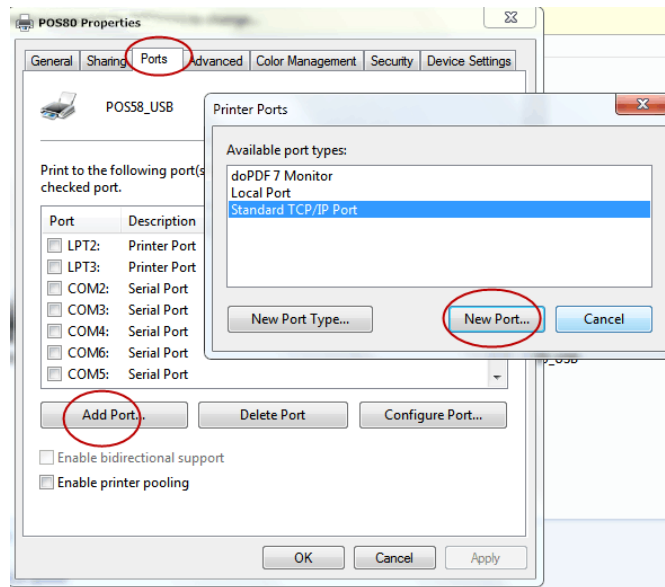
Bluetooth port choose :

Select COM port what automatically assigned by Bluetooth Device in the 'PORT", Bluetooth

serial port settings and corresponding baud (factory default Bluetooth baud rate: 9600, N,

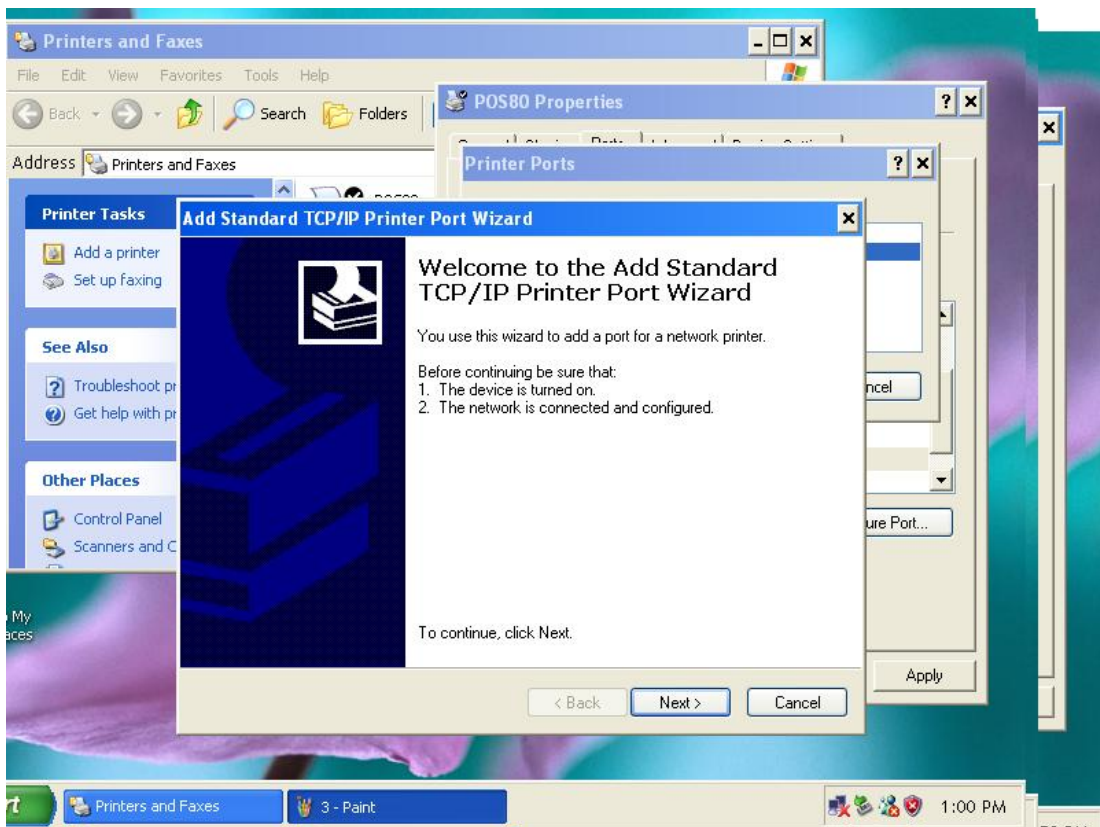8,1,), in the "Device Settings"- "Print" is selected for "soft fonts".

WIFI port choose :

1,Open the Printer Properties screen, then select the "Port" item, as shown below:
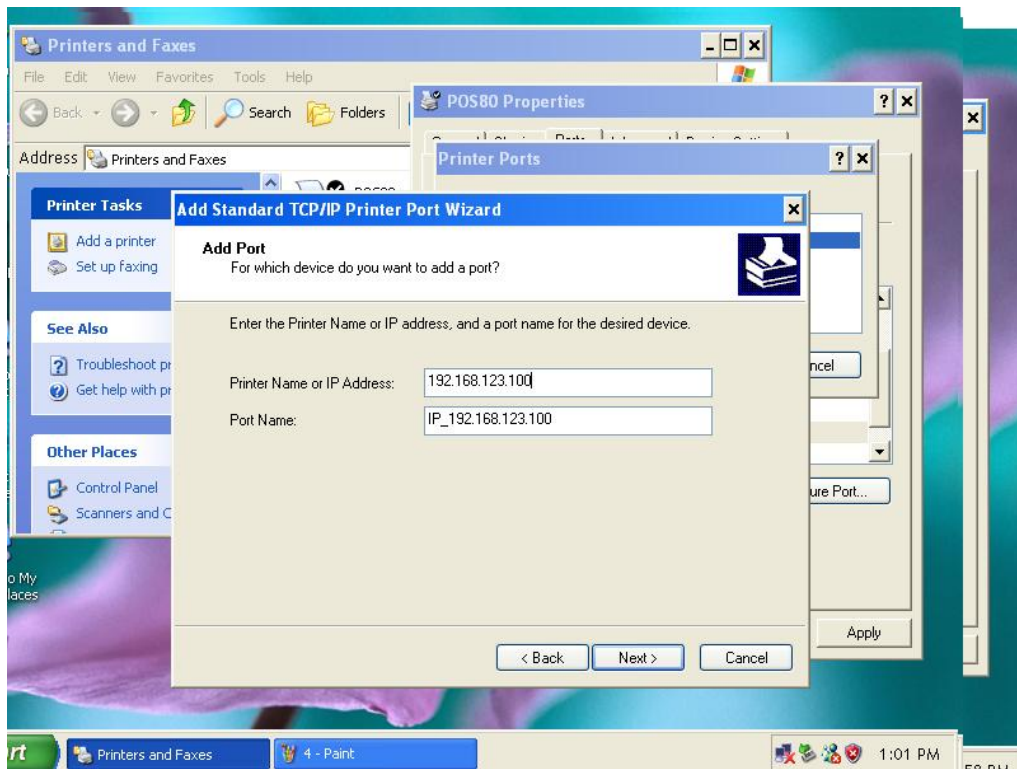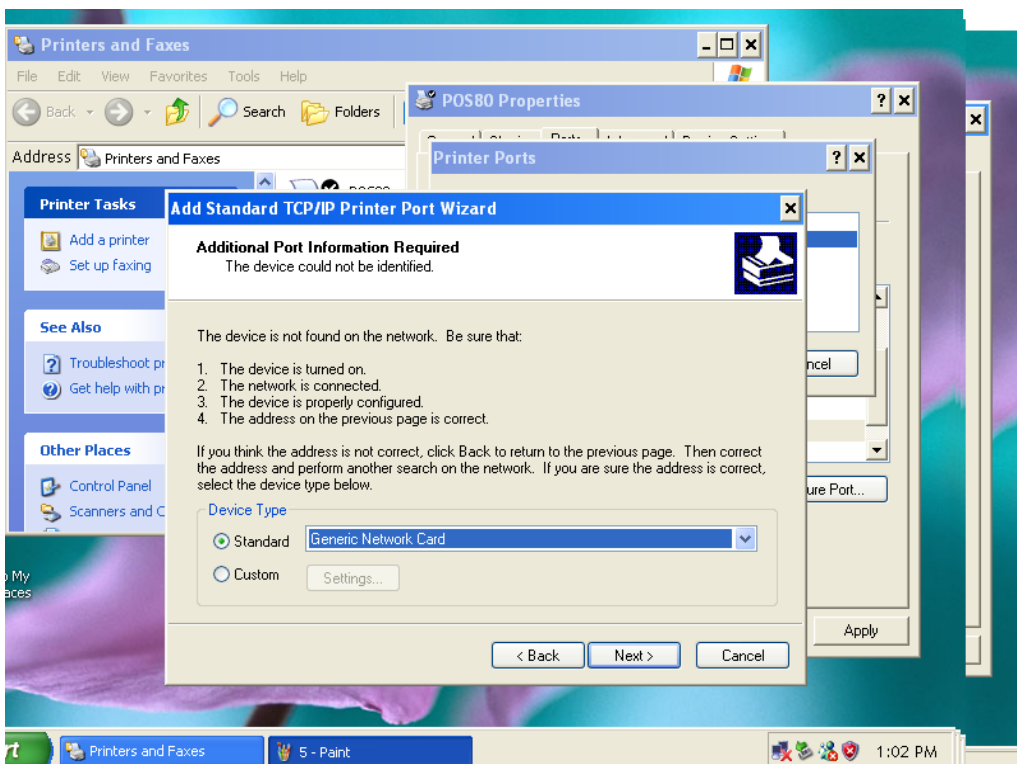
2,Click "Port" to Select "Add Standard TCP/IP Printer Port Wizard", click "Next" to continue the installation.

3,Enter the IP address into "Printer Name" dialog, and click "Next" to continue the installation.

4,Add the standard TCP / IP Printer Port Wizard, select the device type, and then click

"Next" to continue the installation, See the following image:
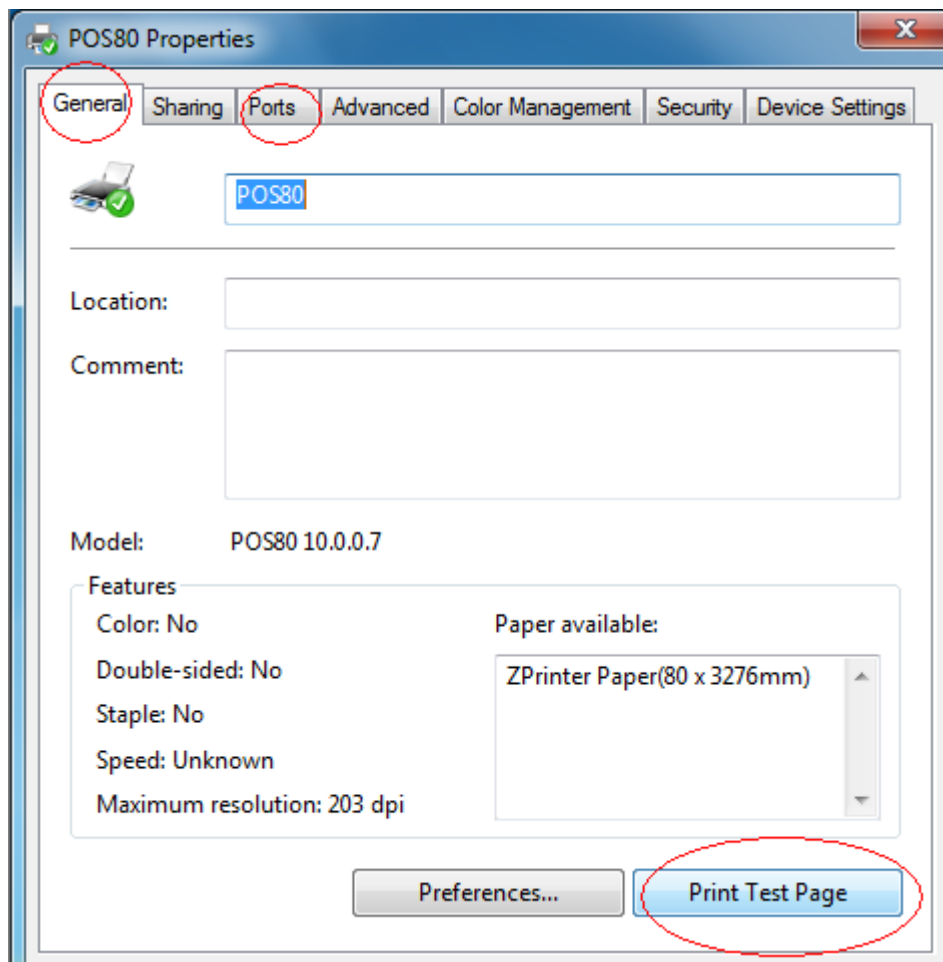

5,Click "Finish" to complete the installation, see the following image:
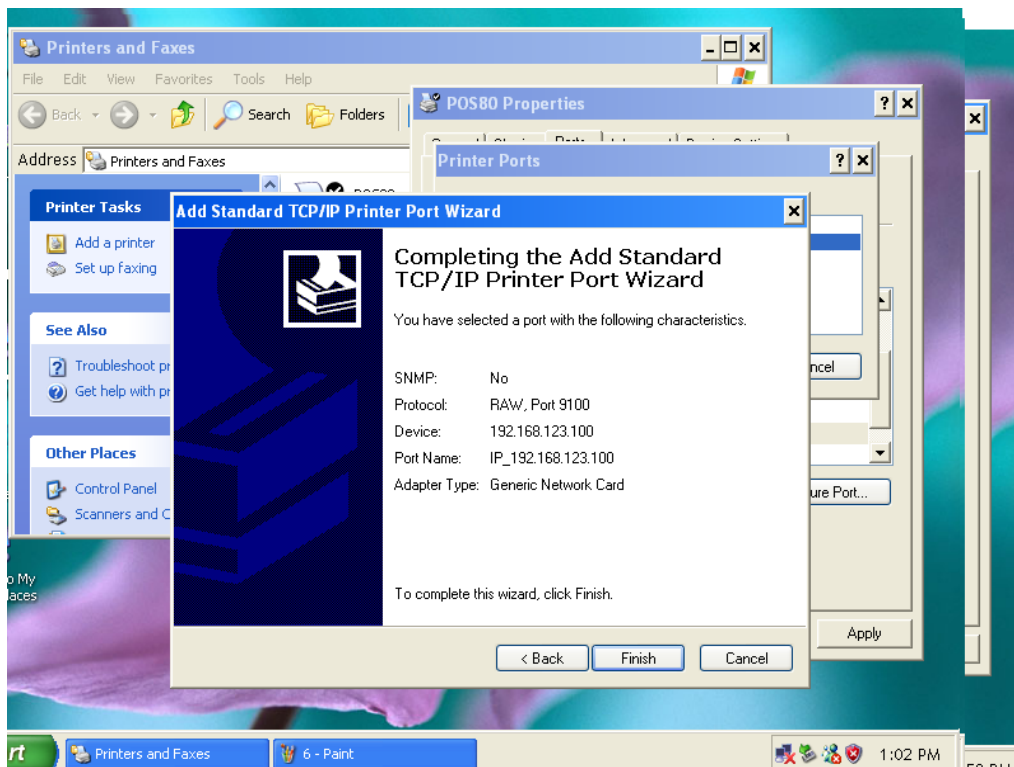
6,Installation will return to "Properties" interface, and then select the correct IP port, click

"Apply", you can now print a test page. See the following images:
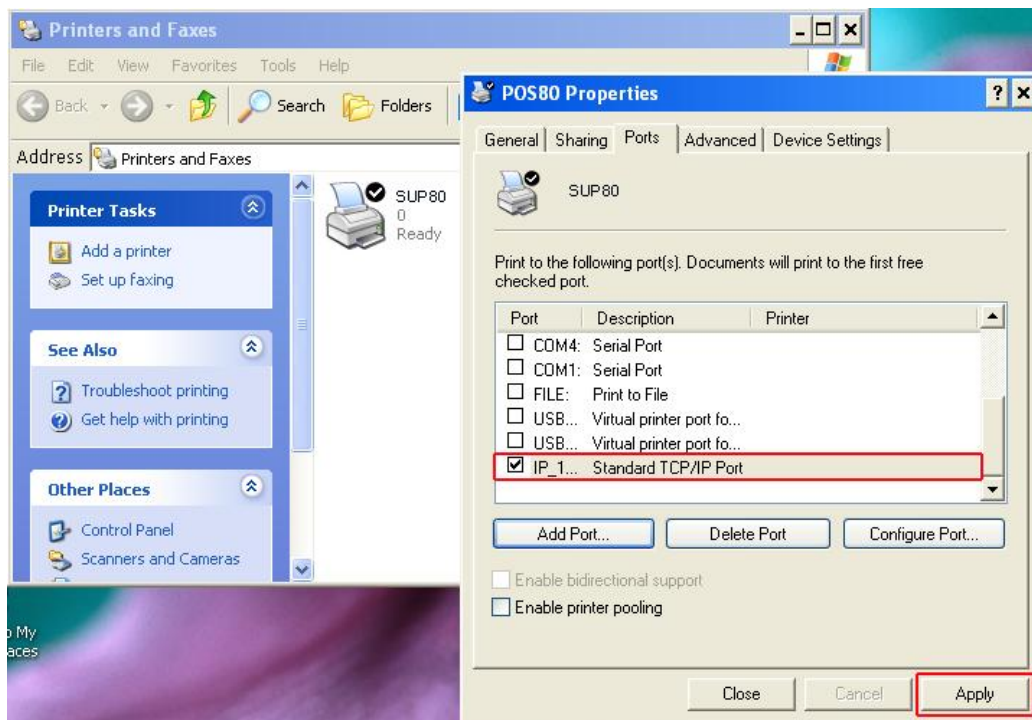
7, Return to " General " and click " Print Test Page " as below:

> Everything is ok if the test page print out in good condition.

11.Cleaning of printer head

Cleaning of printer

When the printer has the following conditions, you should clean the printer head:

① The printer does not print clearly and the thermal paper is Ok.

② The printer Print pages lengthways is not clear

③ It's getting too noisy while feeding paper or printing.

Printer head cleaning steps are as follows:

1. Power off the printer and open the paper room cover. Remove the thermal paper roll.

2. If the printer just finished printing , please wait for the print head to cool down.

3. With a soft cotton cloth dipped in ethanol (please make sure there is no dripping), wipe the thermal printer head gently and remove any dust or stains.

4. Wait for the complete evaporation of any ethanol, then place the thermal paper roll back in the printer and close the paper room cover, then print a test page.

Notes :

- When the printer maintenance must ensure that the power is shut down

- Hands or other metal tools away from the surface of the printer head,do not use tweezers to scratch the surface of the printer head and other sensitive parts.

- Do not use gasoline,acetone and other organic solvents for printer head cleaning.

12.General Troubleshooting

1: Why serial port printer printing messy code?

A: Ensure the baud rate setting in the PC is same as the printer baud rate. (we can see printer baud rate from self test page)

2: Self printing test is ok,but printer does not work after driver installation.

A: Recheck the installation according to above installation wizard and see if we selected the right port or ask service center for advice if needed.

3: Malfunction of paper feeding?

A: Use soft brush to clean the paper sensor and try again or send it to the service center for repair.

4 . Malfunction of the indicator light

A: Check the cable connecting way / adapter / power cord / switch on or off? Or contact the service center for repair.

5 . Messy code printing except Arabic numeral printing.

A: language switching incorrectly,please turn on the SW-4 switch on the DIP switches.

6 . Red indicator keep flashing during the printing.

A: Usually it is due to the high temperature of the print head. If printing stopped,please contact the service center for repair.

7. Printing speed is very slow for serial printer

A: follow this path and change the set accordingly : Driver -- Properties -- Device Settings -- Print Mode -- Print as soft font.

8. Water or other liquid spills into the printer

A: Cut off the power,we can dry the main board or printer head with a hair dryer, careful of the temperature (average 50 degree is ok)

9. The printer can't open

A : The battery maybe without electricity , please use power adapter to charge. Then you try to open the printer, if the printer has same problem, please send to service center for repair.

10. Do not search to Bluetooth

A : Please check the main equipment "Bluetooth" whether opened, the communication whether normal, then plug the printer "Bluetooth Module" again. the printer re-connect, if

there are problems, please send the specified location repair.