

# USER MANUAL

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## 80mm Thermal Receipt Printer



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To Make Your Business Easy

Please keep user manual for reference

## Attention

- Put printer on stable surface. Choose firm, level surface where avoid vibration.
- Don't use and store printer in high temperature, high humid and serious polluted place.
- Connect power adapter properly to grounded receptacle. Avoid using the same socket with large power consumption devices that can lead to power fluctuation.
- Avoid water or other objects go into printer. Once happened, turn off printer immediately.
- Print without paper roll will damage printing head seriously.
- Unplug printer from power receptacle if do not use it for a long time.
- Only use approved accessories, never try to disassemble, repair or remodel it.
- Use standard power adapter.
- Use high quality paper, this ensures the printing quality and life of printer.
- Please turn off power before plug/ unplug cable.
- Printer is used only under 5000 meters.

## Applications

- ★ POS system
- ★ EFT POS system
- ★ Gym, post, civil aviation system
- ★ Inquiry, service system
- ★ Instrument test
- ★ Tax, Tab

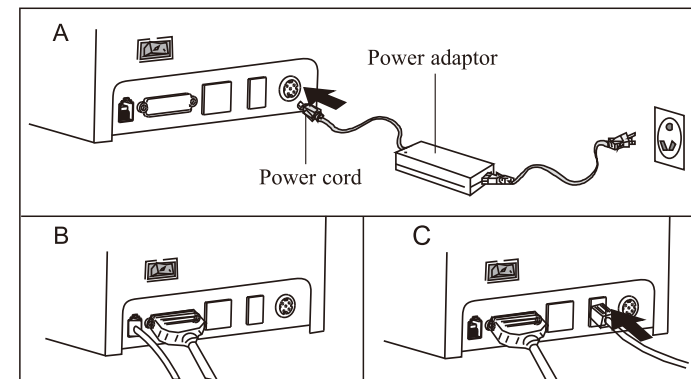
## Packing

### Printer & accessories

User manual	1PC
Printer	1PC
Serial/USB power cable	1PC
Power adapter(24V)	1SET
Paper roll	1ROLL
Driver	1PC

## Connection

- Connect AC power cord to power, DC power cord to printer.
- Connect printer and computer/ tablet.
- Connect cash drawer.

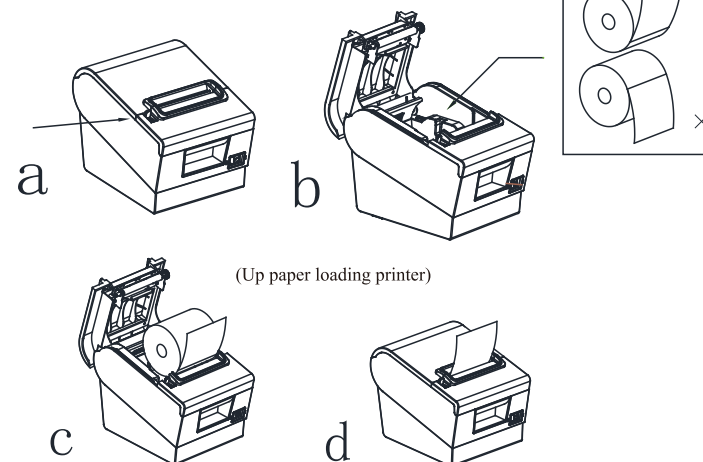


## Paper roll loading

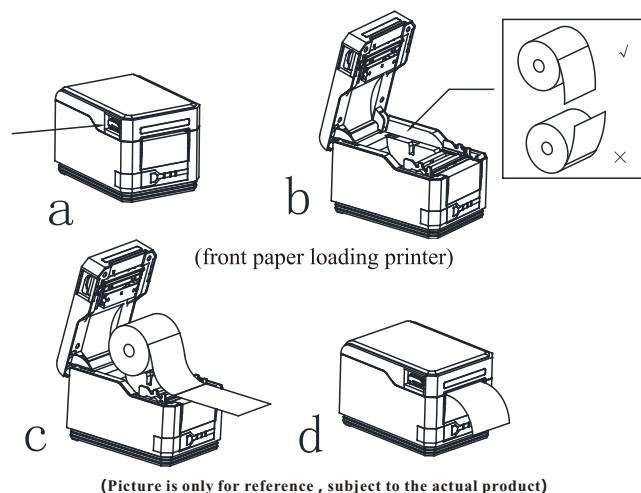
80mm thermal paper roll recommended to 80mm series printers.

The method of paper loading is as below:

- Open top cover
- Drop paper roll in the hole as below
- Pull the paper into the paper holder, then close top cover
- Print one self-test to make sure paper correctly installed.

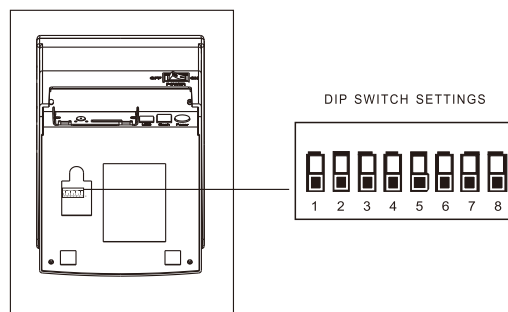


(Picture is only for reference , subject to the actual product)



## Setting printing Mode( DIP Switches)

DIP switches can be changed settings, such as: cutter, languages, beeper, print density baud rate etc.



## DIP Switch functions

DIP Function				
No.	Function	ON	OFF	
SW-1	Select cutter	NO	YES	
SW-2	Select beeper	YES	NO	
SW-3	Select print density	DARK	LIGHT	
SW-4	Two-byte character code	NO	YES	
SW-5	Character per line	42	48	
SW-6	Cutter with cash drawer	YES	NO	
SW-7	ON	OFF	ON	OFF
SW-8	ON	ON	OFF	OFF
Transmission speed (bps) - bit/s	38400	115200	9600	19200

## DIP Switch functions (several models only)

DIP Function				
No.	Function	ON	OFF	
SW-1	Select cutter	NO	YES	
SW-2	Select beeper	YES	NO	
SW-3	58mm	YES	NO	
SW-4	Two-byte character code	NO	YES	
SW-5	Character per line	42	48	
SW-6	Cutter with cash drawer	YES	NO	
SW-3	OFF	OFF	ON	ON
SW-5	OFF	ON	OFF	ON
Character per line	48/64CPL	42/56CPL	32/42CPL	32/42CPL
SW-7	ON	OFF	ON	OFF
SW-8	ON	ON	OFF	OFF
Transmission speed (bps) - bit/s	38400	115200	9600	19200

## Button name, indicator LED light and function

### (1) FEED button

Press to FEED paper manually.

### (2) Paper indicator(LED light)

Blue and red light are on means lack of paper, no alarm means all goes well.

### (3) Power indicator

Light is on means connected properly.

### (4) Error indicator

When out of paper, cutter error or printing head overheat occurred, the ALARM indicator twinkles.

## Self Test

Method: When printer is connected power, turn off , press “FEED” button and turn on at the same time, 2 seconds later release “FEED” button, a completed self test will be printed out to show printer settings.

## Method to enter hexadecimal mode

Method: When printer is connected power, press“FEED” button and turn on at the same time for about 10 seconds, release “FEED” button to enter data hex dump mode. it will print “Hexadecimal Dump”on the paper.

## Reset

Method: When printer is connected power, press“FEED” button and turn on at the same time for about 20 seconds, reset succeed if beeper peals.

## Driver installation

Two method: 1) Printing via port directly.

2) Install driver directly.

**Windows Driver Download link:** <http://bit.ly/PrinterDriver80mm>

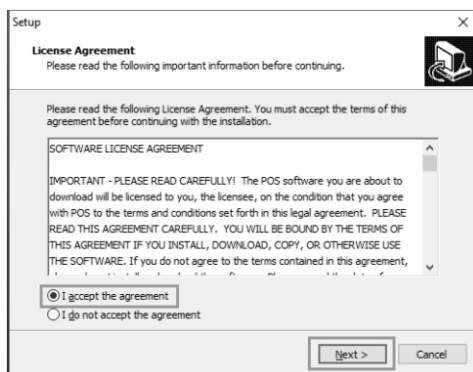
### 1) Printing via port directly

- No need to install printer driver. Directly choose a right port (i.e., USB, LAN, Serial, Parallel) in software.
- Printing via port needs commands to control printer, ESC/ POS commands are integrated directly itself.

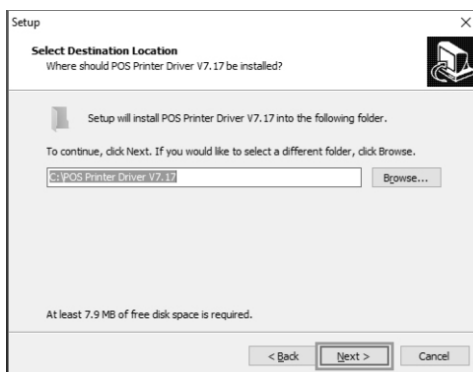
### 2) Install driver under WINDOWS OS (Steps as below):

1. Double click  driver.

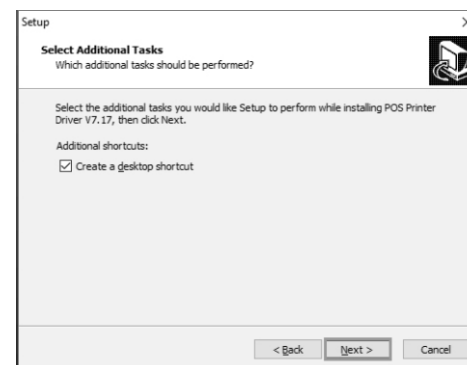
2. Select: I accept the agreement.



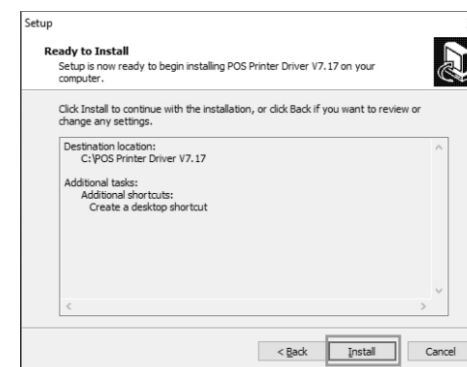
3. Default installation folder.



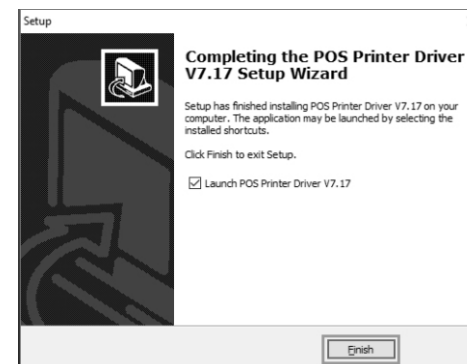
4. Create a shortcut on the desktop.



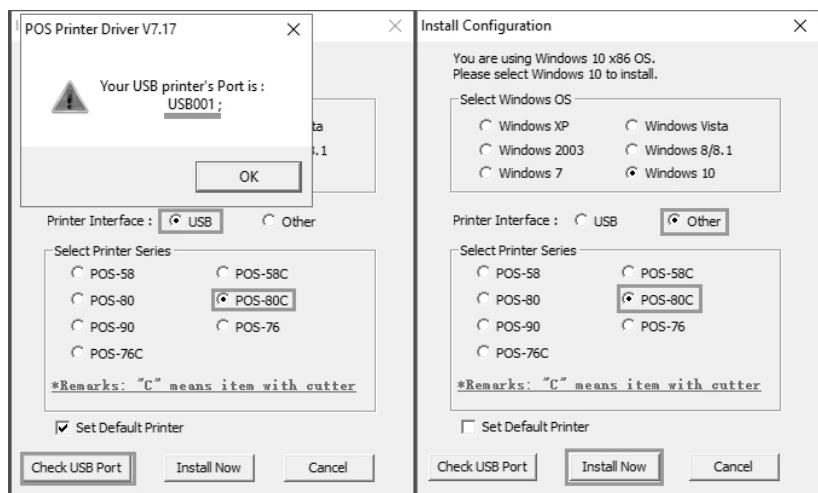
5. Install by below instruction:



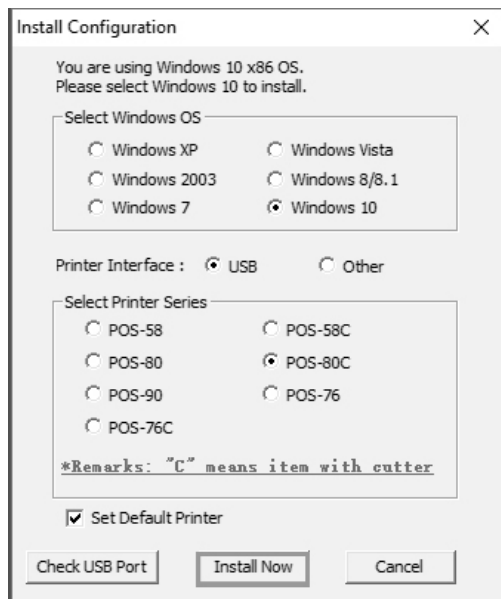
6. Finished.



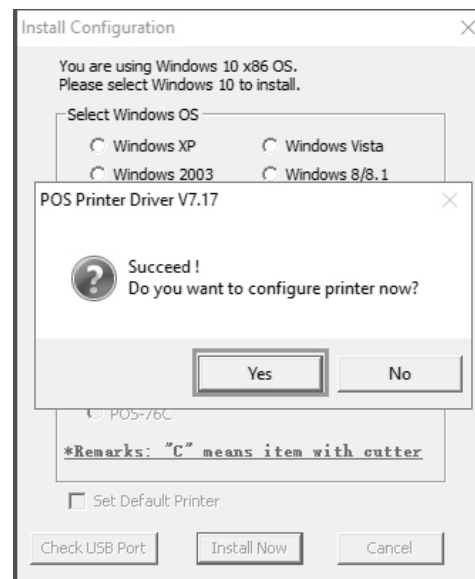
7. Choose the right port, shown as below:



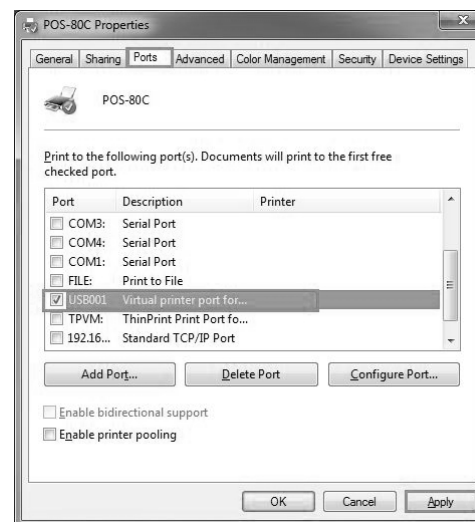
8. Choose the right series, shown as below:



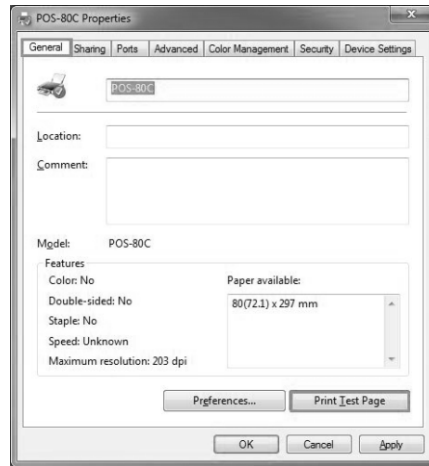
9. Click “OK” to configure the port.



10. Choose the detected USB001, click apply, shown as below :



## 11. Select general and print test page.



The drive has been installed successfully when test page is printed. Thanks for your support

## Installation Guide of MAC Driver

Driver in mac OS: pos, pos-80.ppd  
pos driver is for 80mm printer,

### Method of operation:

1.Copying the pos driver file to the specified directory.

### Method1:

(1)Open the terminal to enter commands(command+blank or Find spotlight in the upper right corner of the screen;

(2)Input “ter” and press “Enter” to open terminal. You may be asked to enter a password when executing terminal commands, enter the password directly and then click enter):

`sudo cp ./Desktop/mac/pos/usr/libexec/cups/filter/`

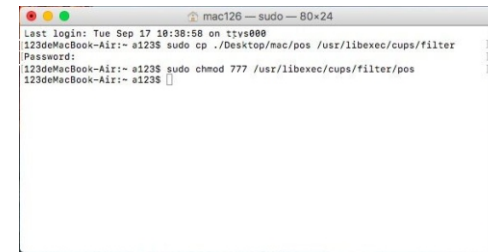
This command copies the driver to the corresponding folder of the MAC OS.

### If method 1 fails, use method 2 below.

Input command: `sudo chmod 777 /usr/libexec/cups/filter/pos`

This is to modify the permissions of the driver.(777 means readable,writable,and executable)

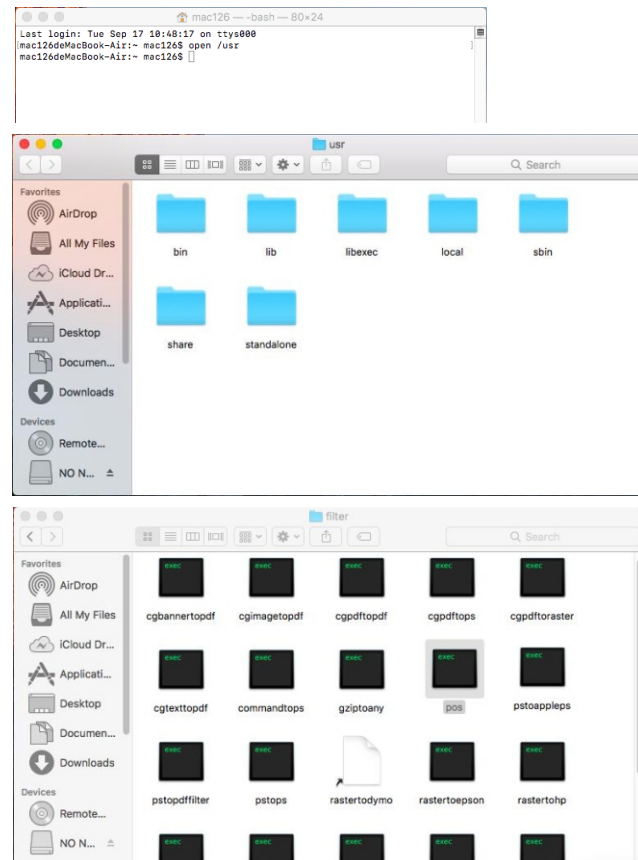
You can also find the corresponding file right-click display profile, copy the path to modify permissions.



### Method 2:

(1) First, Open the “Terminal” to enter commands(command+blank or Find spotlight in the upper right corner of the screen,input “ter” and press Enter to open terminal:

Input “open /usr” Then find the Filter according to /usr/libexec/cups/filter/ Copy pos driver into filter.



(2) Right-click the pos file and select show profile, Click on the lower right corner, Enter password, modify permissions to read and write.

Note: if the above two methods are successful, "2. Input command" will be carried out. If not, the terminal prompt message will be checked.

2. Select the corresponding PPD file, insert the printer into the MAC, select the corresponding PPD file for the corresponding model: if it is 80 model, usb will recognize it as 80 model, and then open system preferences > printer -> add printer -> select other > use the corresponding PPD file -> click repair -> to complete installation.

3. Select the document for printing test.

**Welcome to watch training video of Mac driver installment on YouTube:**

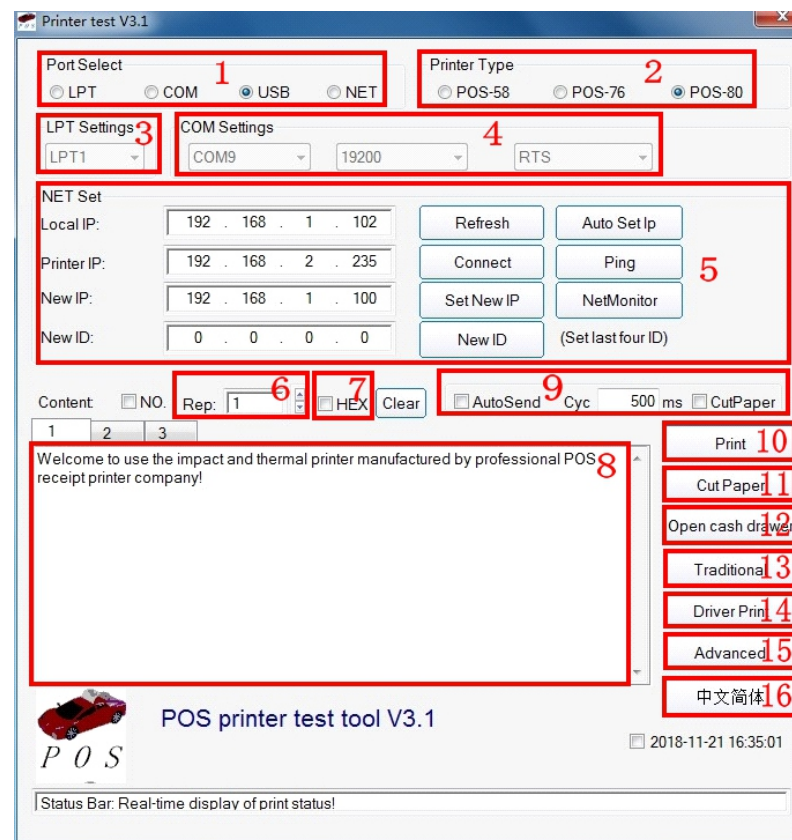
<https://youtu.be/I9cmEOTkH1o>

**Mac driver download link:**

<http://bit.ly/MacDriverDownload>

## Instructions on Printer TEST V3.1C Testing tools

### I. Introduction of Main Interface



1.Communication port selection:

Four options of printer communication interface: parallel port, serial port, USB port and Ethernet port.

2.Printer type selection:

Printer type: default to POS-80

3.Parallel port Settings (LPT Set):

Parallel port Settings ---be consistent with the computer communication parallel port number.

4.Serial port Settings (COM Set):

Serial port Settings --- set the serial port number, baud rate, flow control, etc.

5.Ethernet port Settings (NET Set):

Change the IP address of Ethernet port printer through Ethernet port Settings.



“Local IP”--- computer’s real IP address which can be added manually or by Clicking “refresh” button.

“Printer IP”---printer’s current IP address , its detailed information can be seen on self- test page, only suitable for Ethernet port printers.

“New IP address”--- the new IP address the printer’s IP address is to be changed to (printer’s IP address shall be in the same network segment as the connected computer’s to realize intercommunication).

“New ID address”--- the new ID address the printer’s ID address is to be changed to(Printer’s ID address must be an only address within a network).

Ethernet port settings are operated by means of HUB and SWITCH, in case that the settings can’t bechanged by ROUTER, other means can be used, please refer to the PDF in the folder "IP address changes. and other functional specification" on the CD.

“Auto Set IP”---Used to search printers in the same LAN

“Net Monitor”---Monitor printer status through network.(net port available)

6.Number of the copies:

It refers to the printing quantity of the repeat print of the test content.

7.HEX

Data can only be transmitted by inputting hexadecimal after having selected printing content. (It’s mainlyused to send instructions to the printer).

8.Printing content:

Edit the printing content here, and send data by clicking "Print" button.

9.Automatically sending, cycle, paper cutting:

“Automatically sending”--- Click the "Auto Send" button and the software will automatically send the data in the printing content column to the printer.

“Cycle”--- cycle time to send data automatically

“Paper cutting”--- Printer will automatically do paper cutting work according to the cycle time after the “Auto Send ” button and “cyc” botton have been set.

10.Print:

Print the information and data in the “content”edit box.

11.Paper cutting:

Test the function of paper cutting action.

12.Open cash drawer:

Test the cashbox function

13. Traditional font test:

Used for testing traditional fonts printing

14.Driver print:

Call the installed Windows driver to test print, printing out the information suggests successful installation

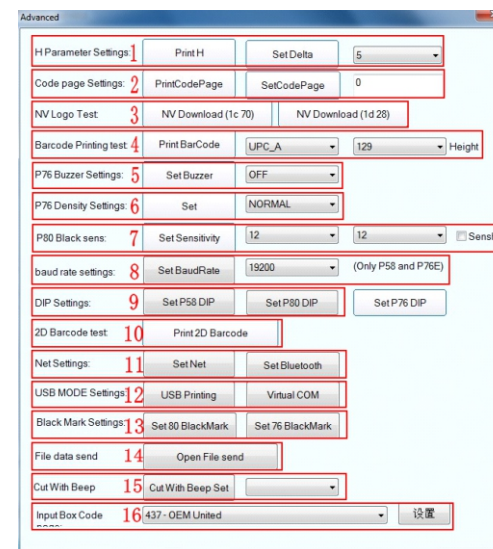
15.Advanced:

Click “advanced” button, and set up more features to have print test, below is the detailed introduction.

16.English:

It’s for switching software interfaces between English and Chinese.

## II.Setup instructions for “advanced” button



1.Set H parameter:

Its Main function is for definition adjusts of the 76 series needle printer. First click “Print H”, and the printer will print 16 groups of H letters from 0 to F, then set "Set delta" button by choosing the clearest Group.

2.Set Code page:

It’s for changing the default printer code page. Following is part of the code pages of the 80 series machine,

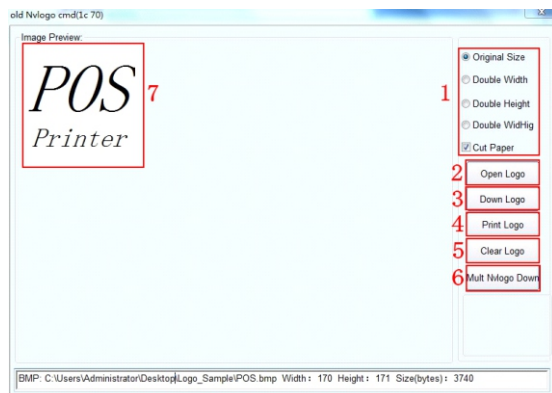
Code Page:		
0:PC437(Std.Europe)	1: Katakana	
2:PC850(Multilingual)	3:PC860(Portugal)	
4:PC863(Canadian)	5:PC865(Nordic)	
6:(West Europe)	7:(Greek)	
8:(Hebrew)	9: East Europe	
10:(Iran)	16 (WPC1252)	
17:PC866(Cyrillic#2)	18 PC852(Latin2)	
19:(PC858)	20 (IranII)	
21:(Latvian)	22 (Arabic)	
23:(PT1511251)	24 (PC747)	
25:(WPC1257)	27:(Vietnam)	
28:(PC864)	29 (PC1001)	
30:(Uigur)	31 (Hebrew)	
32:WPC1255(Israel)	255:(Thai)	

Input the desired parameter value in “Set code page”, and then complete the setting by clicking “set code page” button. Click "print code page" button to view the setup code.



## 3. NV logo demo:

Click the “NV download” button, the menu below will pop-up:



3.1 Size requirement and function selection of paper cutting of NV LOGO printing.

## 3.2 Open LOGO:

Click and select BMP format picture or the LOGO file that you want to print.

## 3.3 Download NV LOGO:

Click the download button after opening the BMP format file and the file will be downloaded to the printer. Print the file content by clicking “print LOGO” button.

## 3.4 Print LOGO:

Click this button to complete the LOGO image printing.

## 3.5 Clear LOGO:

Remove the downloaded NV LOGO.

## 3.6 Mult NV LOGO down.

## 3.7 Show current NV LOGO

## 4.Barcode printing test:

Choose a variety of barcode types and height to test the print with a total of nine kinds of one-dimensional code choice.

## 5.P76 Buzzer Settings:

It's a setting for turning on or off the beeper for part of the 76 series machines.

## 6.P76 Printing density Settings:

To adjust the printing effect of 76 series machine, there are modes: LIGHT、NORMAL、DARK.

## 7.P80 Black mark sensitivity Settings:

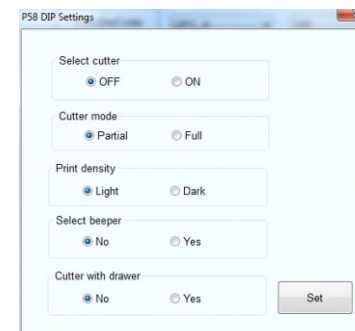
The adjustment of black mark sensitivity Settings for 80 series machines according to different black mark paper. Valid only when black mark function set is on.

## 8.Serial port baud rate Settings: (only for 58 series and P76E machines)

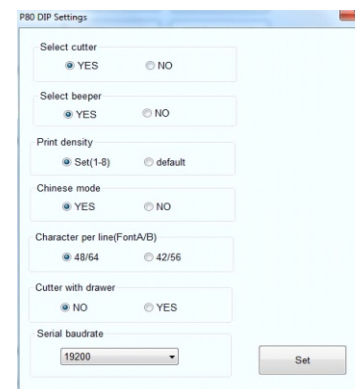
To set different baud rate (such as: 9600, 19200, 38400, etc.)

## 9.DIP switches Settings:

Threemodes:58series,80series(only for machines without dial switches)



(58series)



(80series)

## 10. 2D barcode testing:

Edit and print test of two-dimension codes



## 11. “Network Settings”

It includes “Network Settings” and “Bluetooth Settings”

(Network Settings)

- 11.1 Set up the Printer’s IP address.
- 11.2 Set up the Subnet Mask.
- 11.3 Set up the Gateway.
- 11.4 WIFI SSID address settings. Note: the SSID address is the name of your Wireless Router’s name. For example, if the address of the current Router (SSID) is: Pinter001, then this SSID address should be typed in the tab of “SSID”.
- 11.5 WIFI password settings. Note: the password of the Wireless Router For example, if the WIFI’s current password is: 123456789, then this password should be typed in the tab of “WIFI password”.
- 11.6 Encryption type of WIFI SSID settings. Note: the encryption type of the Wireless Router. For example, if the encryption type of the Router (SSID) is: WPA\_TKIP\_AES\_PSK, then this information should be selected in the tab of “SSID Encryption type”.
- 11.7 After filling the above information, click the “Setting All” option. The printer will “BEEP”. Next, restart the printer.

(Bluetooth Settings)

- 11.7.1 Set up the Port name of the Bluetooth Printer (the Factory Default BT NAME is “Printer001”)
- 11.7.2 Set up the Password of the Bluetooth Printer (the Factory Default BT PINKEY is “123456”)
- 11.7.3 After finishing the above settings, click “Setting”, and then finished the settings of Bluetooth printerParameters.

## 12.“USB Mode Setting”

Mode Setting of printer’s USB port includes Usb Printing and Virtual Com. USB mode switches according to customer demand. For specific operation, refer to file “instructions of switching between USB port and virtual Com” in the folder “IP address change and other functional specification”

## 13. “Black mark Settings”

To set special paper printing with black mark.

### 13.1 Offset in paper-feed direction, offset in paper unwinding direction

To set the direction of data calculation for paper cutting position, the default value is feed direction.

13.2 “Please enter the black mark spacing (mark length)” To calculate the center distance of two black marks.

### 13.3 “Set the black mark Maximum width”

It’s a value to calculate the actual height of a black mark.

### 13.4 “the offset of paper cutting position relative to the black mark position”

It’s to calculate the actual distance from the paper detector in the print head to the paper cutter.

### 13.5 “Distance between the print starting position and paper cutting position”

It’s to calculate the distance from the print starting position to paper cutting position.

### 13.6 “Print a ticket test”

Click this button and a note will be printed out. If it’s properly set, paper will automatically go a length of black mark and then be cut.

### 13.7 “feed to next print position”

Click this button and paper will go to the next print starting position for a black marker. Print out the information to test the right position.

### 13.8 “feed to the next cutting position”

Click this button and paper will go to the next paper cutting position and paper will be cut to test the accuracy of paper cutting position.

### 13.9 Turn on the black mark, turn off the black mark

Black mark function is off by default. Turn on black mark function to make related Settings. In case black mark position is detected incorrect, please reset referring to 7 “P80 black mark sensitivity” of “advanced”.

## 14.“Send file data”

Click button, choose and open TXT format file in the pop-up dialog box, and then the printer will print the contents of the file.

## 15. “Cut With Beep”

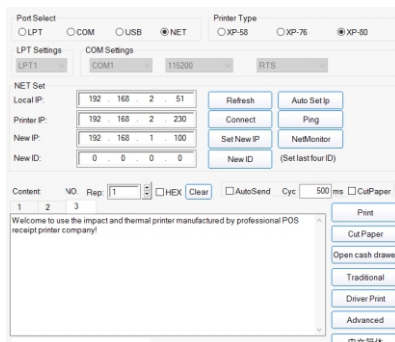
The alarm function can be set to turn on or off after cutting paper with cutter.

## 16. “Input BOX Code Page”

Words responsible for decoding text boxes.

## Instruction input introduction:

S1: OPEN the V3.1C tool as shown below:



S2: When sending data in hexadecimal format, please display it as shown below:

☒ HEX

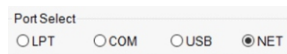
S3: Enter the print data in hexadecimal format and press the “Print” button to complete the data entry and transmission.

Take the sound and light alarm function switch operation instructions as an example:

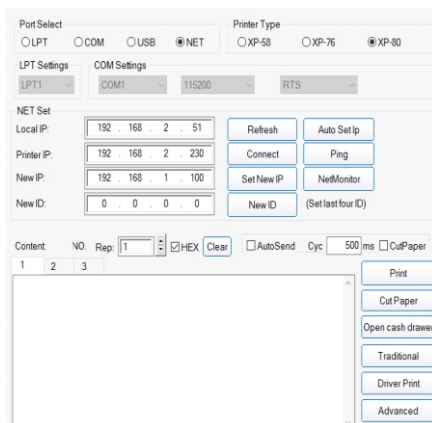
① Cutter with alarm on/off: 1F 1B 1F E0 13 14 m 04 02 03

S1: OPEN the V3.1C tool as shown below

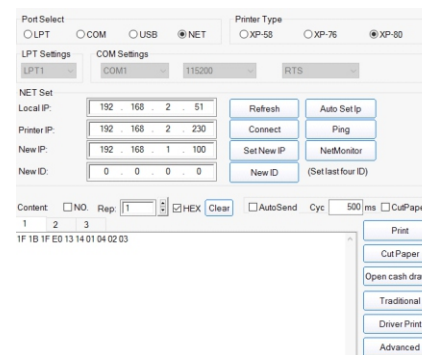
S2: Select the corresponding interface .If the serial port needs to set the baudrate,the printer baudrate can be obtained by printing the selftest.The network port needs to set the IP address. For the operation mode,refer to the following network IP setting instructions.After the setting is completed,click the “Connect” button(  ),and the connection success prompt indicates that the network connection is successful.Select the area of the interface as shown below:



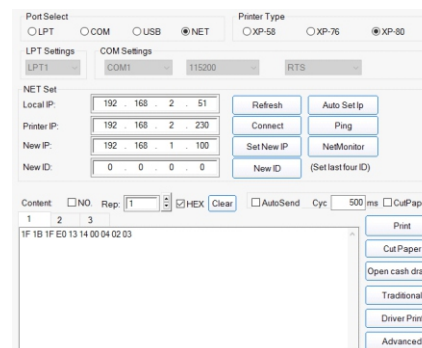
S3: Check the “HEX” option box( ☒ HEX ) and click the “Clear” button(  )to clear the contents of text input box.The result is shown below:



S4: If you need to turn on the “cutting with alarm” function, enter the command as shown in the text box and click the “Print” button(  )to send it.



Conversely, if you want to turn off the “cutting with alarm” function, enter the command as shown in the text box and click the “Print” button(  ) to send it.



② Cutter idle alarm on/off: 1F 1B 1F A0 mode 00 0A 00 FF  
The operation is the same as ①

### 1 Font size

GS !

[Name] Select character size

[Format] ASCII code GS ! n

Hexadecimal code 1D 21 n

Decimal code 29 33 n

[Range]  $0 \leq n \leq 7$ ,  $16 \leq n \leq 23$ ,  $32 \leq n \leq 39$ ,  $48 \leq n \leq 55$ ,

$64 \leq n \leq 71$ ,  $80 \leq n \leq 87$ ,  $96 \leq n \leq 103$ ,  $112 \leq n \leq 119$

$1 \leq \text{Vertical magnification} \leq 8$ ,  $1 \leq \text{Horizontal magnification} \leq 8$

[Description] Use the 0th to 2nd digits to select the character height, 4 to 6 digits to select the character width, and 3, 7 digits to be 0, which is 0XXX0XXX.

Magnification table

Horizontal magnification  Vertical magnification	1		2		3		4		5		6		7		8	
	Hex	DEC	Hex	DEC	Hex	DEC	Hex	DEC	Hex	DEC	Hex	DEC	Hex	DEC	Hex	DEC
1	00	0	10	16	20	32	30	48	40	64	50	80	60	96	70	112
2	01	1	11	17	21	33	31	49	41	65	51	81	61	97	71	113
3	02	2	12	18	22	34	32	50	42	66	52	82	62	98	72	114
4	03	3	13	19	23	35	33	51	43	67	53	83	63	99	73	115
5	04	4	14	20	24	36	34	52	44	68	54	84	64	100	74	116
6	05	5	15	21	25	37	35	53	45	69	55	85	65	101	75	117
7	06	6	16	22	26	38	36	54	46	70	56	86	66	102	76	118
8	07	7	17	23	27	39	37	55	47	71	57	87	67	103	77	119

## ①Test case:

1B 40  
 1D 21 11  
 B1 B6 B8 DF B1 B6 BF ED B5 C4 41 0A  
 1D 21 33  
 34 B1 B6 B8 DF BF ED 0A

## ②Print result description:

The “double height-width A” of the first line is the result of twice the horizontal and vertical magnification; the “four times the height and width” of the second line is the result of quadrupling both horizontal and vertical;(Chinese characters and alphanumeric characters can be amplification)

## ③Instruction setting calculation instructions:

According to the need to horizontally zoom in multiples to look up the table,such as 2 times the width and height to choose 1D 21 11

**2 Density setting**

1F 1B 1F 13 14 n

[Name] Set the density level

[Format] Hexadecimal code 1F 1B 1F 13 14 n  
 Decimal code 31 27 31 19 20 n

[Description] Set the density level

[Range]  $1 \leq n \leq 8$

[Default]  $n=5$

[Comment] Data filtering beyond the parameter range, the higher the concentration level, the higher the concentration.

Test case:

1F 1B 1F 13 14 07 set density level 7

**3 Sound and light alarm on/off**

Cutter with alarm on/off: 1F 1B 1F E0 13 14 m 04 02 03

m=1: Cutter with alarm :on

m=0: Cutter with alarm :off

Cutter idle alarm on/off: 1F 1B 1F A0 mode 00 0A 00 FF

mode=1: Cutter idle alarm on

mode=0: Cutter idle alarm off

**4 IP address setting method**

Single network port model setting method:

S1: Open the V3.1C tool

S2: Communication port selection network port

S3: Click“Auto Set Ip” ->click“Search”-> select the IP address of the printer you want to set -> Modify IP address and gateway parameters -> click“Save”(see Figure 1)

S4: The buzzer sounds and the printer restarts to indicate that the setting is successful.

S5: Print a self-test page to check if the IP address is set correctly.

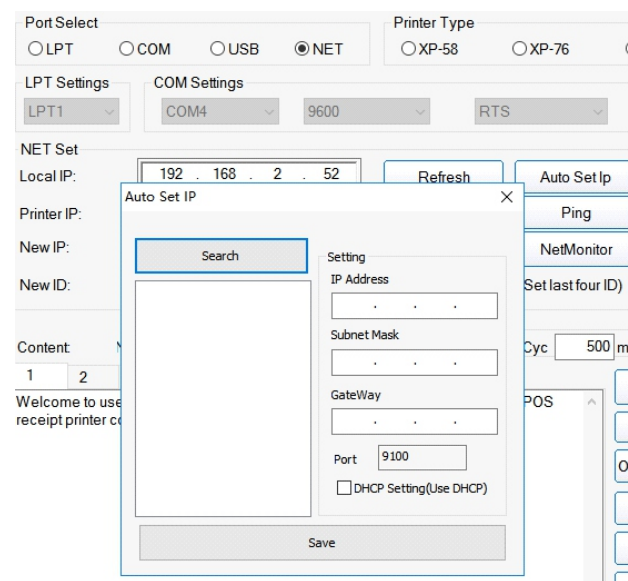


Figure 1



## Clearance

One of the followings occurred, please clean printing head.

- (1) Printing is not clear
- (2) Any vertical column is not clear
- (3) Paper feed noisily.

### Printing head cleaning steps:

- (1) Turn printer off, release power cord. Open top cover, take out paper roll.
- (2) Wait till printing head cooling if it just finished printing.
- (3) Clean printing head completely using swab with alcohol (without water).
- (4) Until alcohol completely volatilized, close top cover.
- (5) Connect power again, print self test to check if it is clean.



#### Notice:

- (1) Please make sure power off when maintaining printer.
- (2) Don't touch or scratch printing head surface, roller and sensors.
- (3) Avoid gas, acetone or other organic solvent.
- (4) Wait till alcohol completely volatilized, close top cover and connect power again. Try print self test to make sure it works properly.

## Cutter stuck maintenance

### Method (1)

Turn off the power and then restart.

### Method (2)

Turn the gear on printing head , cutter can be returned to its original position.



**Notice:** To avoid the damage of the printing head and automatic paper cutter, please do not open cutter and mechanism violently.