

NC-UV60



User Manual

Please read this manual carefully before you use this machine
and keep it handy for future reference.

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Notice

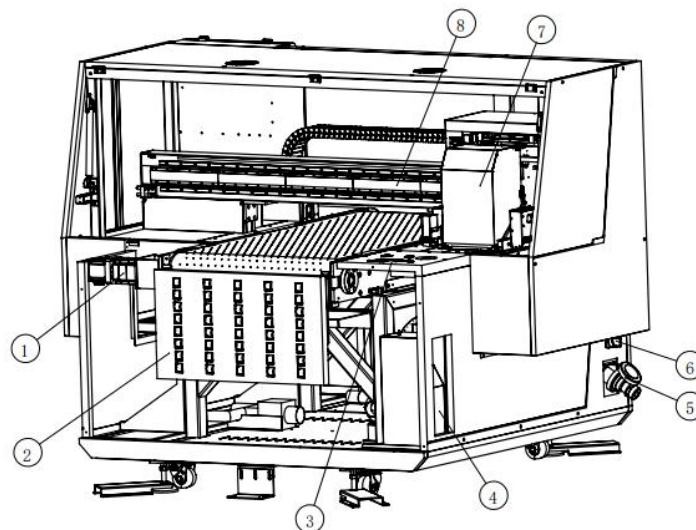
Please read these instructions before using the machine

1. Machine should not be used by children or the disabled.If needed,please under the supervision;
2. Please use original supplier's spare parts and ink under instruction;
3. Make sure the power voltage is same as power cable and machine which shown on the Nameplate;
4. Only suitable to be used indoors and better suggest to have air conditioning inside the room to keep stable working temperature and humidity;
5. Dismantle the wooden case and the foot cup fixed frame and put it on a stable table before using;
6. Do not use the machine in a environment which has fire,dust and wetness;
7. Do not use the machine in a humid house;
8. Do not put sundries on the machine or the platform and surroundings;
9. Please keep a stable temperature in the working room,not suggest to use machine where environment over 30 degrees or below 15 degrees;
10. Do not use any broken cable to provide electricity;
11. If power supply is broken,please stop to using the machine;
12. Power off machine when you clean or fix machine;
13. Please use the machine according to local legal policy;
14. Make sure the head not touch anything before sending picture printing.Height sensor do not work when meets transparent materials;
15. When machine is working,eyes will feel sick if staring at the UV lamp for a long time,better suggest to wear ultraviolet-proof glasses;
16. When needed to move the machine,at least require 4 people to lift. Do not move the machine together with other parts. And remember to take take off the power charger when move the machine;
17. When adding ink, you may touch ink tube,ink bottle and ink cap and some parts,please protect in advance;
18. The table which used to put the machine should be make sure it's stability to place the machine and protect machine from shaking during working;
19. Not recommended to use UV LED lamp high load printing for a long working time;
20. Make sure machine is normally grounded;
21. Do not use the machine in thunderstorm day,avoid lightning strikes;
22. If your ink is not come from Nocai, after sale service will not be provided.

Machine introduction and graphics analysis

1.1 Graphic analysis of the front and side of the machine

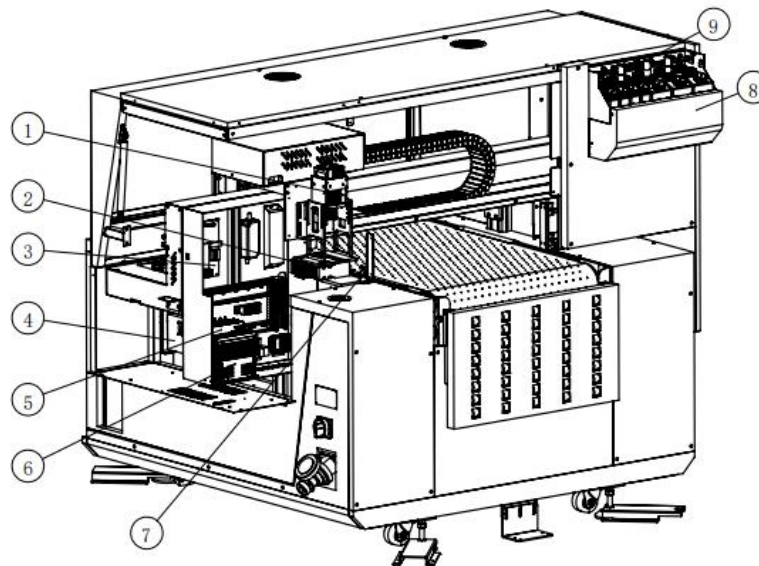
- ① LS-750W servo motor: control the movement of the belt
- ② Extension plate assembly
- ③ Paper reel assembly
- ④ Keyboard panel: Display panel
- ⑤ Waste ink bottle: To store the ink
- ⑥ Network cable interface: connect the network cable
- ⑦ Power socket: To connect the 220V power cable
- ⑧ Power supply: control the start-stop of the machine
- ⑨ Print cart: To print and LED curing
- ⑩ The beam of the machine: Support the movement structure of the cart



1.2 Graphic analysis of the side of the machine

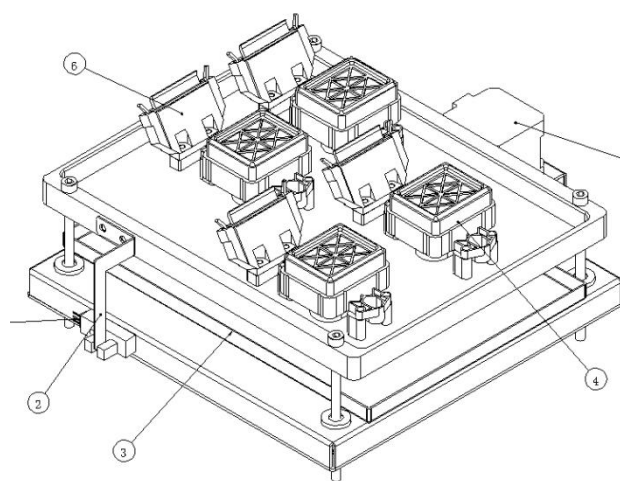
- ① Visual camera: Provide light for the detection target
- ② Visual light source: Perform image acquisition
- ③ Mainboard: Power supply of mainboard, signal control of XY axis motor
- ④ Vision Shield: Expand your vision capabilities
- ⑤ Vision Power Box: Powers the vision system

- ⑥ Linear motor drive: pump the waste ink of the cap top
- ⑦ LS-750W servo driver: control 750W servo driver precisely
- ⑧ Dovetail groove type X-axis slide table: control the lifting of the laser shooter
- ⑨ Ink cartridges: Used for storing and adding ink
- ⑩ Cartridge alarm board: check whether the ink is sufficient



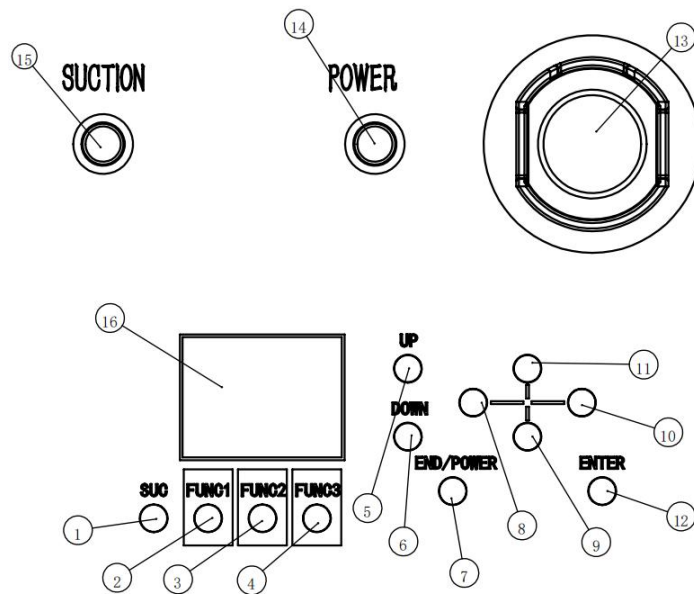
1.3 Analysis of ink station

- ① Lower station sensor of ink station: control the lifting of the ink station
- ② Adjustment sheet metal of ink station: confirm the position of the ink station
- ③ Ink station funnel: Receive ink absorbed by the cap top
- ④ Cap top: To maintain the printhead
- ⑤ Ink station motor: To control the lifting of ink station
- ⑥ Wiper: Clean the residual on the surface of the printhead after cleaning it



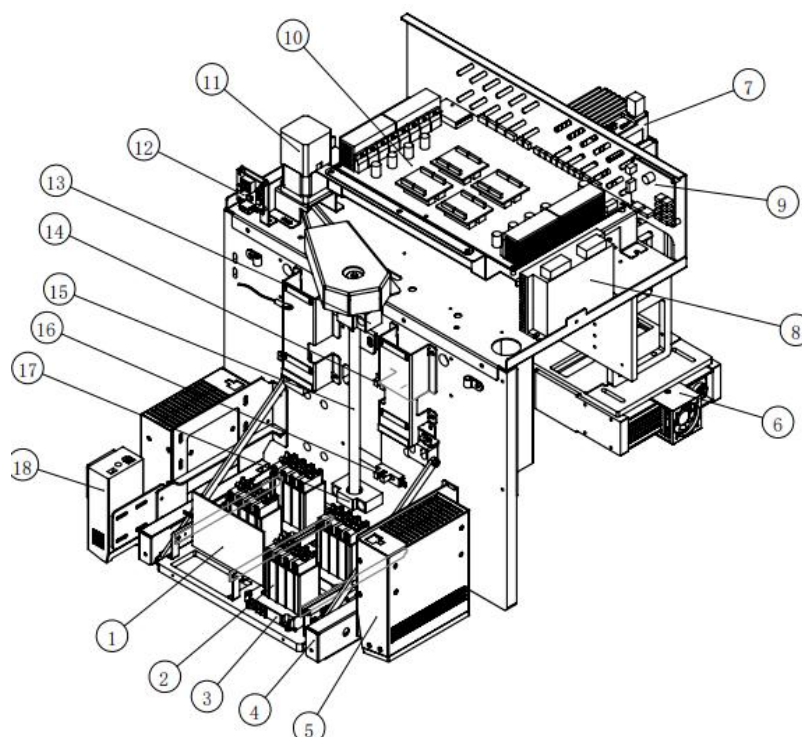
1.4 Graphic analysis of keyboard panel of the machine

- ① Suction button switch: Fan button for suction platform
- ② Function key
- ③ Test shortcut: Nozzle detection shortcut
- ④ Pause key
- ⑤ UP: The beam rises
- ⑥ DOWN: The beam goes down
- ⑦ Exit key
- ⑧ LEFT: The cart moves to the left
- ⑨ FRONT: The platform moves to the front
- ⑩ RIGHT: The cart moves to the right
- ⑪ BACK: The platform moves to the back
- ⑫ Exit key
- ⑬ emergency stop switch
- ⑭ Power
- ⑮ Suction button switch: Fan button for suction platform



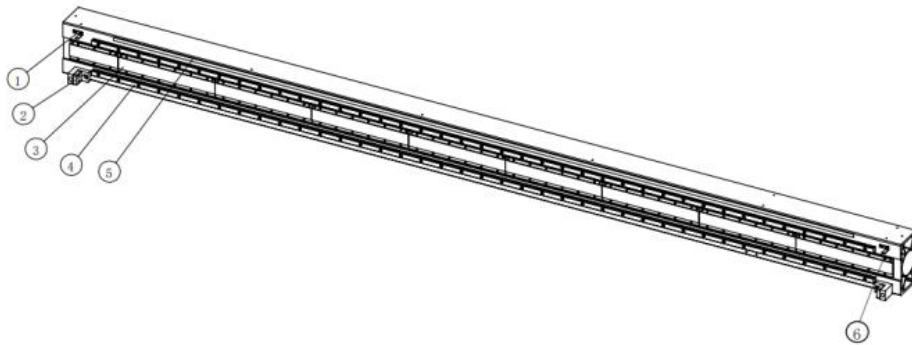
1.5 Graphic analysis of ink cart

- ① Heating the diaphragm: Increases the temperature of the ink
- ② JV33 damper: The ink is filtered and supplied to the head
- ③ Printhead: To print material
- ④ Anti-collision device of ink cart: To protect the head
- ⑤ UV lamp: Accelerates ink curing
- ⑥ Visual light sources: To provide light for the detection target
- ⑦ Visual camera: Acquire images
- ⑧ LS-42 stepping motor driver: control 42 stepping motor precisely
- ⑨ Cart board:
- ⑩ 42 stepping motor: Control the lifting of the ink cart
- ⑪ Temperature-controlled circuit board: Monitor and control operating temperature of the printhead
- ⑫ EK08 bearing mousing: Support and fix the screw rod
- ⑬ Lower station sensor of ink station: Control the lifting of the ink station
- ⑭ Ball screw: Convert rotational motion into linear motion
- ⑮ Upper station sensor of ink station: Control the lifting of the ink station
- ⑯ EF08 bearing mousing: Support and fix the screw rod
- ⑰ Insert the two-color damper directly (UV) : Two-color ink can be printed at the same time
- ⑱ Varnish lamp: Accelerate the UV varnish curing



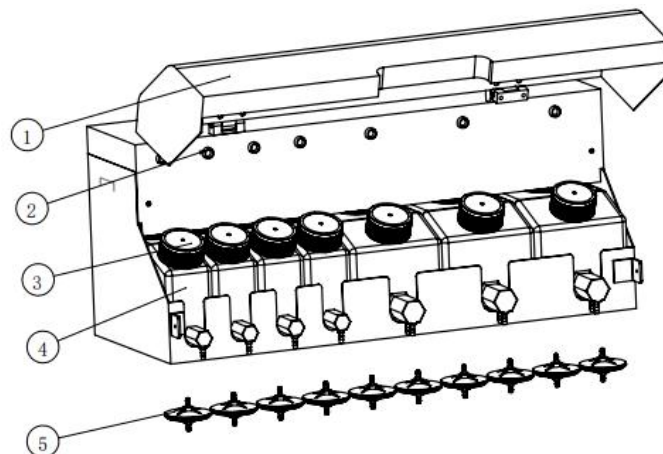
1.6 Analysis of beam

- ① Left limit sensor : Control the left and right movement of the cart
- ② Limiting glue: Ink cart limit
- ③ Linear motor stator: A magnetic field is generated to drive the rotor motion of a linear motor
- ④ Ink cart slides: The left and right tracks of ink cart
- ⑤ Raster: Precision and dimensional control of X-axis
- ⑥ Origin sensor: The initial position limit of the ink cart



1.7 Analysis of ink cartridge of the machine

- ① Alarm: The ink is insufficient
- ② Cartridge cover
- ③ Cartridge lid: Add ink and prevent ink from leaking
- ④ Ink bottle: Store the ink
- ⑤ Dish filter: Filters out impurities in ink



Machine Initialization Confirmation

2.1 Preparation

Confirm the machine is placed firmly, check the power supply voltage marking is 220V or 110V, and it can only be used by matching the local power supply voltage.

2.2 Assure operate-on normal

The machine is connected to the power supply, open the main power switch at the rear of the machine, the machine begins to initialize the action.

The complete action is as follows:

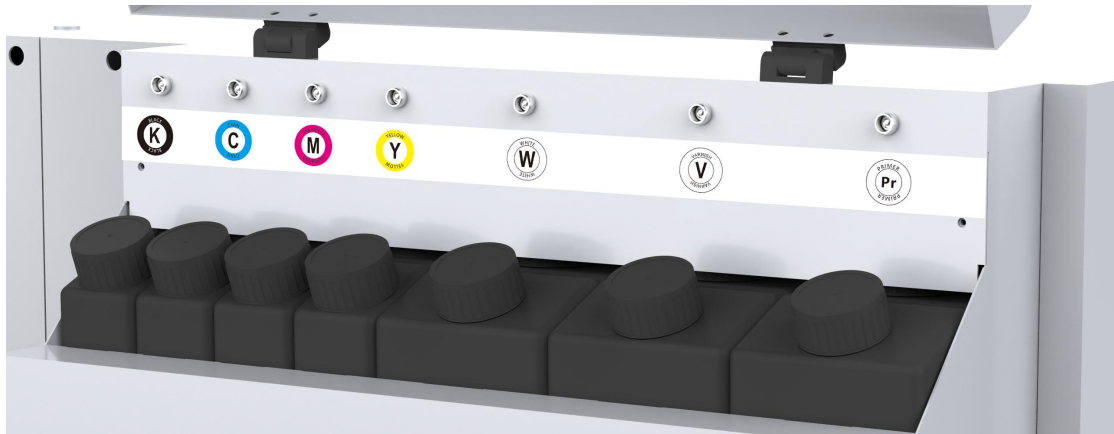
【OK Ink station drops to the lower station→The wiper moves forward and turns back to the back position→The cart moves to the left→Platform moves forward and turns back to the rear limit position→Cart moves to the right and turns left above the ink station→The head goes back to the ink station→OK】

2.3 Check the movement is normal

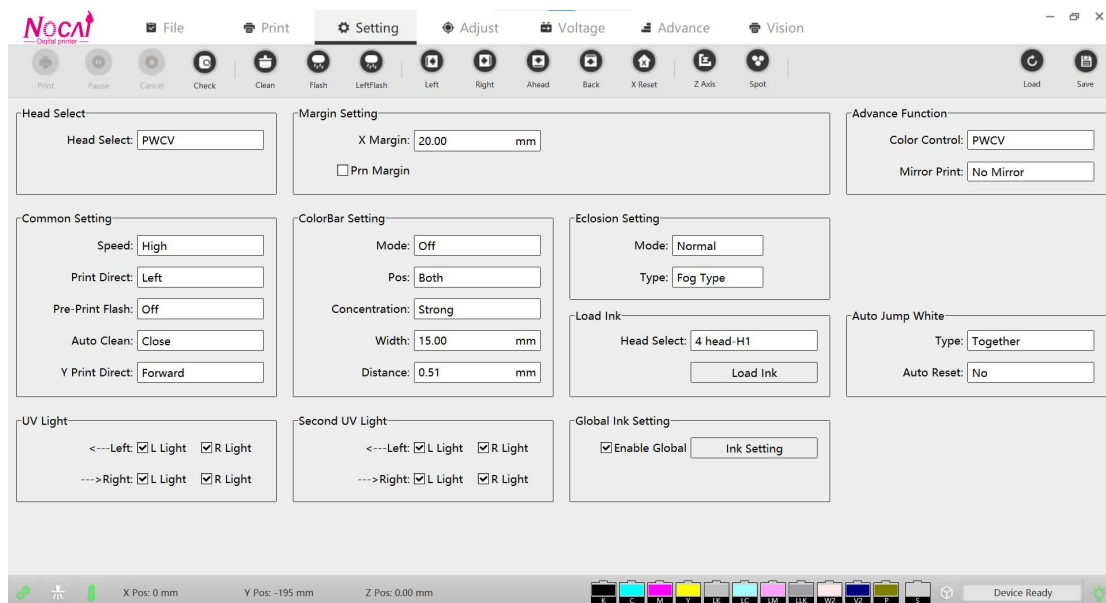
【The network cable connects the computer and the printer→ opens the driver software→ the lower left corner shows that the connection is normal→ the left, right, front and back control in the drive, and the Z-axis controls the up and down→ the printer can feedback normally】

How to add ink

1. As shown in the image below, follow the notice to add the corresponding ink.

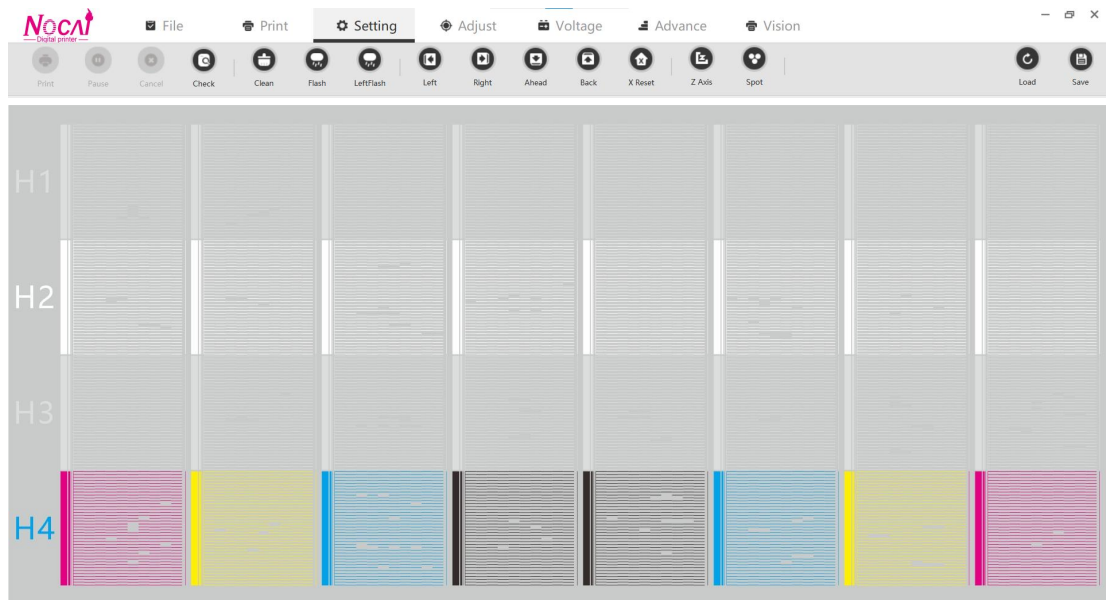


2. When adding ink, in order to prevent the ink from leaking out and contaminating the shell sheet metal, you need to do protective measures. You can use paper to wrap the mouth of the bottle. After adding the ink, twist the ink bottle tightly.
3. Print the test strip. Open the online driver software PrintExp, the lower left corner shows that the connection is successful, select the corresponding printhead, and click to load the ink.

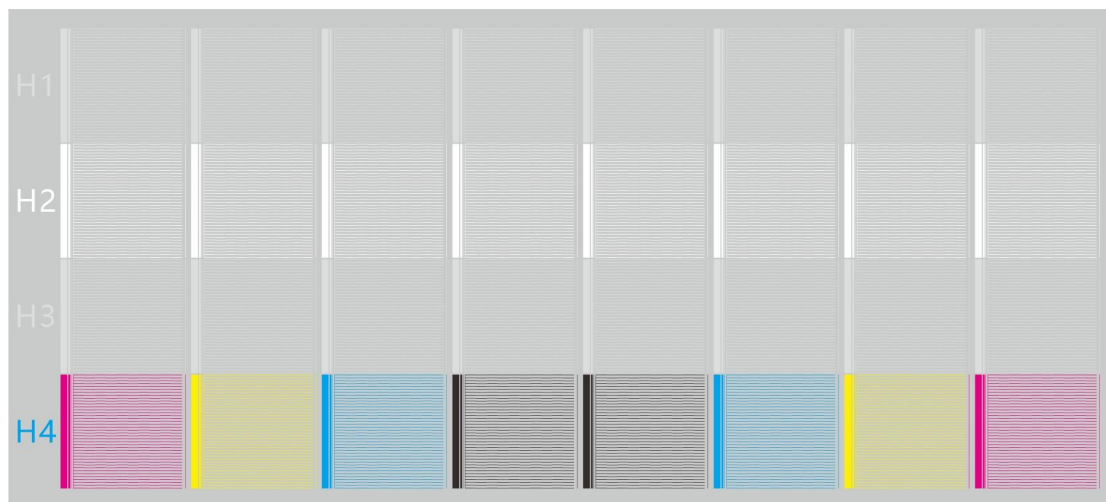


4. Click the cleaning button of the driver software PrintExp, select the

corresponding nozzle and its cleaning intensity, after the machine completes the cleaning action, click to detect, print the test strip, if there is a lack of color or ink-supply suspension problem, please continue to clean the nozzle, the test strip is out completely. The machine goes into standby.



The test strip has interruptions and needs to continue to "automatical clean"



Set up and explain the driver

4.1 Requirement

System version: must be Win7, Win8, or Win10 on a 64-bit system. Memory: 4GB or more; Hard disk: 250GB or more.

Computer must be equipped with Gigabit network card and gigabit network cable, only in this way the software can be normal online.

IPv4 address of the computer is set to be obtained automatically.

4.2 Install the driver

1、Install-PrintExp

Start the control software, firstly make sure that the machine has been turned on normally and the boot initialization action is normal, and the computer has been connected to the machine through the network cable.

Open PrintExp directly, find the software file and

 PrintExp_X64.exe double-click to open it.

When the online is normal,

The ink station will descends and rises to connect the head

PrintExp The lower left corner of the software interface shows that the connection is successful (green light)

2、Explanation of the software

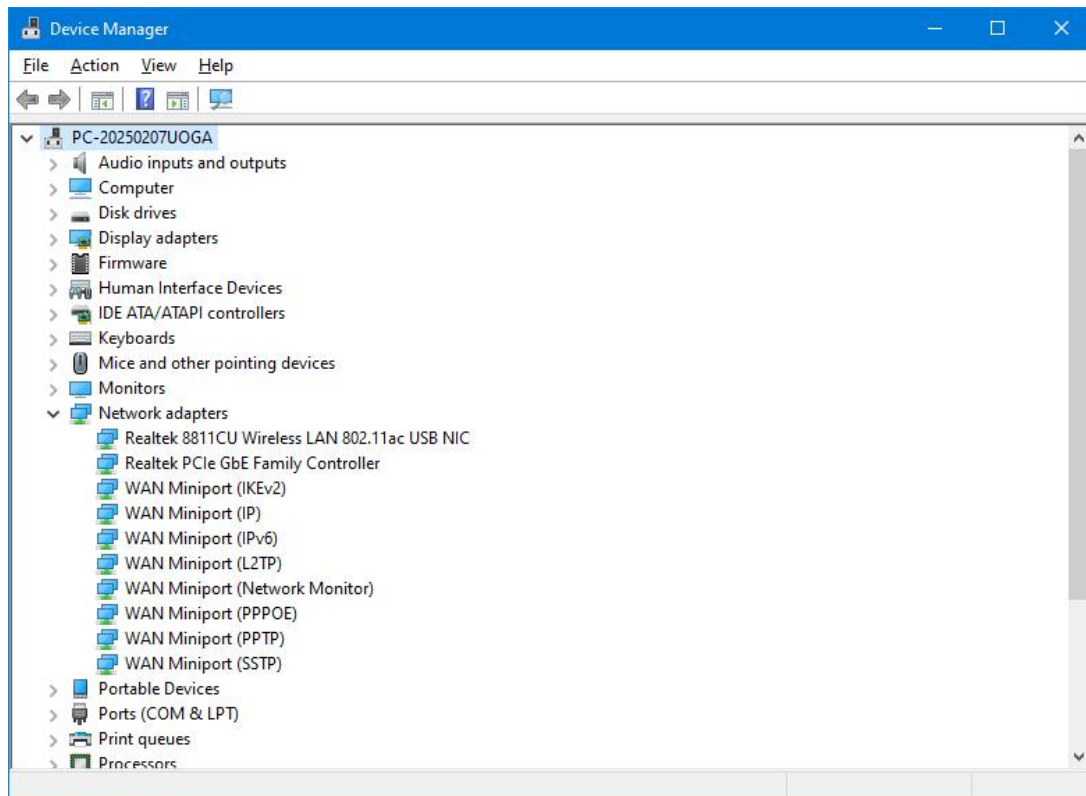
Gigabit network card judgment

Before the network is connected, check that the network card of the computer must be Gigabit network card to connect normally, and the difference between a 100 Gigabit network card and a Gigabit network card:

Gigabit network card includes the following characters: Gigabit、GBE、10/100/1000M、RTL8169 。

100 Gigabit network card includes the following characters: Fast Ethernet、10/100、FE。

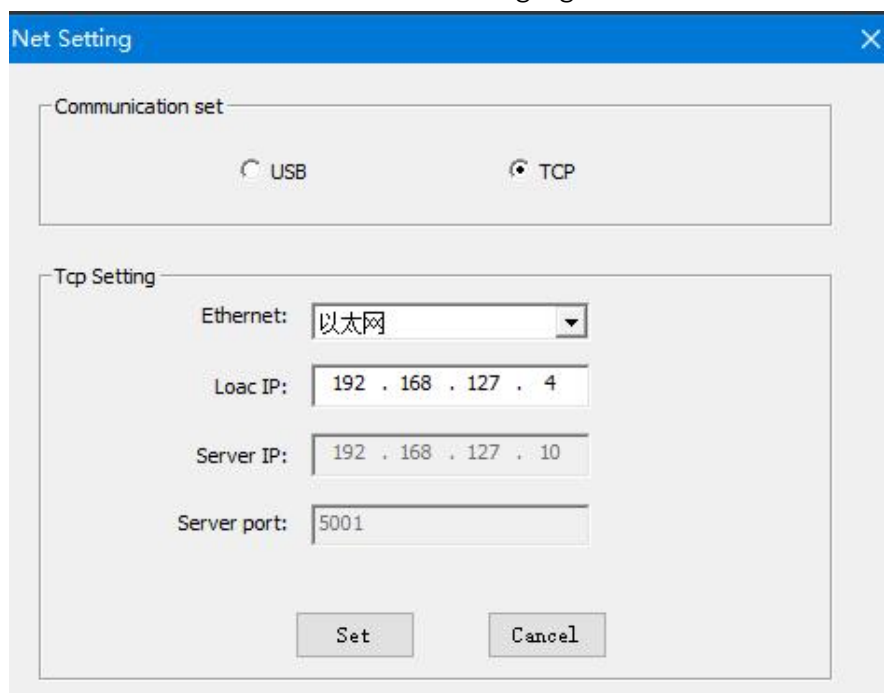
Enter the computer device manager and check the network adapter, as shown in the figure below, it is a 100 Gigabit network card:



3、Network setting

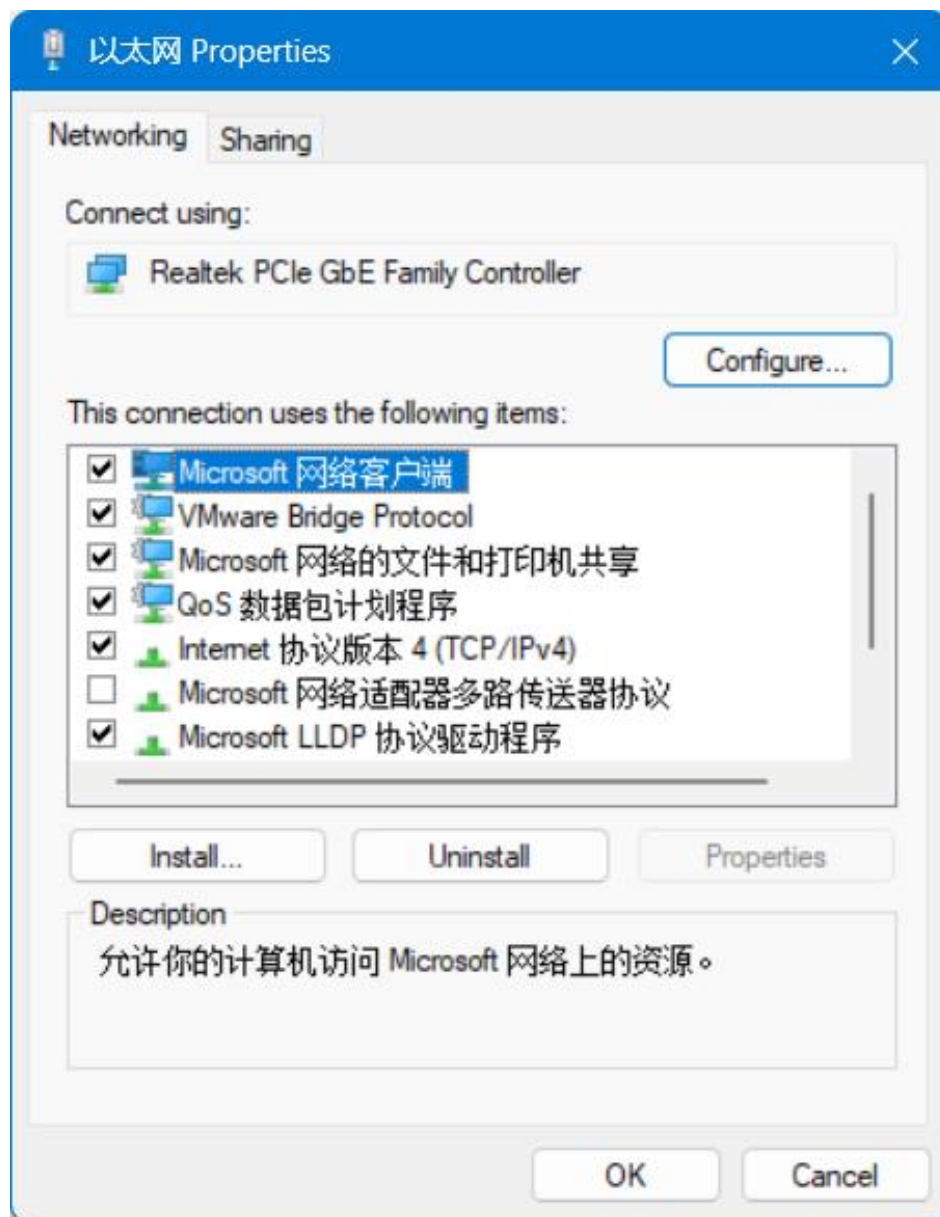
For the first time, you must set the network connection parameters to use it online. Connect the TCP/IP network cable to set up the network.

Connection method: → the advanced menu → the communication settings in the online software, and you can see the communication settings window at this time, as shown in the following figure:



The IP and server port settings have been fixed, it is no need to set it again, just set the local IP, as shown in the figure above, enter 192.168.127.111 in the local IP position (note that the last three digits can be any number in the range of 1-255 except 10), click "Set", and check if the network connection can be connected normally, if you still can't connect to the machine, you can use the following methods:

Go to the computer control panel→ Network & Internet→ check the network status and tasks→ change adapter settings→ click on Ethernet or Local Connection→ properties will appear as follows:



Double-click the highlighted bar in the above figure to enter the following window:

Internet 协议版本 4 (TCP/IPv4) Properties

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

☐ Obtain an IP address automatically

☒ Use the following IP address:

IP address: 192 . 168 . 127 . 4

Subnet mask: 255 . 255 . 255 . 0

Default gateway:

☐ Obtain DNS server address automatically

☒ Use the following DNS server addresses:

Preferred DNS server:

Alternate DNS server:

☐ Validate settings upon exit

Advanced...

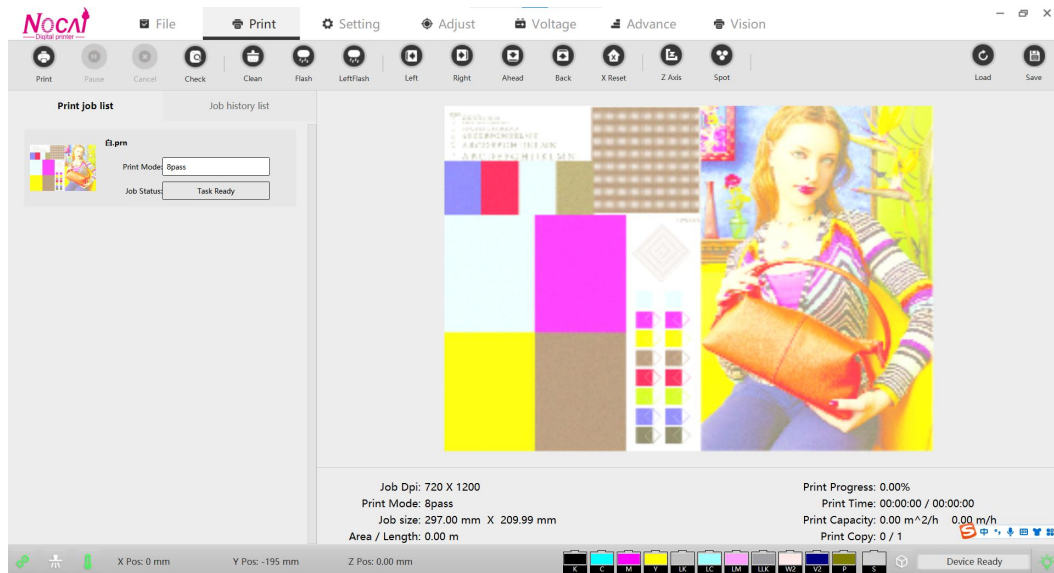
OK Cancel

Enter the same address in the red box in the above figure, and click OK to finish.

Then go back to the main interface of the online driver software, you can see that the first icon in the lower left corner of the main interface is displayed as green, indicating that the computer is connected, if it is still red, it means that it is not connected. You can unplug the network cable and try again to see if it is connected. If you still can't connect to the network, check whether the network cable is normal.

Explanation of the driver

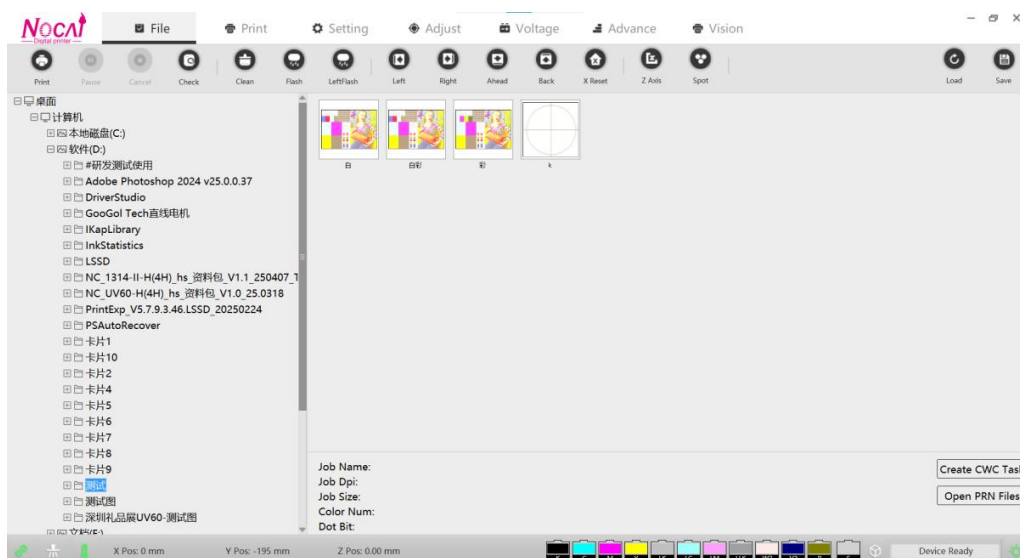
PrintExp The interface is as the following:



The main interface of PrintExp software mainly includes the main menu area, the shortcut button area, the print list area, the task preview display area, the print task information area, the status bar and other parts.

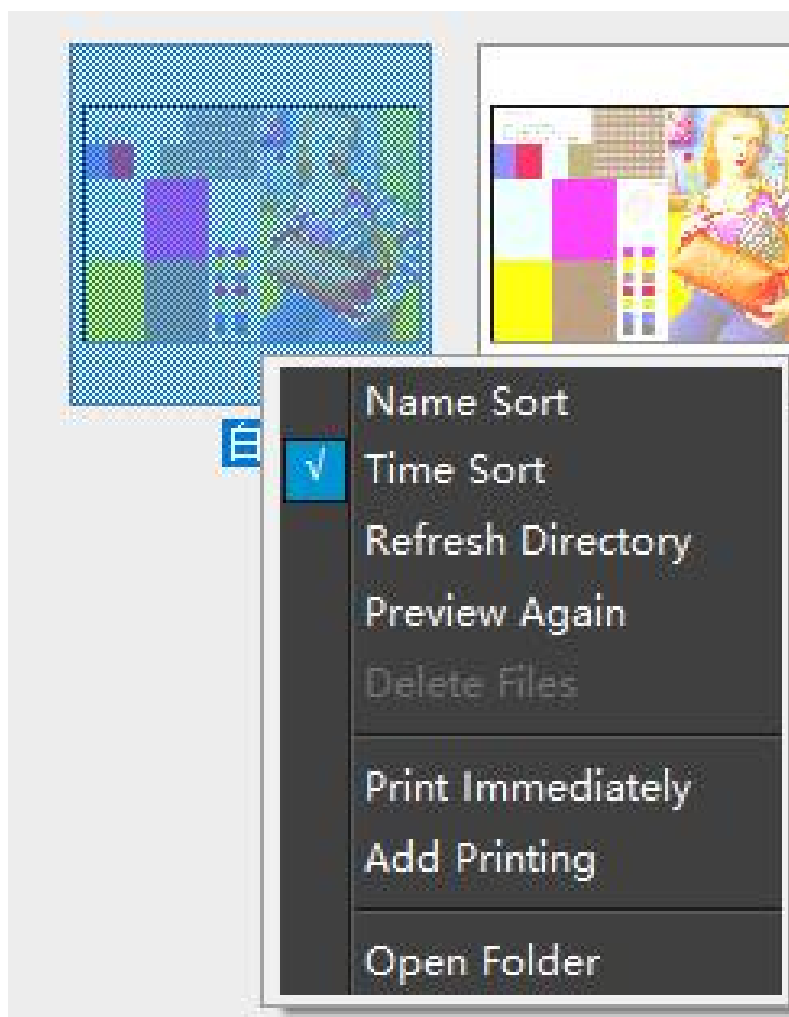
5.1 File

Click the file in the menu bar to enter the file interface, which mainly includes the file directory window, the picture preview window, and the image information display bar as shown below:



NO.	Name	Function explanation
1	Catalogue area	The folder where you put the file
2	Preview area of PRN file	Displays all files under the specified file
3	PRN information display area	Displays the information of the selected print file
4	Create a color-white-color task	Click to create a color-white-color task
5	Open PRN file	Precise search and selection of PRN files are performed by path

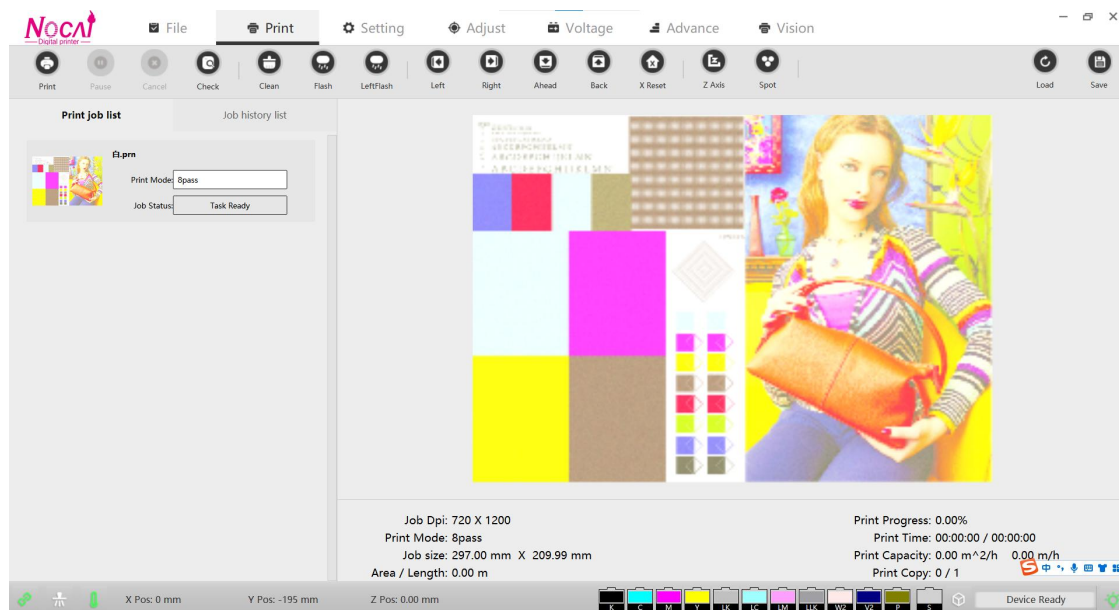
If you select the preview image and click right, a menu list will pop up, as shown below:



NO.	Name	Feature description
1	Refresh the catalog	Refresh all files in the specified folder
2	Re-preview	Regenerate a preview image of the specified file
3	Delete the file	Delete the file
4	Start print	Add the current file to the print job list and print immediately
5	Add task	Adds the file to the print task list
6	Open the catalog	Open the folder

5.2 Print

Click Print in the menu bar to enter the interface, as shown in the figure below:



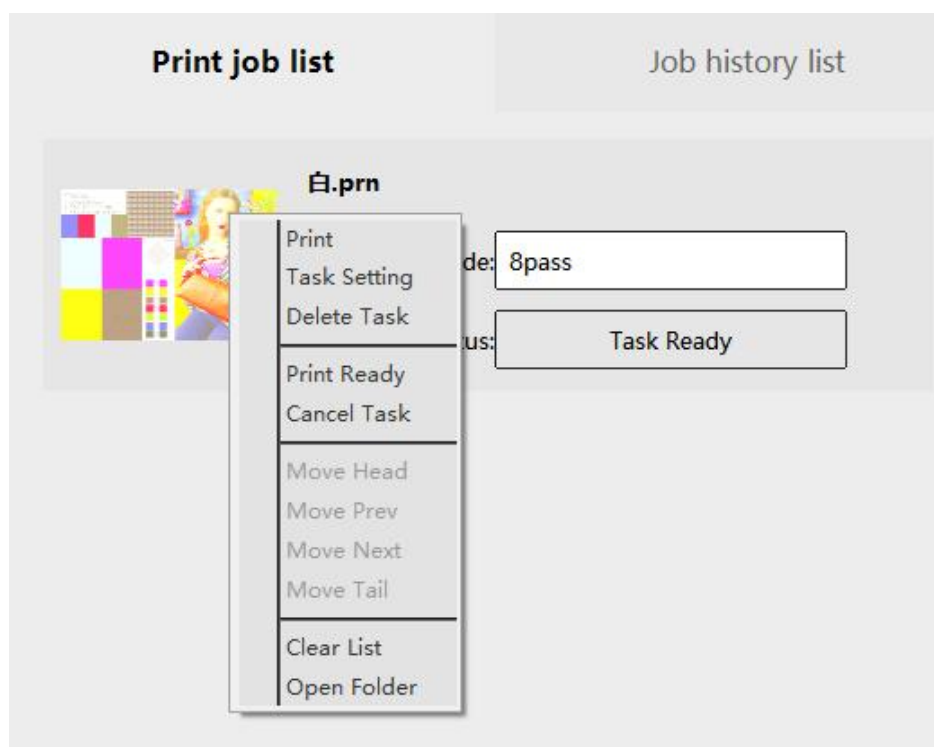
NO.	Name	Feature description
1	Main area of the menu	The area where the main function buttons of the system are displayed
2	Shortcut button area	An area where command buttons are displayed

3	Print list	The area for all tasks that are currently being printed or are to be printed
4	The task preview image display area	The area that displays the platen print area and a preview of the selected job
5	Information function area of the task	An area that displays all information for the current print job
6	Statistics area of the task	Statistics on the printing progress, printing time/remaining time, printing capacity, and printing area of the current task
7	Status column	The area that displays the current working status of the system, connection status, XYZ position coordinates, limit level prompt, and cartridge/safety bottle status

5.2.1 Printing task list

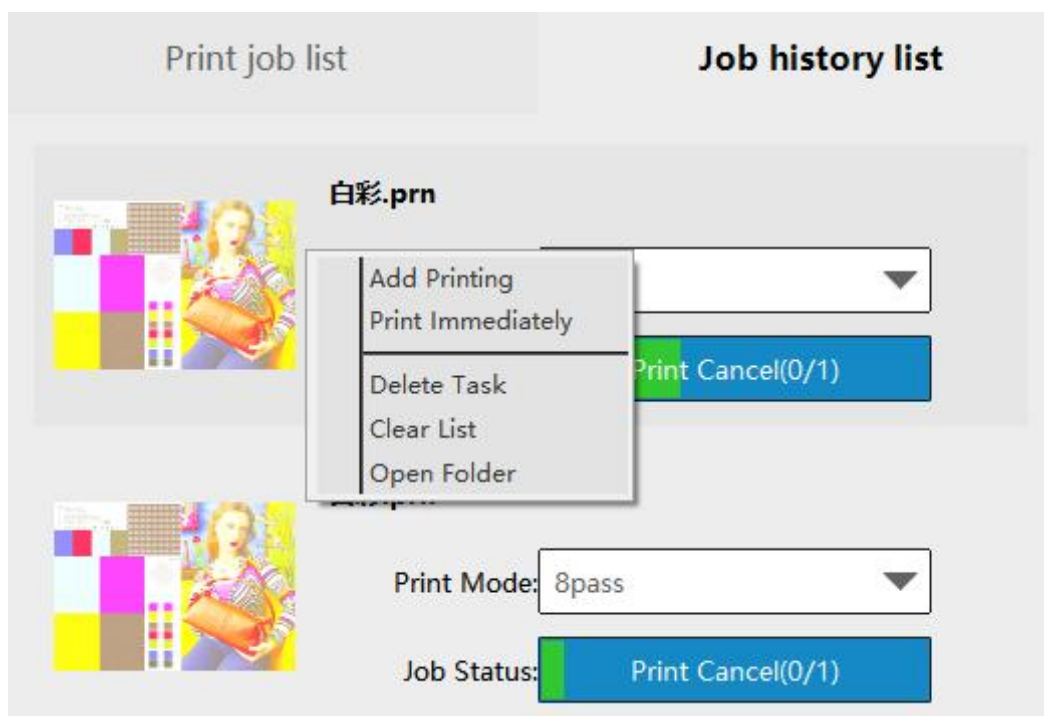
The printing interface includes the print task list window, the historical task list window, the print task preview window and the print information window;

Select a task in the print task list, and click right to pop up a menu. As shown in the figure below:



NO.	Name	Feature description
1	Print	Start to print
2	Task setting	Edit task properties, such as print parameters, settings for task parameters
3	Delete the task	Delete the task from the printing list
4	Wait for printing	Add the current task to the queue to be printed
5	Cancel the task	Cancel printing or cancel the waiting status
6	Move to the front	Moves the selected task to the top of the task list
7	Move forward	Move the print job forward by one bit
8	Move backward	Move the print job backward by one bit
9	Move to the last	Moves the selected task to the back of the task list
10	Clear the list	Clears all tasks in the print task list
11	Open the catalog	Open the folder

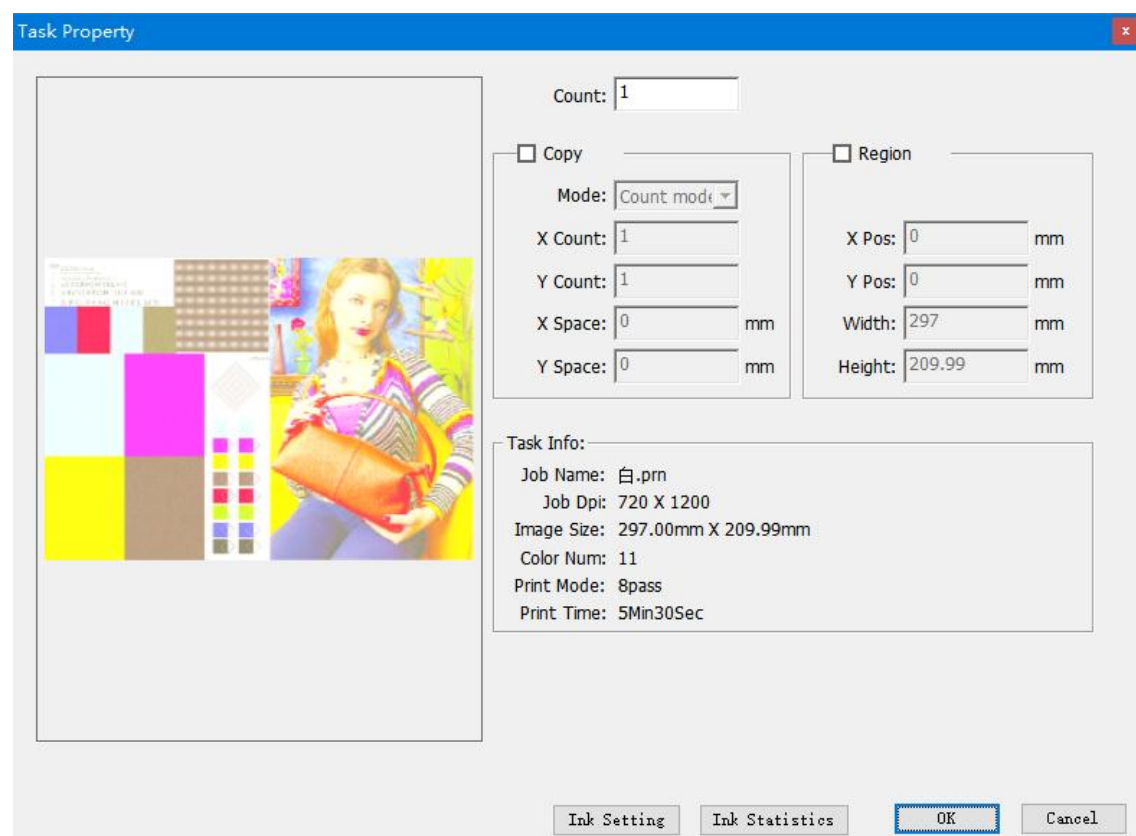
5.2.2 Job history list



NO.	Name	Feature description
1	Print	Add the task to the list
2	Start to print	Add the task to the task list and print immediately
3	Delete the task	Delete the task from job history list
4	Clear the list	Clears all tasks in the print task list
5	Open the catalog	Open the folder

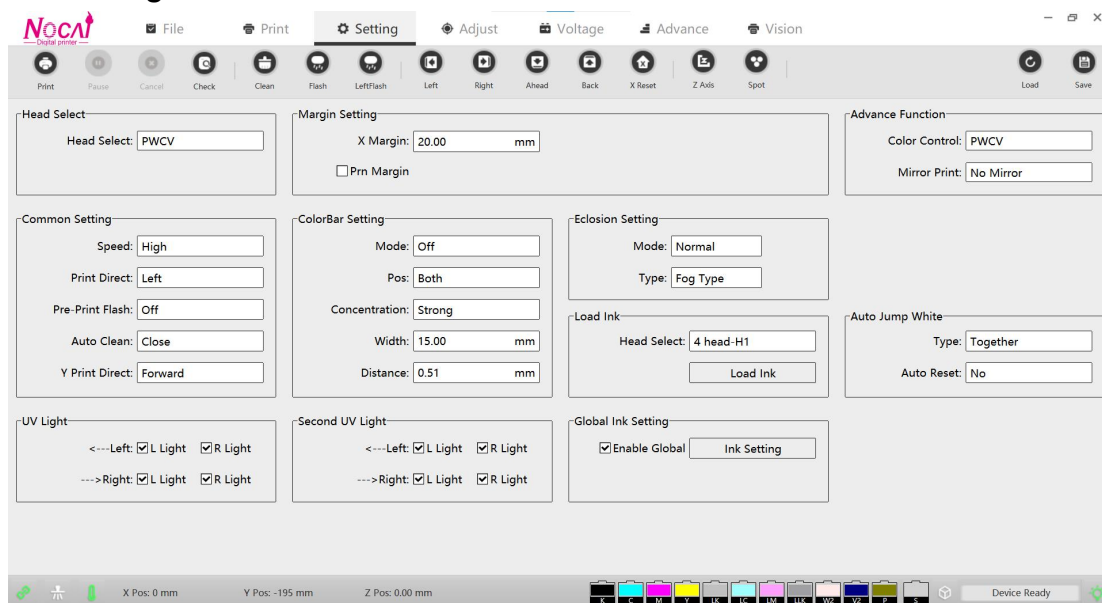
5.2.3 Settings (Parameter)

Double-click a task in the list to enter the task property window of the task (or click right to select the task settings), as shown in the following figure:



NO.	Name		Feature description
1	Count	Count	Print some of the selected task schedule, from 1 to 9999
2	Continuous exposure (frame mode)	X Space	X width
		Y Space	Y width
		Transverse space	Transverse continuous interval (mm)
		Lognitudinal space	Lognitudinal continuous interval (mm)
3	Continuous interval (Size)	Width	Width of the picture
		Height	Height of the picture
		Transverse space	Transverse continuous interval (mm)
		Lognitudinal space	Lognitudinal continuous interval (mm)
4	Area print	X position	The start position in the X direction
		Y position	The start position in the Y direction
		Width	The width of the file
		Height	The height of the file
5	Task information		It includes the name of the task, the printing accuracy of the task, the size, the number of colors of the printing task, and the number of passes of the task

5.3 Settings

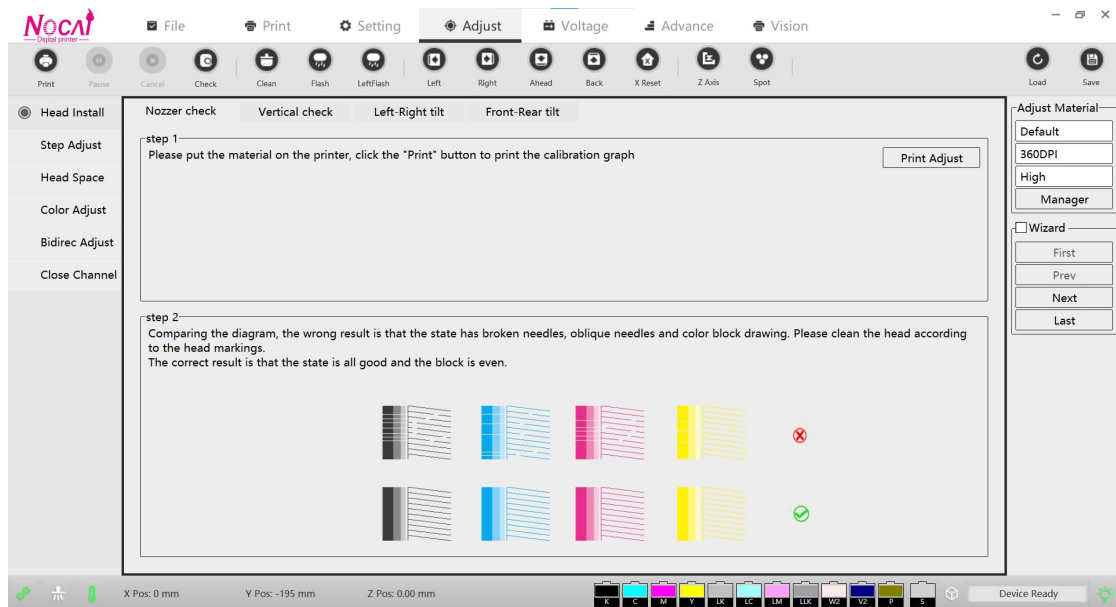


NO.	Name		Feature description
1	Printhead		Specific printers
2	White-edge settings	X White edge	It sets the start position of the calibration chart and prn file X while printing the calibration chart.
		Y White edge	Click to take effect to set the starting position of the calibration chart and prn file Y while printing.
		Prn White edge	Click to take effect and then block the function of X white edge and Y white edge(That is, the white edge of X and Y is 0, and the function becomes gray and cannot be modified). Note: Be sure to check the Y white border at this time. For the Prn file generated by the RIP software that contains the XY offset position (that is, the XY white edge), enable the white edge offset in the prn, and the X white edge and Y white edge settings in the software do not take effect.

3	Common settings	Speed	Low, medium, high
		Direction	Print left, right, and bidirectional
		Flash spraying before printing	On/Off
		Automatic cleaning	Auto Cleaning On or Off
		Paper-feeding	Forward or reverse printing
4	ColorBar setting	Position	You can set the position of the color bar to the left side and the right side, both sides, or turn off the color bar
		Mode	The difference of two different color bar
		Concentration	Weak, medium, strong
		Width	The width of color strip
		Distance	The empty distance of test strip and image
5	Eclosion	Mode	Normal or other modes
		Type	Fog type or other types
6	Load ink		Load ink or stop
7	Advance function	Color control	Controls whether each color channel for each task prints ink
		Mirror print	Whether to horizontally mirror the task when printing
8	Auto jump white	Step jump white	Turn on and print PASS to feed material while jumping white vertically
		Jump white continuously	Turn on and feed material while jumping white continuously and vertically
		Turn off the function	Turn off the function
9	UV light	Turn on UV light	
10	Second UV light	Turn on the second UV light	
11	Global ink setting	Ink setting	Sets the percentage of ink output for each printhead

5.4 Calibration

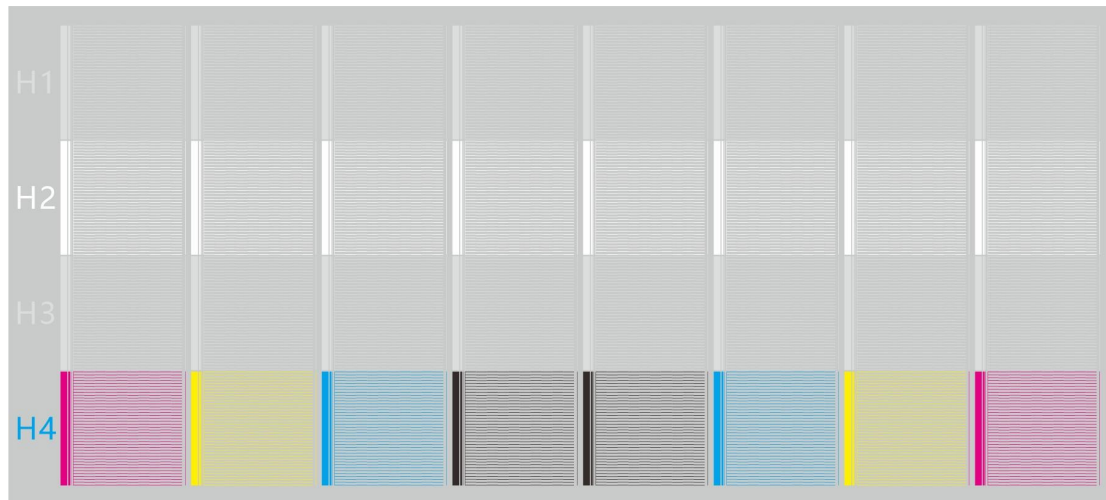
Click Calibration in the menu bar to enter the calibration interface, as shown in the figure below:



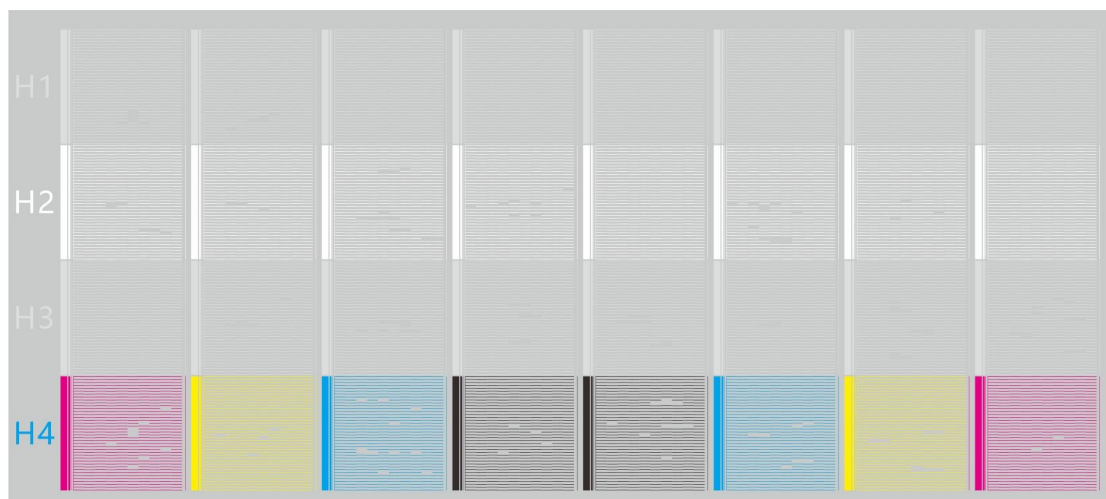
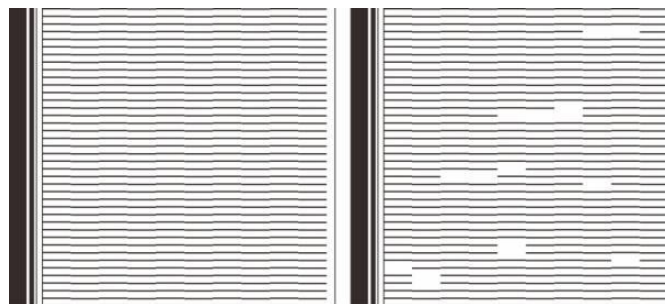
NO.	Name		Feature description
1	Install the printhead	Check the nozzle	Check whether the ink output from each nozzle is good
		Vertical check	Check whether the head is left-right tilt
		Left-right tilt	Check that the entire nozzle is parallel to the horizontal plane
		Front-rear tilt	
2	Step adjust		Calibrate the reference step parameters and fine-tuned step parameters for different pass modes
3	Head space	Adjust to left(right)	Adjust the horizontal space between printheads
		Vertical calibration	Adjust the vertical space between printheads
4	Color adjust		Calibrate the longitudinal and horizontal positions of each channel of the printhead
5	Bidirection adjust		Calibrate bidirectional offsets at different speeds for bidirectional printing

5.4.1 Check the nozzle

Click“Check the nozzle”, the system will print the nozzle detection pattern, as shown below:



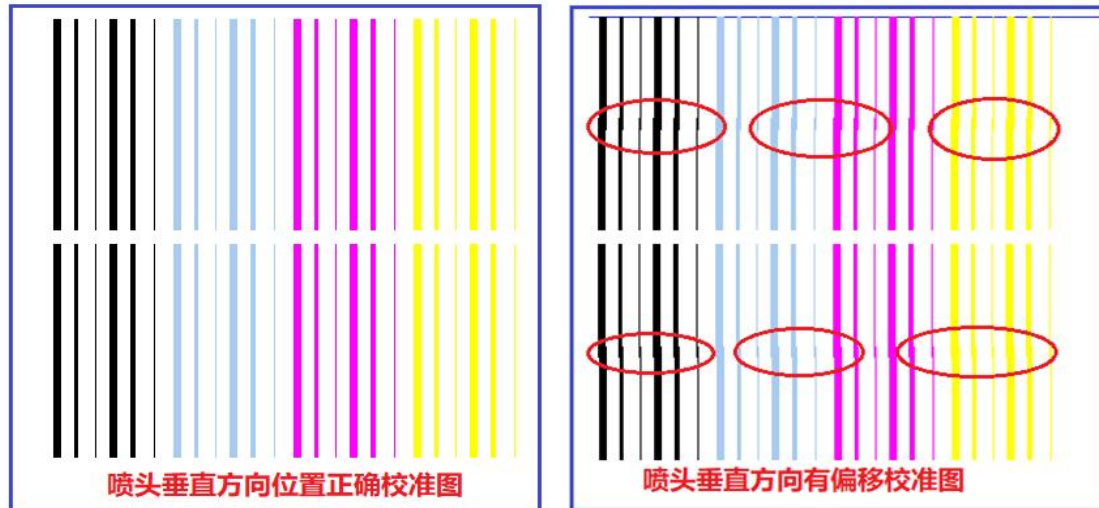
The normal and abnormal conditions of the black state chart are enlarged partially, as shown in the following figure:



In the case of the above state diagram, there may be blocked and it needs to be cleaned until the nozzle is in optimal condition.

5.4.2 Vertical check function

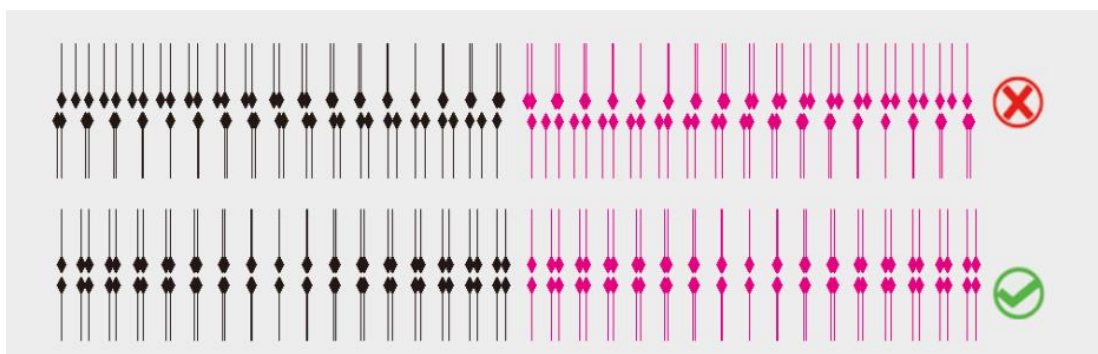
Click "Vertical check function", the system will print the vertical check function pattern, as shown below:



The calibration chart on the right side of the above figure needs to be adjusted for the vertical direction of the head until the vertical calibration chart reaches the correct state.

5.4.3 Left-right tilt function

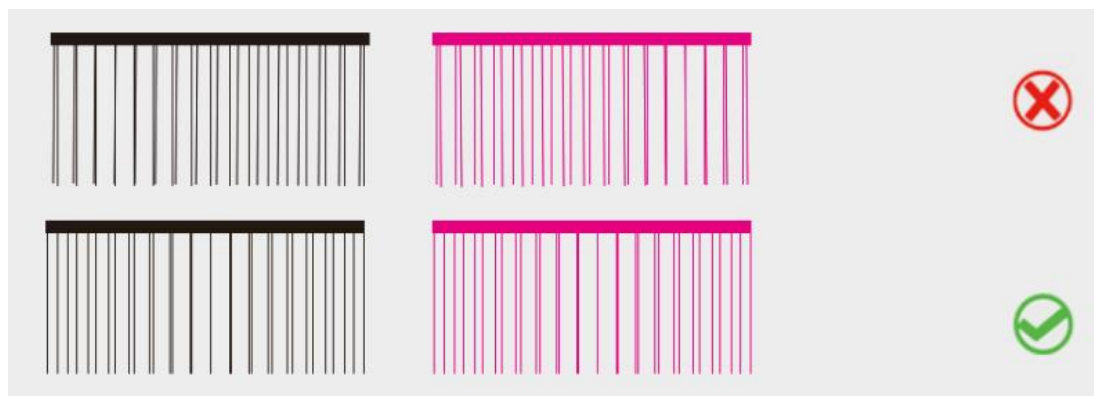
On the Left-right tilt function screen, click Print. After the pop-up window is confirmed, the system will print a left-right tilt calibration picture. As shown in the figure below:



Comparing the schematic diagram, the wrong result is that the overlapping position of the upper and lower parts of the calibration diagram are not in the same place, please adjust the corresponding left and right tilt or adjust the left and right tilt of the bottom plate according to the nozzle mark. The correct result is that the upper and lower parts coincide in the same vertical position.

5.4.4 Front-rear tilt function

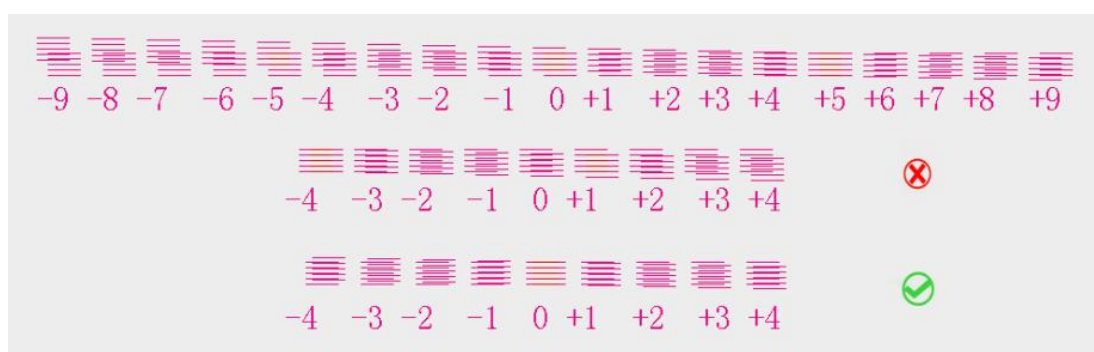
On the Front-rear tilt function screen, click Print. After the pop-up window is confirmed, the system will print a picture. As shown in the figure below:



Comparing the schematic diagram, the wrong result is that the vertical lines of the calibration chart are crossed, please adjust the corresponding front and rear tilt or adjust the front and rear tilt of the bottom plate according to the printhead mark. The correct result is that the vertical lines are parallel to each other.

5.4.5 Step calibration function

Click "Print Calibration Chart" , and the system will print the step calibration chart, as the following:



Comparing the schematic diagram, the wrong result is that the calibration line and the reference line not coincide at the 0 position, please enter the value on the right side of the "Print" button, and then click the "Calculate" button below to calibrate.

The correct result is that the calibration line and the reference line coincide

at the 0 position.

Step Adjust

step 1
Please put the material on the printer, click the "Print" button to print the calibration graph

Base Step

Print Adjust
0.00
Pixel

Calculate
21183
☐

Step Offset

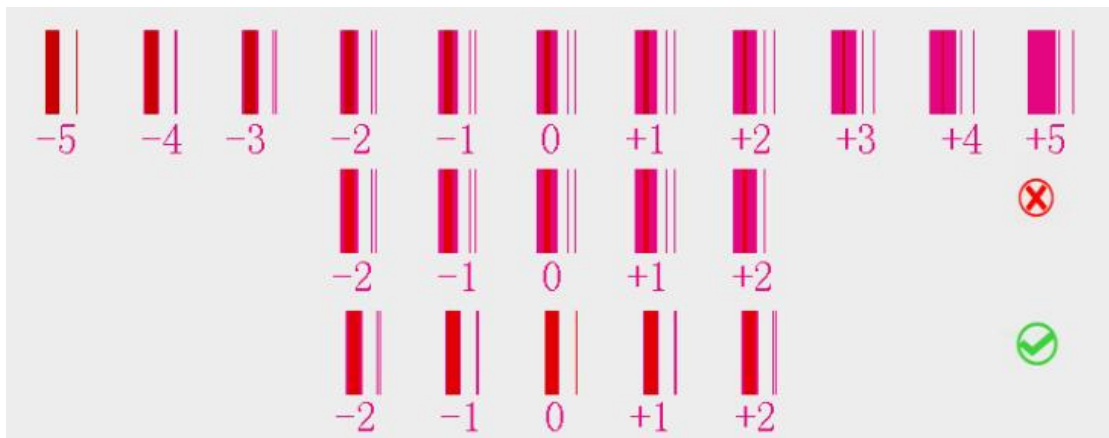
Print Pass Mode:
1Pass

Offset Value(pulse):
0
1Pixel=17.935777Pulse

Print Adjust

5.4.6 Horizontal space calibration between printheads

Click "Print Left/Right Calibration Chart" and the system will print as follows:



Comparing the schematic diagram, the wrong result is that the calibration line and reference line coincide in the calibration diagram is not in the 0 position, please add or subtract according to the value of the calibration line and the reference line on the original basis and enter it. The correct result is that the calibration line and reference line coincide at the 0 position.

Horizontal L
Horizontal R
Vert Adjust

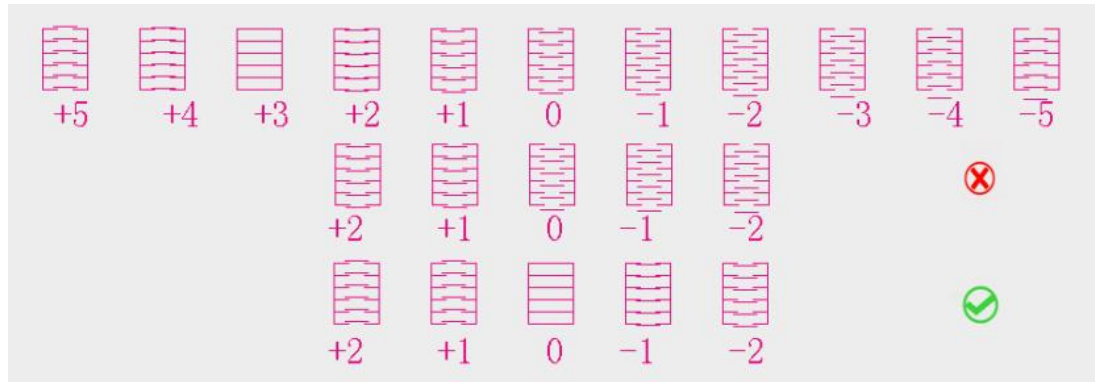
step 1
Please put the material on the printer, click the "Print" button to print the calibration graph

Print Adjust

H1	-7.5	H2	1483.5	H3	1491.5	H4	0.0
----	------	----	--------	----	--------	----	-----

5.4.7 Vertical space calibration between printheads

Click "Print Calibration Chart" and the system will print it as follows:



Comparing the schematic diagram, the wrong result is that the calibration line and reference line coincide in the calibration diagram is not in the 0 position, please add or subtract according to the value of the calibration line and the reference line on the original basis and enter it. The correct result is that the calibration line and reference line coincide at the 0 position.

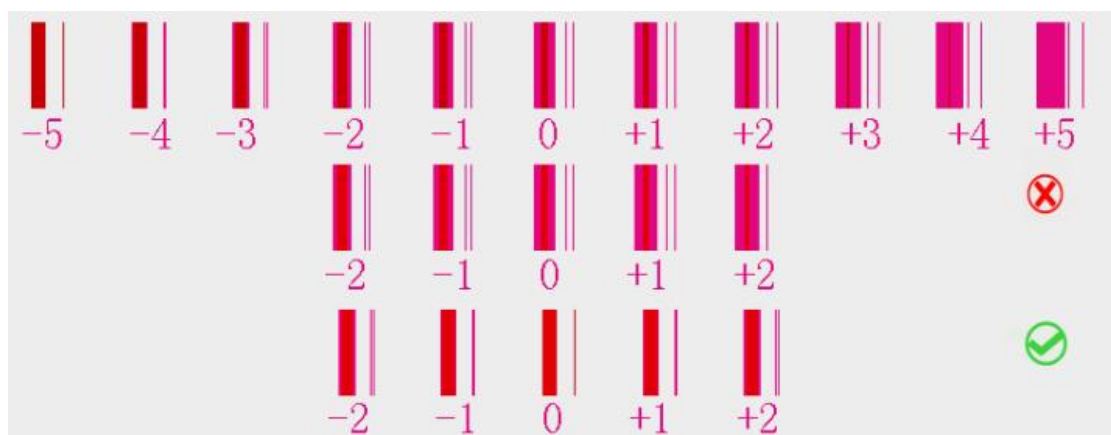
Horizontal L
Horizontal R
Vert Adjust

step 1
Please put the material on the printer, click the "Print" button to print the calibration graph
Print Adjust

H1	-799.0	H2	-402.0	H3	545.0	H4	0.0
----	--------	----	--------	----	-------	----	-----

5.4.8 Bi-direction calibration function

Click "Print Calibration Chart", and the system will print it as follows:



Comparing the schematic diagram, the wrong result is that the calibration line and reference line coincide in the calibration diagram is not in the 0 position, please add or subtract according to the value of the calibration line and the reference line on the original basis and enter it. The correct result is that the

calibration line and reference line coincide at the 0 position.

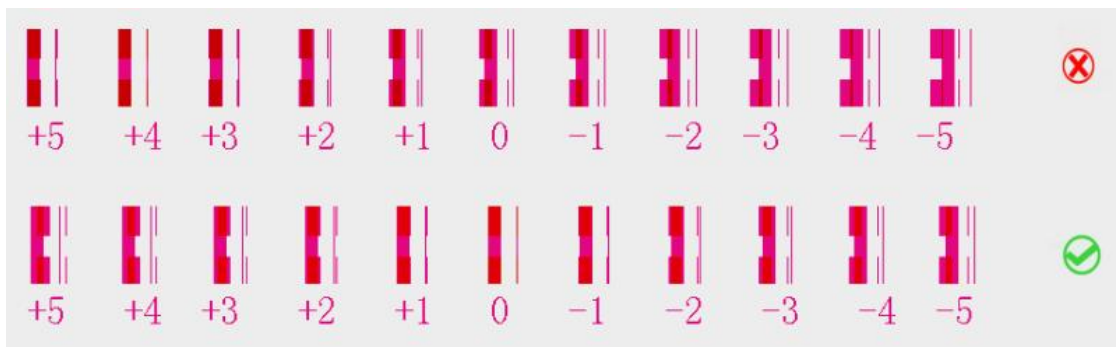
Bidirec Adjust

step 1
Please put the material on the printer, click the "Print" button to print the calibration graph

Bidirect Value:

5.4.9 Color calibration

Click "Print Left/Right calibration picture", and the system will print it

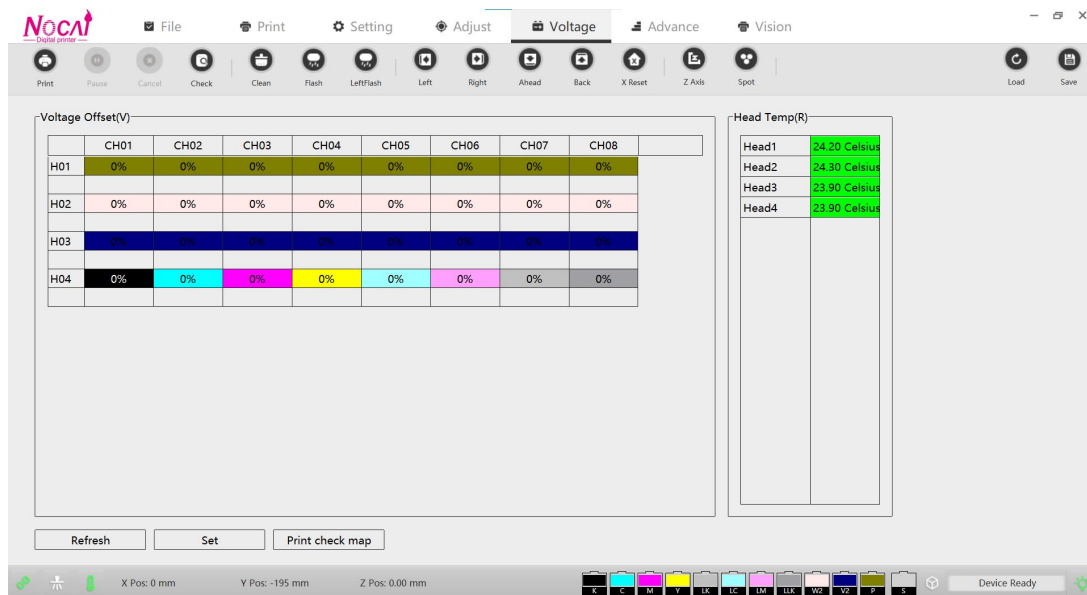


Comparing the schematic diagram, the wrong result is that the calibration line and reference line coincide in the calibration diagram is not in the 0 position, please add or subtract according to the value of the calibration line and the reference line on the original basis and enter it. The correct result is that the calibration line and reference line coincide at the 0 position.

<--	CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
H01	1.0	1.0	1.0	1.0	1.0	0.0	1.0	0.0
H02	2.0	1.0	1.0	0.0	2.0	2.0	2.0	2.0
H03	2.0	2.0	2.0	1.0	2.0	1.0	2.0	2.0
H04	0.0	0.0	0.0	0.0	1.2	0.3	0.5	0.5

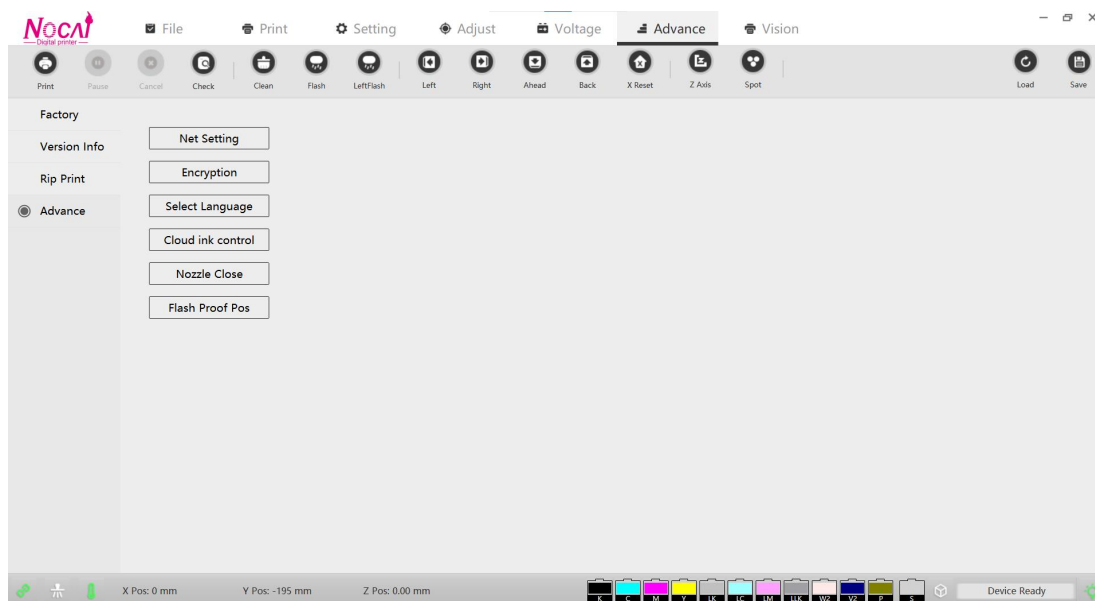
5.5 Voltage

Click on the main menu voltage to enter the voltage window, as shown below:



5.6 Advance

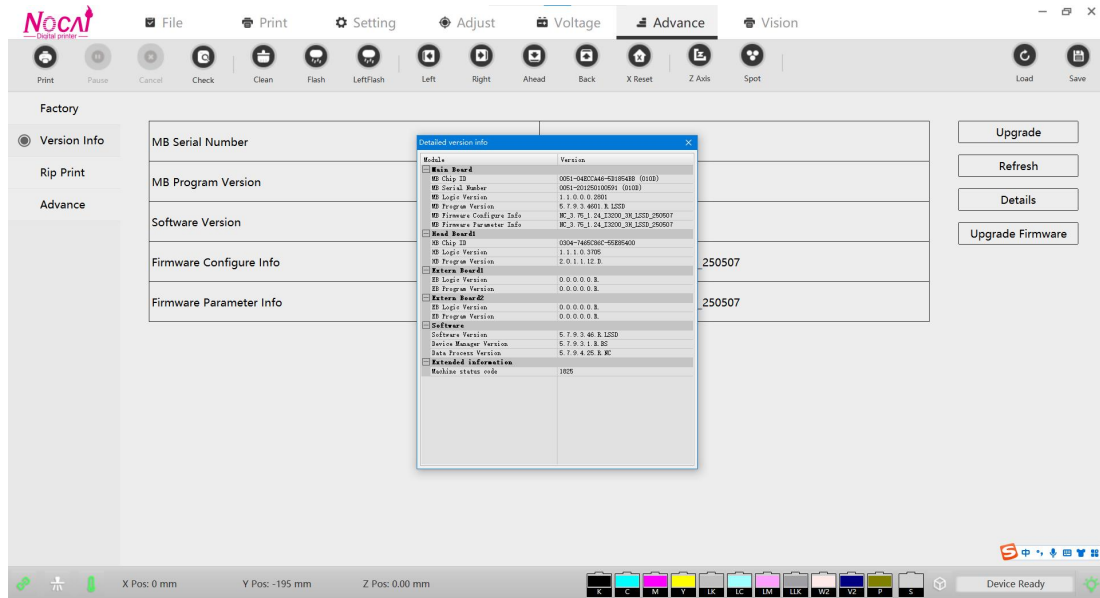
Click the main menu to enter the advanced interface, as shown below:



NO.	Name	Feature description
1	Factory	Enter the entrance to the manufacturer's parameter setting interface
2	Version information	The version information of the system board
3	Rip print	The precision mode of the Rip print
4	Advance	Ink-supply suspension Compensation, Communication Settings, Encryption, Select Language, Read/Write Registers, Print Mode

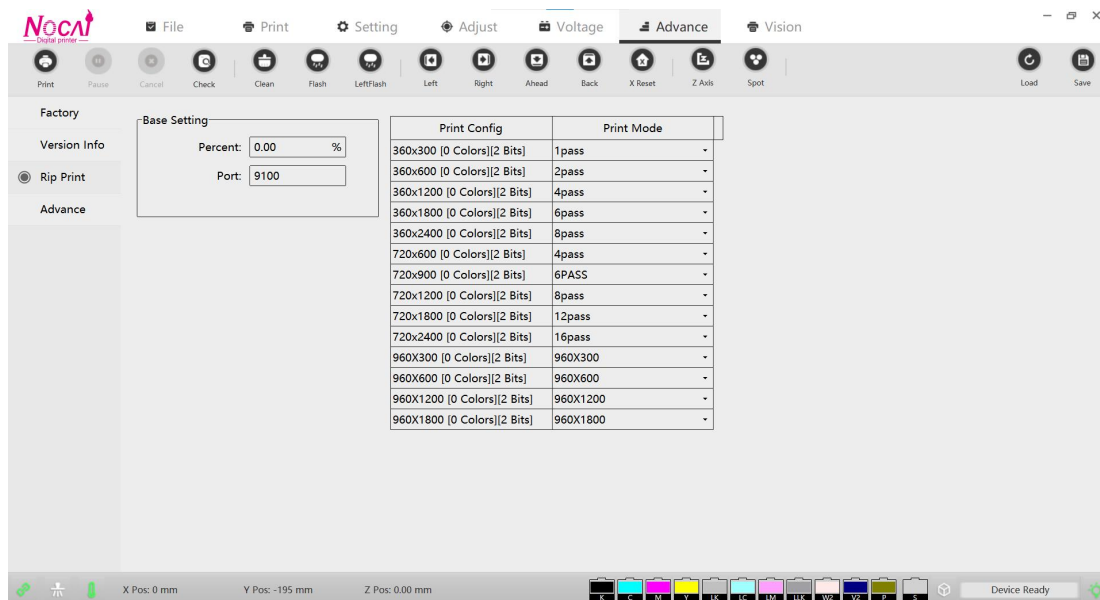
5.6.1 Version information

Click Version Information on the Advanced page, and then click Details to enter the interface as shown below:



5.6.2 Rip print

Click the Rip print in the advanced interface to enter the interface as shown below:

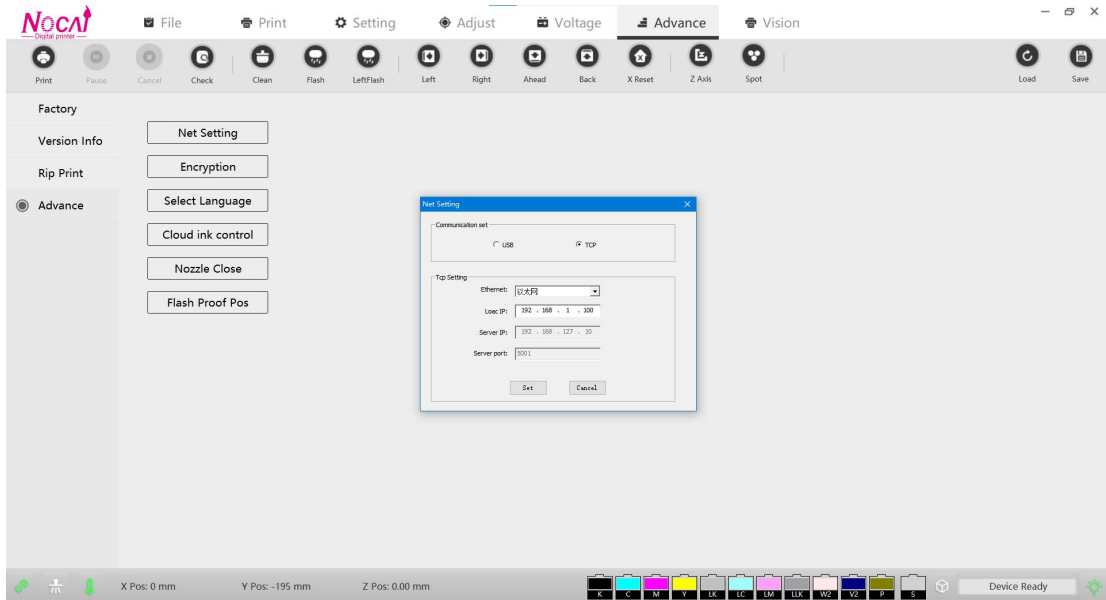


NO.	Name		Feature description
	Base setting	Percent	The RIP starts printing to the set value.
		Port	Usually 9100

5.6.3 Communication settings

Click the communication button in the advanced interface to enter the interface as shown below:

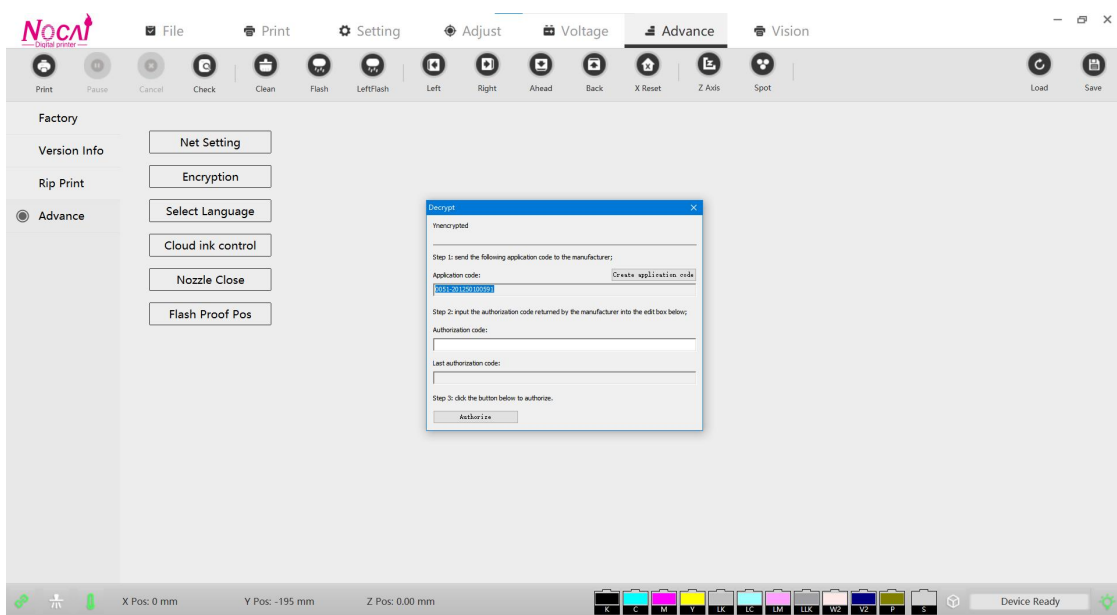
Different communication modes according to the communication interface of the board, such as network communication mode, and IP address needs to be set for TCP communication



5.6.4 Encryption

Go to the Advanced Settings button on the Advanced page, and click Encryption to display the following:

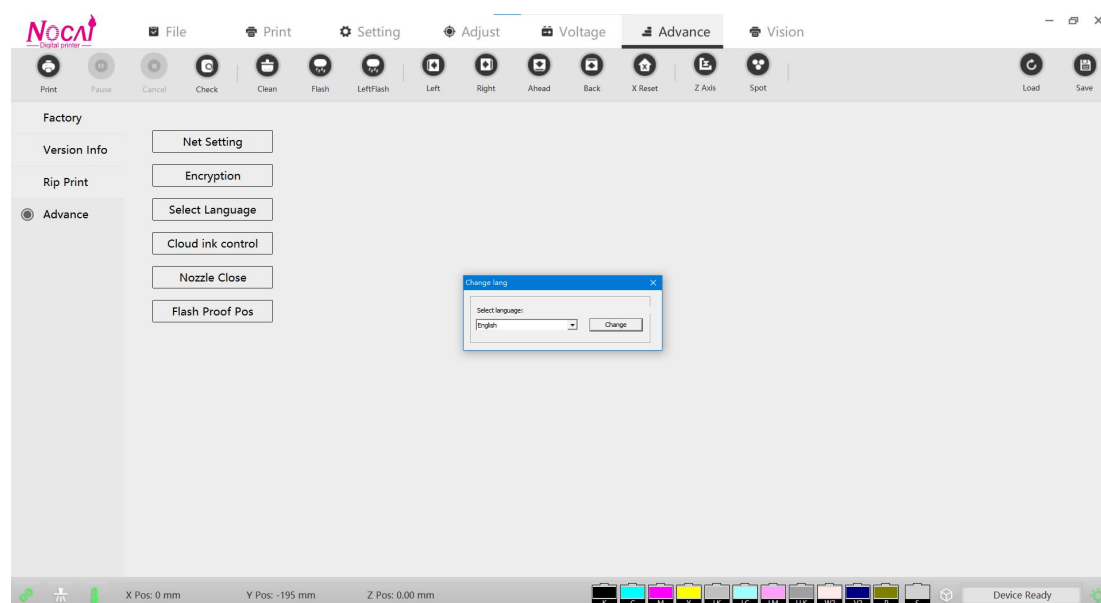
Encryption management and language settings are available



NO.	Name	Feature description
1	Application code	Generate the application code of the mainboard automatically
2	Authorization code	The authorization code generated by the manufacturer according to the application code and the installment time
3	Last authorization code	The authorization code of the previous period is blank when the installment is authorized, and the code is blank for the first authorization
4	Authorize immediately	After entering the authorization code, click Authorize Now to authorize the mainboard in installments

5.6.5 Select language

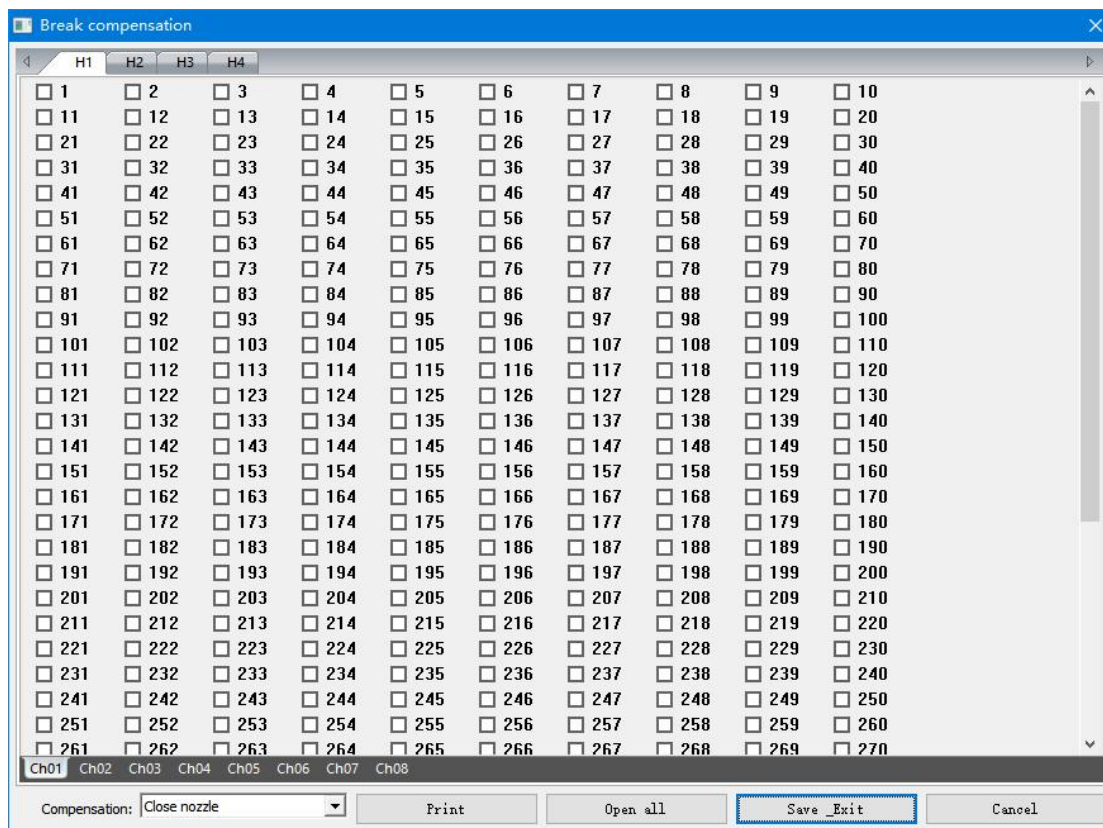
Click the Advanced Settings button on the Advanced page and click "Select Language" to pop up the following interface:



Select the language you want to use, and click Edit. The pop-up window prompts you to confirm and restart the software, and the software will display the selected language.

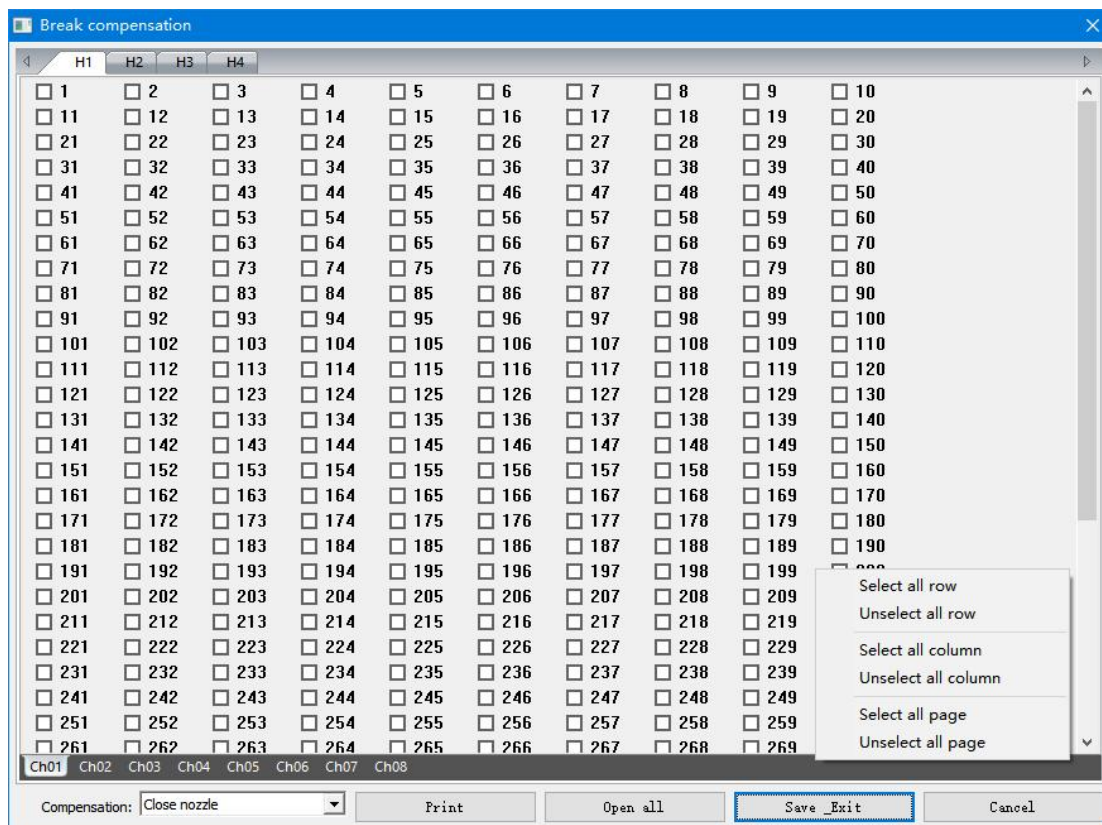
5.6.6 Break compensation

In the advanced settings menu, click the Break Compensation button to enter the interface as shown below:



NO.	Name	Feature description
1	Break treatment	Break treatment
2	Break test	Check the status of the printhead
3	Start the break	Start/Off all the nozzles
4	Save-Exit	Save the current setting and exit Break compensation
5	Cancel	Do not save the current settings and exit the Break setting.

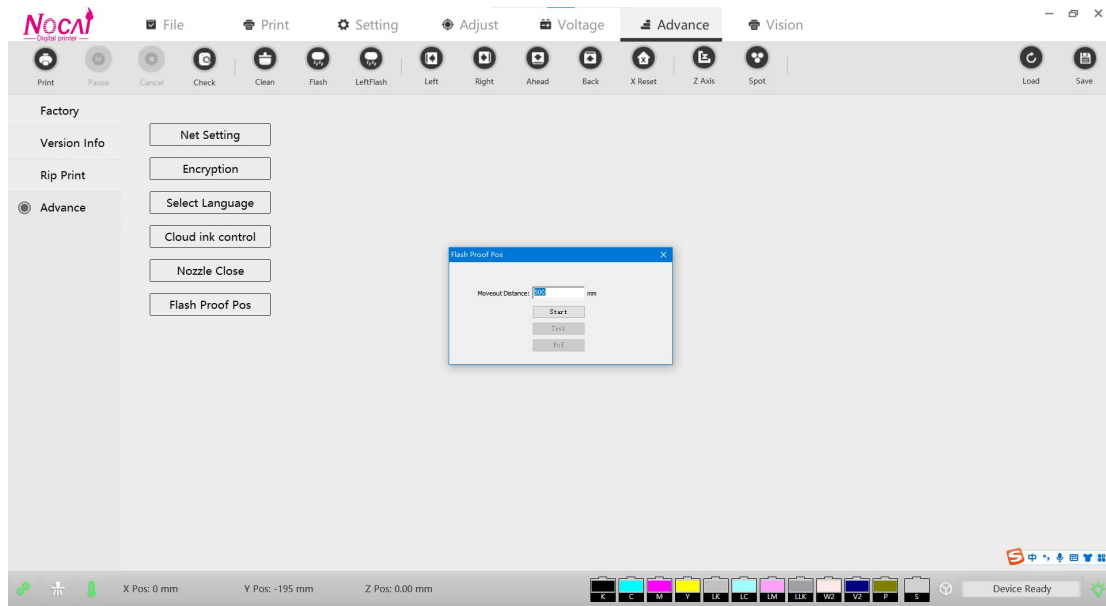
Click right on the nozzle setting interface will pop up a window, as shown in the following figure:



NO.	Name	Feature description
1	Select all in the row	Select all in the row
2	Do not select all in the row	Do not select all in the row
3	Select all in the column	Select all in the column
4	Do not select all in the column	Do not select all in the column
5	Select all the page	Select all the page
6	Do not select all the page	Do not select all the page

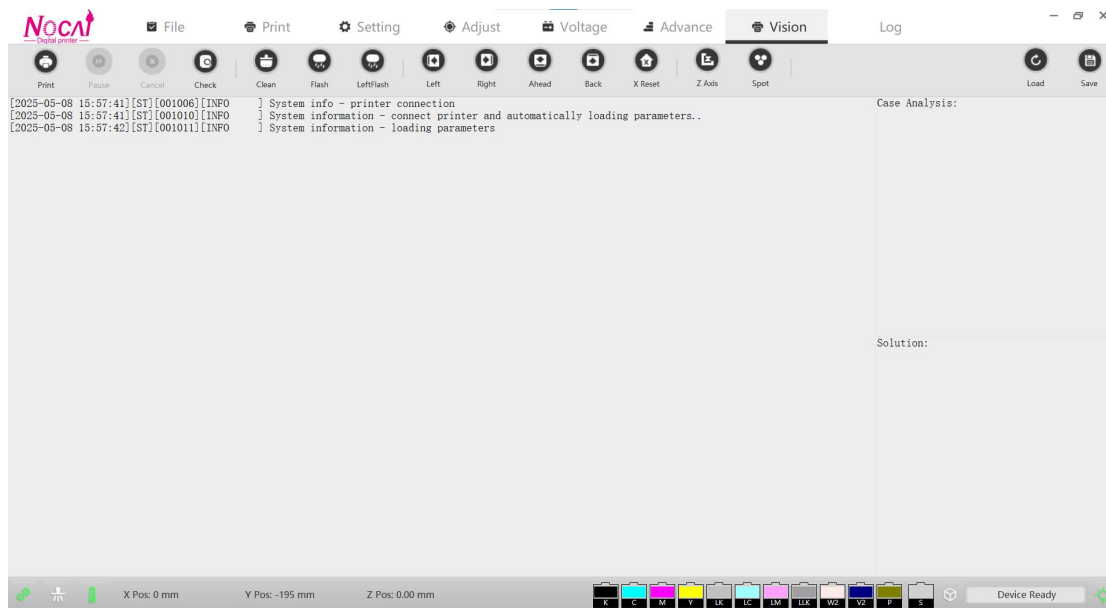
5.6.7 Flash Proof Position

Click the Advanced Settings button under the Advanced interface, click“Flash Proof Position”, there will pop-up a window as the following:


















5.7 Log

Click the log button in the lower right corner of the software to enter the log window, as shown below:

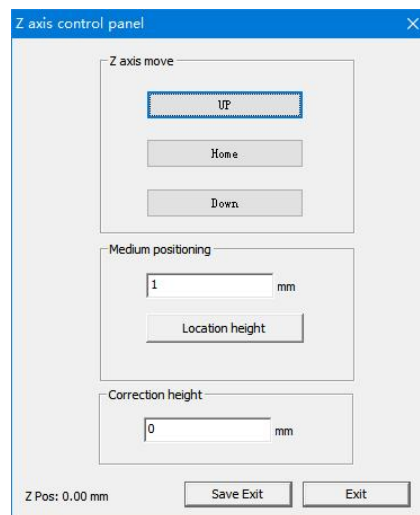


Through this window, you can see the current operation, especially when there is an error or failure, you can know what kind of error information is generated by viewing the debugging information, so as to solve the error in a targeted manner.

5.8 Shortcut

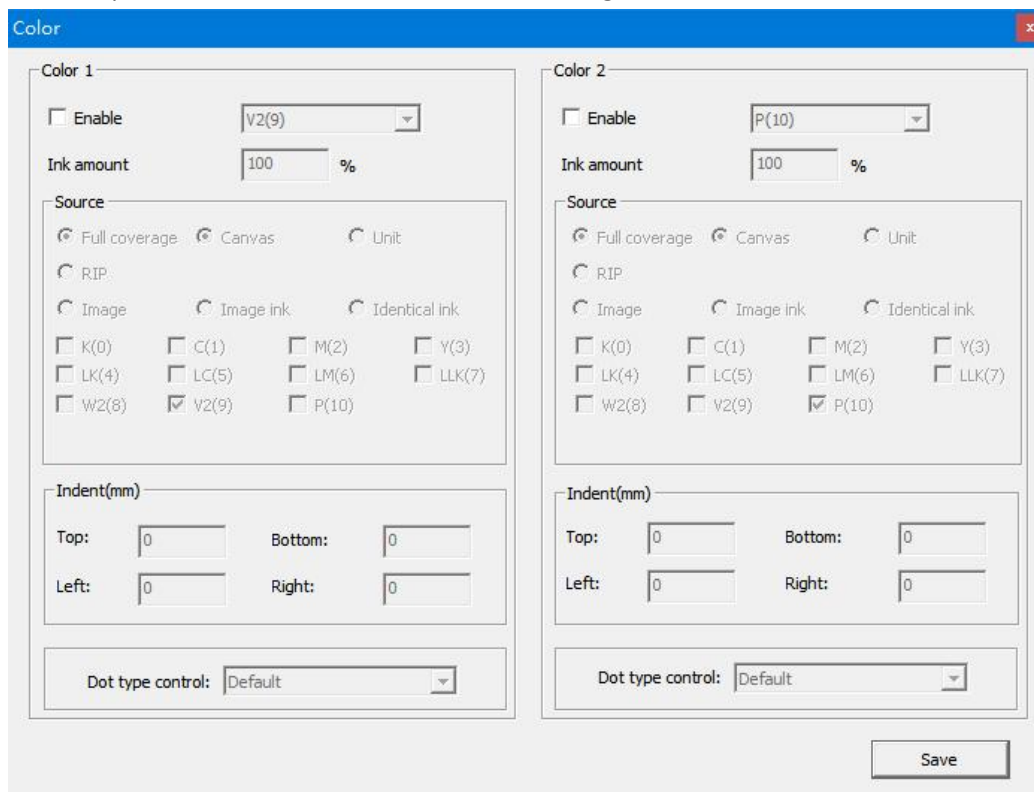
Shortcut button	Feature description
 打印	Start print
 检测	Check the printhead
 暂停	Pause/Resume print
 取消	Cancel print
 清洗	Clean the printhead
 闪喷	Flash spray On/Off
 左侧闪喷	The flash spray position is the flash spray tank position on the left
 左移	X motor moves to the left
 右移	X motor moves to the right
 进料	Feeding
 退料	Material return
 X复位	The cart restoration
 Y复位	The platform restoration
 Z轴	The altimetry control panel button
 专色	Spot color control panel for control data

Z axis control panel:



NO.	Name	Feature description
1	Z axis	Control the movement of Z axis
2	Media positioning	To the set height, where initialization is complete and moves to the media height position

The spot color interface is as the following:



Function description: It can be used to process the original channel data of the PRN file

Special function:








Spot color 1, spot color 2 means that 2 PRN data channels can be operated







Enable, click Effective, and select the specified PRN channel (the specific number of channels supported is determined by the firmware configuration)

The complete image, RIP, and the image refer to the data source of the selected PRN channel, and the complete image represents the color block generated by the software according to the size of the PRN to the selected PRN channel, with a ratio of 0-100%; RIP represents the data from the PRN file, the software does not operate, and the image indicates that the selected PRN channel data is copied from other PRN channel data for use;

Indentation refers to the indentation of pixels around the selected PRN channel data according to parameters (valid in full-image mode)

5.9 Status bar

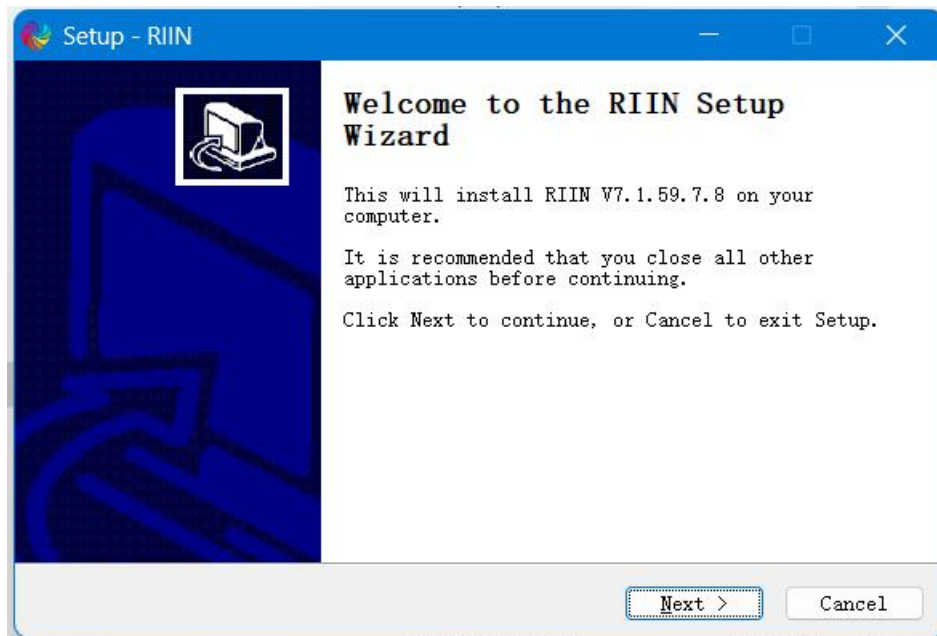
Status bar	Description
	The network cable is connected normally
	The network cable is disconnected
	Offline
	Turn on the Flash Spray status
	Turn off the Flash Spray status
	The system is working properly
	The system reports an error

	Warning
	Offline
	The temperature of the head is normal
	The temperature of the head is abnormal
	Head temperature warning status
	Offline

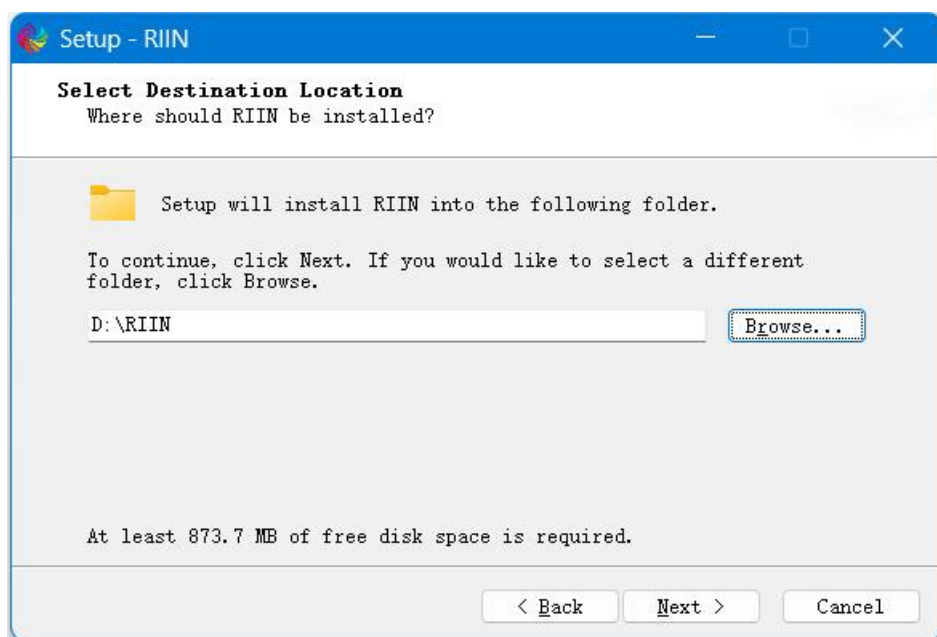
RIIN install procedures

6.1 Install the software

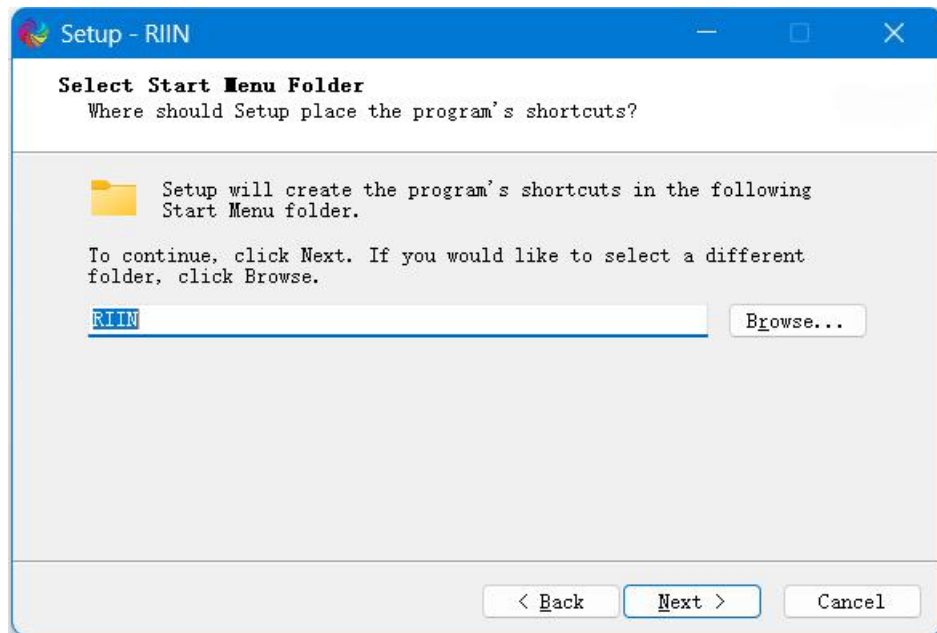
Extract the software package to a folder with the same name and run the .exe file. Click "Next".



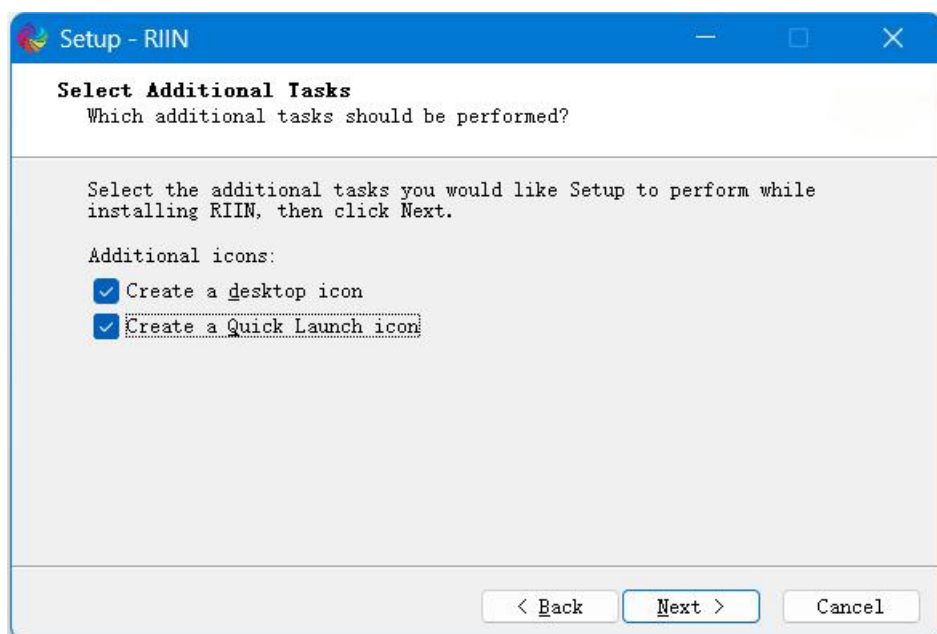
In the "Browse" section, select the path where the software will be installed (the software will require about 200MB of disk space), and click "Next" when you are done.



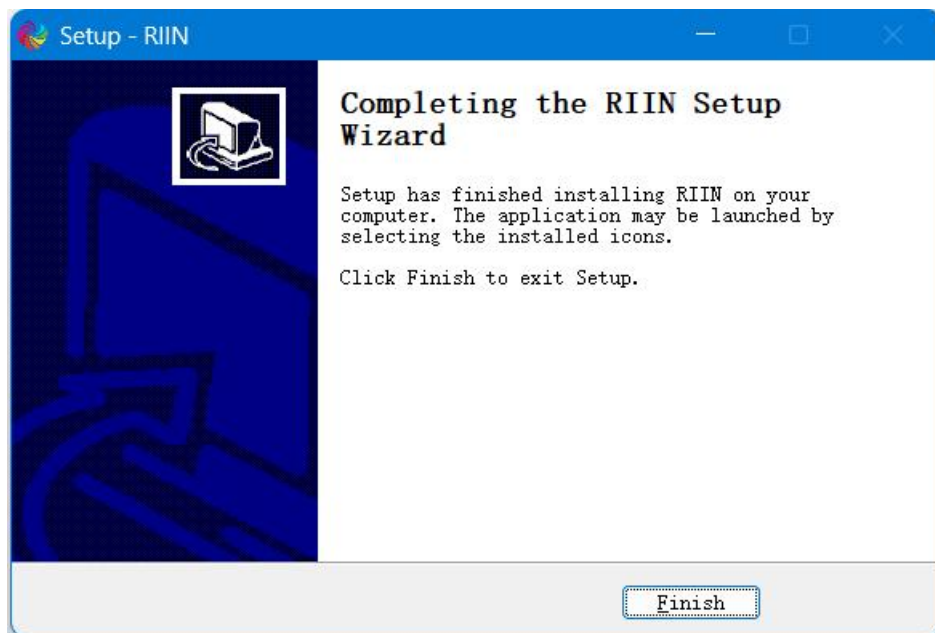
In "Browse", select the folder where the shortcut to the program installation is placed. It is recommended to use the default folder, and click "Next" directly in this step.



Choose whether to create a desktop shortcut icon or create a quick launch icon. It is recommended not to change it, just click "Next".



The progress bar shows that when the installation is complete, click "Next", and then click "Next".



Notes:

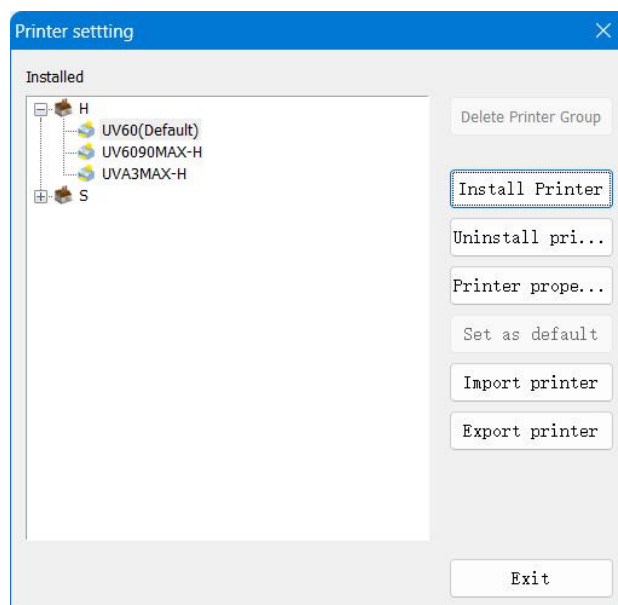
The screen may vary slightly depending on the version of the RIPrint software, but the steps are the same.

If you do not succeed in the first time, we recommend that you uninstall the previous software before installing it for the second time.

6.2 Printer settings



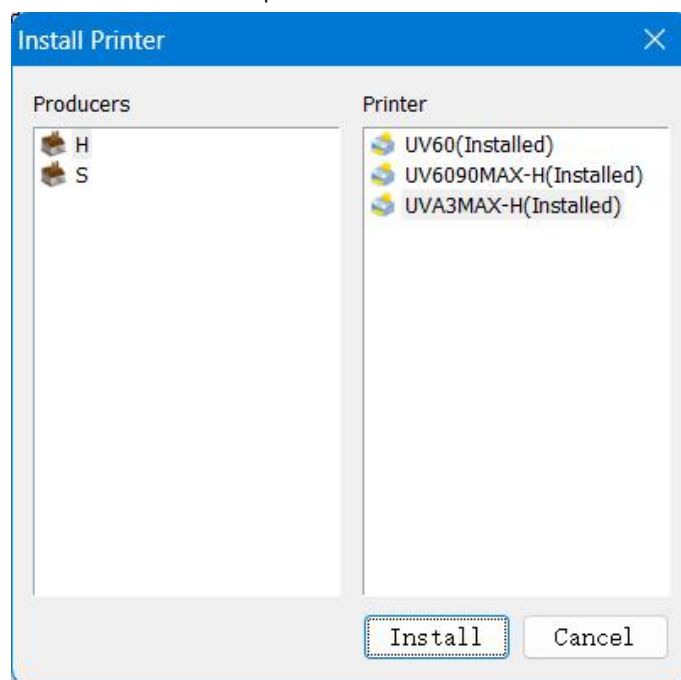
Click "Printer Management" (Shortcut Ctrl+Shift+P), and the program will pop up the printer settings dialog interface, as shown below:



There is already a printer in the printer list, which is the printer driver that comes with the program and supports file output ports.

Install the printer:

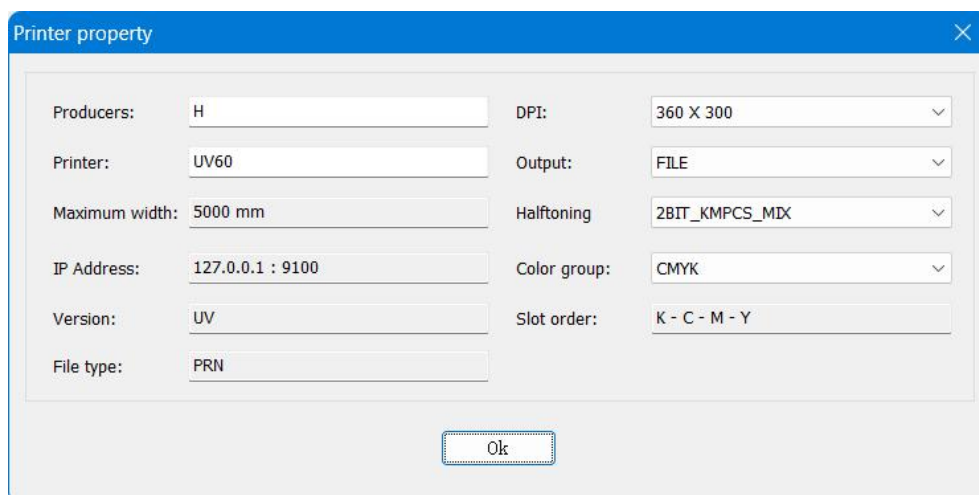
If there isn't a printer that matches your requirements in the list of installed printers, you can add it by yourself. Click the "Install Printer", and the program will pop up the interface to add a printer, as shown below:



Usually, if you've already purchased RIPrint software officially, your software vendor should already have the drivers you need written for you.

The printer you need should be in the printer list of the respective manufacturer, select it, click the "Install" button, and it will appear in the list of installed printers.

Printer property: Select the printer you want to set, click the "Printer Property" button, and the program will pop up the printer property interface, as shown below:



Here, you can check the output resolution, color combination, output mode, and other parameters of the printer. After checking, click "OK" to exit.

Delete Printer: If you want to delete a printer that you don't use from the list of installed printers, you just need to select the printer you don't use and click on it.

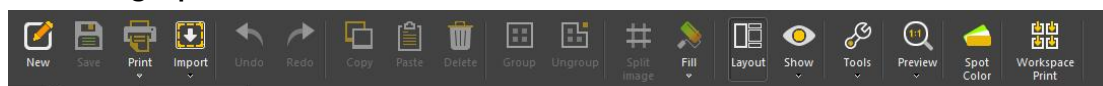
When the Delete Printer is complete, all information about the printer will be deleted, so you should do this carefully.

Default Printer: After setting the parameters of the printer, you need to set the printer you selected as the default printer, select the printer, click the "Set as Default" button, the subscript of the printer will show that the printer is the default printer. At this time, you've finished setting up your printer.

Notes:

If your driver changes any of the printer's settings, you'll need to install the printer again and set your installed printer as the default printer so that you can use the printer for normal printing

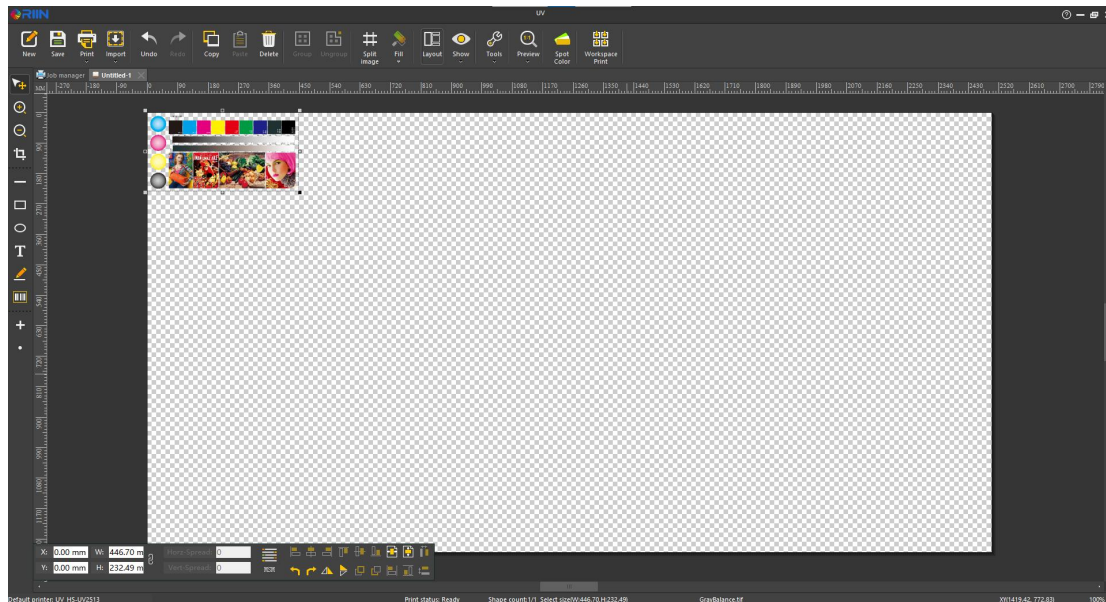
6.3 Add graphic



1. "New" is to create a new canvas.
2. "Save" is to keep the canvas by the current name and catalog.
3. "Print" is to the entrance of the print interface.
4. "Import" is to import the image to the canvas.
5. "Undo" Using this command undoes the last edit that was performed. This software supports multi-level undo.
6. "Redo" Use this command to redo actions that were previously undone with the undo command.
7. "Copy" is to copy the selected image of the canvas.
8. "Paste" is to copy the image to the canvas.
9. "Delete" is to delete the image from the canvas.
10. "Group" is to combine two or more selected images into a single image.
11. "Ungroup" It is the dissolution of the combined image into a single image before the combination.
12. "Split image" It is to divide an image into as many images as you want.
13. "Fill" It is to fill the vector rectangle, ellipse, etc. with the color you want.
14. "Layout" is the entry point to using the typography tool.
15. "Show" It is the entrance to set the page to display or not to display certain content, you can set whether to display the ruler, select the unit of the display ruler, whether to display snapping guides, whether to display snapping elements,

set the snapping distance, whether to display thumbnails, whether to display borders, whether to display dividing lines, whether to set reminders for imported images, and language selection.

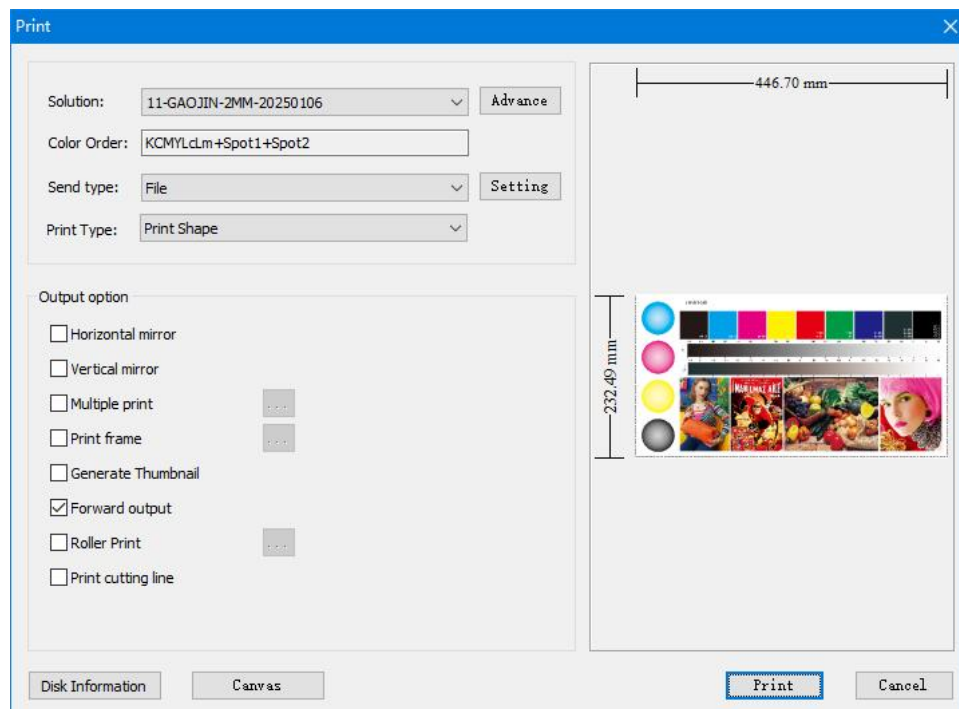
16. "Tools" It is the entry for functions such as clearing the cache and setting dimensional error compensation.



Click "New" can add job file, (You can also pull the image directly into the frame) as shown in the picture:

6.4 Print

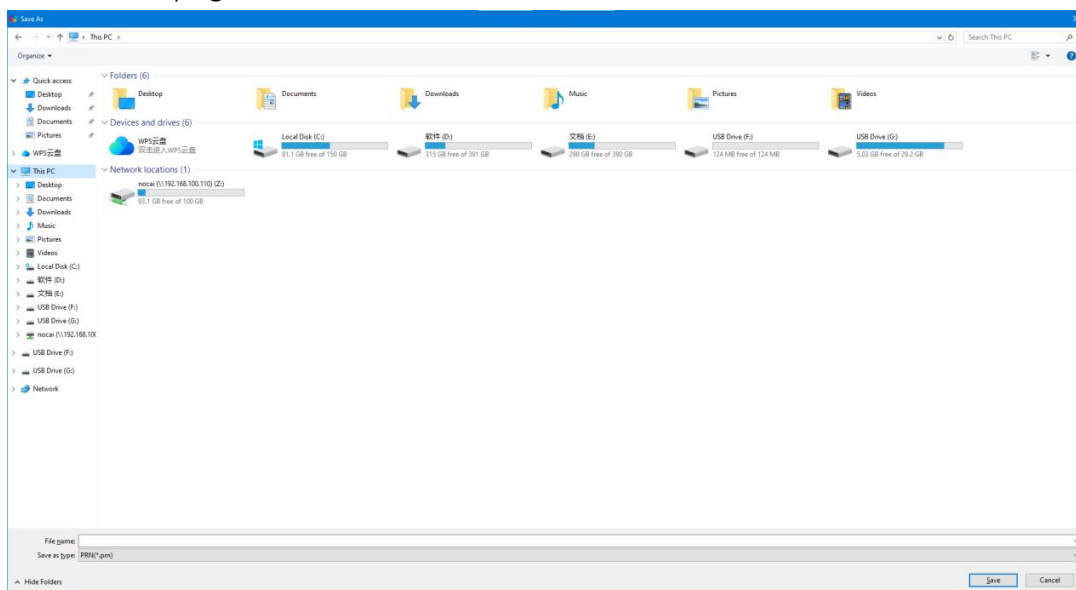
Click "Print" on the Print menu bar and the print confirmation interface will pop up, as shown below



Here you can set the parameters for the relevant printing:

1. Print scheme: Select one of the new print plans that you want to use for printing.
2. How to send: You can choose to print to a file port (output mode: FILE) or to a network port (output mode: TCP/IP). Select the Print to File port to generate a PRN file, and then open the PRN file by Printer Manager and print it. Choosing to print to the network port is to print while processing the image, and does not generate a PRN file. Printer Manager only needs to keep it open in the background and set the parameters.

Select the print to file port and click the "Print" button on the print confirmation page, as shown below:



Maintenance method and announcements

7.1 Maintenance method of printhead

①There is a board chip inside the nozzle, which is directly inserted with the nozzle line. You need to pay attention to the nozzle line and nozzle contact parts, be sure to prevent ink dripping. Once the nozzle line parts and the nozzle has a watery contact, turn off the machine immediately, and remove it for blow-drying. Only in this way can you test whether it is burned or not, and remember not to use with water, otherwise it will burn the nozzle and the nozzle board.

②Due to the nozzle plug and the printhead line is tightly connected. So after a long time there will be contact oxidation, damage, misalignment or contact another line, so when unplugging the nozzle line you need to pay attention to check these problems carefully, and exclude or replace the nozzle line, otherwise it will result in the burnt out of the nozzle or nozzle board.

③When not using the machine you must do a good job of maintenance, adhere to the daily power-on once and test strip printing, if the test strip broken, please clean automatically to ensure that the test strip is normal. You can print a picture, you have to use the cleaning fluid 3-5 drops of ink in the cap top when more than 3 days of vacation unattended. And then combine and seal the nozzle and the cap top, which will play a certain role in the protection.

④When the ink is added to the cartridge, you'd better use the method of adding less diligently, the expiry of the ink is 3 months after opening. Otherwise it will produce deterioration, which will affect the printing effect and cause clogging of the printhead, it is recommended that the customer stir the ink regularly and open the switch at the white ink cartridge when using the machine.

⑤The height of the printhead from the material should be 2-3mm. Confirm the height timely in order to avoid printhead is damaged.

⑥Nozzle sheet metal of the cart must be cleaned regularly to avoid effects on the nozzle.

⑦Avoid printing transparent materials that can cause printhead clogging.

7.2 Ink station maintenance

Due to the combination of the nozzle and the cap top for ink extraction or cleaning, ink dripping will leak inside the ink station or on the sheet metal, so it must be scrubbed regularly or in time with alcohol to keep the ink station clean.

7.3 Encoder maintenance

The grating strip is a part that controls the printing accuracy in the card slot, the grating will be scratched by the sensor when working out of the slot, and there will be direct scratches in the future, and the accuracy will reduce or can not read the data to cause the cart to hit, so be sure to check the position when using the machine, whether it is in the middle, whether it has been rubbed, in the dust or dirty air, the grating bar will be adsorbed by particles or dust to cause dislocation and other problems, please clean and wipe in time (use alcohol). Keep the grating clean and undamaged, and replace it in time if there are scratches that cause misalignment.

7.4 Rail maintenance

Machine guide rail contains cart guide rail. There is a basis of lubricant between guide rail and slider, please add it into the guide rail in a certain period of time, in order to avoid corrosion and astringency of the guide rail for lacking of oil. If you find that there is black oil in the guide rail, you need to use alcohol to wipe firstly and then add lubricant.

7.5 Suction platform maintenance

This printer is equipped with suction function, there are many dense holes on the platform to produce suction to the printing material on the platform, so please keep the platform clean, and avoid blocking the suction holes to cause poor suction is not strong, or watery objects are sucked into the air holes to hurt the fan.

7.6 Change the damper

3 months is recommended.

7.7 Change the cap top

3 months is recommended.

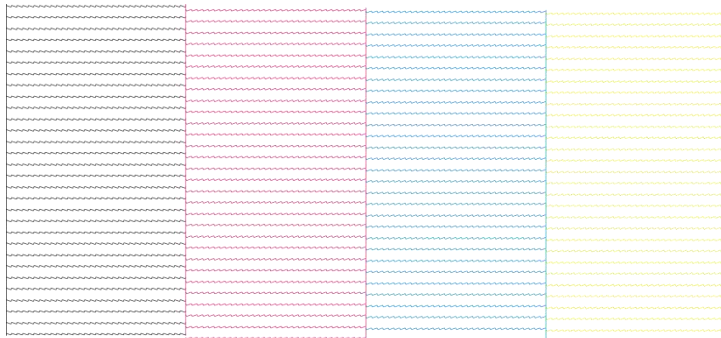
7.8 Maintenance of shell sheet metal

Keep the shell clean, if there is any droplet, please scrub it to avoid ink corrosion on the outer paint surface of the sheet metal.

Common trouble shooting method

8.1 Common examples of ink-supply suspension problems

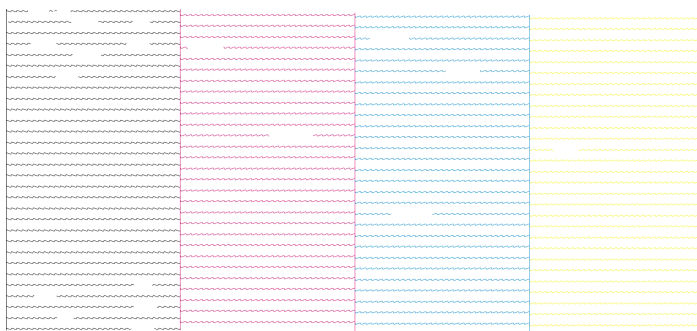
Test strips are all out



Partial ink-supply suspension problems



Note: The partial ink-supply suspension problem of the test strip is caused by the corrosion damage of the ink to the print head. You can choose automatic cleaning. If automatic cleaning cannot solve the problem, you can continue to use it without affecting the print effect.



The ink-supply suspension problem of test strip is severely and partially

Solution:

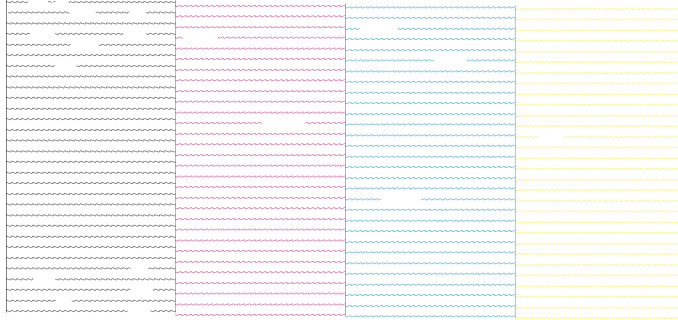
1. Extract the ink by syringe, check whether the ink can flow out normally, and eliminate the possibility of blockage and air leakage. If there is any problem, please replace the damper.
2. After replacing the damper, if it is still blocked, please check whether the ink

tube and the cartridge head of the damper are blocked.

3. Clean the print head manually to ensure that the print head is not blocked.

Summary: The above problems are usually caused by damper and clogging of the nozzles. Please check them firstly.

Almost all of the test strips have the problem of ink-supply suspension

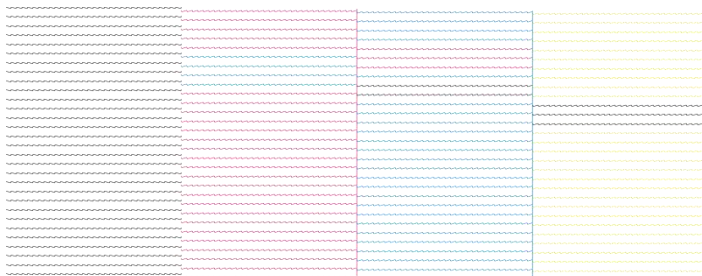


Solution:

1. Automatic cleaning, check whether the ink can be pumped, if the ink cannot be pumped normally, please replace a new cap top or re-adjust the position.
2. Check whether there is any residue on the surface of the nozzle. If there is a single color ink droplet, please replace the corresponding damper. If there is a multi-color ink droplet, please check whether the wiper can wipe the nozzle mirror normally during the automatic cleaning process.
3. Change the head board.

Summary: The above problem is generally less likely to be blocked by the nozzle. Check in detail whether the scraping of the cap top and the nozzle are normal. The above problems generally occur due to the ink entering the nozzle plug-in port or the customer's misoperation after replacing the printhead, resulting in a short circuit of the nozzle, burning the nozzle board or nozzle, because the nozzle will damage the nozzle board, the nozzle board will not damage the nozzle. It is recommended to give priority to replacing the nozzle and replacing the new nozzle line.

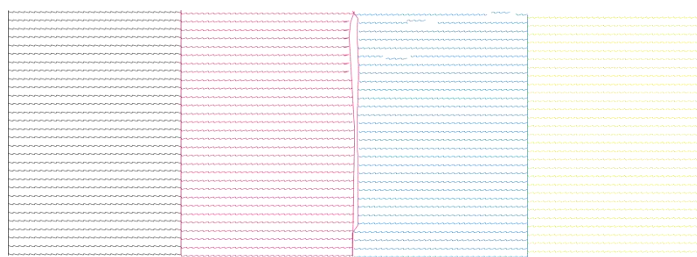
Color mixing: large area color mixing



Solution:

1. Please flush the ink firstly, then print a test strip to check whether the color mixing situation improves or not. If not, please check whether there is residue on the surface of the nozzle. If there is a single color ink droplet, please replace the corresponding damper. If there is a multi-color ink droplet, please check whether the wiper can scrape the nozzle mirror normally during the automatic cleaning process.
2. Change the printhead.

Summary: When the above problem occurs, firstly check whether there is residue on the surface of the nozzle.



Flying ink of test strip

Solution:

1. Check whether the height of the nozzle is within 2-3mm from the printing medium.
2. The printing environment is within the range of 15°C~30°C.
3. Check whether the cap top can pump ink normally.
4. Stir the ink evenly, and pump more than 10ml of the ink from the damper by the syringe, and then clean the print head. If the problem cannot be solved, it is recommended to replace the ink.

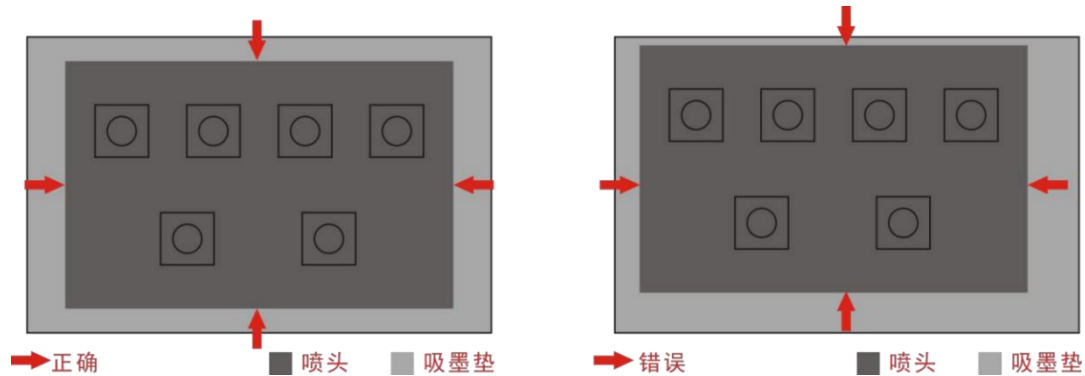
Summary: If the above problems occur, and if there is no special change in the surrounding environment, it is generally caused by the ink precipitation caused by the machine being put on hold for a long time.

8.2 Cleaning without ink extraction/pump

Solution:

1. Pour the cleaning solution into the cap top, and clean to confirm whether the cleaning solution can be pumped out, change the ink pump if it cannot be replaced.
2. Check if the connection tube is off or blocked, reconnect or replace it.
3. The cap top is damaged or deteriorated, please replace it (priority).

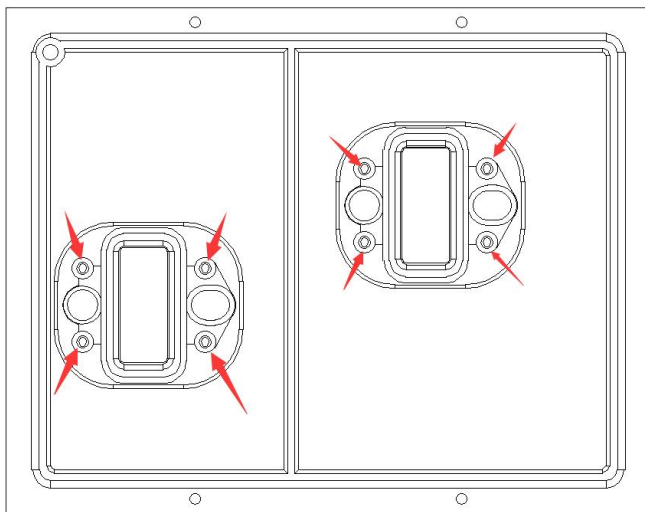
4. Check that the cap top and the print head are in the correct position, and the cap top can not seal the print head. As shown in the following:



Adjusting the combination position of the cap top and the mirror surface of the nozzle, and the square edge of the cap top is generally located in the iron sheet of the mirror edge of the nozzle; If it is located outside the edge of the iron sheet, it means the printhead and cap top are leaking, and the ink cannot be pumped, and the test strip cannot be adjusted normally.

The adjustment method refer to the graphic.

5. The adjustment method of the cap top is shown in the figure below:



As shown in the figure above, adjusting the position of the cap top, and the adjustment of the cap top can be moved in a wide range of alignment, which is convenient to complete, and the adjustment can be made by loosening the fixed screw of the cap top.

6. Micro-adjustment of the head

Summary: If the above problem occurs, it is because the machine has been used for a long time, the nozzle has been re-installed and a new cap top has been installed, resulting in deviation of the position of the nozzle. It is necessary to

adjust the front, rear, left and right positions between the nozzle and the cap top. The specific deviation should be combined with the bottom of the printhead and the cap top. Clean it automatically after debugging. During the automatic cleaning process, there will be ink beads on the nozzle mirror before scraping, which means that the ink is drawn normally.

8.3 Cart with great resistance

1、 The cart moves to the middle of the machine to start, and the cart does not move to report an error.

1.1 When the machine is turned on, move the cart by hand to see if it can be pushed, if it can be pushed easily, please check whether the X-axis drive motor indicator light is on or flashing red to report an error, and whether the base screw of the motor pulley is tightened.

1.2 Check whether the cart board is lit, and replace the cart board data cable if it is not on.

1.3 Change the cart board.

1.4 Check that the X-axis motor pulse signal line has these problems such as loose, broken, and aging interfaces.

1.5 Change the headboard.

Summary: In the event of the above problems, the first consideration is the hardware structure of the machine.

2、 The cart moves to the middle of the machine to start, and the cart moves left to report an error

2.1 Change the cable of cart board.

2.2 Change the cart board.

2.3 Change the mainboard.(Almost impossible)

Summary: If the above problem occurs, the cart board cannot receive the instructions sent by the mainrboard normally.

3、 The cart moves to the middle of the machine to start, and the cart moves right to report an error

3.1 Check whether the light is on or not, and if not, it is recommended to replace the light grid sensor.

3.2 Whether there are obvious scratches on the encoder strip, if any, it is recommended to replace it.

3.3 Whether there is ink, oil stains, or dust on the encoder strip, if so, please wipe it clean with alcohol.

3.4 Whether the encoder strip is stuck in the middle of the encoder sensor, centering left and right, up and down, moving back and forth without scratching.

3.5 Whether the encoder sensor is stuck in the grating card slot.

3.6 Change the cart board.

Summary: The above problem is because the cart has received the command from the mainboard, but the encoder sensor cannot data correctly.

4、 During the printing process, the machine reports errors from time to time

4.1 Whether there are obvious scratches on the encoder strip, if any, it is recommended to replace it.

4.2 Whether the encoder strip has ink, oil stains, dust, wipe and clean it with alcohol.

4.3 Whether the encoder strip is stuck in the middle, left and right up and down centered, moving back and forth without scratching.

4.4 Whether the X-axis motor belt is loose.

4.5 Whether the base screws of the motor cart are tightened.

4.6 Change the cable of the mainboard.

4.7 Check whether the temperature of the X-axis drive motor is above 50 degrees, if so, reconnect the X-axis drive signal cable or check whether the X-axis drive motor is parallel to the transverse belt (note that below 50 degrees is within the normal range).

Summary: In the event of the above problem, the encoder sensor can read the data, but there will be an error data feedback.

5、 The cart moves to the middle to turn on, the ink cart moves to the left, then to the right, and quickly crashes to the left after reaching the ink station, and returns to the middle to report an error

5.1 Check whether the origin sensor is offset or not.

5.2 Change the cart origin sensor.

5.3 Change the cable of the cart origin sensor.

5.4 Change the cart board.

6、 The front and rear limit sensors are incorrect

6.1 Pull up the front and rear limit sensor cables.

6.2 Change the front and rear limit sensor.

6.3 Check whether the connection wire of the limit sensor is loose, broken, aging.

6.4 Change the mainboard.

8.4 Ink does not dry

All products are not dry:

1. Check whether the UV lamp lights up or not during printing. If it does not light up, please refer to the solution of UV light not lighting up.

The edges of the product are not dry:

1. Confirm the version number (Pull down the machine settings menu to find the device information)
2. Manufacturer make sure the version number and upgrade the printer.
3. Adjust the UV lamp irradiation distance in the advanced settings of the driver panel.

Introduction of board circuit

Wiring instructions of UV60 board



