NC-UV2513

User Manual

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

Catalogue

Notice

## Please read these instructions before using the machine

1. Machine should not be used by children or the disabled.If necessary,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 it is better 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 itself,the printing table and surroundings;

9. Please keep a stable temperature in the working room,do not use the 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 the machine;

13. Please use the machine according to local legal policy;

14. Make sure the head not touch anything before sending picture.Height sensor do not work when meets transparent materials;

15. When the machine is working, your eyes will feel sick if staring at the UV lamp for a long time, it is better 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 machine parts. And remember to take take off the power charger when move the machine;

17. When add ink,you may touch ink tube,ink bottle and ink cap and some other parts,please protect yourself in advance;

18. The table which used to put the machine should be make sure its stability to place the machine and protect machine from shaking during working;

19. Do not use UV LED lamp for a long time;

20. Make sure the machine is normally grounded;

21. Do not use the machine in thunderstorm day in order to 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

①Start button：Place the material

②Stop button：The front cover of the machine is powered partially

③Origin position：

④Ink supply reset：

⑤Platform suction button 1：Start/stop platform suction for area 1

⑥Platform suction button 2：Start/stop platform suction for area 2

⑦Platform suction button 3：Start/stop platform suction for area 3

⑧Platform suction button 4：Start/stop platform suction for area 4

⑨Cartridge warning light：Indicates that the cartridge is lack of ink

⑩Print platform：Place the material

⑪Emergency stop switch：Cut off the power quickly

⑫Three-color warning light：There was an error in the operation of the device

⑬Monitor：Connect to the computer display

⑮Print cart：For machine printing and LED curing

⑯Beam：The structure that supports the movement of the trolley

⑰Flash spray tank：The position of flash spraying
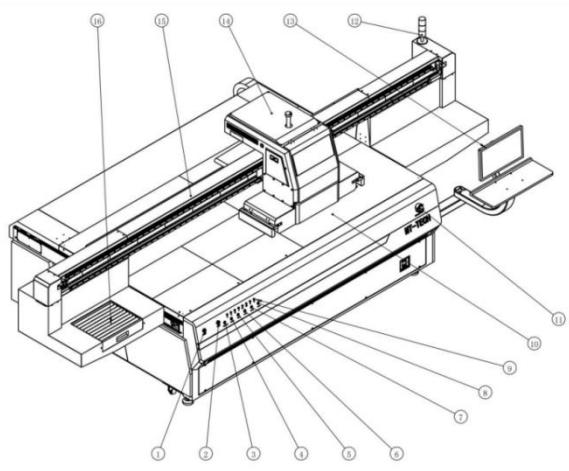
## 1.2 Graphic analysis of the side and back of the machine

①Electrical box：Location of electrical components

②Cartridge：It contains an ink bottle that can be refilled at any time

③Negative pressure generator: a key component for maintaining stable ink supply

④Turbine fan: Suction air by connecting with a pipe and suction platform
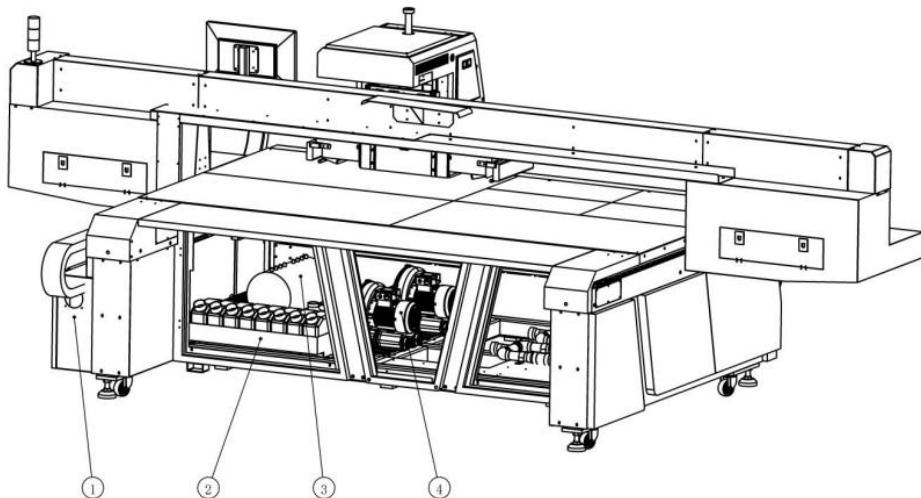
1.3 Analysis of cart of the machine

①Printhead：It is used for printing.

②Varnish lamp：Accelerate the UV varnish curing

③Ink cart anti-collision device: the role of protecting the printhead

④UV lamp：Accelerate ink curing

⑤Lower limit sensor of ink station: control the ink station lifting

⑥Ball Screw: Converts rotational motion into linear motion

⑦Secondary cartridge: Ink is supplied to the printhead controlled by a negative pressure system

⑧Printhead Driver Board: Driver control the printhead inkjet

⑨Ink station limit sensor：Control the lifting of the ink station

⑩42 stepper motor：Control the lifting of the ink cart

⑪Leadshine Drive DM556：Precise control of 42 stepper motors

⑫Lifting handle: It can control the lifting of the ink cart manually

⑬Mainboard：

⑭Flash button: press the ink on the printhead and clean the printhead

⑮Negative pressure control panel: controls the air pressure of the negative pressure system

⑯Static Eliminator: Eliminates static electricity from the material
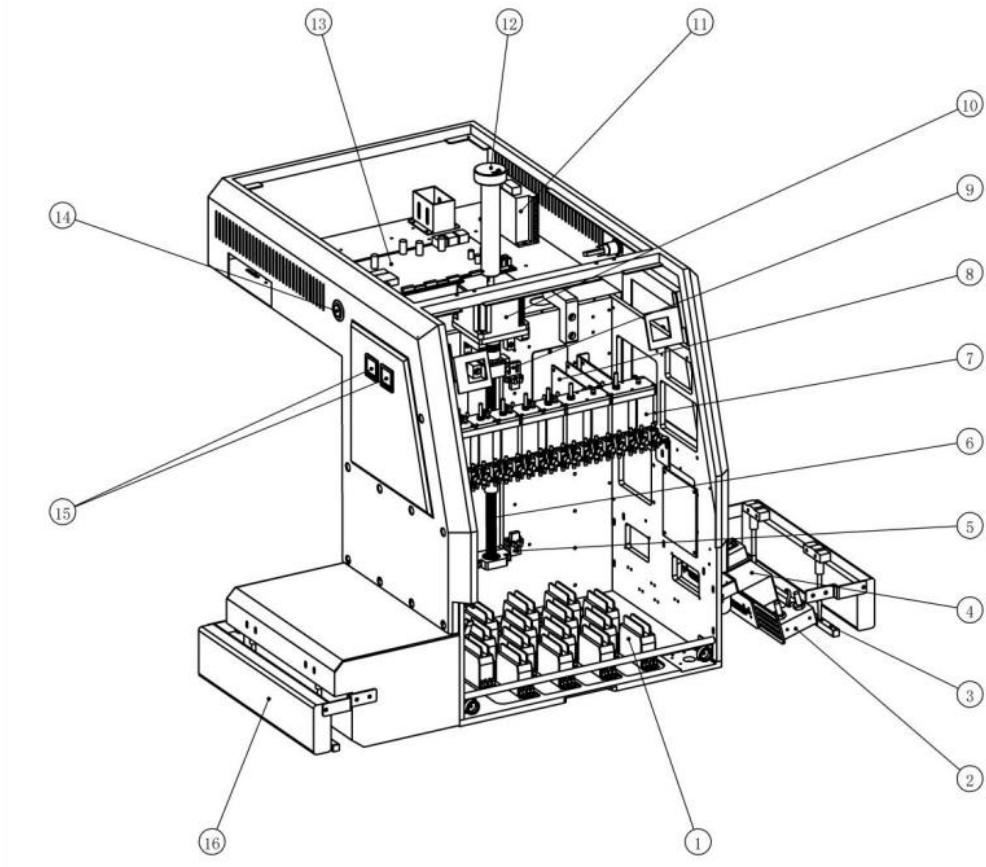
1.4 Analysis of machine beam diagram

①Left limit sensor: control the left and right movement of the ink cart
②Limit glue: ink cart limit

③Linear motor: A magnetic field is generated to drive the linear motor rotor to move

④Ink cart slide rail: left and right movement track of the ink cart

⑤Magnetic grid: X-axis precision dimensional control

⑥Origin Sensor: Ink Cart Initial
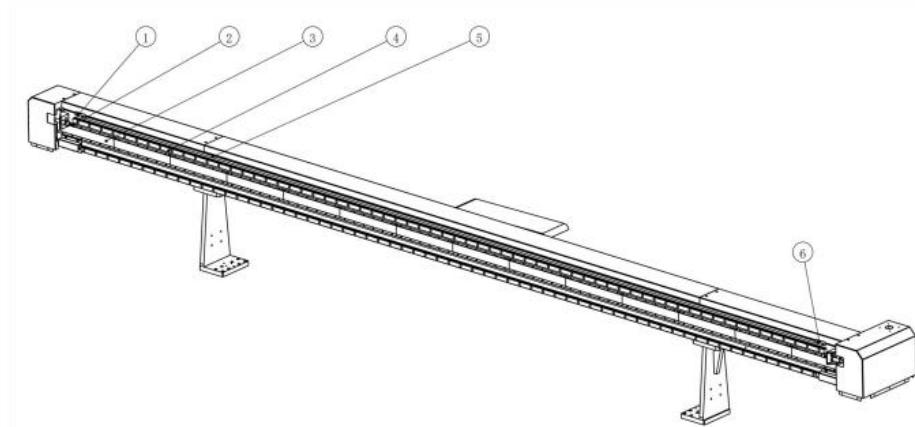
## 1.5 Negative pressure generator diagram analysis

①Negative pressure control board

②Solenoid valves

③Pneumatic tanks

④Diaphragm pumps

⑤Negative pressure solenoid valve
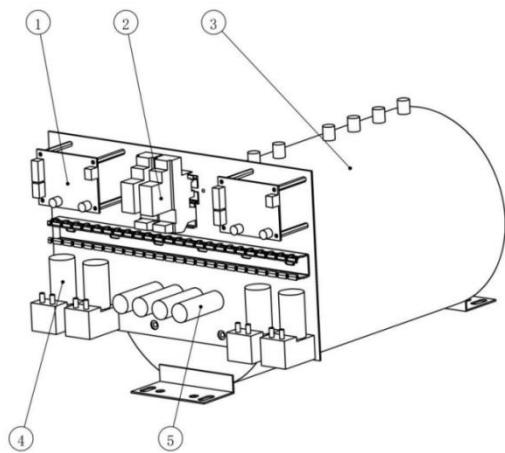
Machine Initialization Confirmation

2.1 Preparations

Make sure that the machine looks normal, and matches the power supply voltage (220V or 110V) of the machine.

2.2 Confirm that the boot initialization process is normal

The machine is powered on, turn on the main power switch at the back of the machine, click the power button on the front panel, the machine starts, and the initialization action is executed.
The machine initializes the action process completely.

2.3 The machine is moving normally

【The network cable connects the computer and the machine→ 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 machine can feedback normally】

2.4 Negative pressure plate operation

According to sw1（unit 1）sw2（unit 0.1）Numeric dials

Colored negative pressure
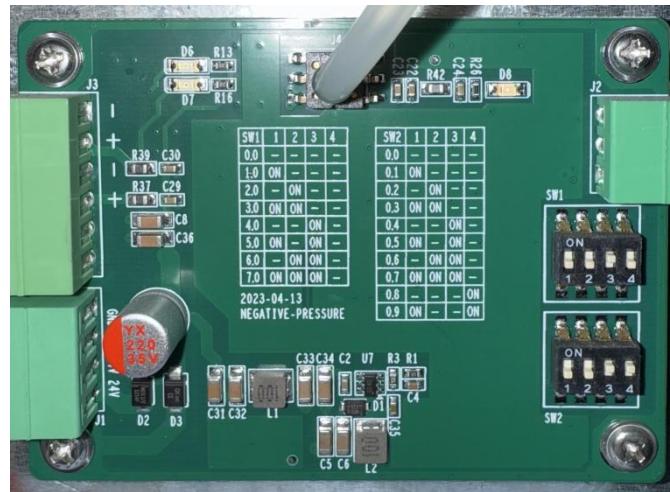
White ink negative pressure

2.5 Secondary cartridge thermostat

SV: set-point

PV: display value

The up and down arrows are used to add or subtract the value to set the temperature


Secondary cartridge heating

2.6 Fixed sheet metal for the beams

Remember to remove the fixed sheet metal on both sides of the beam for the new machine
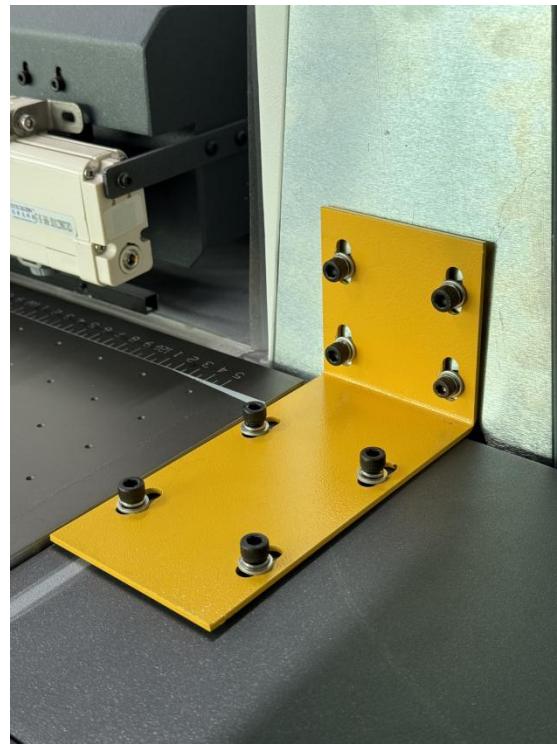
2.7 Fixed screws of the cart

Open the front cover of the cart, and there are two screws on both sides to be screwed up or removed, (such as the screws can be screwed off and put on the back plate during the transportation)
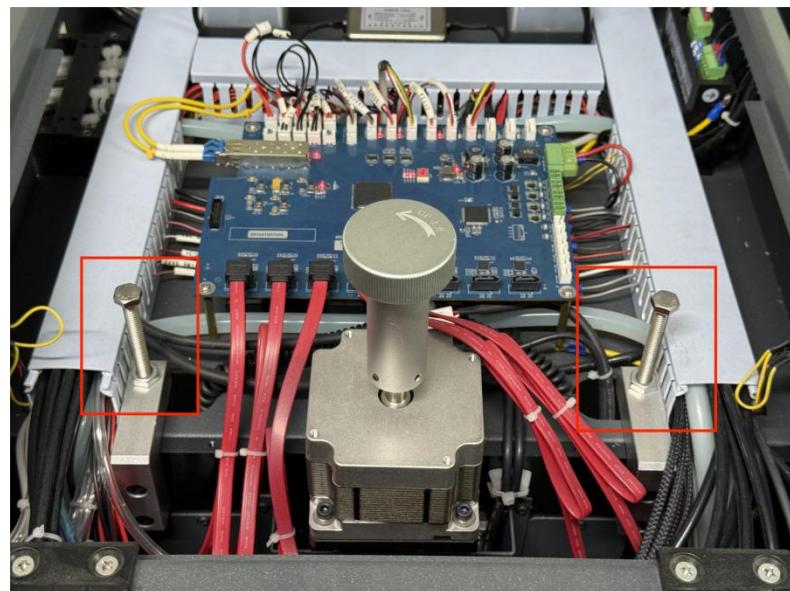
How to add ink

1. Follow the color tips to add the corresponding ink as following.

2. In order to prevent the ink from leaking out and contaminating the shell sheet metal when adding ink, protective measures need to be taken. The bottle mouth can be wrapped with paper. After adding the ink, twist the ink bottle tightly.

3. There are two buttons on both sides of the inkjet cart, the left is the pressing button of color ink, and the right is the pressing button of white ink. Press sequentially and hold it about 5 seconds. After the ink pressing is completed, wipe the surface of the nozzle with a dust-free cloth, adjust the height of the cart, print the nozzle detection graphic, and check the status of the nozzle. The condition of the printhead directly affects the effect. After starting, you need to print the printhead status bar to check whether the printhead is in good condition, if the state is good, you can carry out the operation of the printing task, if the state is not good, or the printing pattern is biased in the middle, you should stop the printing task and check the printhead, usually the ink can be pressed.

4. Print the test strip and open the online driver software PrintExp, the lower left corner shows that the connection is successful, click to test, print the test strip, if there is any lack of color or ink supply-suspension problem, please continue to clean the nozzle, until the test strip is complete. The machine goes into standby.
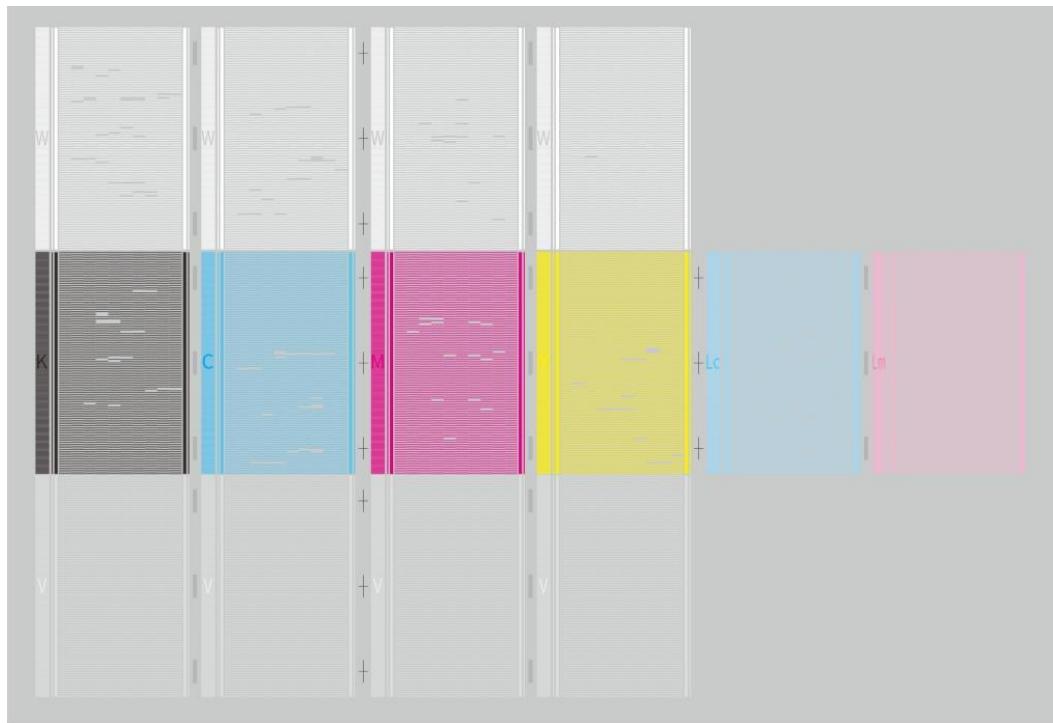
The test strip is incomplete and the ink needs to be pressed
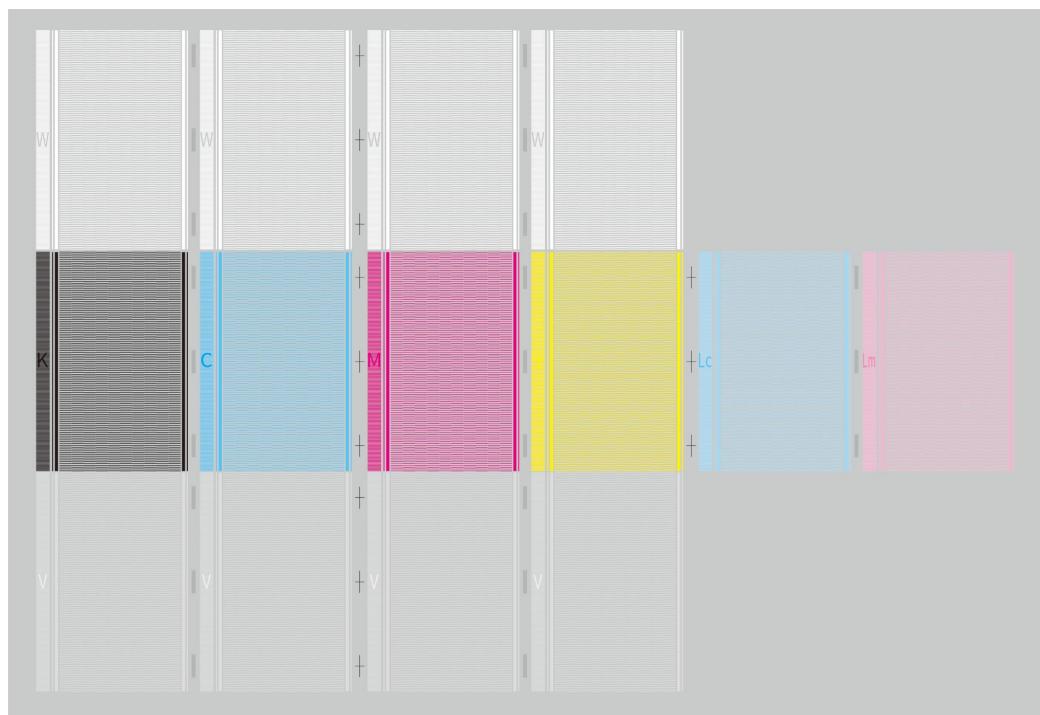
Complete test strip

Install and setup the driver

4.1 Computer requirements

System version：Win7, Win8, or Win10 on a 64-bit system.

Memory: 4GB or more；

Hard disk: 250GB or more.

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

PrintExp software can be opened and used directly, first find the folder where the PrintExp software is placed, open it, and find ![PrintExp_X64.exe], double-click on the program to launch the PrintExp software.

When the connection is successful,

The ink station will move down, and then the head will be raised.

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

### 2、Software Online Setup Instructions

Gigabit network card judgment

Before the network connection, first check the computer's network card must be Gigabit network card to connect normally, the difference between 100 Gigabit network card and Gigabit network card:

Gigabit network cards contain these characters：Gigabit、GBE、10/100/1000M、RTL8169 。

The 100 Gigabit network card contains these 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：
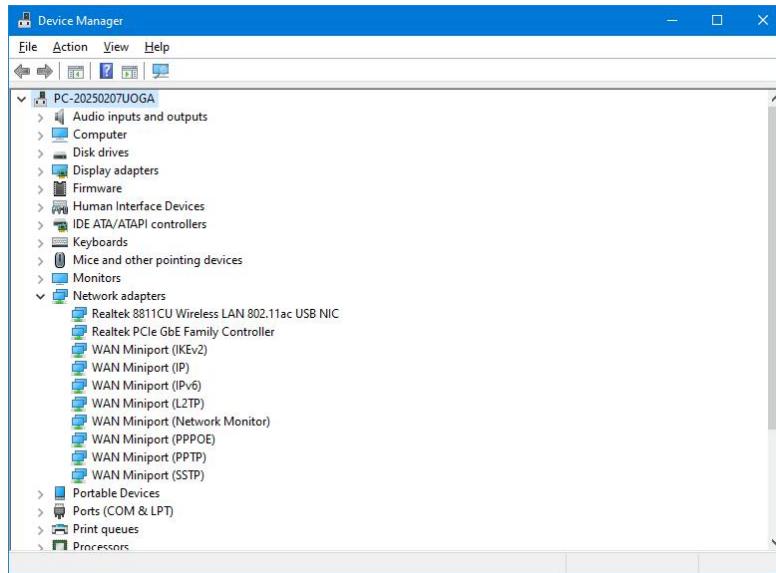

3、 Network settings

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.

How to set up the connection: the advanced menu in the online software → the advanced menu→the communication settings, and you can see the communication settings window at this time, as shown in the figure below：
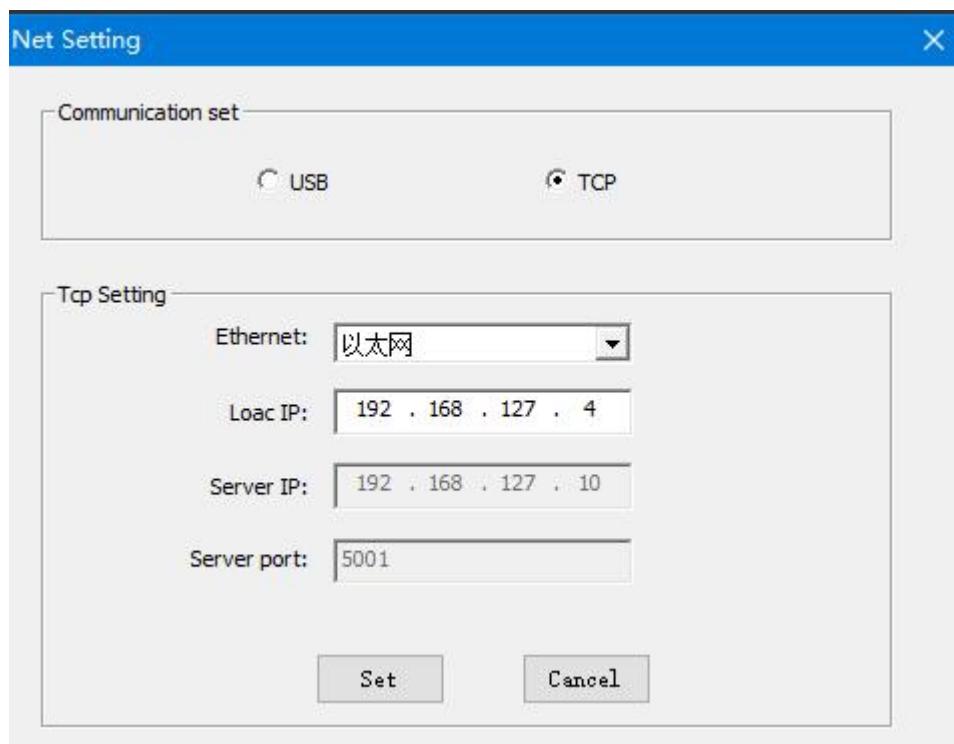
The server IP and server port settings have been fixed, there is no need to set it up, just set the local IP, as shown in the figure above, enter 192.168.127.111 in the local IP position (note that the last three digits can be any number in the range of 1-255 except 10), click "Set" to check if the network 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 the Ethernet or local connection → the properties will be shown as the following：
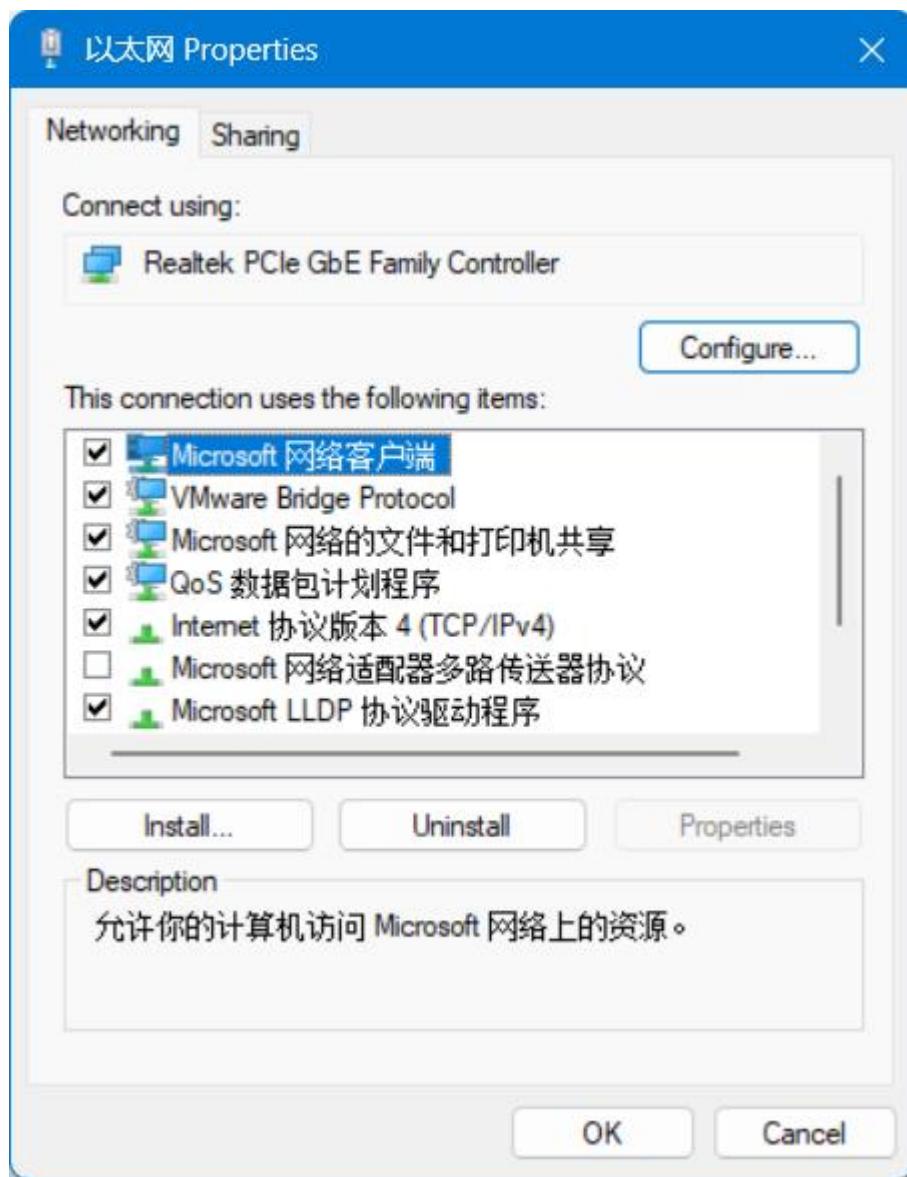
Double-click the highlighted bar in the above figure to enter the following
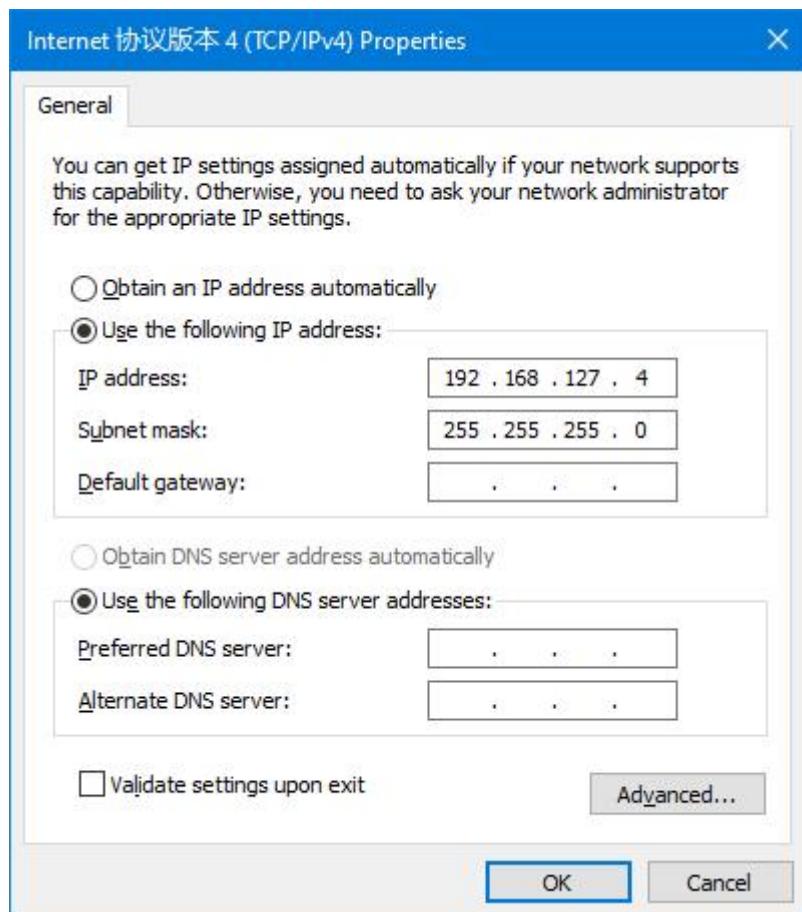
interface：

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

Then go back to the main interface window 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 go.

The setup and introduction of driver function

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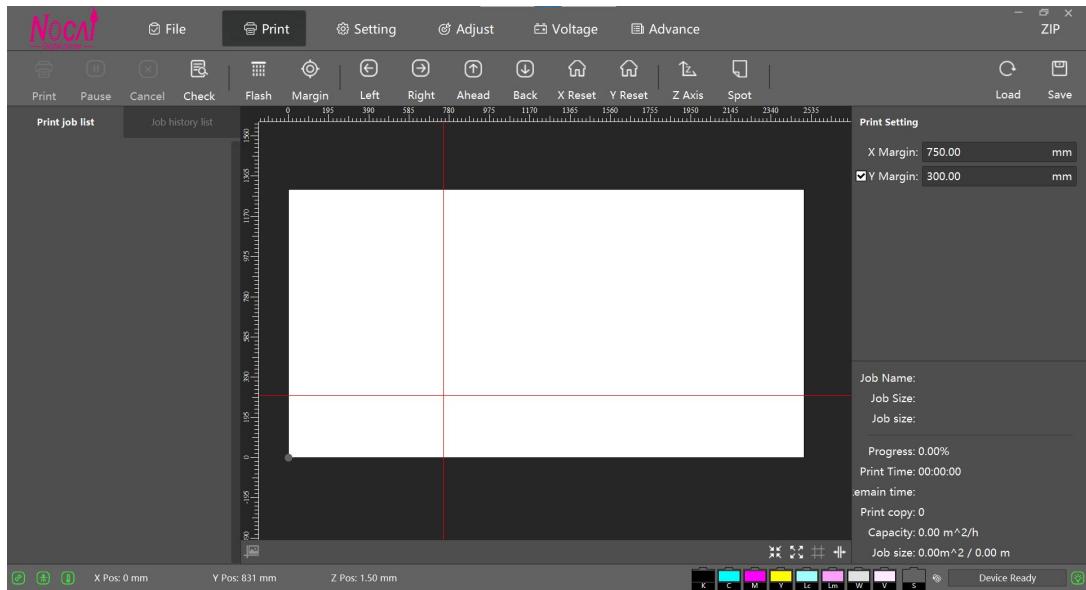
The main interface of PrintExp software mainly includes the main menu area, the shortcut button area, the print list function area, the task preview display function area, the print task information function area, the status bar and other parts.

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 column as shown below:
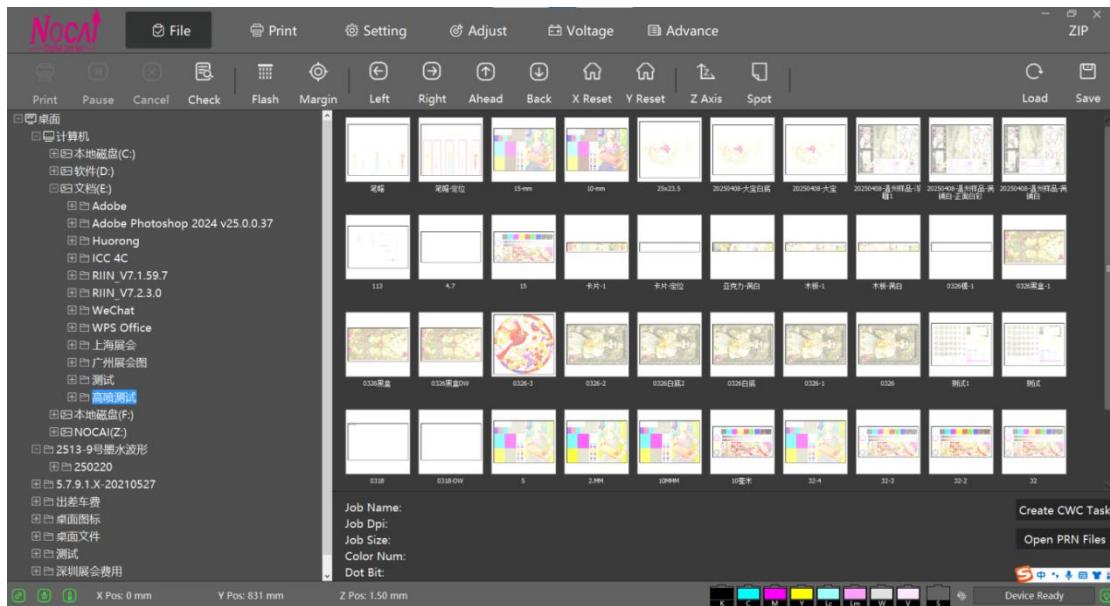
| NO.	Name	Function description
1	File directory function area	Select the folder where you want to print the file
2	PRN file preview function area	Displays all print files under the specified print file file
3	PRN file information display area	Displays the print information of the selected print file
4	Create color-white-color task	Create color-white-color task after clicking
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：
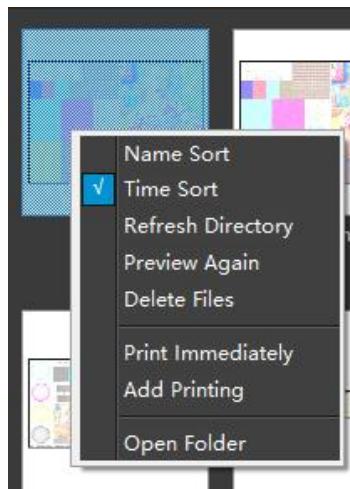
| NO.	Name	Function description
1	Refresh Directory	Refreshes all files in the specified file folder
2	Preview Again	Regenerates a preview of the currently specified print file
3	Delete files	Delete the file
4	Print immediately	Add the current print file to the print job list and print immediately
5	Add printing	Adds the selected print file to the task list
6	Open the folder	Open the folder for the print file

5.2 Print

Print: Click Print in the menu to enter the print interface, as shown in the figure below：
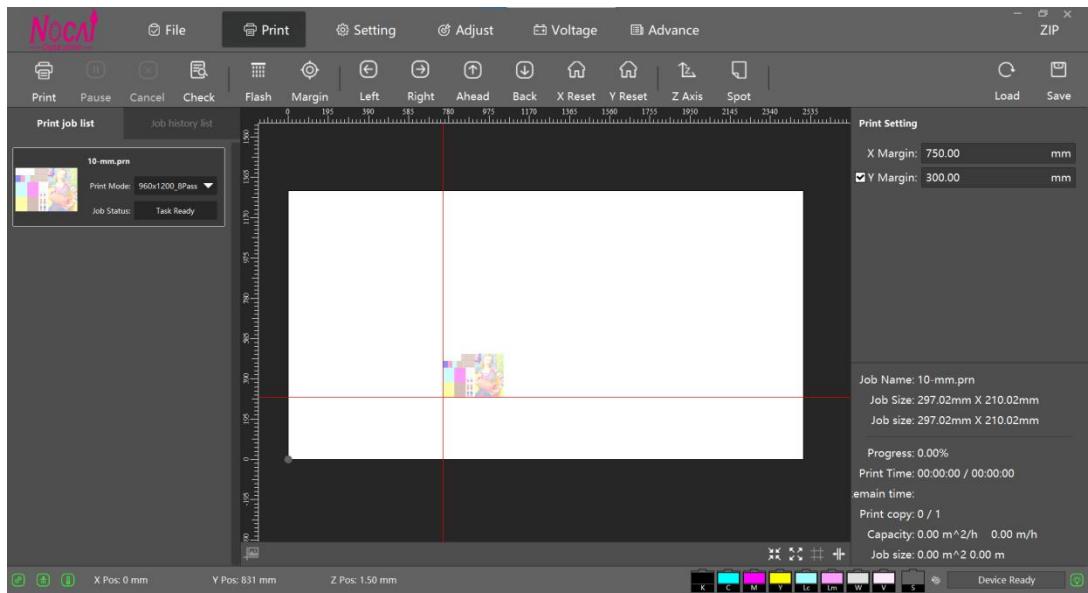
| NO.	Name	Function description
1	Main menu function area	The area where the main function buttons of the system are displayed
2	Shortcut button area	Areas that display the button for frequently used
3	Print list function area	Displays the area of all tasks
4	The task preview function area	The area where the plate print area is displayed as well as the preview of the selected print job
5	Print task information function area	An area that displays all information for the current job
6	Print Task Statistics function area	Statistics on the printing progress of the current task, printing time/remaining time, printing capacity and printing area
7	Status column	An area that displays the current working status of the system, connection status, XYZ position coordinates, limit reminder, cartridge/safety bottle status

5.2.1Task list

The printing interface includes the print task list window, the history 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 drop-down menu. As shown below:
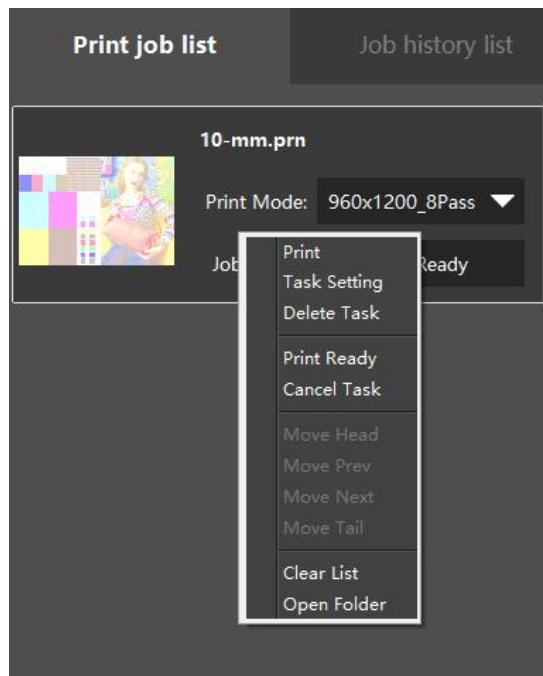
| NO.	Name	Function description
1	Print	Start print
2	Task setting	Edit the task property, such as print parameter and task parameter
3	Delete the task	Delete the task from the list
4	Wait for printing	Add the current task to the queue to print
5	Cancel the task	Cancel printing
6	Move to the front	Move the selected task to the front of the task list
7	Move forward	Move the task forward
8	Move back	Move the task back
9	Move to the last	Move the task to the last
10	Clear the list	Clear all the tasks in the list
11	Open the catalogue	Open the folder

5.2.2 Job history list
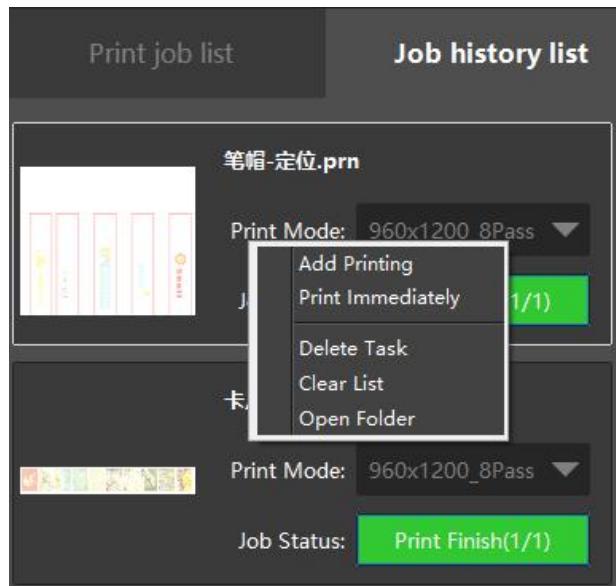
NO.	Name	Function description
1	Add job	Add the task to the list
2	Print immediately	Add a task to the list and perform the print immediately
3	Delete the task	Delete the task from the list
4	Clear the list	Clear the task from the job history list
5	Open the catalogue	Open the folder

5.2.3Task setting（Task parameter）

Double-click a task in the list to enter the task property window (or click right to select the task settings), as shown in the figure below：
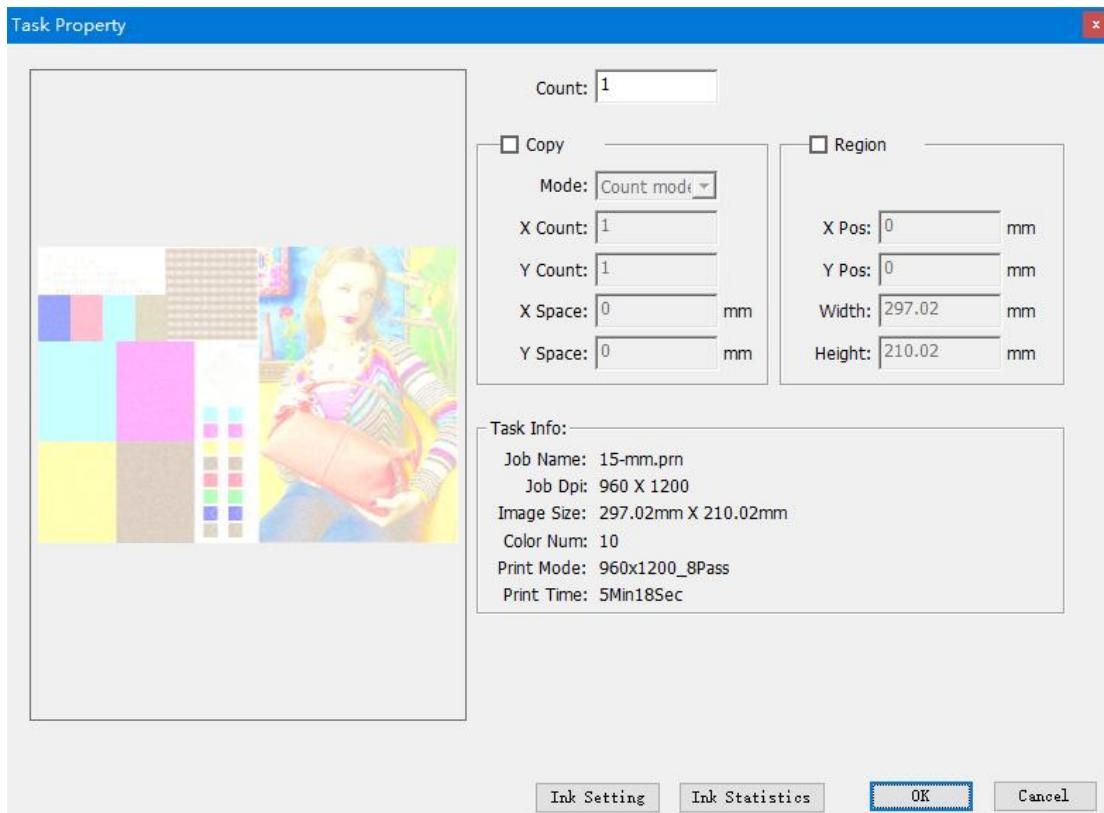
NO.	Name		Function description
1	Number of copies printed	Number of copies printed	from 1 to 9999
2	Continuous exposure (frame mode)	Horizontal width	Horizontal continuous exposure
		Vertical width	Vertical continuous exposure
		Horizontal spacing	Horizontal spacing (mm)
		Vertical spacing	Vertical spacing (mm)
3	Continuous sun (size mode)	Width	Set the width of the picture
		Height	Set the height of the picture
		Horizontal spacing	Horizontal spacing(mm)
		Vertical spacing	Vertical spacing(mm)

| 4 | Print the area | X position | The print position in the X direction of the print file |
		Y position	The print position in the Y direction of the print file
		Width	Print width of the file
		Height	Print height of the file
5	Task information		It includes the name of the task, the printing accuracy of the task, the size of the print task, the number of colors of the print task, and the number of passes of the print task

5.3 Setting
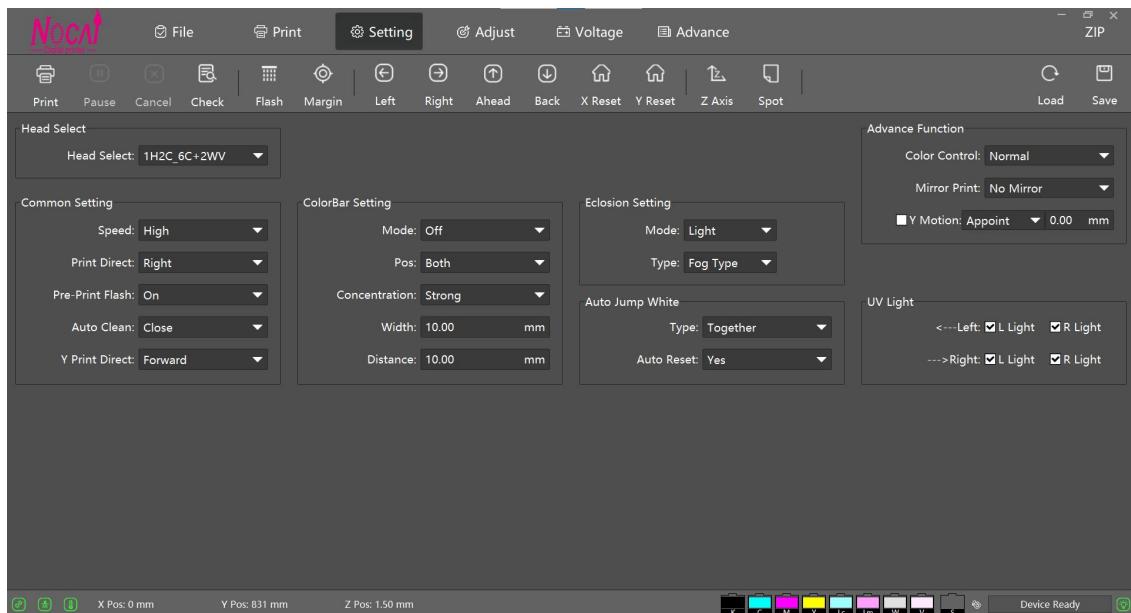
NO.	Name		Function description
1	Printhead		Different combination patterns
2	White-edge setting	X white edge	Set the starting position for printing （The flatbed machine is set in the printing interface）

		Y white edge	Set the starting position for printing（Check the print will be Y white border positioning）（The flatbed machine interface is set in the printing interface）
3	Common settings	Speed	Low, middle and high speed
		Direction	Set the print direction to print left, right, and bidirectional
		Flash spraying before printing	Set whether to flash before printing
		Clean automatically	Set whether to clean automatically during printing (cleaning method is origin flash spray)
		Paper direction	Set the printing direction, support forward and reverse printing
4	Color strip setting	Mode	Select the mode of the color strip when printing, turn off the color strip and moisturize: each pass will produce a color strip and status: the corresponding pass will count the color strip once
		Position	Left, right and both sides
		Concentration	Weak, medium and strong
		Width	Choose the width of the strip
		Distance	The distance between strip and picture
5	Feathering setting	Mode	You can choose a fixed feathering amplitude or a custom amplitude（0-200%）
		Type	Feathering types
6	Advanced	Color	Control the printhead data, control the output

	functions	control	or absence of different ink colors
		Mirror printing	Controls whether the image is flipped horizontally or not
		The positiono f Y after printing	After printing the Y-axis motion mode: specified, current, origin, and the end
7	UV switch		Set the UV light irradiation direction switch
8	Skip the blank area automatical ly	Mode	Close the mode of skipping the blank area, stepped white-jumping and continuous white-jumping
		Reset automati cally	Long time white jump selects whether to reset automatically and then jump white

5.4 Calibration

Click Calibrate in the menu bar to enter the calibration interface, as shown in the figure below:
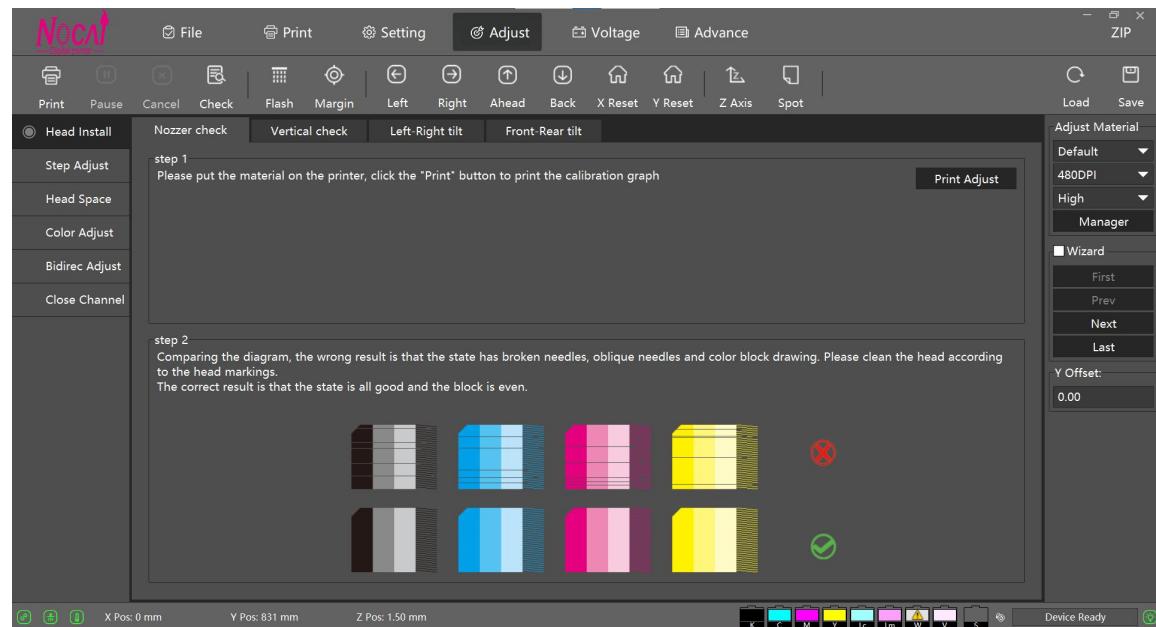
NO.	Name		Function description
1	Install the printhead	Nozzle check	Check whether the nozzle is good or not
		Vertical check	Check that the nozzle is tilted
		Left-Right tilt	Check that the entire nozzle plane of the nozzle is parallel to the horizontal plane
		Front-Rear tilt	
2	Stepped calibration		Calibrate the reference step parameters and fine-tune the step parameters for different pass modes
3	Spacing between printhead	Calibrate to left/right	The horizontal spacing between printheads
		Vertical calibration	The vertical spacing between printheads
4	Color registration calibration		Calibration of the longitudinal and horizontal positions of each channel of the printhead
5	Bi-direction calibration		Calibrate bidirectional offsets at different speeds of bidirectional printing

5.4.1 Check the nozzle

Click"Check the nozzle"，the system will print the graphic，as the following：
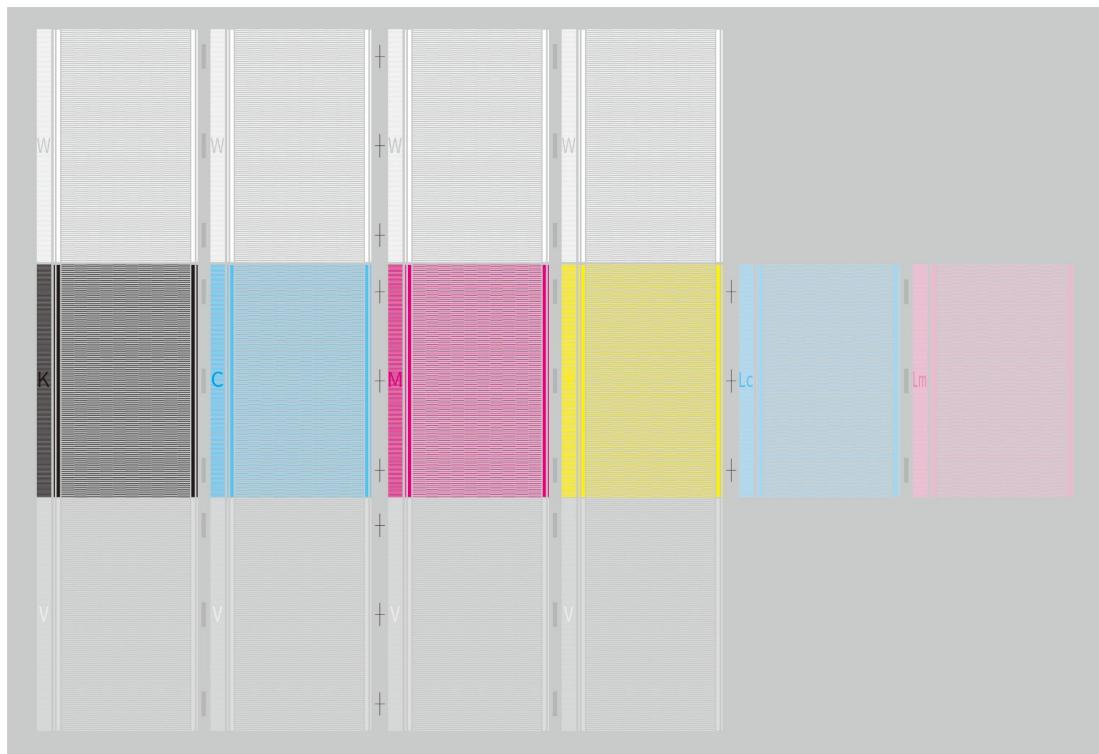
The normal and abnormal conditions of the black status graphic are partially

enlarged, as shown in the figure below:

正常情况下喷头状态图
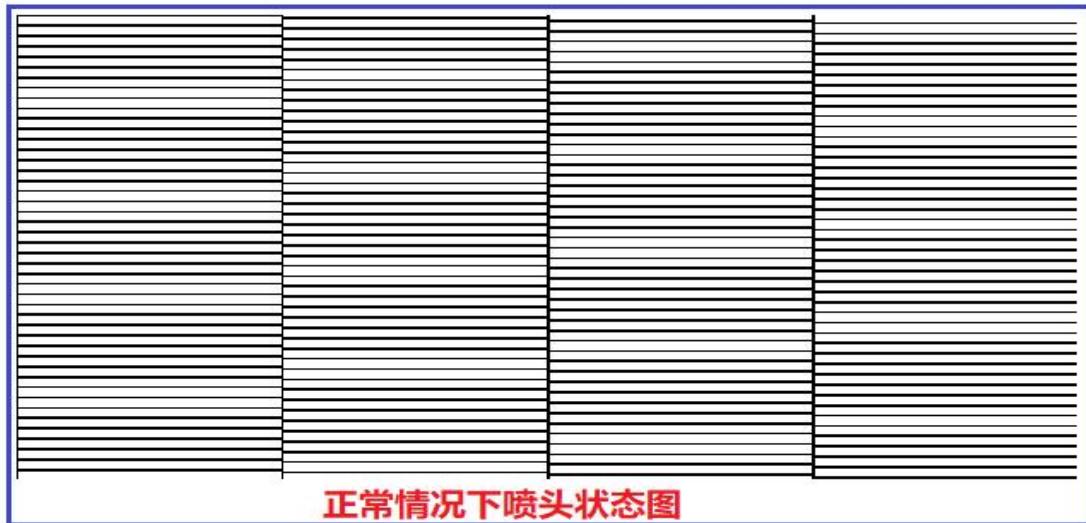
The status graphic in the case of the above diagram may be blocked and needs to be cleaned until the inkjet is in the best condition.

5.4.2 Vertical check function

Click "Vertical check", and the system will print the vertical check graphic, as the following：

喷头垂直方向位置正确校准图　　　喷头垂直方向有偏移校准图
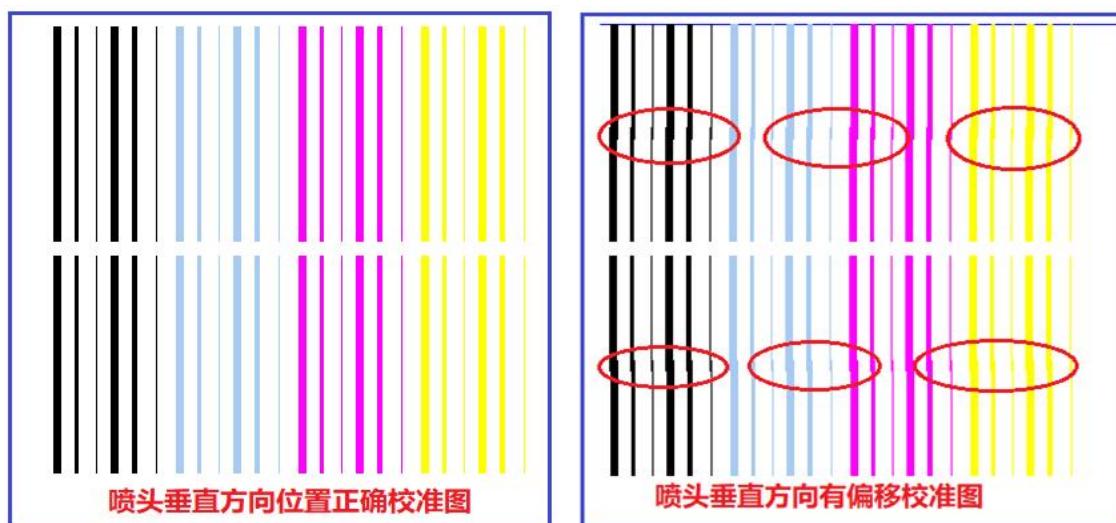
The calibration diagram on the right side of the above figure needs to be adjusted vertically until the vertical calibration diagram is correct.

5.4.3 Left and right tilt function

Tilt the calibration interface left and right, and click Print. After the pop-up interface is confirmed, the system will print the left and right tilt calibration picture. As shown below：
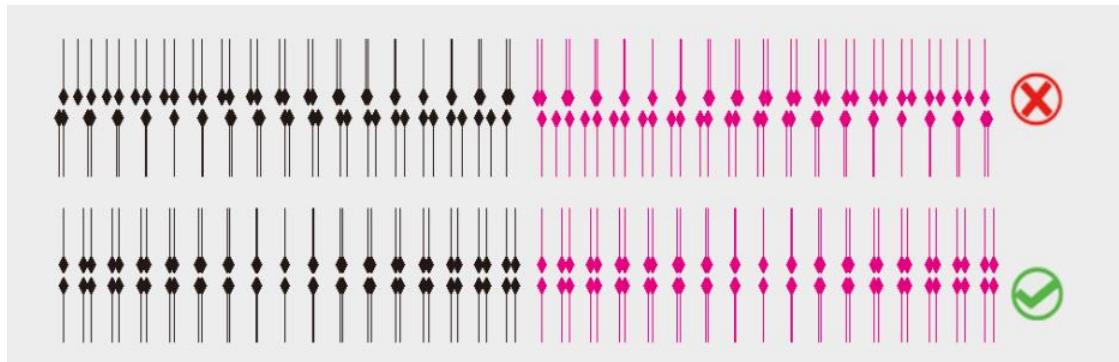
Compare with the schematic diagram, the wrong result is that the upper and lower parts of the calibration diagram coincide with each other in the same vertical position, please adjust the corresponding left and right tilt or adjust the left and right tilt of the base plate according to the printhead mark. The correct result is that the upper and lower parts coincide in the same vertical position.

5.4.4 Tilt forward and backward function

Tilt the calibration interface back and forth and click Print. After the pop-up interface is confirmed, the system will print the picture of the front and rear tilt calibration. As shown below：
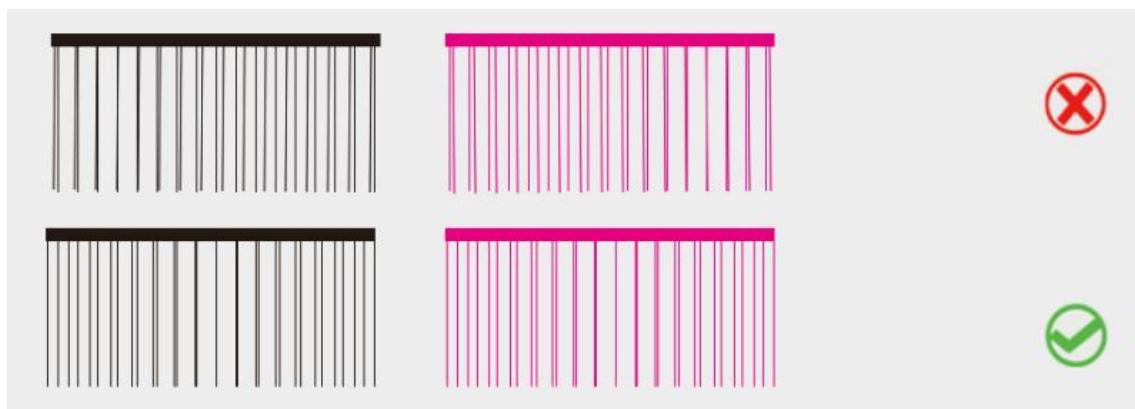
Compare the schematic diagram, the wrong result is that the vertical lines of the calibration diagram are crossed, please adjust the corresponding front and rear tilt according to the printhead mark or adjust the front and rear tilt of the base plate. The correct result is that the vertical lines are parallel to each other.

5.4.5 Introduction to step calibration function

Click "Print Calibration Diagram" under the Baseline Step interface, and the system will print the step calibration diagram as follows:
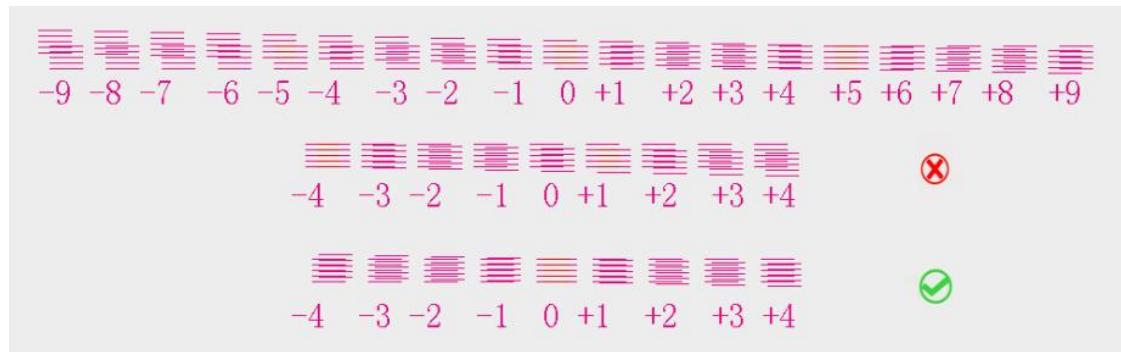

Compare with the schematic diagram, the wrong result is that the calibration line and the guide line coincide with the calibration diagram are not at the 0 position, please enter the value on the right side of the "Print" button according to the value of the coincidence position of the calibration line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

The correct result is that the calibration line and the guide line coincide at position 0.
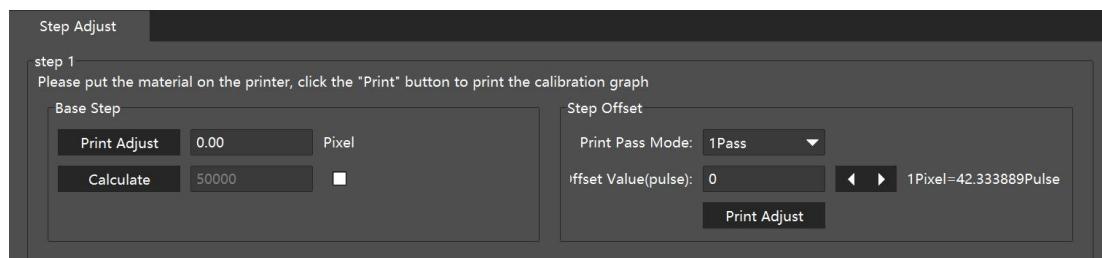
5.4.6 Horizontal spacing calibration of the printhead

Click "Print Left/Right Calibration Chart" of the printhead horizontal spacing calibration interface and the system will print as follows:

Compare the schematic diagram, the wrong result is that the calibration line and the reference line coincide with the calibration diagram are not at the 0 position, please add or subtract on the original basis according to the value of the coincidence position of the calibration line and the reference line, and then enter it in the corresponding input interface marked by the corresponding printhead. The correct result is that the calibration line and the guide line coincide at position 0.

Horizontal L	Horizontal R	Vert Adjust				
step 1 Please put the material on the printer, click the "Print" button to print the calibration graph				Default value: 0.00	One-click Reset	Print Adjust
H1	0.0	H2	1336.0	H3	2669.5	H4	3331.5
H5	0.0	H6	Off	H7	Off	H8	Off

5.4.7 Vertical spacing calibration of the printhead

Click "Print Calibration Chart" of the Vertical Spacing Calibration interface of the printhead, and the system will print it as follows:

Compare the schematic diagram, the wrong result is that the calibration line and the reference line coincide with the calibration diagram are not at the 0 position, please add or subtract on the original basis according to the value of the coincidence position of the calibration line and the reference line, and then enter it in the corresponding input interface marked by the corresponding printhead. The correct result is that the calibration line and the guide line coincide at position 0.

Horizontal L	Horizontal R	Vert Adjust				
step 1 Please put the material on the printer, click the "Print" button to print the calibration graph				Default value: 0.00	One-click Reset	Print Adjust
H1	0.0	H2	0.5	H3	0.5	H4	-639.5
H5	640.0	H6	Off	H7	Off	H8	Off

5.4.8 Bi-directional calibration function

Click "Print Calibration Graphic" in the bidirectional calibration interface, and the system will print it as follows：
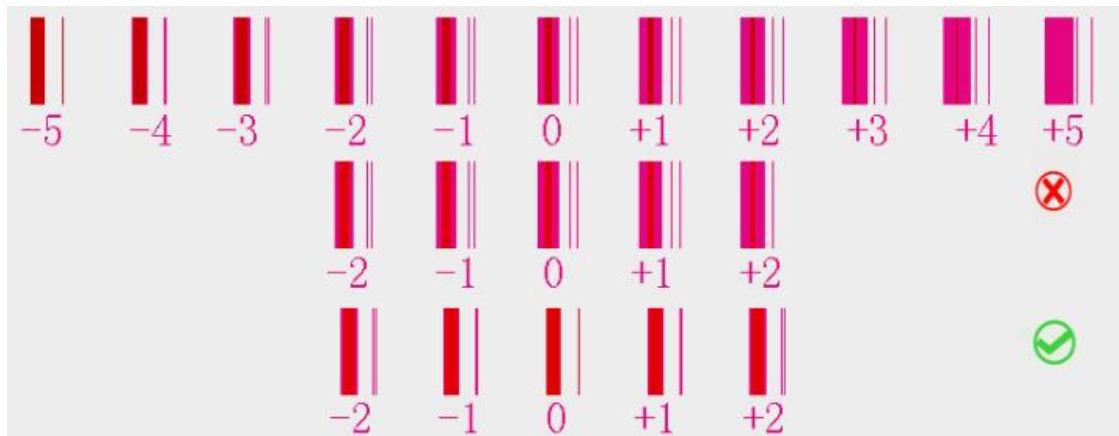
Compare with the schematic diagram, the wrong result is that the calibration line and the reference line coincide with the calibration diagram are not at the position of 0, please add or subtract on the original basis according to the value of the coincidence position of the calibration line and the reference line, and then enter it in the corresponding input box marked by the corresponding printhead. The correct result is that the calibration line and the guide line coincide at the position of 0.
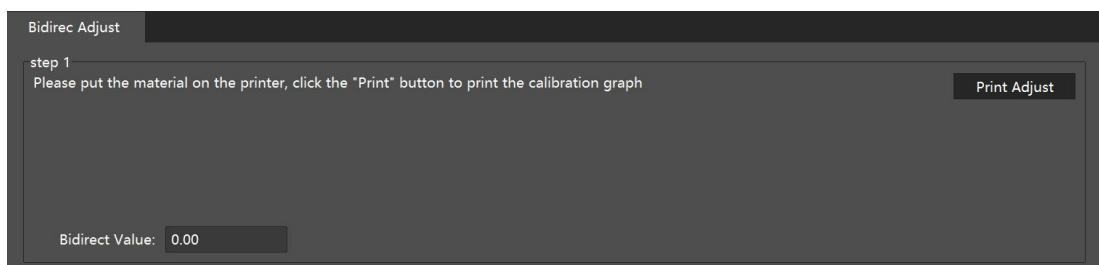
5.4.9 The function of color registration calibration

Click"Print Left/Right calibration graphic"， and it will be printed.
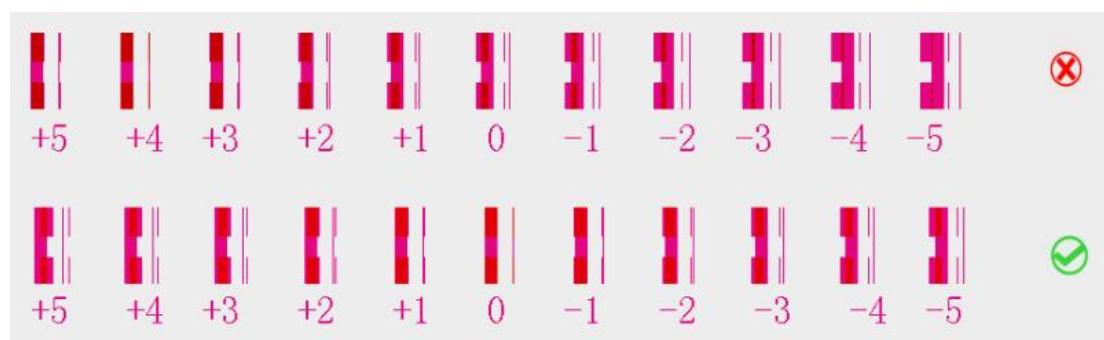
Compare with the schematic diagram, the wrong result is that the calibration line and the reference line coincide with the calibration diagram are not at the

position of 0, please add or subtract on the original basis according to the value of the coincidence position of the calibration line and the reference line, and then enter it in the corresponding input box marked by the corresponding printhead. The correct result is that the calibration line and the guide line coincide at the position of 0.

<--	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 Voltage to enter the interface,as the following：
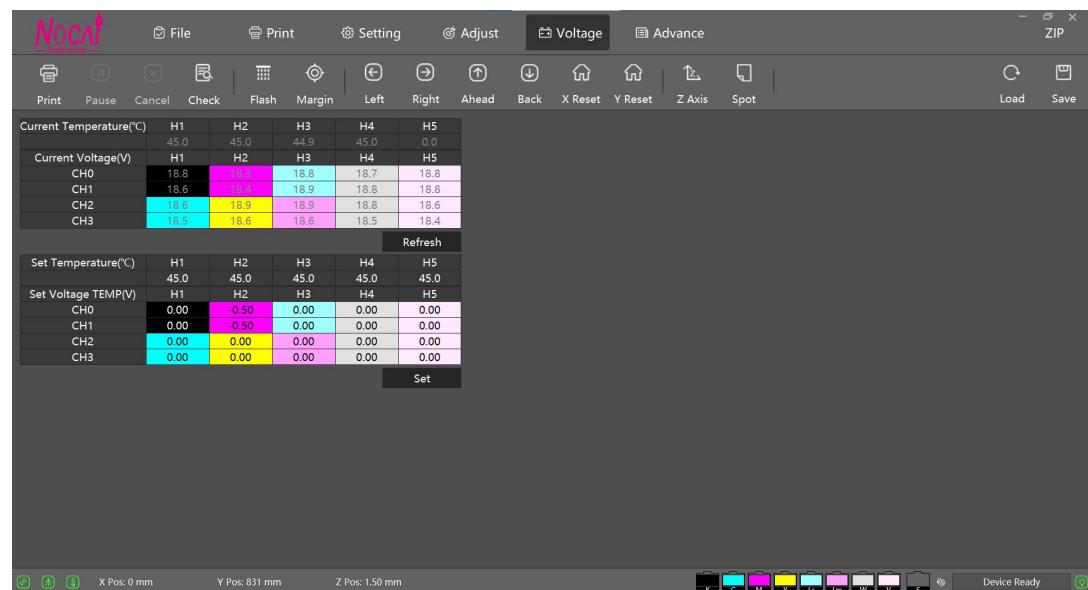
NO.	Name	Function description
1	The current temperature、the current voltage	Check the printhead, operating voltage of the board, and the voltage range is 1.4V when not working, and refresh the current temperature and voltage value
2	Set up the temperature and voltage	The working heating temperature (15°C~55°C) and working voltage offset (-5V~5V) of the printhead can be adjusted appropriately according to the actual situation of ink, and the temperature and voltage value of the effect can be set.

5.6 Advance

Click Advance to enter the interface，as the following：
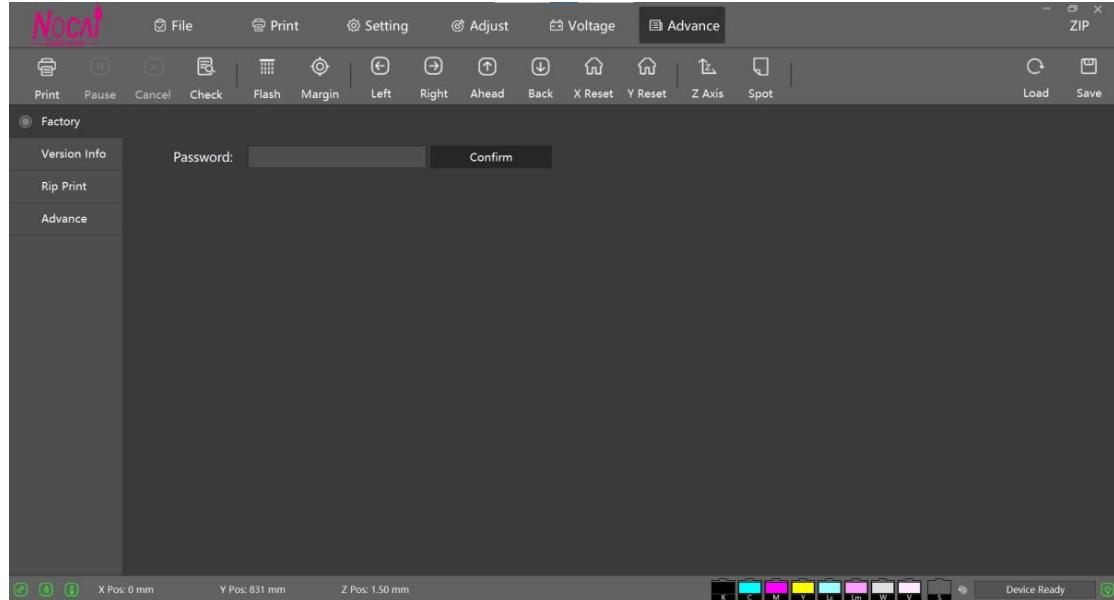
| NO.	Name	Function description
1	Factory	Enter the Factory parameter interface
2	Version information	The information related to the board
3	Rip Print	Confirm the precision mode
4	Advance	Net setting, encryption, select language, nozzle close, PRN color order.

5.7.1 Version information

Click Version Information on the Advance Interface and click Details to enter the interface as shown below：
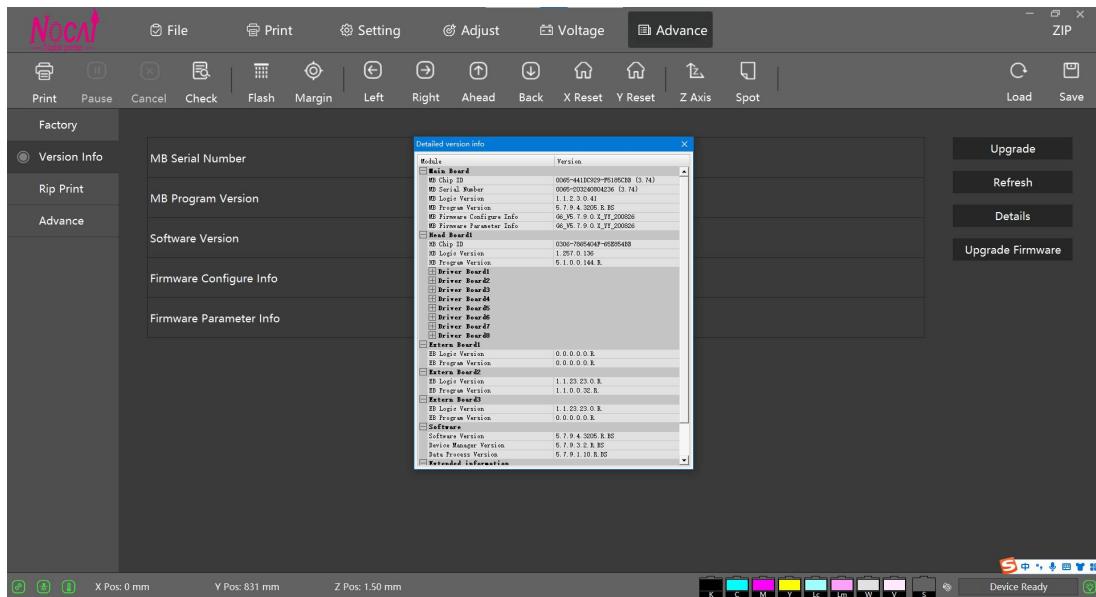
5.7.2 Rip Print

Click the Rip Print on the advanced interface to enter the interface as shown below：
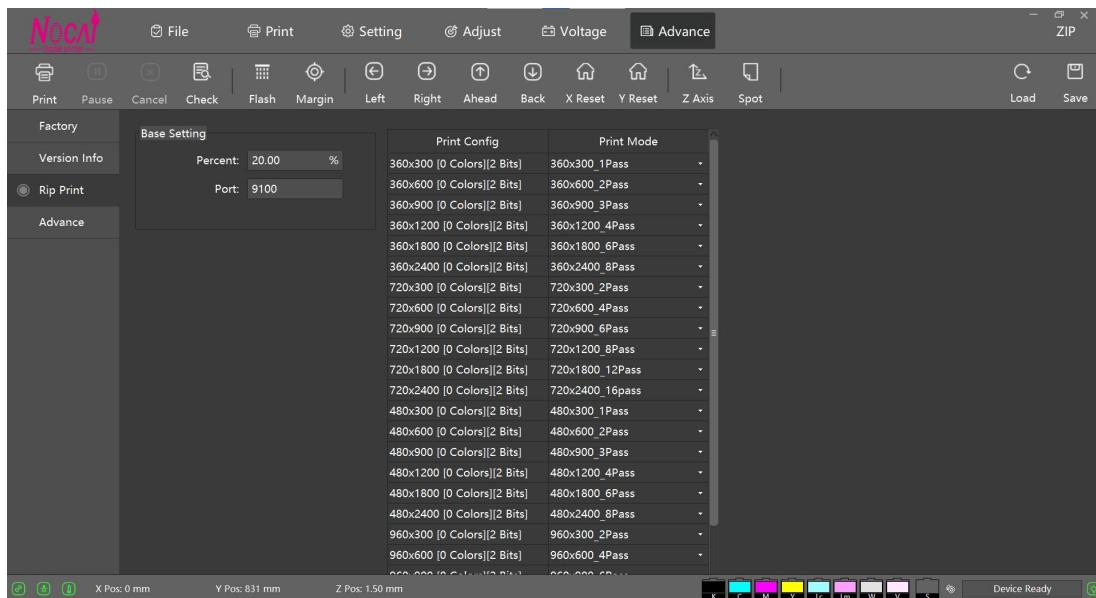
NO.	Name		Function description
	Base setting	Percent	It starts printing when the RIP reaches the set value.
		Port	9100

5.7.3 Net Setting

Click the communication number button in the Advance interface, as shown below：

Different communication methods can be selected according to the board communication interface, such as network communication mode, the TCP communication needs to set the IP address
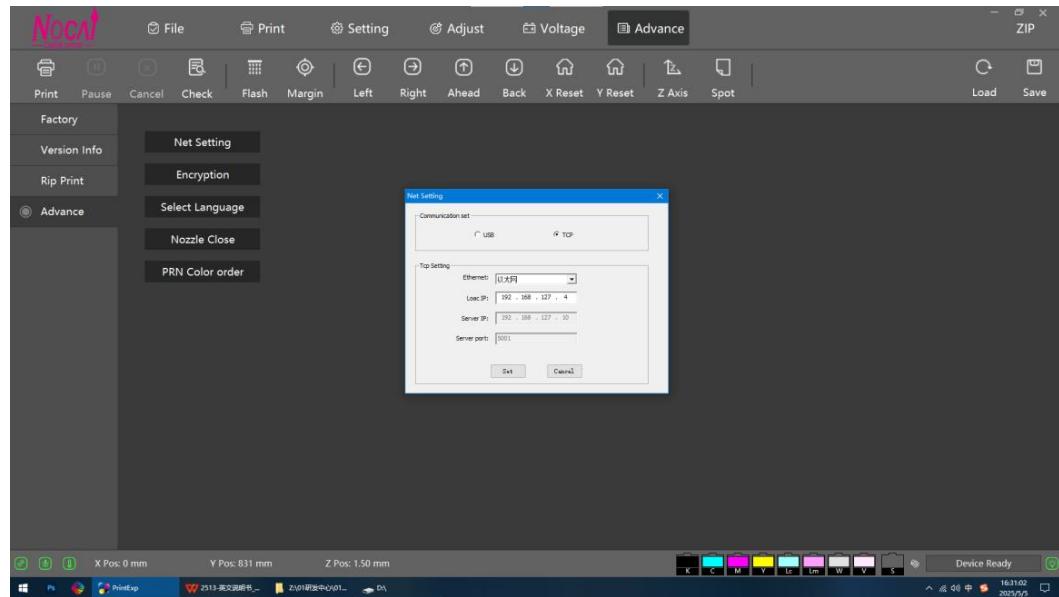
5.7.4 Encryption

Click the Advance Setting under the Advance Interface, and click "Encryption" to pop up the following prompt interface：

You can delay the encryption management and set up the language.
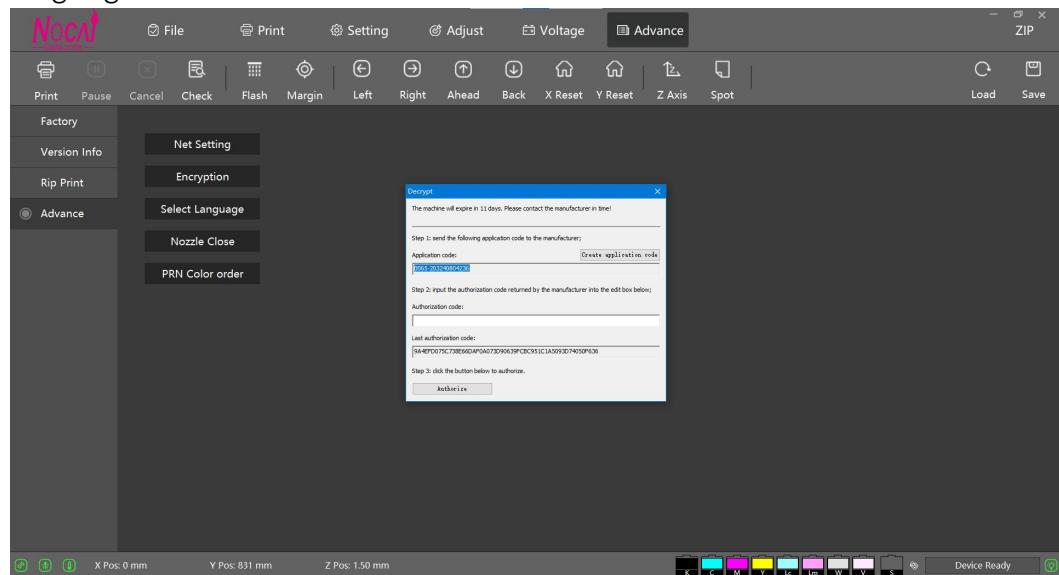
NO.	Name	Function description
1	Create a new application code	Generate the application code automatically for the current mainboard
2	Authorization code	The authorization code generated by the manufacturer according to the application code and the time of installment
3	Authorization code of the last period	The authorization code of the last period at the time of installment, it will be empty when authorize it for the first time.
4	Authorize immediately	After entering the authorization code, click Authorize Now to authorize the mainboard

5.7.5 Select language

Enter the Advance Interface, click "Select Language" and the following prompt box will pop up：
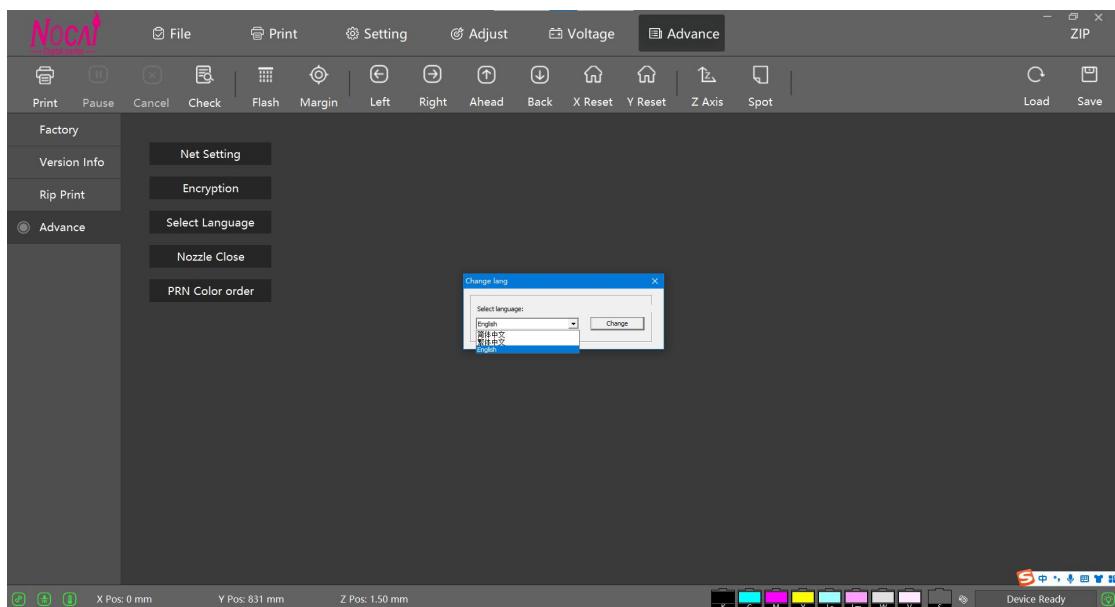
Select the language you want to use and click Change. The pop-up box will prompt you to restart the software after confirmation, and the software will show the selected language.

5.7.6 Break compensation

Click Break compensation button in the Advance interface and it will enter the following interface：
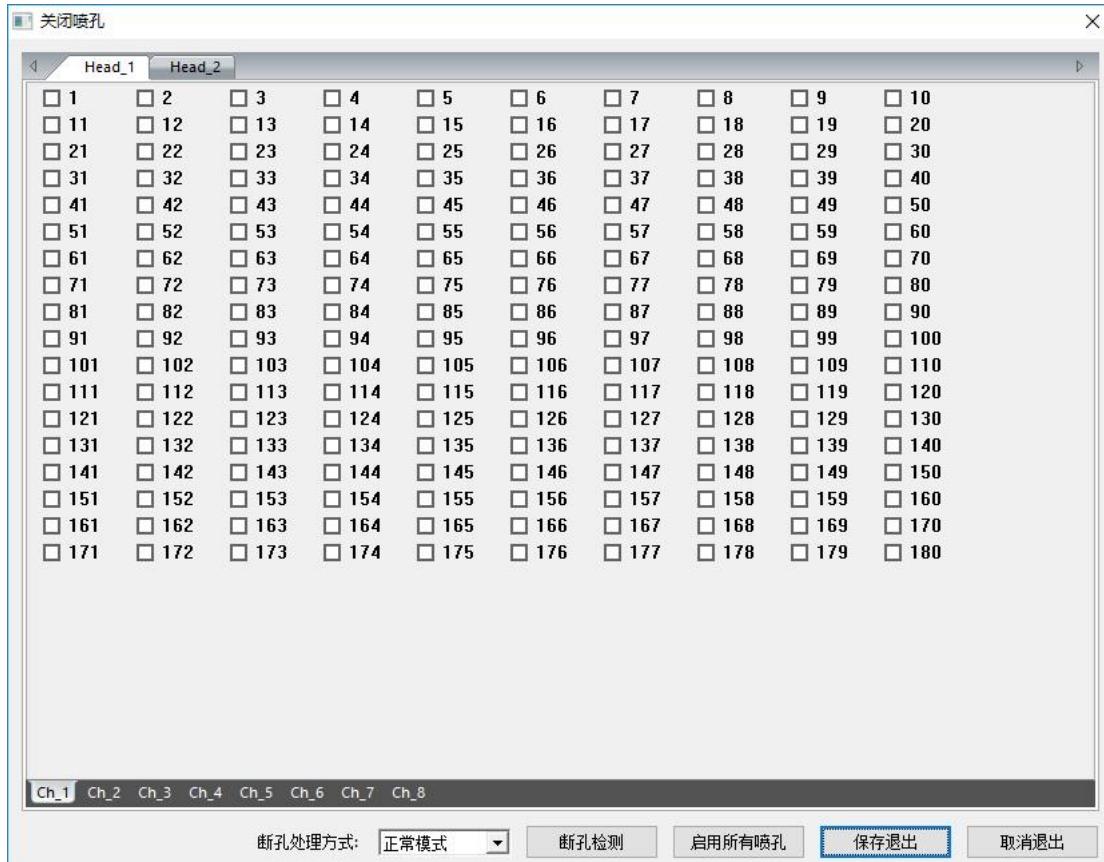
NO.	Name	Function description
1	Solution	Select the solution
2	Check	Check the status of the broken hole of each nozzle
3	Start all the nozzle	Start all the nozzle/Close
4	Save and exit	Save the current settings and exit the setting of broken holes.
5	Cancel and exit	The current settings are not saved, and exit the break setting directly.

Click the right on the setting interface, and it will pop up a menu, as shown in the figure below：
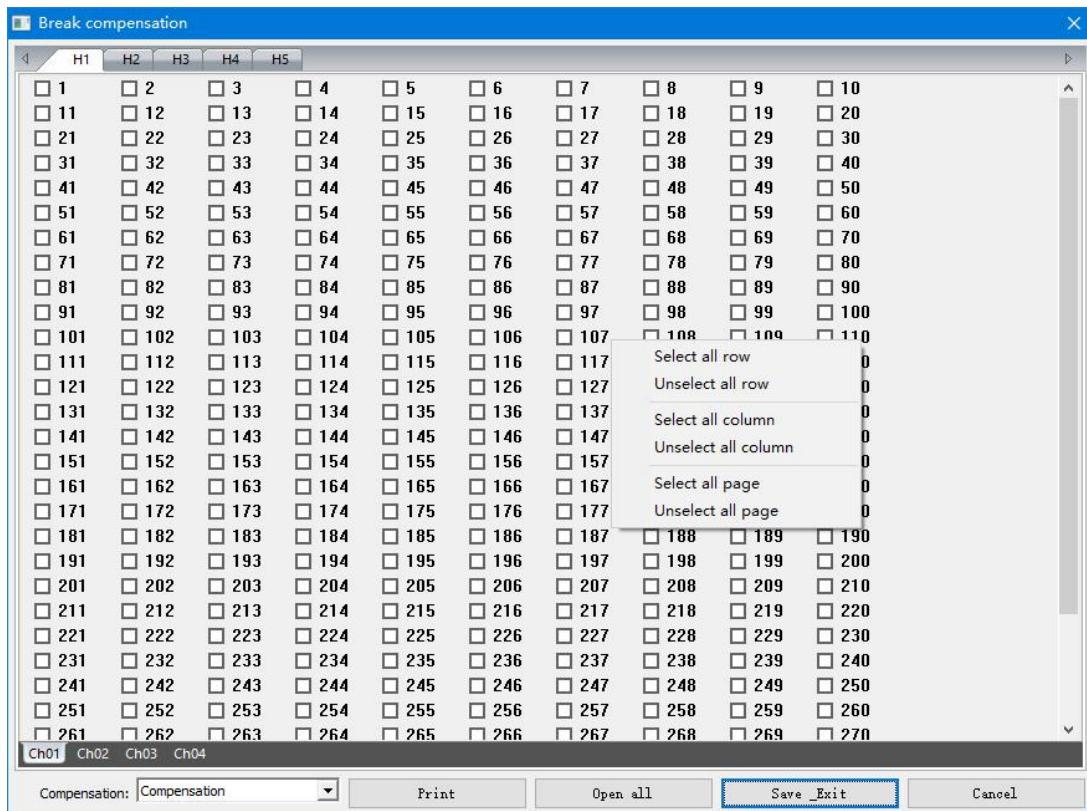
| NO.	Name	Function description
1	Select all the row	Select the whole row
2	Do not select the whole row	Do not select the whole row at the same time
3	Select the whole column	Select the whole column
4	Do not select the whole column	Do not select the whole column at the same time
5	Select the whole page	Select the whole page at the same time
6	Do not select the whole page	Do not select the whole page at the same time

5.7 Log

Click the button in the lower right corner of the printing software to enter the
interface, as shown in the figure below：
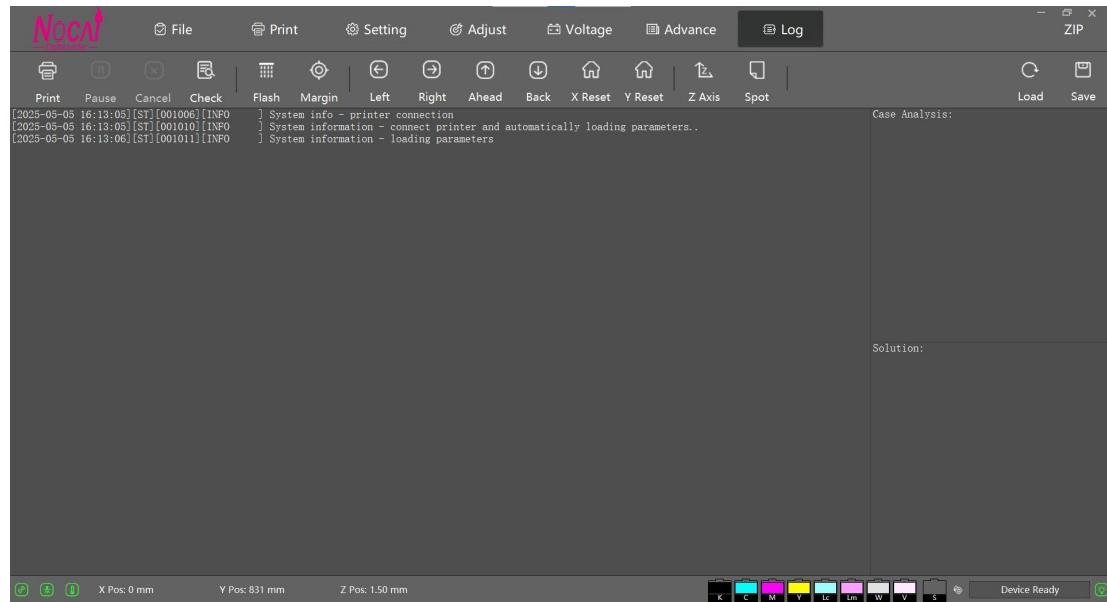
You can see the operation, especially when there is an error or fault, and you can
know what kind of error message is generated by viewing the debugging
information, so as to solve the error specially.

Icon	Function description
Print	Click the Print button and print the file
Stop Continue	Stop/resume the print button to pause the print job or resume printing Shortcut key: Space key

Cancel	Stop printing
Check	Check the printhead and print the state graphic
Flash spray	Start/Close
White edge	Positioning button for white edge, the position of X axis is the white edge value
(direction buttons)	Direction movement button, move left, move right, feed, return (double click for continuous movement) Shortcut key: Ctrl+direction keys
X reset	Reset button of X axis
Y reset	Reset button of Y axis Special operation：The Y-axis is operated at the position of 0 and reset 3 times, and it will enter the limit reset.
Z axis	Control panel of Z-axis, which can perform Z-axis control operation and measure the height
Spot color	Control panel of spot color in order to control color channel data
Stepping- Stepping+	Spin button can be performed during printing

⬚ Bidirectiona l- ⬚ Bidirectiona l+	Spin button can be performed during printing

5.8 Shortcut key

The interface of Z axis is as the following：
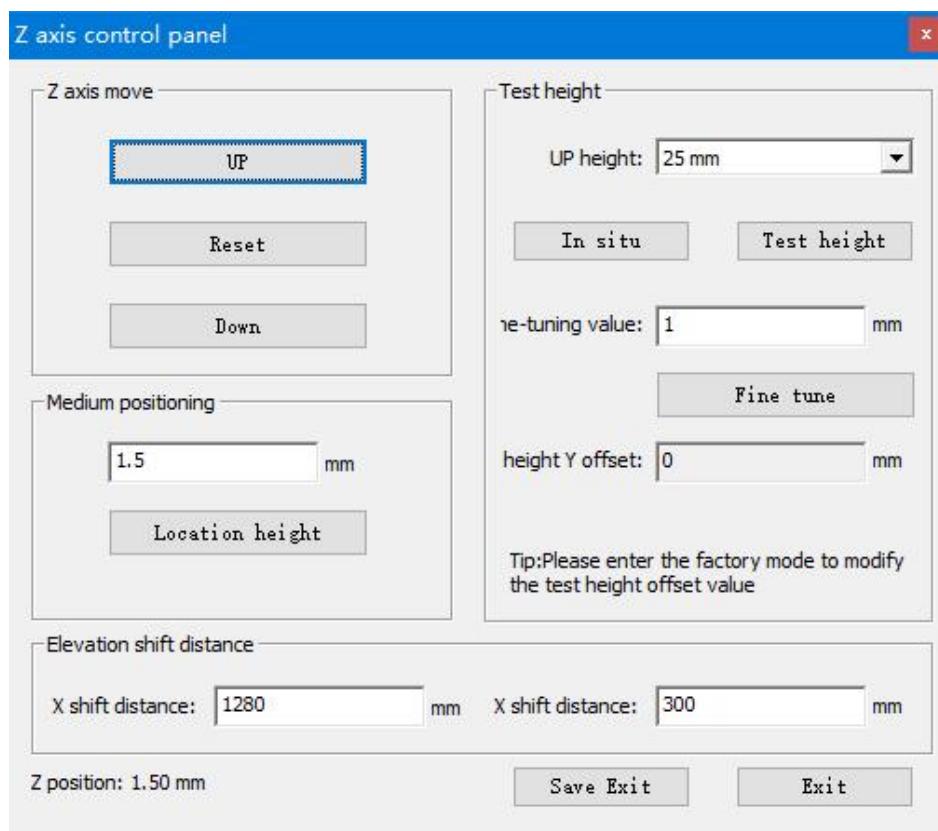
NO.	Name	Function description
1	Z axis move	Move, rise, fall and reset of Z axis
2	Medium positioning	The height is positioned, and it will move to the height of the media after initialization

3	Test height	For large, flat surfaces without bumps or depressions: Directly click to measure height. If the measured height is deemed too low and unsafe, click 'Spin' button to raise the cart slightly.
4	Elevation shift distance	Move to the designated position using the offset values to measure the height: If X > 0 and Y > 0: the X and Y axis will move to the specified position before measuring the height. If Y = 0: The system will not move the Y axis.
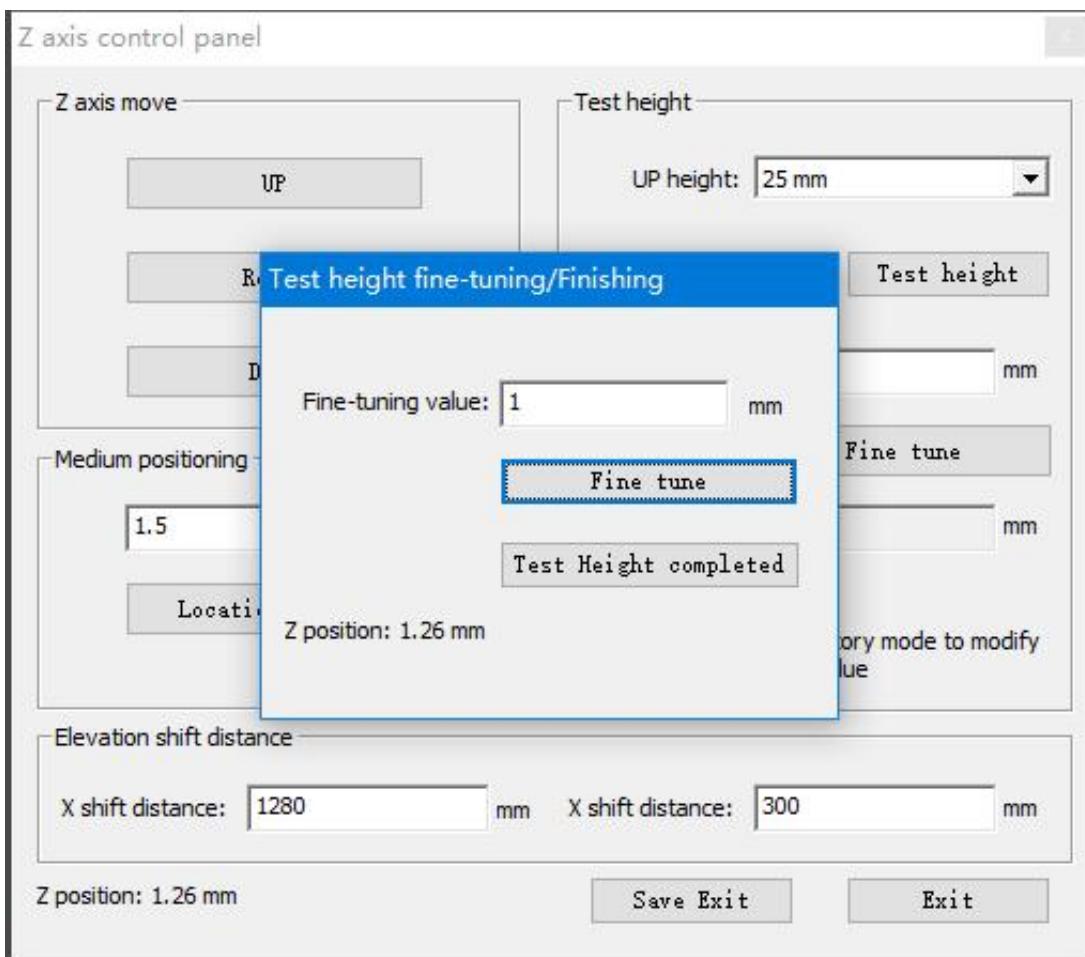
Record the setting for the same material after height adjustment. You can directly enter the Media Positioning value and click 'Position Height'.

Before printing, it is strongly recommended to move the cart across the entire surface of the material to detect any raised areas that could damage the printhead during operation.

For materials prone to deformation during printing (such as heat-sensitive

substrates), increase the height setting appropriately.

(The dedicated Spot Color interface is shown below.)
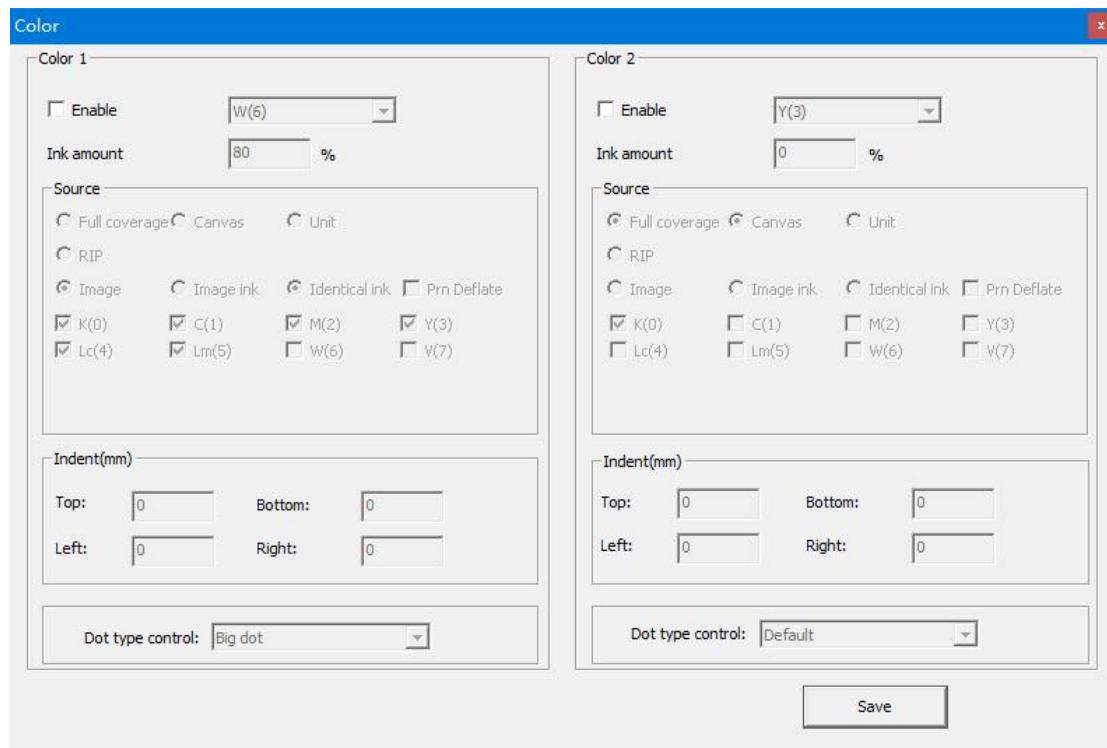
Function Description: This feature enables process the software of existing channel data within PRN files.

Specific function：

Spot Color 1 and Spot Color 2 represent the two PRN data channels available for manipulation.

Enable: Check to activate processing for the selected channel. Channel Selection: Choose the specific PRN channel to process (The total number of supported channels is determined by firmware configuration).

The software generates a solid color block covering the entire PRN page size for the selected channel. Adjust intensity via the Percentage setting (0-100%). RIP means the channel's original data directly from the PRN file. The software performs no manipulation.

Channel Cloning means the copies data for the selected channel from another specified PRN channel within the file.

5.9 Status Bar

Icon	Function description
	Normal connection status
	Disconnected status
	Flash Spray Active
	Flash Spray Inactive
	Normal Temperature Status
	Temperature Warning Status
	Abnormal Temperature Status
	Ink Status, Low Ink Detection, Secure Tank Verification
	Ink System Reset, Ink timeout icon blinking: Click to reset for auto feed
设备就绪	Operating Status Display
	System Normal Operation
	System Warning Condition
	System Fault Status
	Travel Limit Status Display, Limit Status Transition Alert

Install RIIN software

6.1 Install the software

Extract the software package to a folder of the same name. Run the .exe file. Click "Next" to proceed.
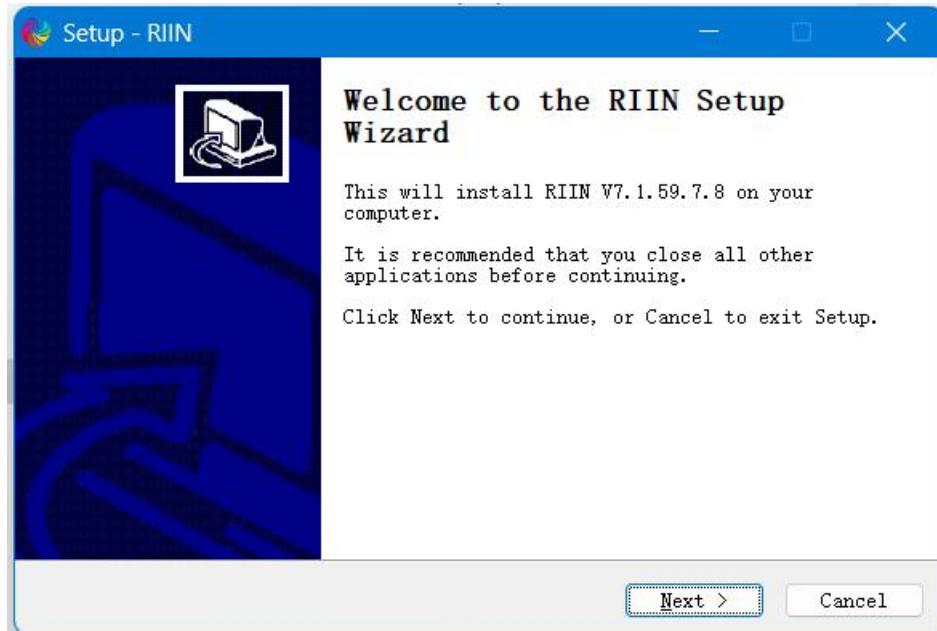
Click 'Browse' to select the destination path. Make sure 200MB disk space is available, Click 'Next' to proceed after confirmation".
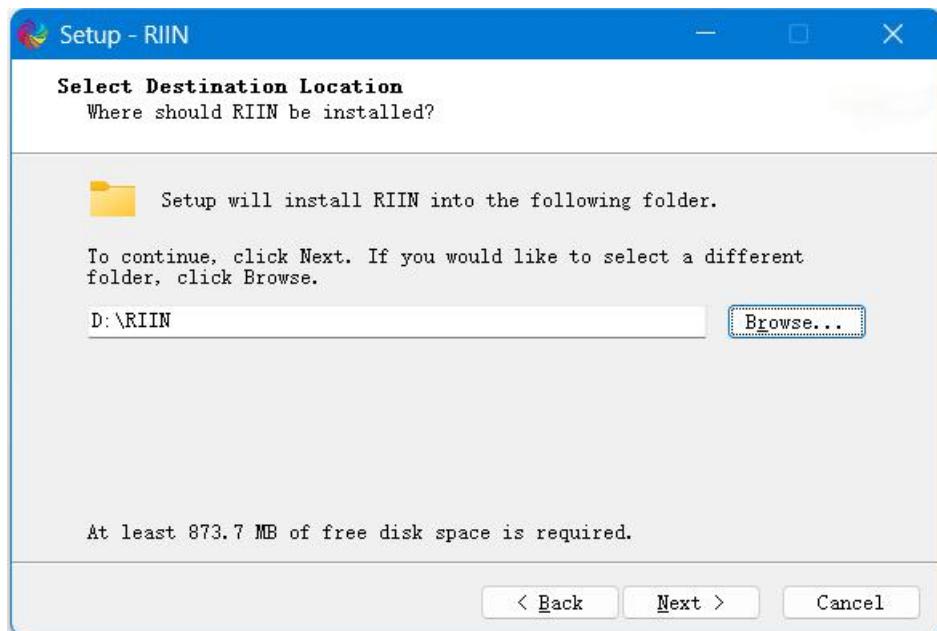
Click 'Browse' to select a folder for program shortcuts. It is recommended to use default location (click 'Next' directly)".

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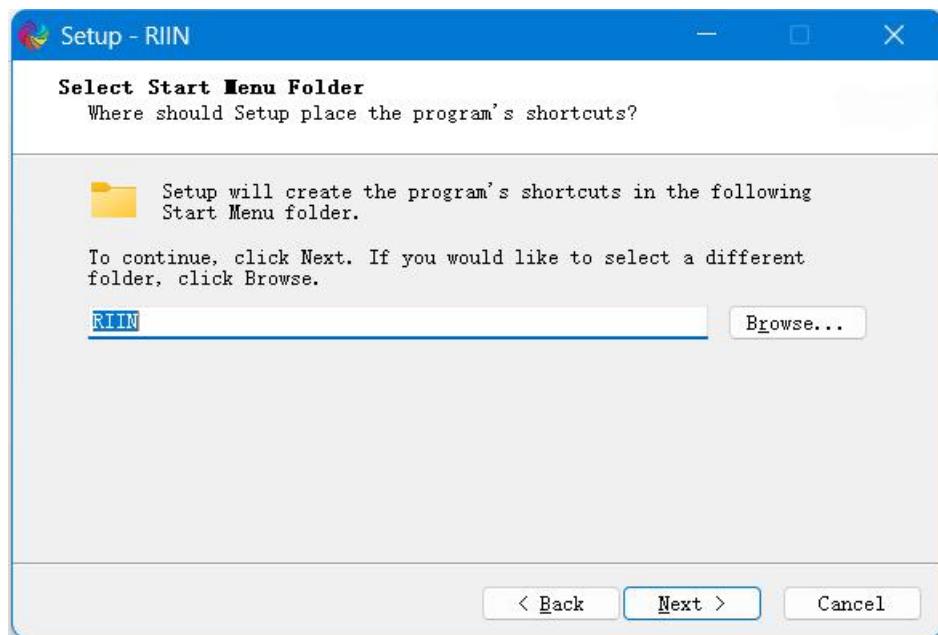
Create desktop shortcut or not. Keep defaults and click 'Next'.
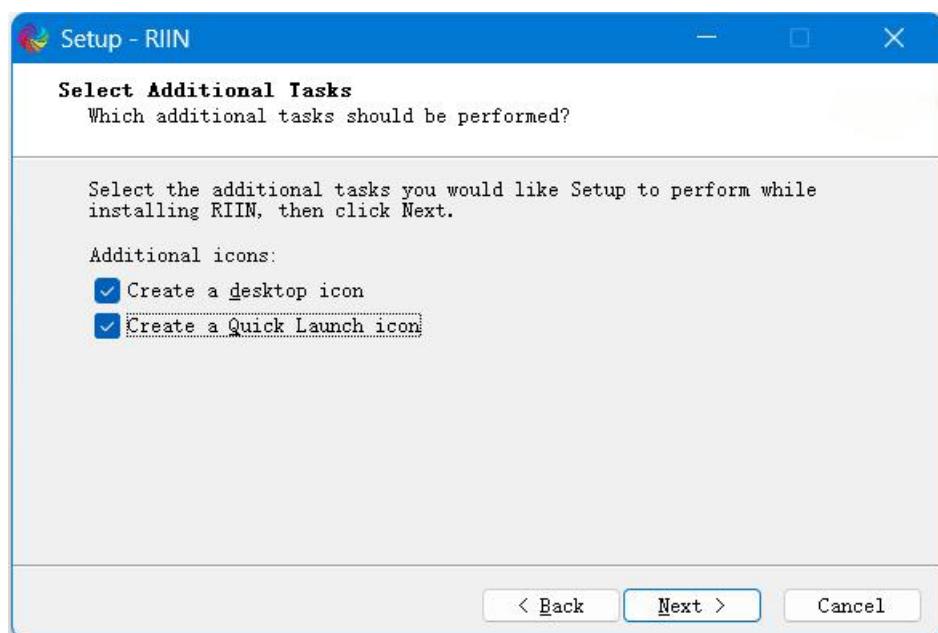
When the progress bar reaches 100% , click 'Finish'.
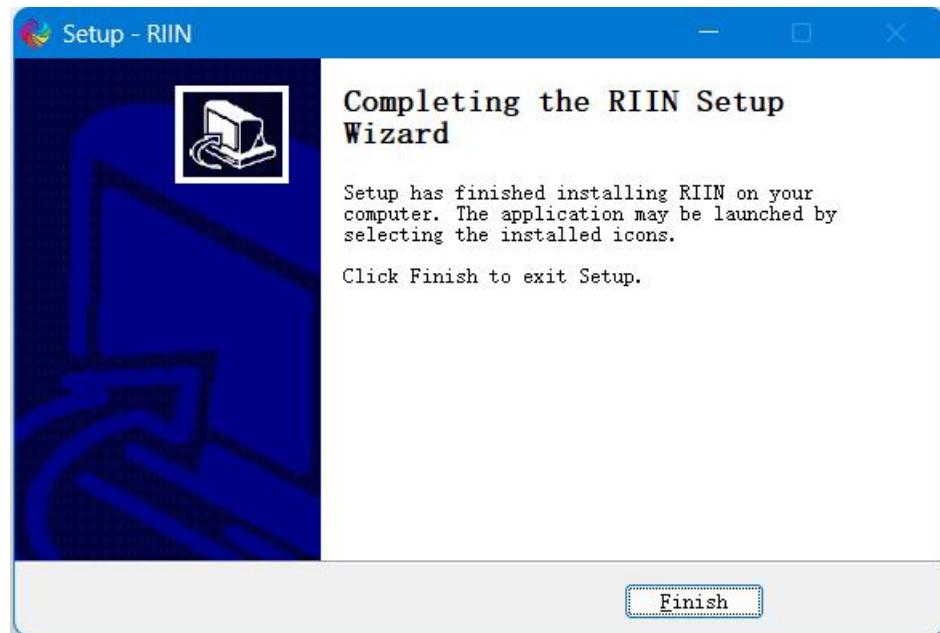
Important Notes:

Installation interface elements may vary slightly across RIPrint versions, though core procedures remain essentially identical.

If initial installation fails: Uninstall prior version completely and install it again.

6.2 Printer setting

Click"Printer setting" （shortcut key: Ctrl+Shift+P） . The program will display the Printer Settings dialog as shown below:：
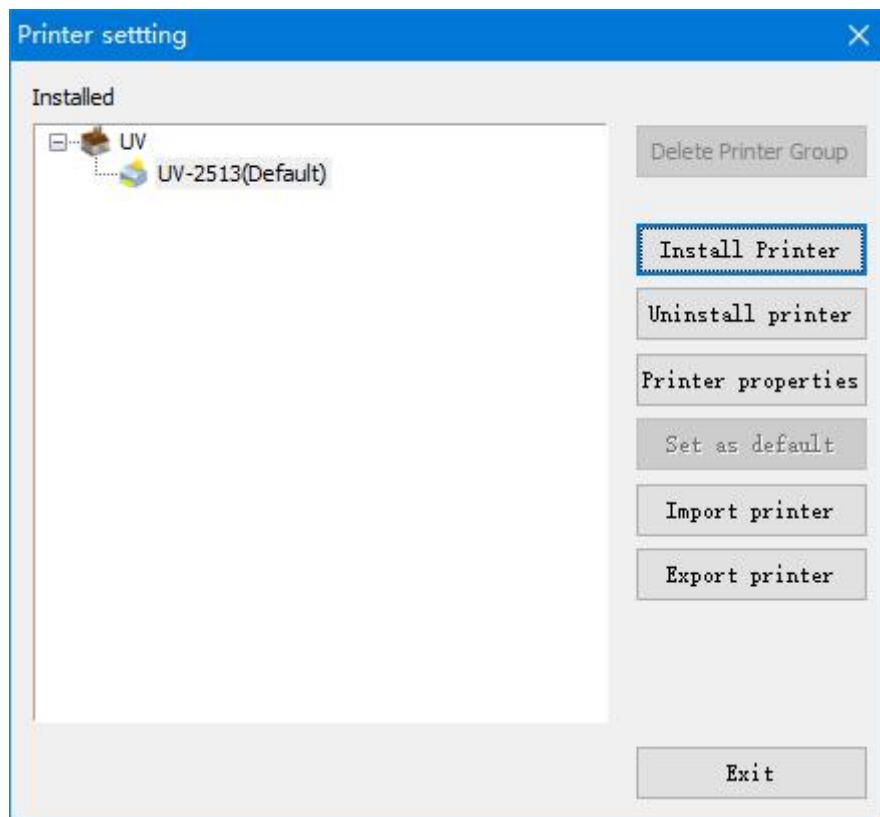
A preconfigured printer appears in the printer list. This built-in printer driver supports file output ports.

Install the printer：

If no suitable printer exists in the installed printers list, add your device manually. Click the 'Add Printer' button, the Add Printer dialog will launch as shown below:
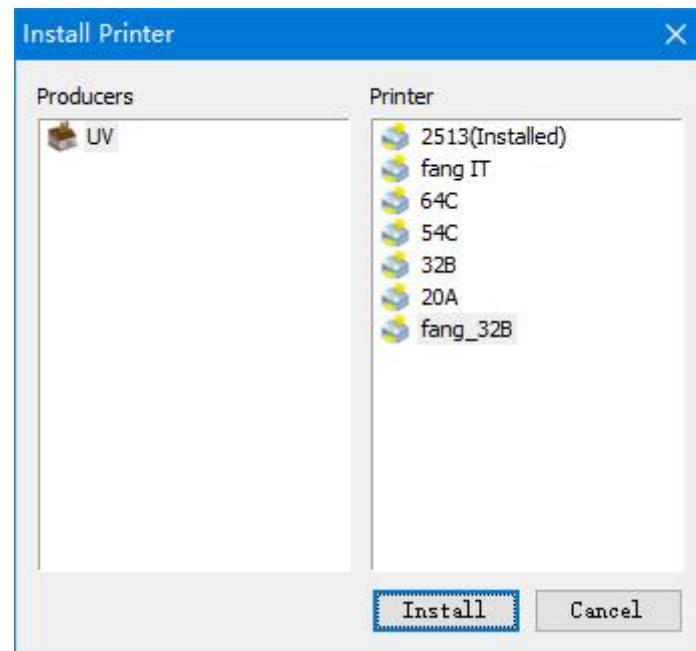
Under normal circumstances, if you have purchased a licensed copy of RIPrint

software, the authorized vendor should have pre-configured the required drivers for your specific printer model. In the target manufacturer's printer list, select your required printer model. Click the 'Install' button to add it to the Installed Printers list.

Printer property： Select the printer you want to configure, click the "Printer Property" button, and the program will pop up the printer property dialog box, as shown below：
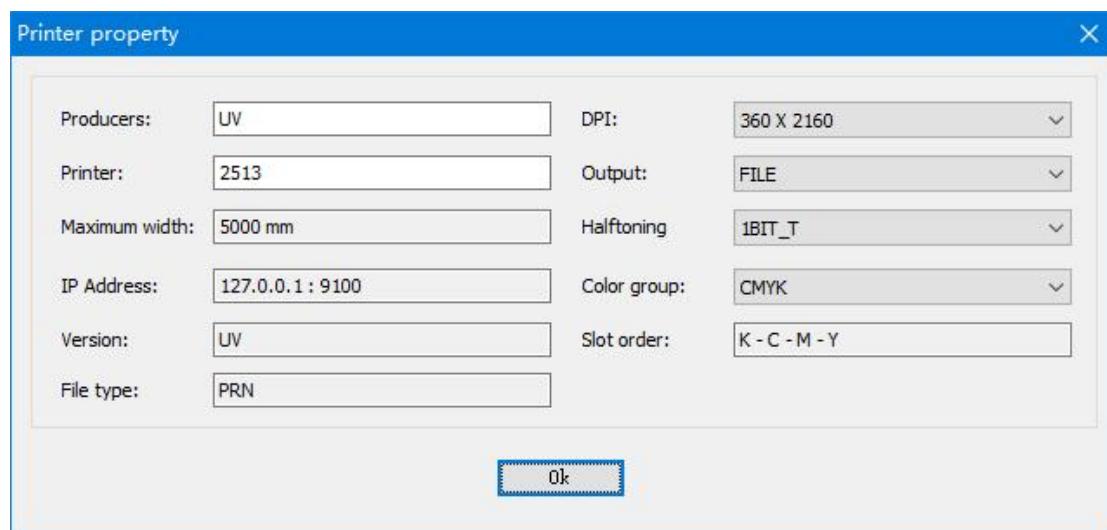
Here, you can view parameters such as the printer's output resolution, color combination, and output method. Once you have finished reviewing, click "OK" to close the dialog box.

Delete the printer： If you wish to remove an unused printer from your list of installed printers during use, select that unused printer and click the delete button.

"Delete the printer"， after the operation is completed, all information for this printer will be permanently deleted. Therefore, proceed with caution when performing this action.

Set as Default Printer:

After configuring the printer settings, you need to set your selected printer as the default. Select the printer, click the "Set as Default" button, and a default printer icon will appear next to it. At this point, you have completed the printer setup process.

Important Note:

If your driver modifies any printer settings, you must reinstall the printer and set

it as the default printer before you can use it for normal printing.

6.3 Add job

1."New" is to create a new canvas.

2."Save" is to save the current canvas.

3."Print" is the access to the Print Confirmation Screen.

4."Import" is to import the graphic to the canvas.

5."Undo" This command undoes the last edit. The software supports multi-level undo.

6."Redo" This command redoes actions undone by the undo command.

7."Copy" Copies the selected image on the active canvas item.

8."Paste" Pastes the copied image onto the active canvas.

9."Delete" Removes selected images from the canvas.

10."Group" Combines multiple selected images into one.

11."Ungroup" Ungroups the combined image into individual elements.

12."Split image" Divides an image into customizable segments.

13."Fill" Applies user-defined fill values to selected vector primitives (rectangles, ellipses, polygons, etc.)

14."Layout" Access to Typesetting Tools.

15."Show" Access to Interface, measurement tools (rulers/units)

Object alignment behaviors (snapping guides/objects/tolerance)

Visual reference elements (thumbnails/outlines/gridlines)

System operations (import alerts & localization)

  16."Tools" Access to: Performance maintenance tools (Cache clearance) .

Precision adjustment modules (Dimensional tolerance compensation) . System calibration utilities.
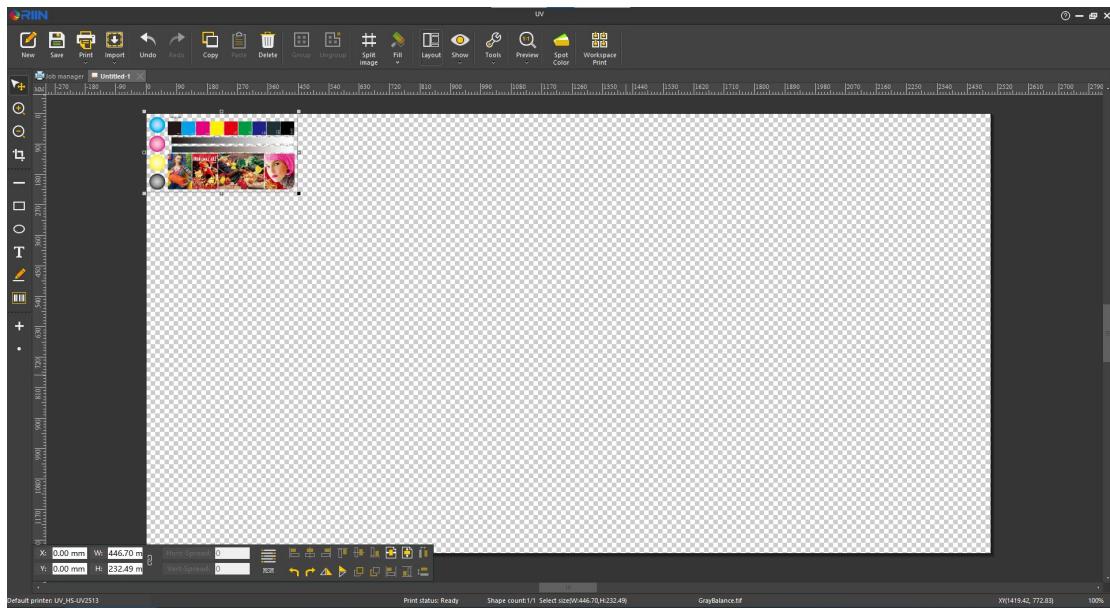
Click"New"can add files, （Pull the image into the frame directly）as shown above：

6.4 Print

Click 'Print' in the menu bar will launch the Print Confirmation dialog, as shown below:

"
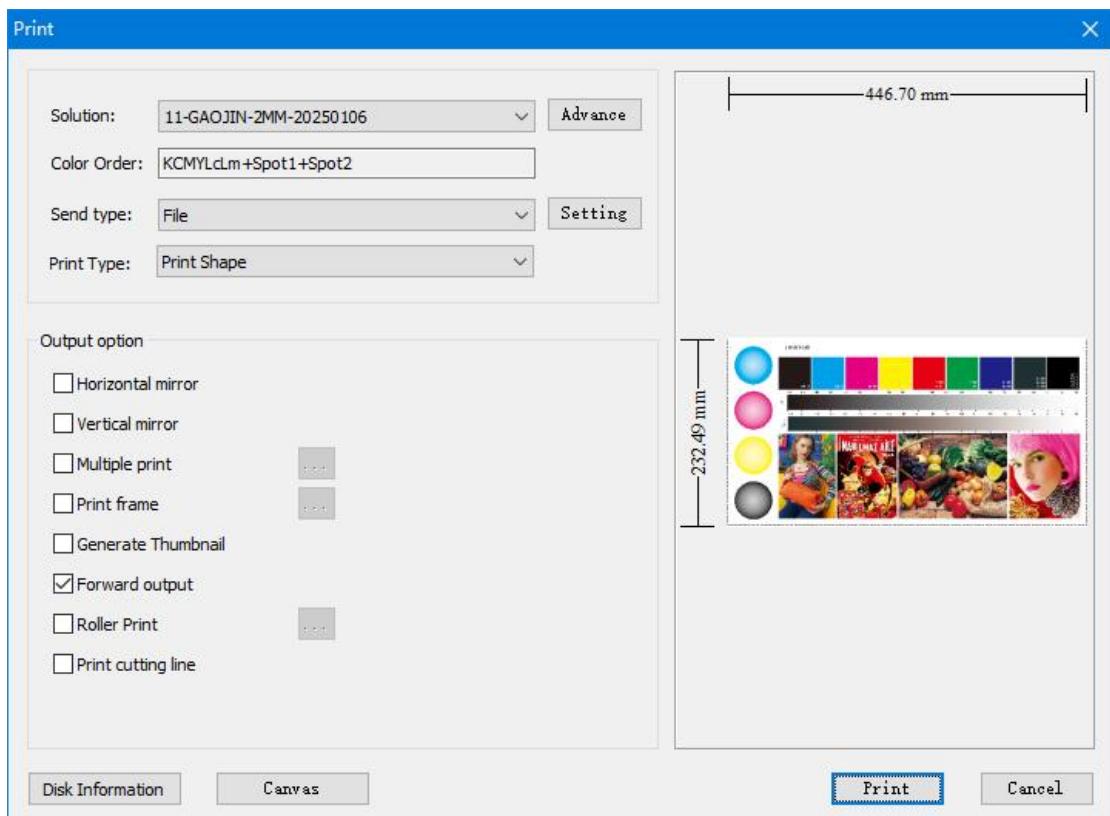
Here you can set the parameters for printing：

1. Solution：Select one for printing.

2. Send type：Print to the file port（Send type：FILE）or print to the network port
（Send type：TCP/IP）。Print to the file port is to generate PRN file firstly and then open it by Printer Manager. At last, print it. Print to the network port is to process the picture and print at the same time, there is no PRN file. Simply keep Printer Manager running in the background with parameters configured.

Print to the file port，click"Print"，the interface is as shown below:
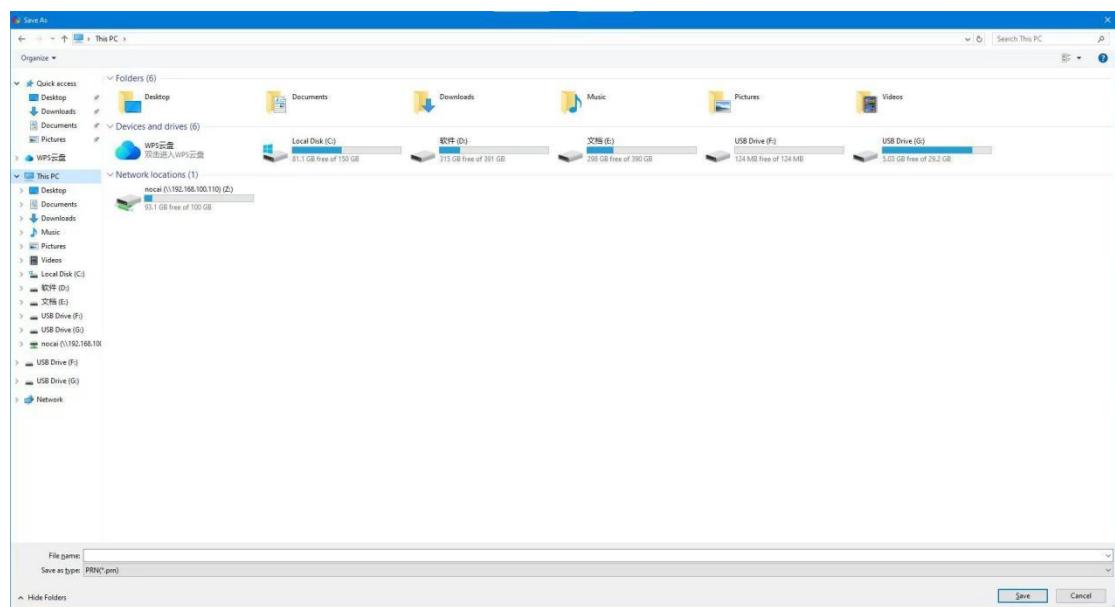
Maintenance method and announcements

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 head cable and contact parts, be sure to prevent ink dripping. Once the head cable parts and the printhead 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 printhead and the head board.
②Due to the head cable and the plug is tightly connected. So after a long time there will be contact oxidation, damage, misalignment or contact another cable, so when unplugging the head cable you need to pay attention to check these problems carefully, and exclude or replace the head cable, otherwise it will result in the burnt out of the printhead or head board.
③When not using the machine you must maintain the printer once a day, power-on it once and print the test strip, if the test strip is not complete, please clean automatically to ensure that the test strip is normal. Use the cleaning solution 3-5 drops of ink in the cap top when more than 3 days of vacation unattended. And then combine and seal the printhead and the cap top,which will protect the printhead.
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.
⑥Sheet metal of the cart must be cleaned regularly to avoid effects on the printhead.
⑦Avoid printing transparent materials that can cause printhead clogging.

7.2 Magnetic grid maintenance

The magnetic grid strip is a part that controls the printing accuracy in the card slot, the magnetic grid 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 printer, whether it is in the middle, whether it has been rubbed, in the dust or dirty air, the magnetic grid strip will be adsorbed by particles or dust to cause dislocation and other problems, please clean and wipe in time (alcohol). Keep the magnetic grid clean and undamaged, and replace it in time if there are scratches that cause misalignment.

7.3 Guide Rail maintenance

The guide rail contains cart guide rail. There is lubricant between guide rail and slider, please add lubricant regularly in order to avoid corrosion. If you find that there is black oil on it, you need to use alcohol to wipe firstly and then add lubricant.

7.4 Suction platfrom maintenance

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

7.5 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.

Troubleshooting Common Faults

8.1 Common examples of ink-supply suspension problems

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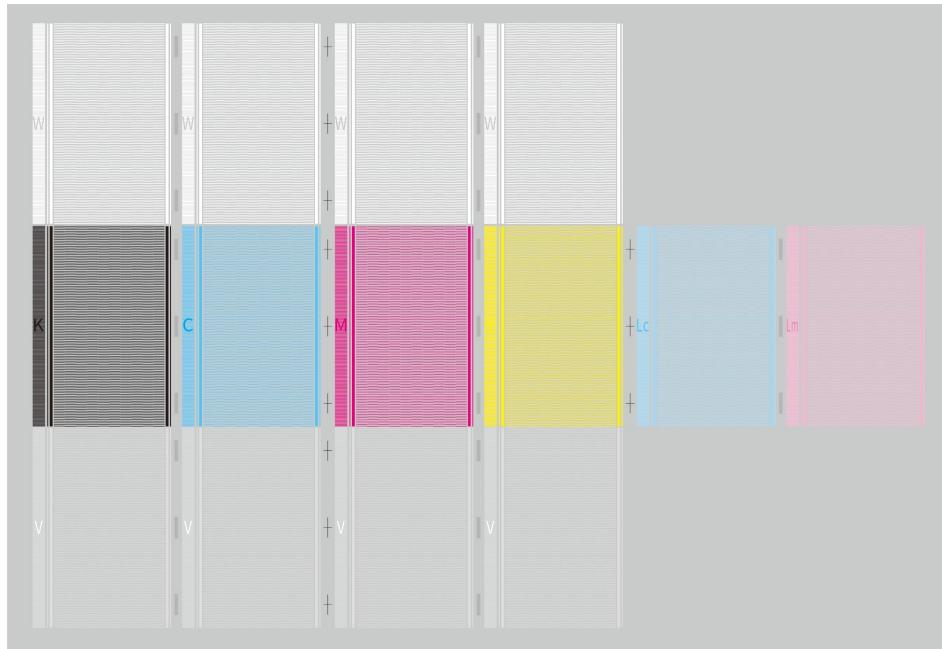
Partial ink-supply suspension problems
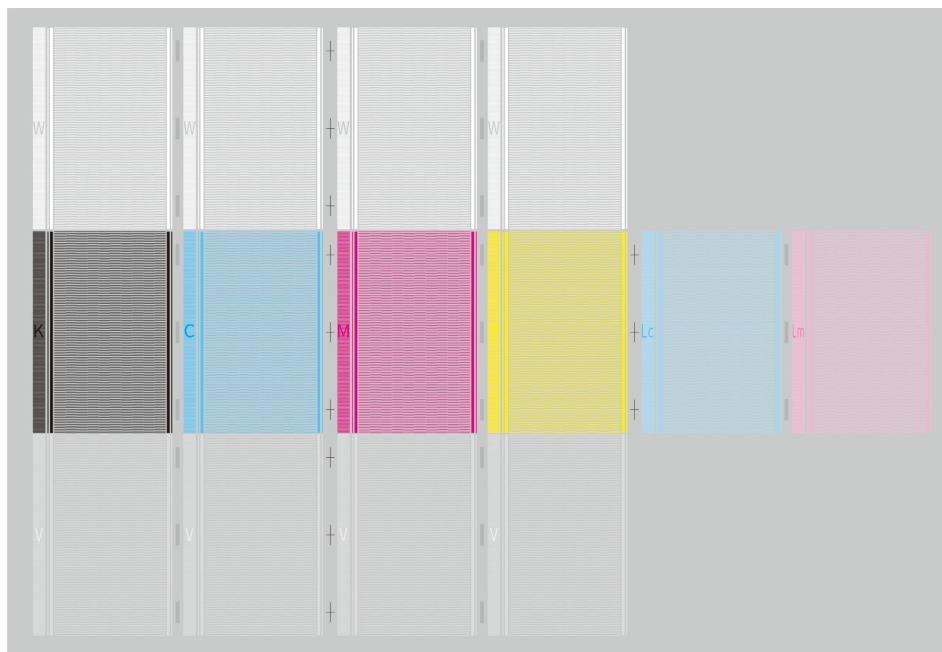
Note：The partial ink-supply suspension problem of the test strip is caused by the corrosion of the ink to the print head. You can choose automatic cleaning. If it cannot solve the problem, you can continue to use it without affecting the print

effect.

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

Solution：

1. Check whether the ink can flow out normally, and eliminate the possibility of blockage and air leakage.

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

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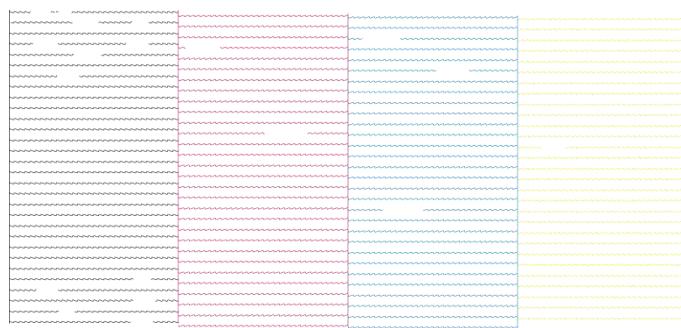
Solution：

1. Check whether the ink can flow out normally, and eliminate the possibility of blockage and air leakage.

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

3. Replace the headboard.

Problem Overview： The above problems generally occur due to the ink entering the receptacle of head cable or the improper operation after replacing the printhead, resulting in a short circuit of the printhead, burning the head board or printhead, because the head will damage the head board, but the head board will not damage the printhead. It is recommended to give priority to replacing the printhead and the new head cable.

Color mixing: large area color mixing
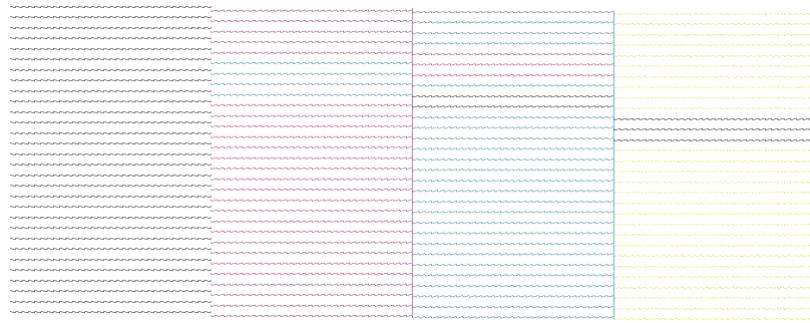
Solution：

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 printhead. Wipe the printhead surface clean with a lint-free cloth.

2. Replace the printhead.

Problem Overview： When the above problem occurs, firstly check whether there is residue on the surface of the printhead.

Test Pattern Droplet Deflection
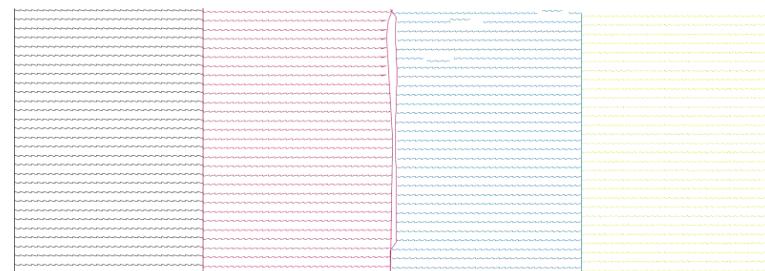
Solution：

1. Check whether the height of the printhead is within 2-3mm from the printing medium.

2. The printing environment is within the range of 15℃~30℃.

3. Stir the ink evenly, and then clean the print head. If the problem cannot be solved, it is recommended to replace the ink.

Problem Overview：If the above problems occur, and if there is no special change in the surrounding environment, it is because of the ink sedimentation caused by the machine being extended inactivity.

8.2 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 easily, if so, please check whether the X-axis drive motor indicator light is on or flashing red to report error, and whether the base screw of the motor pulley is tightened.

1.2 Check the cart board LED status; if unlit, replace its data cable.

1.3 Replace the cart board.

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

1.5 Replace the mainboard.

Problem Overview：Please check the hardware architecture firstly.

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

2.1 Replace the cable of cart board.

2.2 Replace the cart board.

2.3 Replace the mainboard.(Highly unlikely)

Problem Overview：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 then it 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 magnetic grid sensor.

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

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

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

3.5 Whether the magnetic grid sensor is stuck in the slot.

3.6 Replace the cart board.

Problem Overview：The above problem is because the cart has received the command from the mainboard, but the magnetic grid sensor cannot read data correctly.

4、During the printing process, the machine reports errors occasionally

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

4.2 Whether the magnetic grid strip has ink, oil stains, dust, clean it with alcohol.

4.3 Whether the magnetic grid 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 Replace 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).

Problem Overview： The magnetic grid 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 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 Replace the cart origin sensor.

5.3 Replace the cable of the cart origin sensor.

5.4 Replace 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 Replace the front and rear limit sensor.

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

6.4 Replace the mainboard.

8.3 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.

The edges of the product are not dry：

1. Confirm the version number （Pull down the setting menu to find the device information）

2. Manufacturer make sure the version number and upgrade the printer.

3. Adjust the UV lamp in the advanced settings of the driver panel.

8.4 Nozzle exhaust

Close all valves and make the negative pressure gauge zero. Unscrew the printhead cap with a container. Open the valve, press the button, and flush until the ink flow is smooth. It is very easy to check if there are bubbles. Press the button again to drip ink from the nozzle, then close the valve. Repeat this for each valve. Finally, open all valves, prime again, and reset the vacuum gauge to its original value.

8.5 Digital tube display code mapping

Digital display codes: Initialization procedures and alarm messages:

Digital tube A: If the fiber optic cable is not connected, connect it to initiate the following actions.

Digital tube 1: Raise the Z-axis to the specified height (the distance moved in the positive direction from the origin).

Digital tube 2: Raise the X Y-axis to the specified height (the distance moved in the positive direction from the origin).

Digital tube 3: The XY axes perform a two-stage homing sequence to the limit switches: the second stage involves a slow-speed movement to locate the limit switch precisely.

Digital tube 4: The XY axes move away from the limit switches to a designated position, which is set as the home position (defined by the retraction distance after triggering the limit).

Digital tube 5: The Z-axis performs a homing sequence: it first locates the limit switch, then retracts to a designated position which is set as the home (zero) position, and finally rises to the media height.

Digital tube 6: The secondary ink cartridge is low.

Digital tube 0: Initialization Complete.

Digital tube 9: Ink ingress into the air reservoir.

High-Frequency Jet Printing Conditions

30mm High-speed jet waveform： 30mm Jet waveform Waveform Type： Waveform 2 Printing Z-Axis Height： 30mm Printing Conditions： Low Speed / Deep Feathering / Mist Spray Voltage Temperature： 30°	25mmHigh-speed jet waveform： 25mm Jet waveform Waveform Type： Waveform 2 Printing Z-Axis Height： 25mm Printing Conditions： Low Speed / Deep Feathering / Mist Spray Voltage Temperature： 30°	25mmHigh-speed jet waveform： 25mm Jet waveform Waveform Type： Waveform 2 Printing Z-Axis Height： 20mm Printing Conditions： Low Speed / Deep Feathering / Mist Spray Voltage Temperature： 30°	15mmHigh-speed jet waveform： 15mm Jet waveform Waveform Type： Waveform 2 Printing Z-Axis Height： 15mm Printing Conditions： Medium Speed / Deep Feathering / Mist Spray Voltage Temperature： 30°

10mm High-speed jet waveform Waveform： 10mm High-speed jet waveform Waveform Type： waveform 2 Printing Z-Axis Height： 10mm	5mm High-speed jet waveform Waveform： 10mm High-speed jet waveform Waveform Type： waveform 2 Printing Z-Axis Height： 5mm Printing	2mm High-speed jet waveform Waveform： 2mm Standard Waveform Waveform Type： waveform 2 Printing Z-Axis Height： 2mm Printing Conditions： High	

Printing Conditions ： Medium Speed / Deep Feathering / Mist Spray Voltage Temperature：35°	Conditions ： Medium Speed / Deep Feathering / Mist Spray Voltage Temperature：35°	Speed / Deep Feathering / Mist Spray Voltage Temperature：45°	