

NC-UVDTF60-PLUS (3H)



User Manual

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

Catalogue

Notice	1
Machine introduction	2
1.1 Graphic analysis of the front and side of the machine	2
1.2 Graphic analysis of the back and side of the machine	2
1.3 Beam Diagram	2
1.4 Printing cart diagram	3
1.5 Ink station	3
1.6 Key panel diagram	3
1.7 Ink cartridge diagram	4
Preparations before usage	5
2.1 Disassembly of machine fixed sheet metal	5
2.2 Confirm that the operation is normal after powering on	6
2.3 Install the printing material	6
2.4 Settings of heating lamp	6
Confirm the status	7
3.1 How to add ink	7
3.2 Print test strips	7
Install Future Rip	8
4.1 Future hardware introduction	8
4.2 Computer configuration and IP settings	8
4.3 Install Future Rip	9
Introduction of driver setting	12
5.1 Open driver setting	12
5.2 Introduction of driver setting	13
5.2.1 Basic setting	13
5.2.2 Calibration	14
Future Rip usage introduction	24
6.1 Dongle	24
6.2 Function introduction	24
6.2.1 Language switching	24
6.2.2 Navigation bar	25
6.2.3 Main function	25
6.2.4 Bottom function keys	32
Introduction to the fuction of key panel	33
7.1 The content of first page	33

7.2 Menu list	33
Introduction to proofing operation process	36
8.1 Confirm the material and height	36
8.2 Import pictures	36
8.3 Confirm printing conditions	37
8.4 Confirm driver setting parameters	39
8.5 Print	40
Machine maintenance methods and precautions	41
9.1 Maintenance methods of print head	41
9.2 Capping station maintenance	41
9.3 Rail maintenance	41
9.4 Change Damper	42
9.5 Change cap top	42
9.6 Shell sheet metal maintenance	42
Common trouble-shooting methods	43
10.1 The situation of intermittent ink	43
10.2 Software UV (demo version)	46
10.3 UV lamp doesnot work	46
10.4 Ink is not dry	46
10.5 Error code	47
Introduction and definition to board line	51
Maintenance rules	53
12.1 After-sales service and quality-warranty policies	53
12.2 Ask for help	53
12.3 Customer information column: please refer to the following chart	53
12.4 Non-warranty items	53
12.5 Warranty policies	53
12.6 Notes	54

Notice

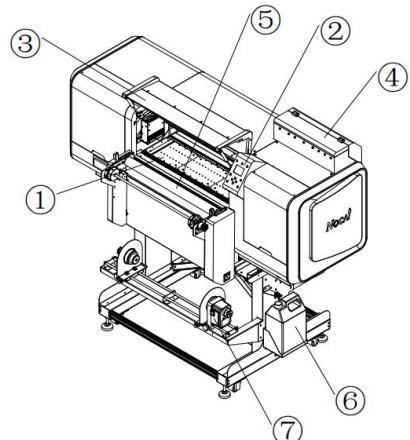
Please read this instruction carefully before using the machine

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 the 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,machine printing table and surroundings;
9. Please keep a stable temperature in the working room,do not use the machine where 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 using the machine;
12. Power off machine when u clean or fix machine;
13. Please use the machine according to local legal policy;
14. Make sure the printhead 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, ultraviolet-proof glasses is necessary;
16. At least 2 people can move the machine.Do not move the machine together with other machine parts.And remember to take take off the power charger when move the machine;
17. Please protect in advance when adding ink because ink tube,ink bottle and ink cap and some other parts may be polluted by ink;
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 high load printing for a long time;
20. Make sure 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

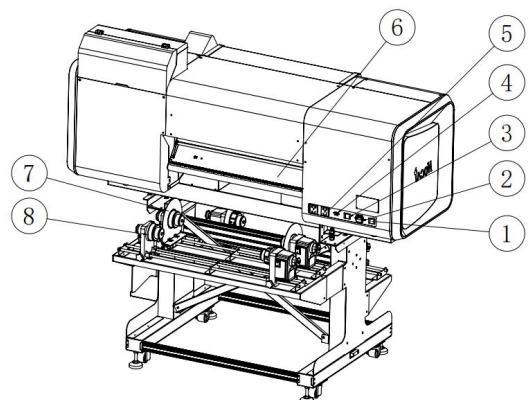
1.1 Graphic analysis of the front and side of the machine

- ① Platform:600mm
- ② Key panel
- ③ Cover
- ④ Cartridge
- ⑤ Heating shaft of UV DTF film
- ⑥ Waste ink bottle
- ⑦ Motor and switch of receiver



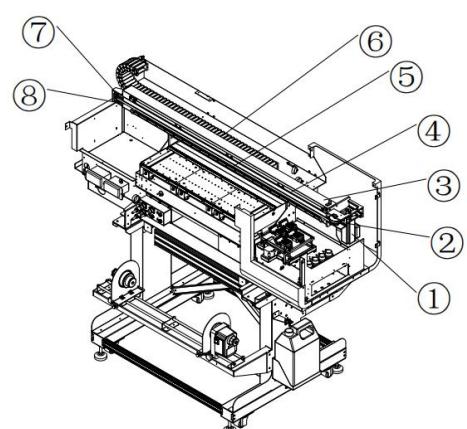
1.2 Graphic analysis of the back and side of the machine

- ① Power switch
- ② Power interface
- ③ Heating switch of coiled material
- ④ Cable connector
- ⑤ Power connector of receiver
- ⑥ Paper board
- ⑦ Paper feeder
- ⑧ Film tearing



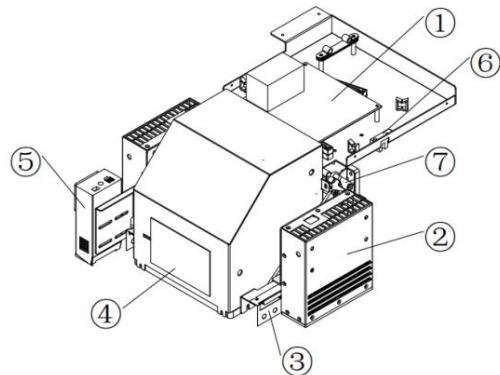
1.3 Beam Diagram

- ① X axis motor
- ② Combining wheel of machine nose
- ③ Aluminum beams
- ④ Encoder strips
- ⑤ Rail
- ⑥ Cable carrier
- ⑦ Driven wheel of machine nose
- ⑧ Timing belts



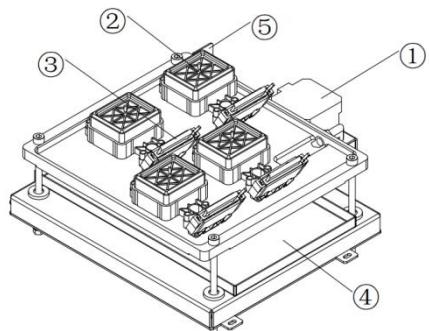
1.4 Printing cart diagram

- ① Head board
- ② Color UV lamp at the right side
- ③ Anti-collision shrapnel
- ④ Heating piece of cart
- ⑤ Varnish UV lamp
- ⑥ Sensor of right side
- ⑦ Adjustment handle of cartridge height



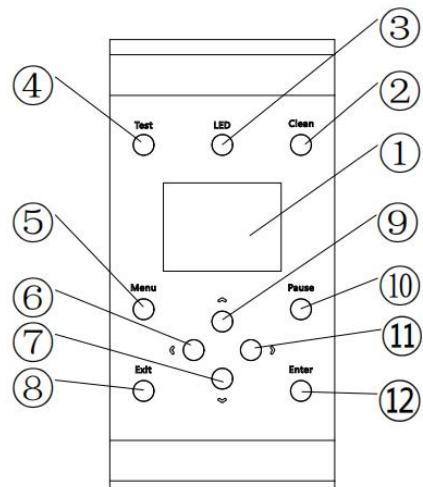
1.5 Ink station

- ① Ink station motor
- ② Cap top
- ③ Wiper
- ④ Ink fountain
- ⑤ Sensing sheet metal of ink station



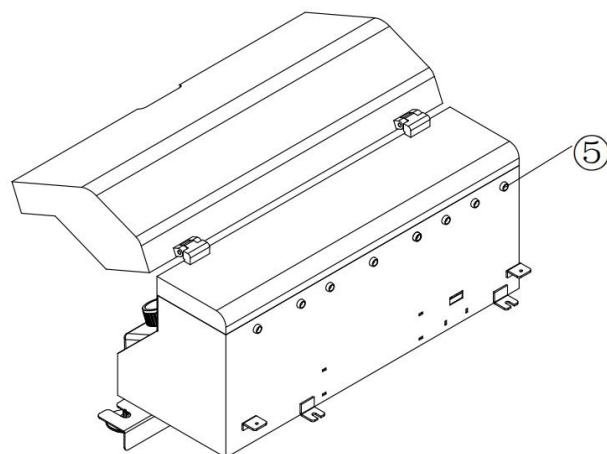
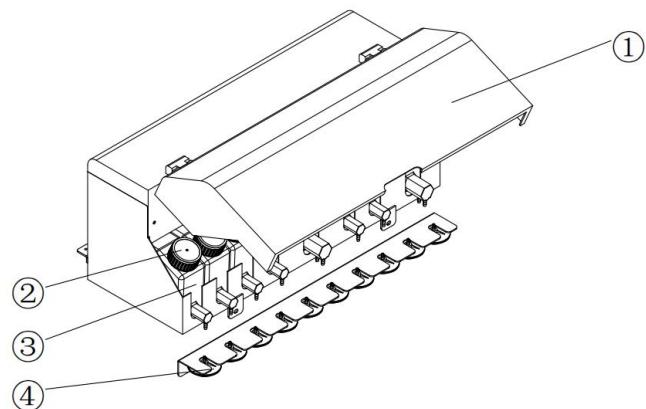
1.6 Key panel diagram

- ① Display panel
- ② Clean
- ③ LED lamp
- ④ Test
- ⑤ Menu
- ⑥ Move to the left
- ⑦ Feed
- ⑧ Exit
- ⑨ Exit
- ⑩ Pause
- ⑪ Move to the right
- ⑫ Enter



1.7 Ink cartridge diagram

- ① Cartridge cover
- ② Ink cartridge cover
- ③ Ink cartridge
- ④ Butterfly filter: Filter the impurities of the ink
- ⑤ Ink alarm indicator: Indicate the amount of the ink remaining

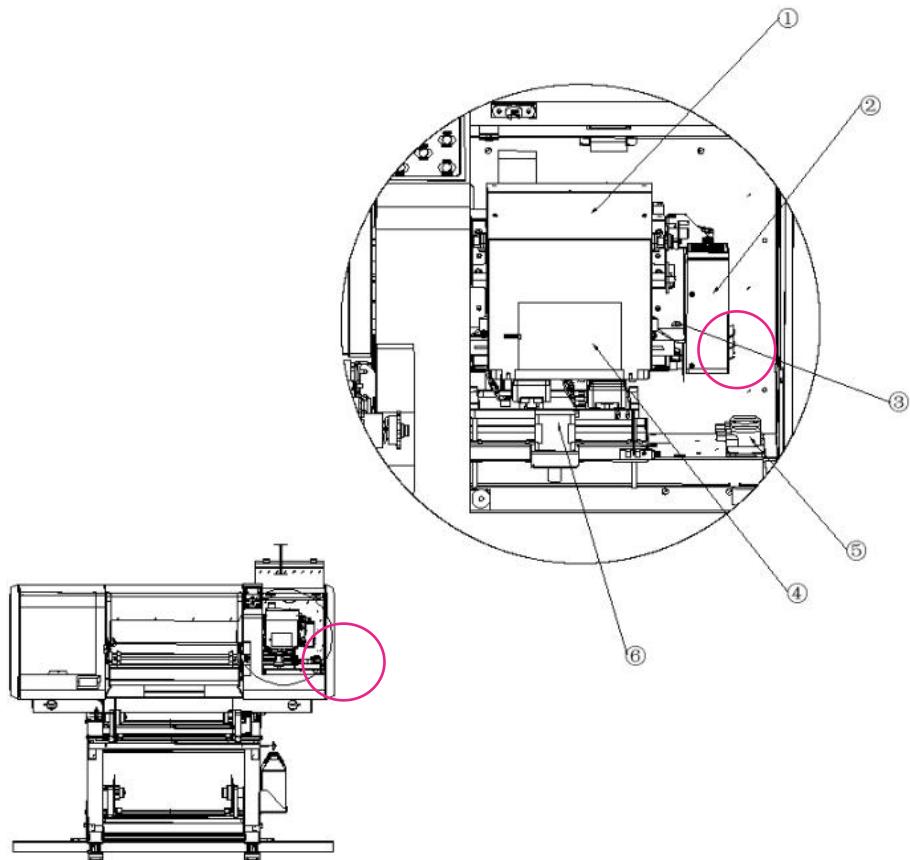


Preparations before usage

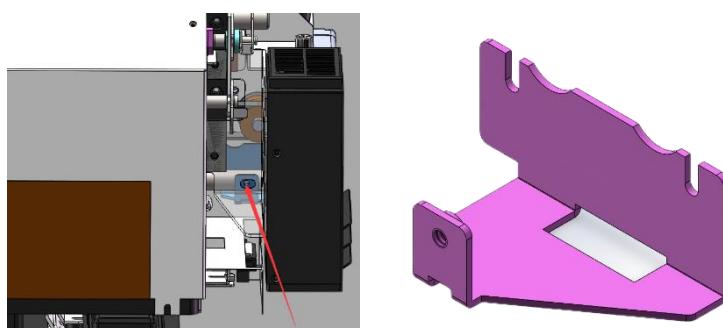
The preparation work after removing the outer packaging includes ensuring that the machine is placed appropriately, removing the fixed sheet metal, and confirming that the power-on and startup actions are normal and the machine moves normally.

2.1 Disassembly of machine fixed sheet metal

You need to remove the fixed sheet metal that fixes the cart before powering on the machine. ③ is shown in the figure below:



The detailed picture is as the following:



2.2 Confirm that the operation is normal after powering on

Make sure that the appearance of the machine is normal and it is placed stably. Check whether the power supply voltage mark of the machine is 220V or 110V. It must be consistent with the local power supply voltage before it can be used.

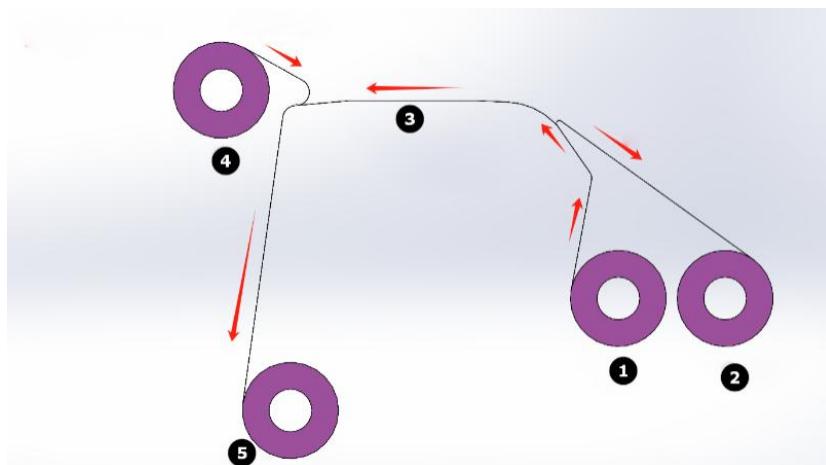
Connect the machine to the power supply, turn on the main power switch at the rear of the machine, and the machine begins to initialize. The specific action process is as follows:

[The ink station and the wiper descend simultaneously → the cart moves to the left → the cart moves right to the limited position → the cart moves left to the top of the ink station → the head of the ink station is sealed]

2.3 Install the printing material

Schematic diagram of standard version

- ① DTF A film
- ② Receive the waste of A film
- ③ Platform
- ④ DTF B film
- ⑤ Receive the finished product



2.4 Settings of heating lamp

The up and down keys adjust the temperature, the LED light in the lower left corner is displayed, and the upper LED light shows the real-time temperature.

PS: There is 1 controller for standard version and 2 controllers for golden varnish version. The left is the controller of heating lamp of golden varnish version. The right is the controller of controller of heating lamp of film.



Confirm the status

3.1 How to add ink

- 1) As shown in the picture below, add the corresponding ink according to the color prompts.
- 2) When adding ink, protective measures need to be taken in order to prevent the ink from leaking and contaminating the shell sheet metal. You can wrap the bottle mouth with tissue.
- 3) Tighten the ink bottle cap properly after adding ink.



Automatic cleaning

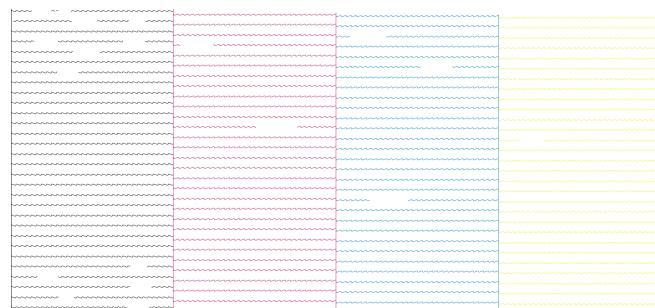
In standby mode, click [RIGHT] → [Equipment Maintenance] → [Auto Cleaning] → [Enter] on the control panel board. After clicking the confirmation button, the machine will start cleaning automatically.

3.2 Print test strips

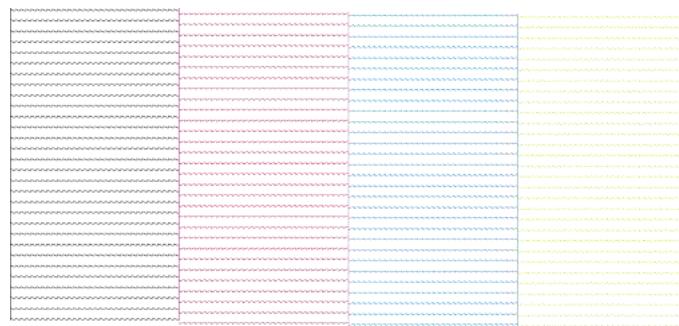
Click [TEST] on the button panel to print the test strip. If there is a lack of color or ink breakage, please continue to clean the print head manually until the test strips are all out and the ink installation is completed.

Reference is as follows:

The test strips are not complete, and needs to continue "automatic cleaning"



The normal status of the test strips is as follows:



Install Future Rip

Future Rip is printing control software, and it is mainly divided into two parts: image processing and driver settings.

4.1 Future hardware introduction

It includes Future RIP installation package and dongle. The picture below shows the dongle, with the number on the front.



4.2 Computer configuration and IP settings

① System version: Win7, win8 or win10 of 64-bit system.

Language: Chinese and English

CPU: i5 or above or equivalent specifications;

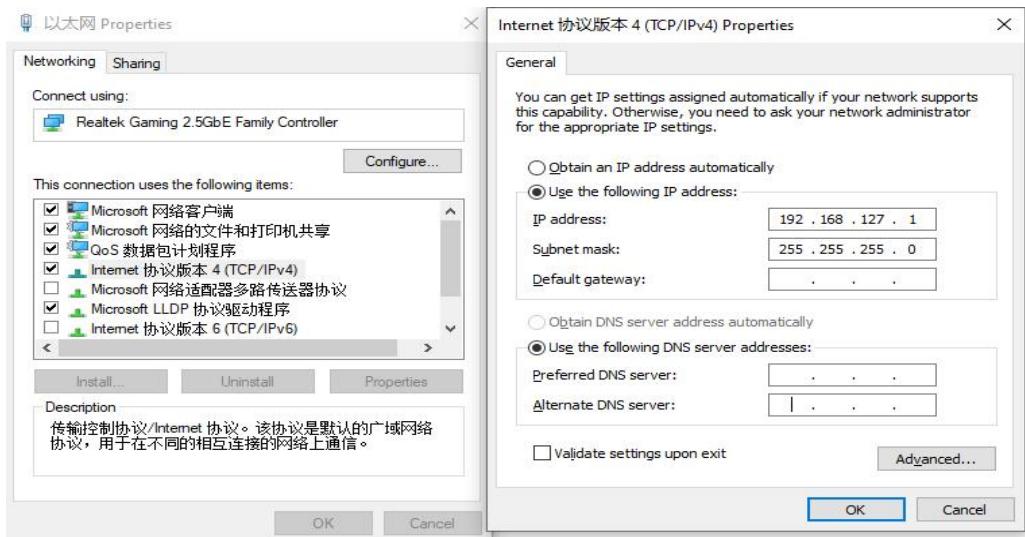
Memory: 8GB or more;

Hard drive: 500GB or more.

② The computer must be equipped with a Gigabit network card and a Gigabit network cable so that the software can be connected normally.

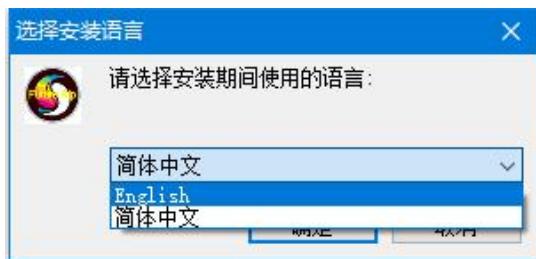
③ Make sure the computer's IPv4 address can obtain IP address automatically, and do not choose IPv6. Only then can the driver connect normally.

The operation is as follows: Find the icon in the lower right corner of the desktop,  right-click, select [Open Network and Internet Settings] - click Change Adapter Options, double-click Local Area Connection (or Ethernet) - click Properties - do not choose Inter Protocol Version 6 (TCP/IPv6) Select Inter protocol version 4 (TCP/IPv4) and double-click to open, - fill in the IP address, click OK.

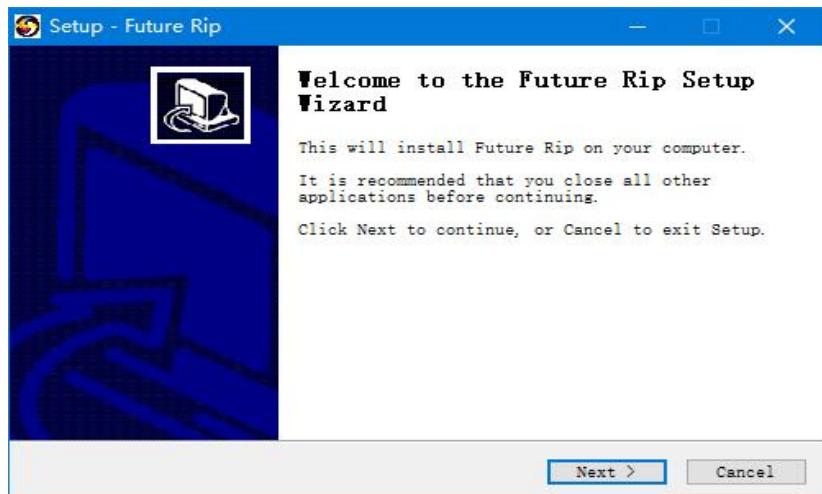


4.3 Install Future Rip

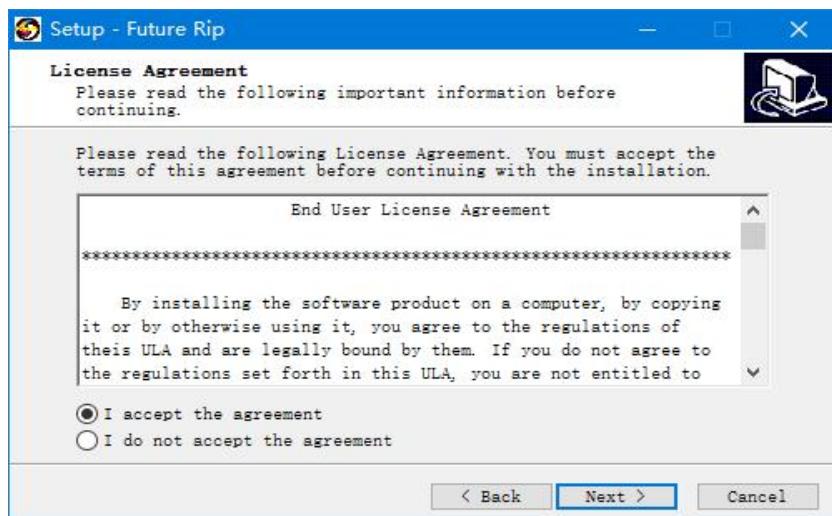
Open the file package named Future Rip on your computer, obtain it from after-sales service team or download it from our official website www.gznuocai.com.cn. Find and open the Future RIP.exe, right-click to operate as administrator, and check the box to agree , Next step, click Install to complete, the details are as follows:



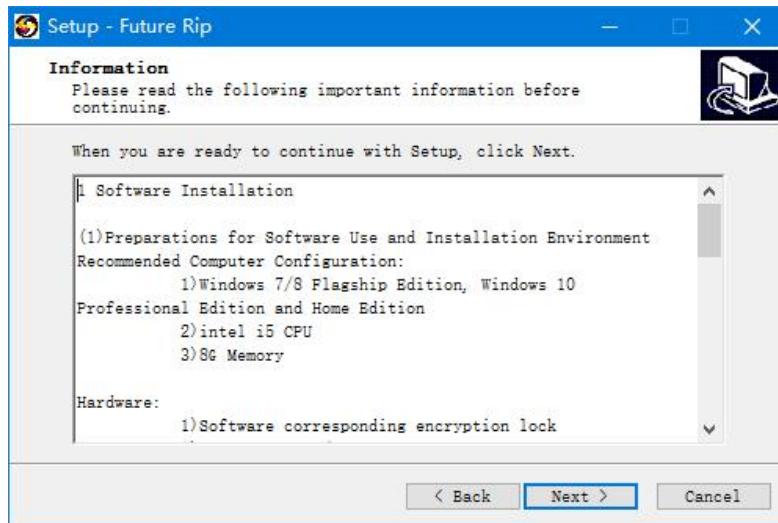
In this interface, you can choose to install Chinese and English displayed. Click "Confirm" and the pop-up window will appear as follows:



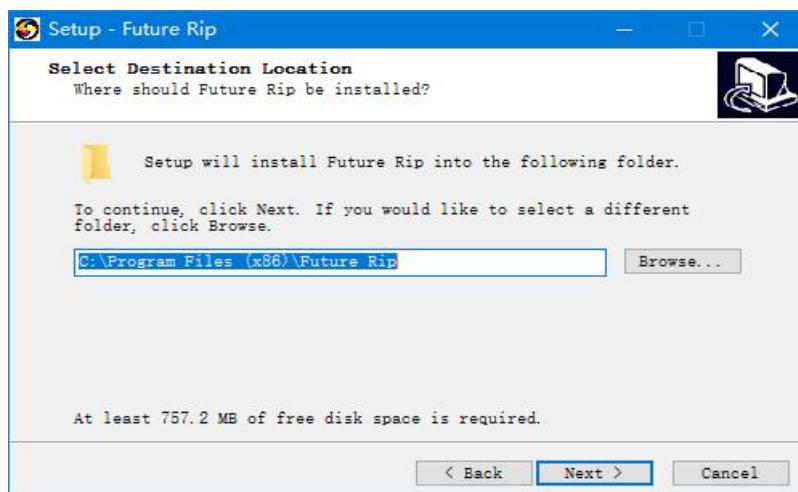
Click Next and the pop-up window will appear as follows:



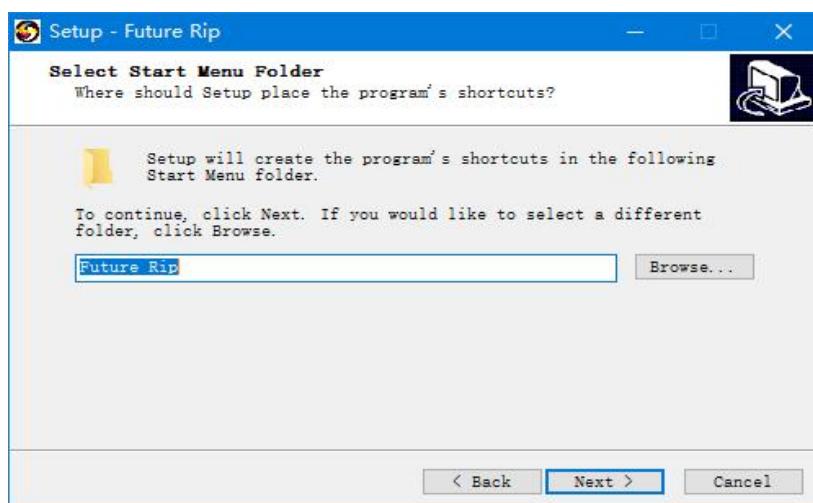
Click Next and the pop-up window will appear as follows:



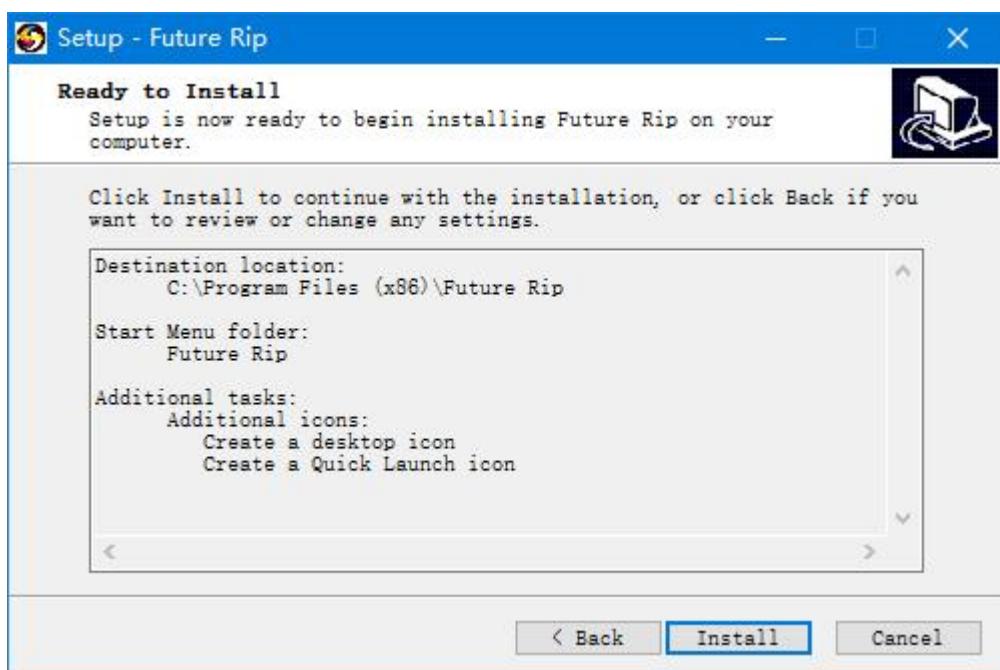
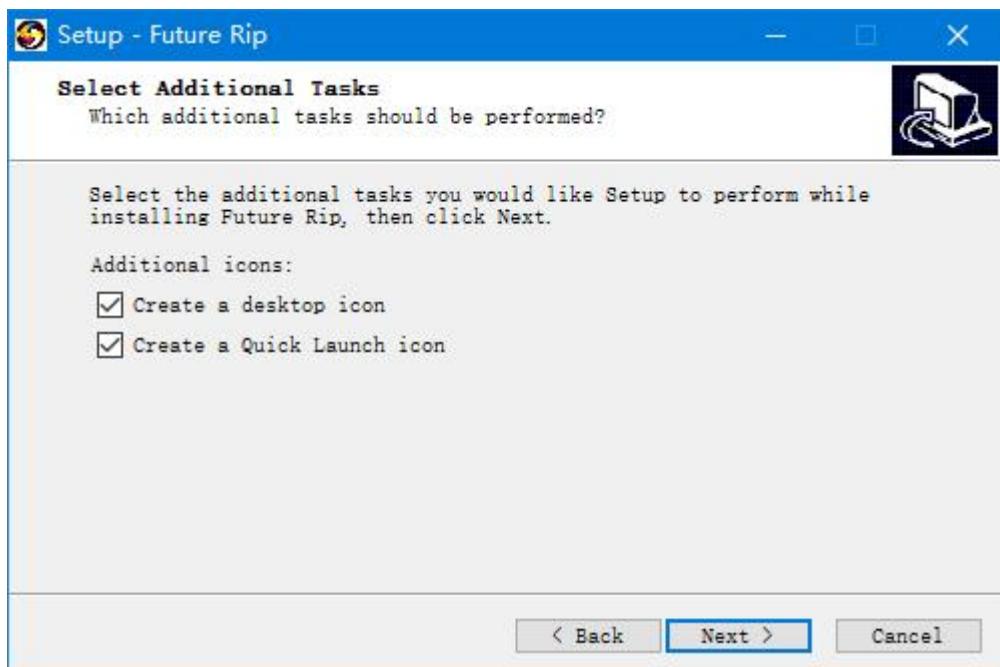
Click Next and the pop-up window will appear as follows:



Click Next and the pop-up window will appear as follows:



Click Next and the pop-up window will appear as follows:



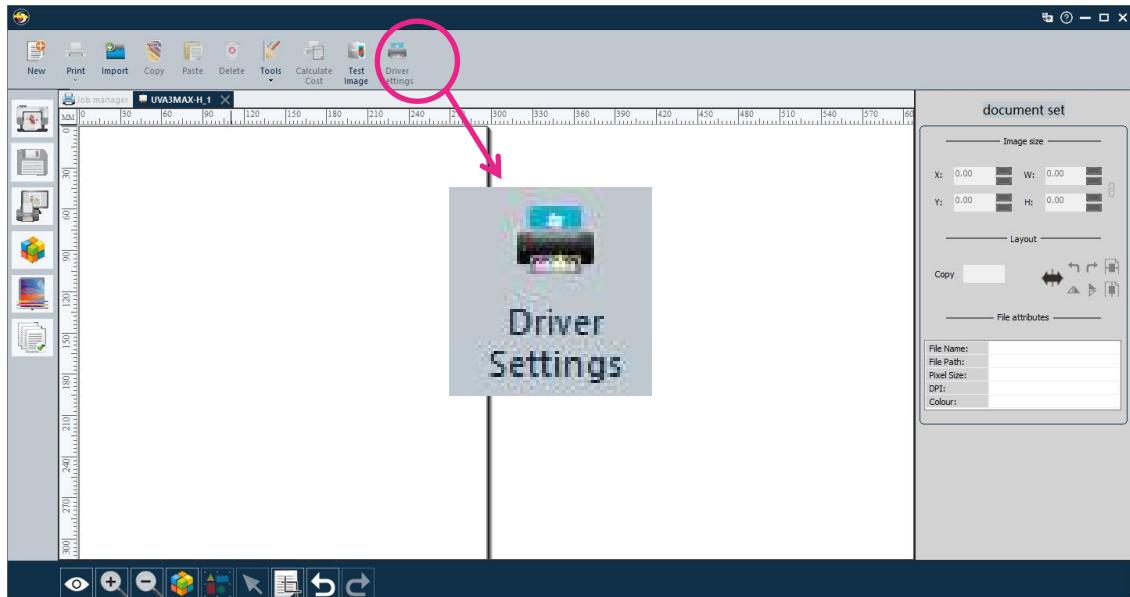
Click Install and the software will be installed. There will be a startup icon on computer



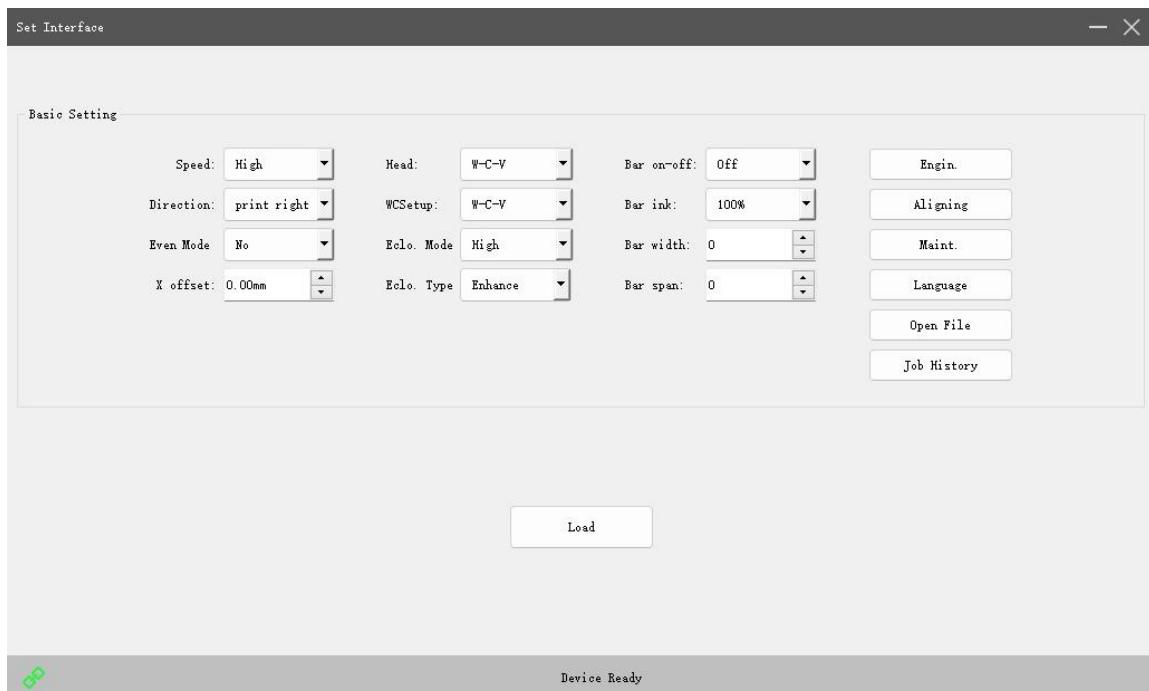
Introduction of driver setting

5.1 Open driver setting

Double-click to open the desktop icon [Future RIP.exe], the pop-up window is as follows:



Then click the Driver Settings button. When the green hinge icon is displayed in the lower left corner, it means that the driver is online, as shown in the figure below: the lower left corner displays a solid light of successful connection, and a flashing light means not successful connection.



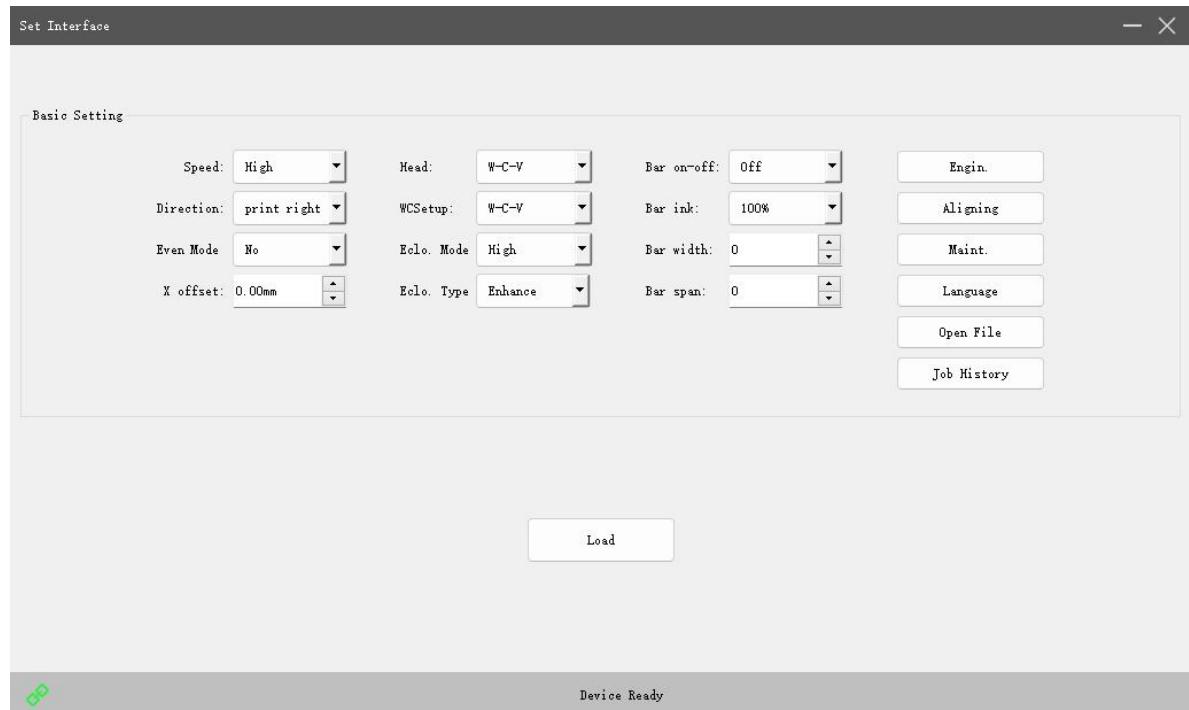
The green light indicates successful automatic connection, and the red light indicates failure to connect automatically.

	The normal connection status of the network cable
	Network cable disconnection status

5.2 Introduction of driver setting

The following are the detailed introduction:

The software display interface is mainly divided into four parts: ① basic settings, ② calibration, ③ engineer mode, ④ system maintenance.



The detailed introduction are as following:

5.2.1 Basic setting

X white edge: the offset position of the calibration chart and the picture relative to the starting point of the platform printing. It is recommended to set both to 0.

Printing speed: High speed, standard, low speed, and high precision. They are the speed of the print head.

Color combination: optional: white color varnish, single color, single white, single varnish, white

color, white varnish, color varnish, single glue, white color varnish glue.

It is the color you need to select while printing. For example: only white ink will be printed if you select white; and only color ink will be printed if you select color; and white and color ink will be printed if you select white color.

Direction: There are three options: printing to the left, printing to the right, and bidirectional printing, which are the printing directions of the print head.

Feathering mode: You can choose Close, Low, Medium, or High to improve the printing quality effectively. The higher the feathering you choose, the better the printing accuracy and quality will be, but the slower the printing speed;

Feathering type: Default, Enhanced, Default type is selected.

Uniform mode: Turn on the uniform mode when the printing effect is seriously broken.

Ink loading: automatic inking for 30 seconds

Ink cutoff settings: For example, if you feel that the amount of ink is too much or too little when printing, you can adjust it here. Reduce percent ink volume and multi-PASS ink volume printing.

5.2.2 Calibration

Click the calibration button, and the software will pop up the calibration process interface, as shown in the figure below.

Material settings

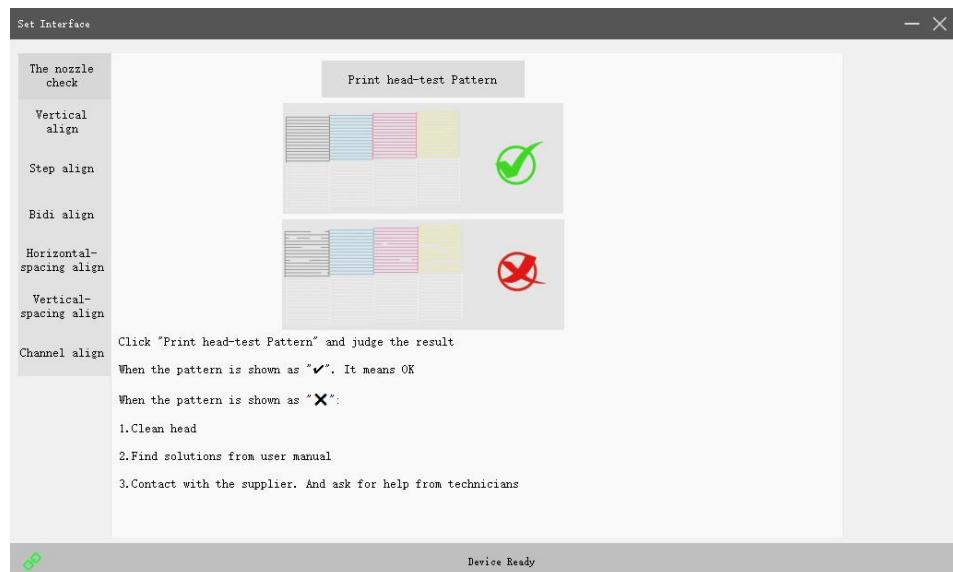
Material selection: Different parameters for different materials. Each material corresponds to a specific set of calibration parameters for printing and use.

Large horizontal printing accuracy: This model should choose 480DPI.

Printing speed: When higher calibration requirements are required, parameter calibration can be performed for high speed, medium speed, and low speed respectively. Generally speaking, only high speed needs to be calibrated.

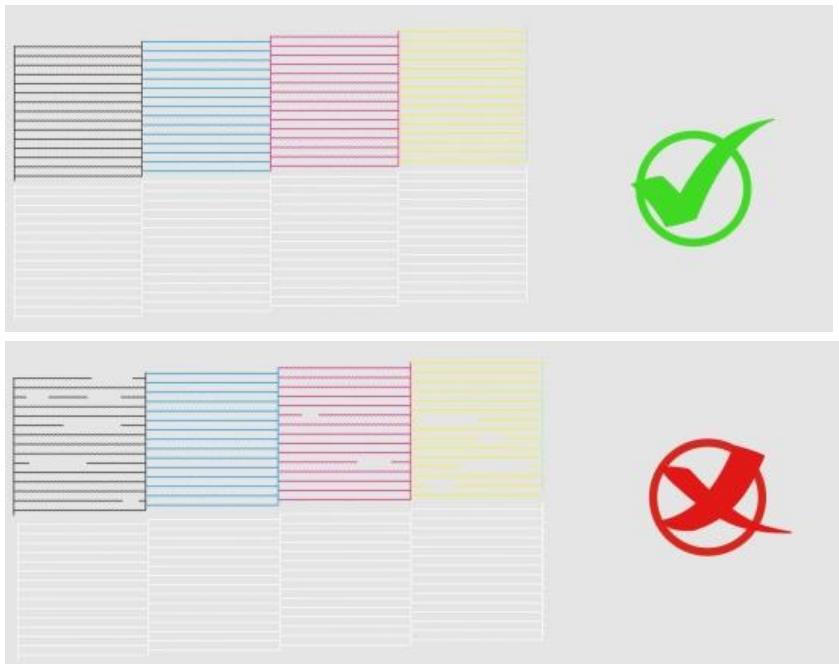
Calibration process

When a new machine is installed, replaced or hits the print head, perform calibrations in sequence from mechanism calibration to complete the calibration work.



Nozzle test

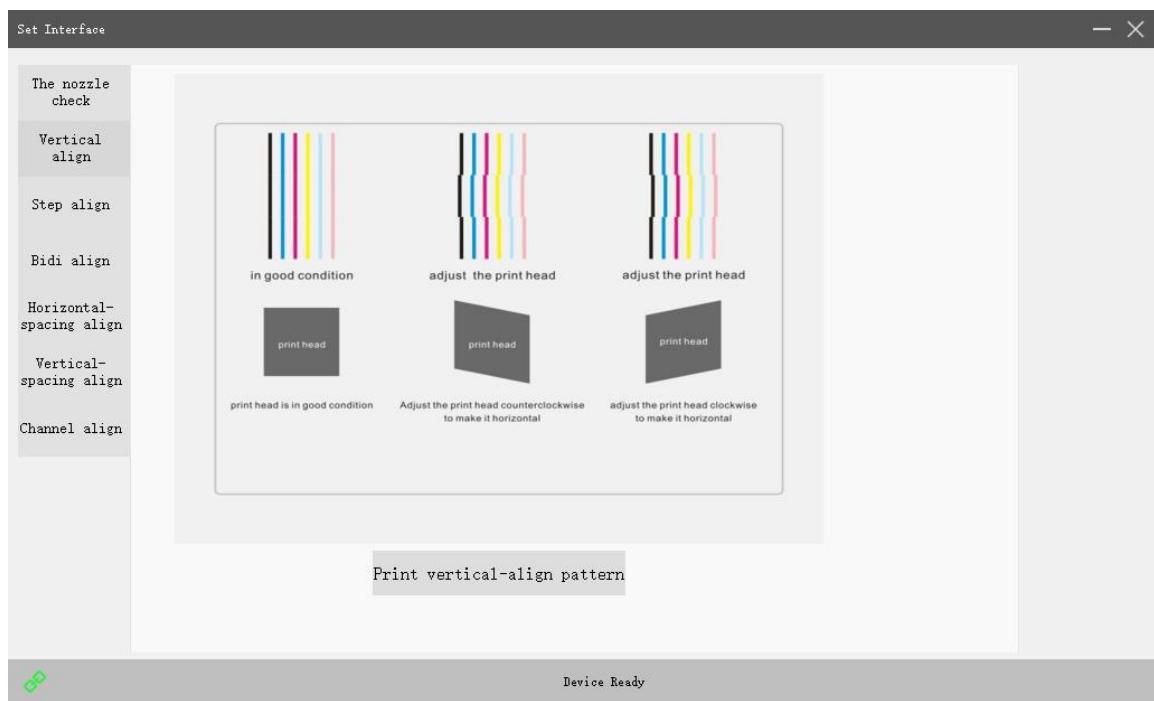
Comparing with the schematic diagram, the wrong result is that the status shows incomplete test strips, oblique spraying and color block drawing. Clean the printhead. The correct result is all the color is out completely.



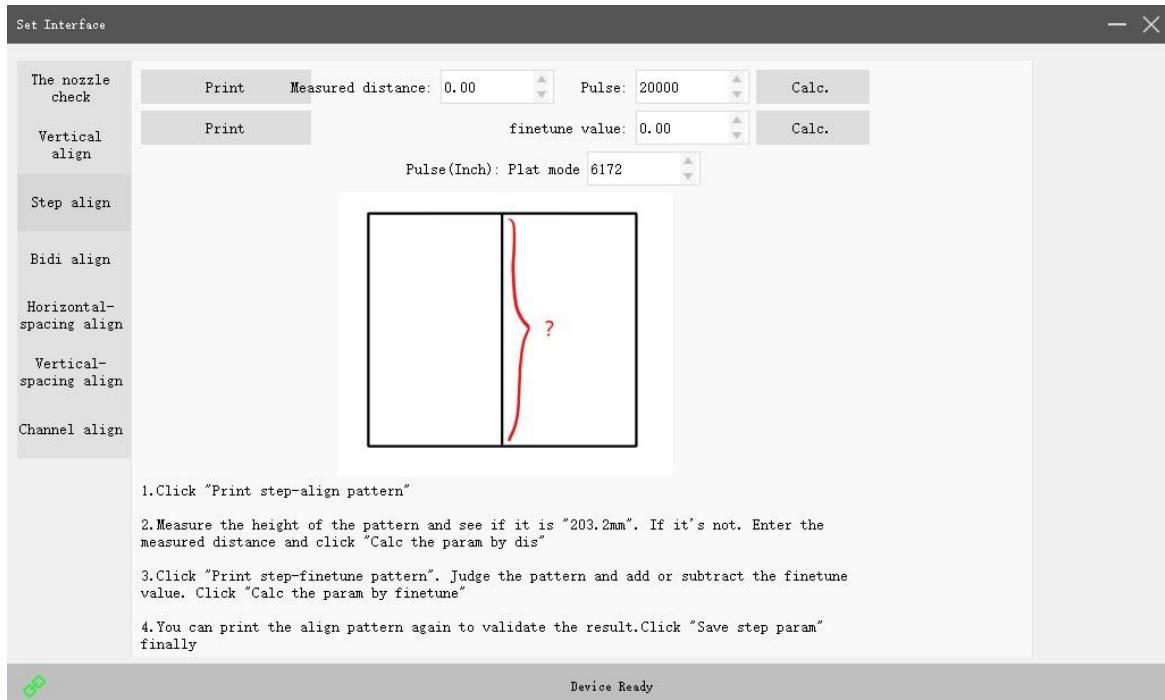
After confirming that the printhead is OK, click Vertical Check.

Institutional calibration

If the printhead is vertically offset to the left or right, you need to loosen the printhead fixing screw and adjust it slightly to the left or right.

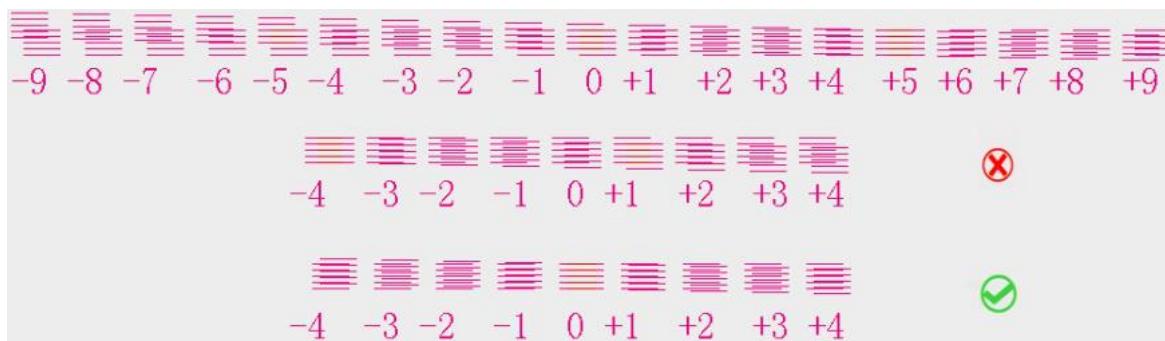


Step calibration

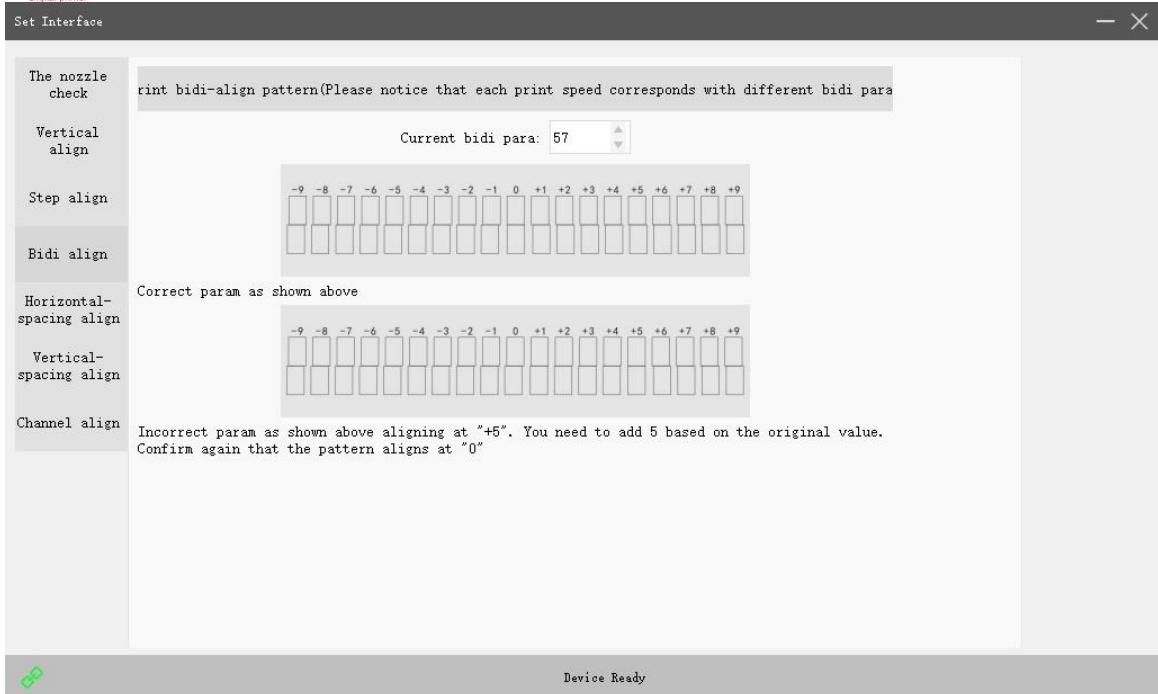


First of all, the first step is to click print of the reference step, and the calibration line as shown below will appear.

For the schematic diagram, the wrong result is that the alignment position of the calibration line and the reference line is not **at the left 0 position**. Please enter the value of the coincidence position of the alignment line and the reference line into the input box at the right of the print button, and then click the [Calculate] button below to perform calibration. The correct result is that the calibration line and the reference line coincide at position 0.

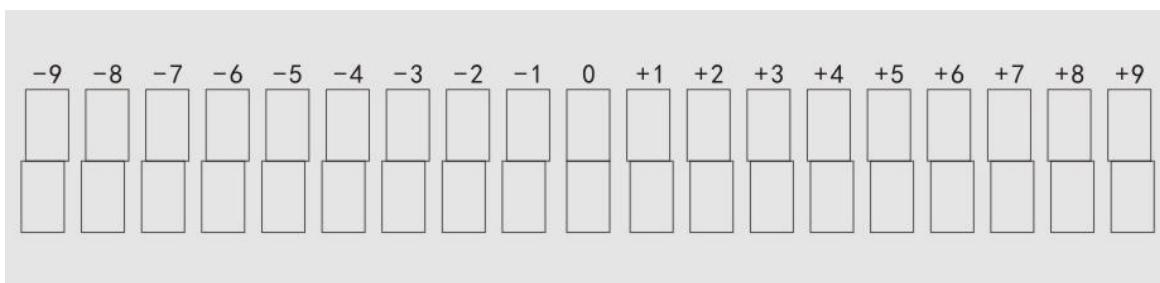


Bidirectional calibration

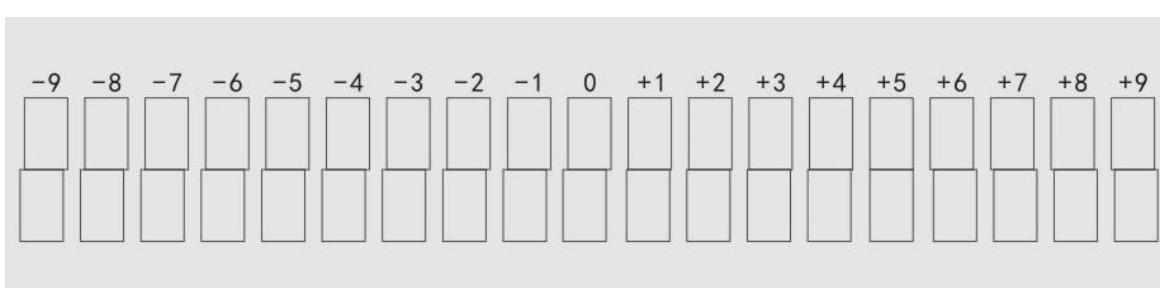


Click "Print Bidirectional Calibration Pattern" and follow the method shown in the figure above. After the adjustment is OK, click Next. The software enters the main calibration interface and selects the horizontal distance between the heads automatically.

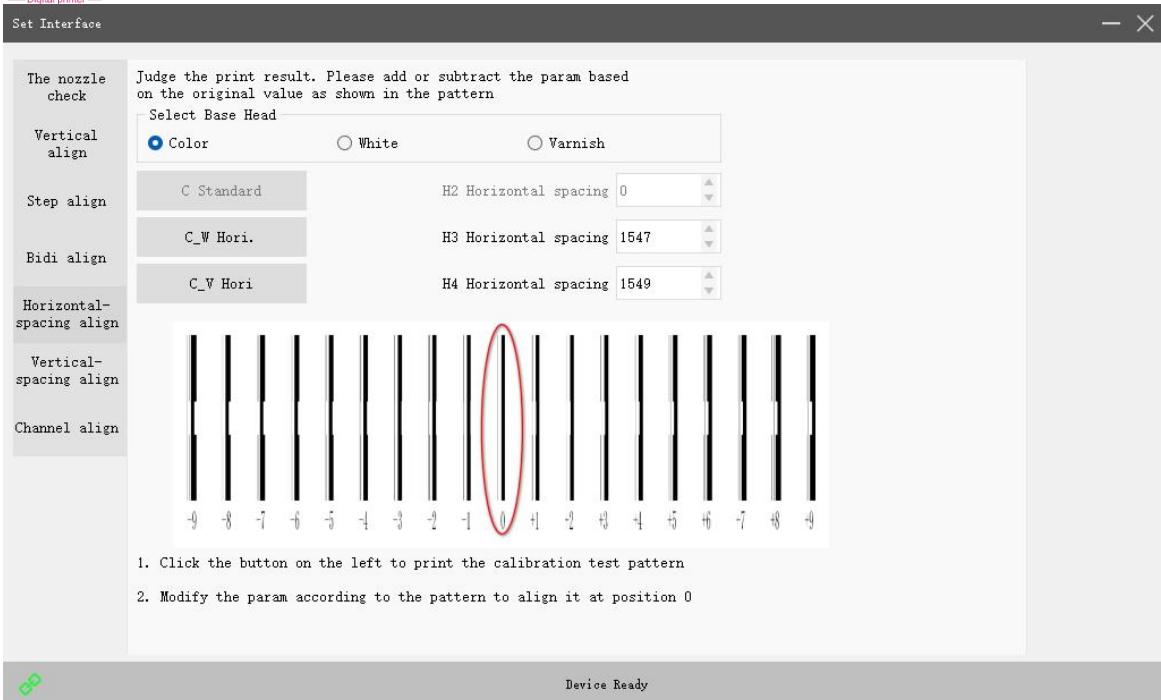
As shown in the figure, the 0 position has been aligned



The picture below shows the calibration misalignment 0 position.

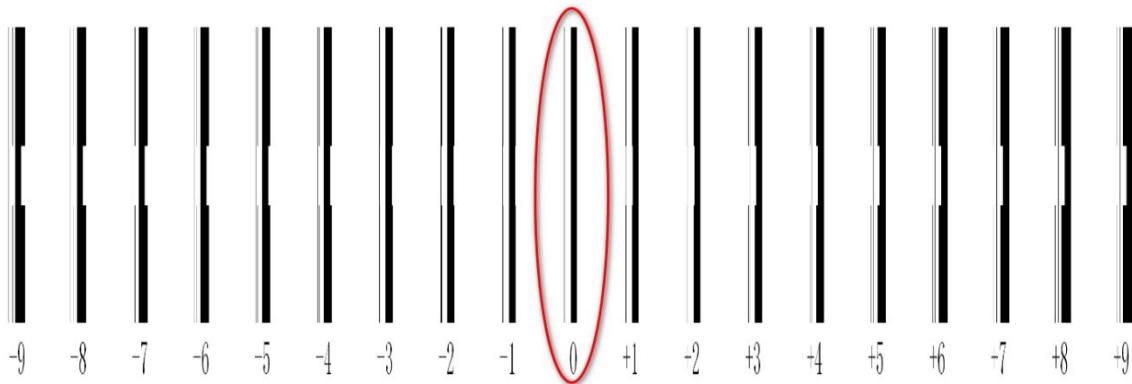


Head horizontal spacing calibration



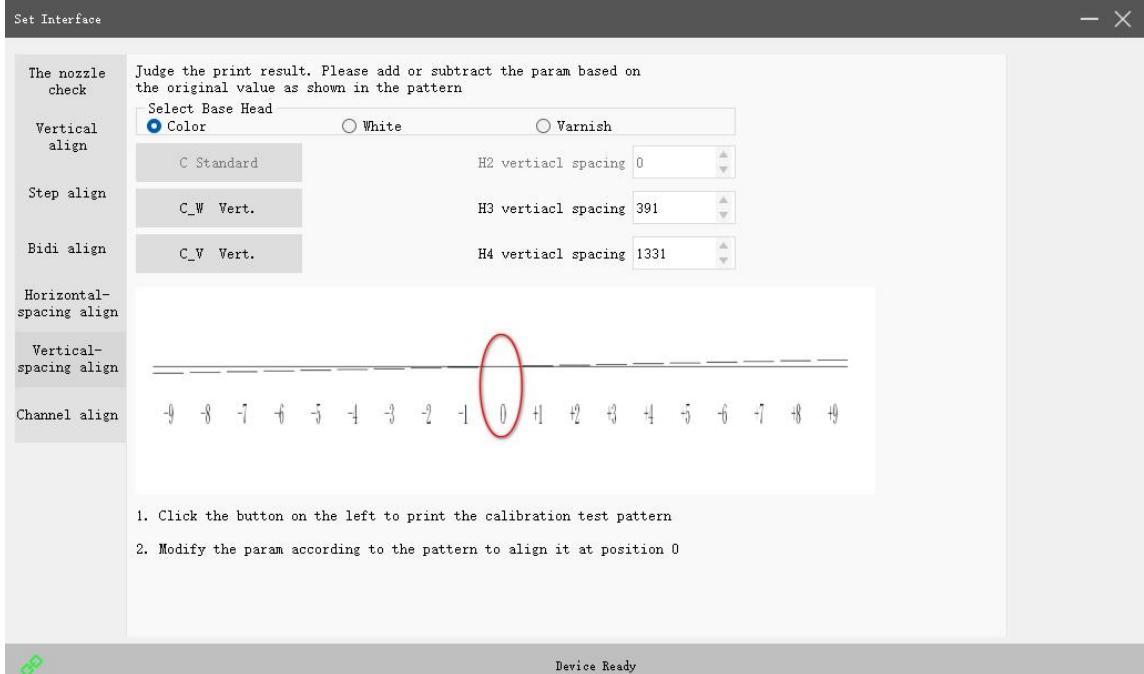
With color as the standard, observe the printed calibration chart and check the overlap of the black and white lines. For example, if "+3" can adjust overlap of black and white line, the current horizontal spacing coefficient will be increased by 3; if "-3" can adjust overlap of black and white line best, the current horizontal spacing coefficient will be reduced by 3. Debug repeatedly until the black and white lines corresponding to the number "0" have the best overlap and become a straight line.

After debugging is completed, click Save.

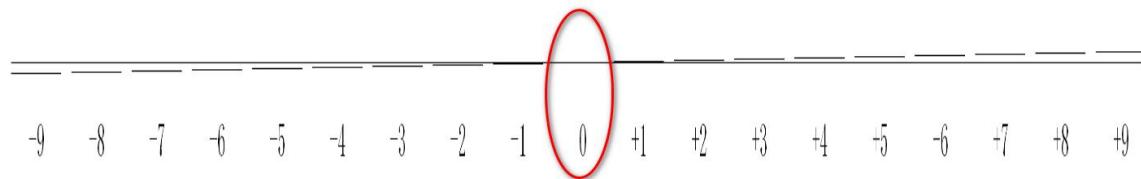


Click Next, the software will enter the main interface of calibration and select the head vertical spacing calibration automatically.

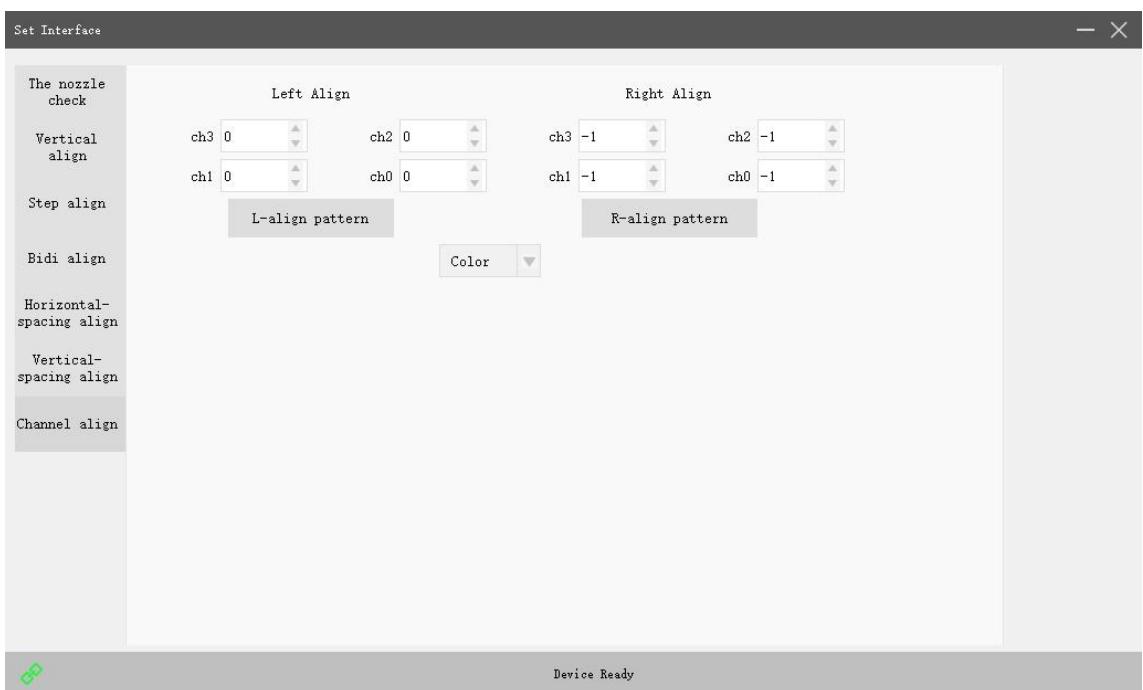
Head Vertical Spacing Calibration



Adjust as shown in the figure below until the black and white lines overlap corresponding to the number "0" and become a straight line.

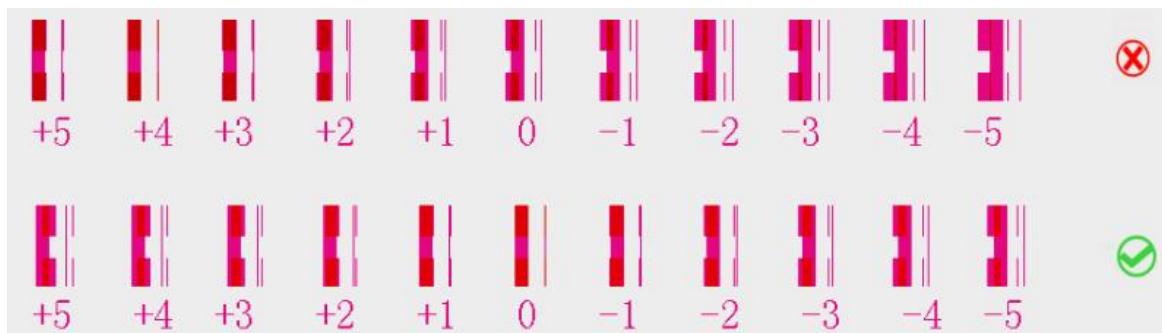


Color calibration

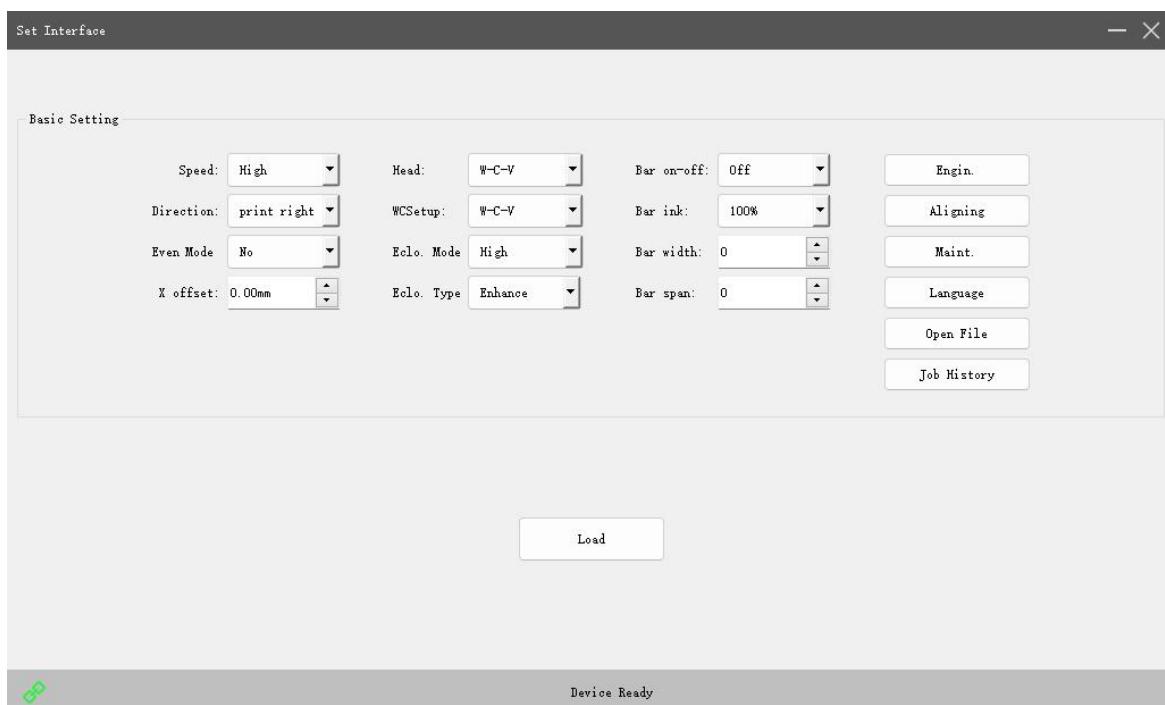


Click Print Left Alignment Pattern or Print Right Alignment Pattern, and the machine will print a calibration chart. As shown below:

The wrong result is that the coincidence position of the calibration line and the reference line of the calibration chart is not at the 0 position. Please add or subtract the value of the coincidence position of the calibration line and the reference line on the original basis and enter it in the corresponding color box. The correct result is that the coincidence position of the calibration line and the reference line is at position 0.



Engineer mode



Click Engineer Mode, and the pop-up window will appear as follows.



Advanced settings

Whether to skip blank areas: It is divided into on and off. Turn it on to skip blank areas on the image.

Distance without printing: the distance that the cart travels backward after printing, in mm.

Voltage adjustment: default 512. According to the actual printing situation, the value can be added or subtracted under the guidance of the technician.

Voltage Type: Default S. It is suitable for standard printing height 2-3mm.

White ink ratio: 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%. The white ink output can be proportionally reduced.

Number of white ink passes: From 1Pass to 10pass.

Varnish ratio: 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%. The amount of varnish ink output can be reduced proportionally.

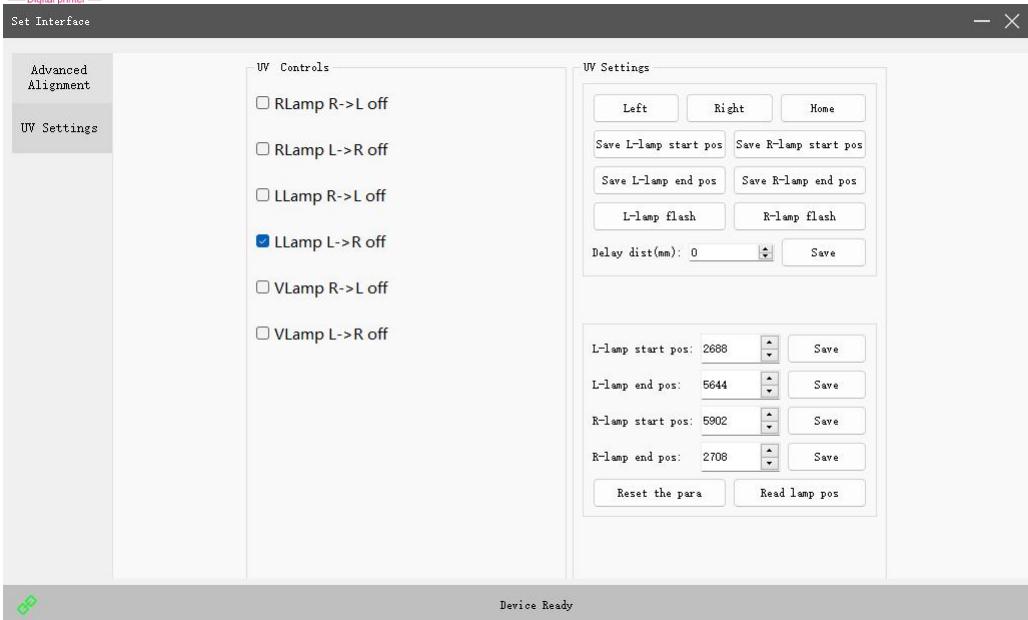
White ink sequence: WWWW. It means closing the corresponding channel if you change W to N.

Color ink sequence: KCMY and the channel cannot be closed.

Varnish sequence: VVVV. It means closing the corresponding channel if you change V to N.

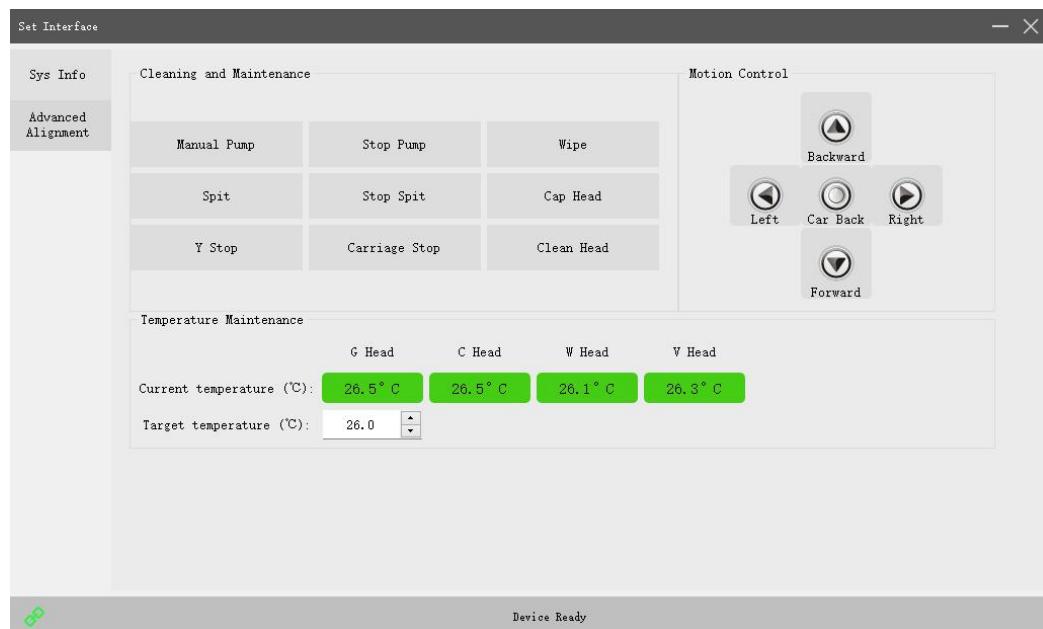
Number of times of varnish: From 1Pass to 10pass

UV settings



- ① Print a test picture first
- ② Move the cart so that the left UV light is aligned with the starting point of the test chart.
- ③ Click the UV left light to flash. After confirming the position, click the starting position of the left light to save the parameters.
- ④ Move the cart so that the left UV light is aligned with the end point of the picture.
- ⑤ Click the UV left light to flash. After confirming the position, click the left light to end the position to save the parameters.
- ⑥ Click to read the light position and click Save
- ⑦ Calibration is over

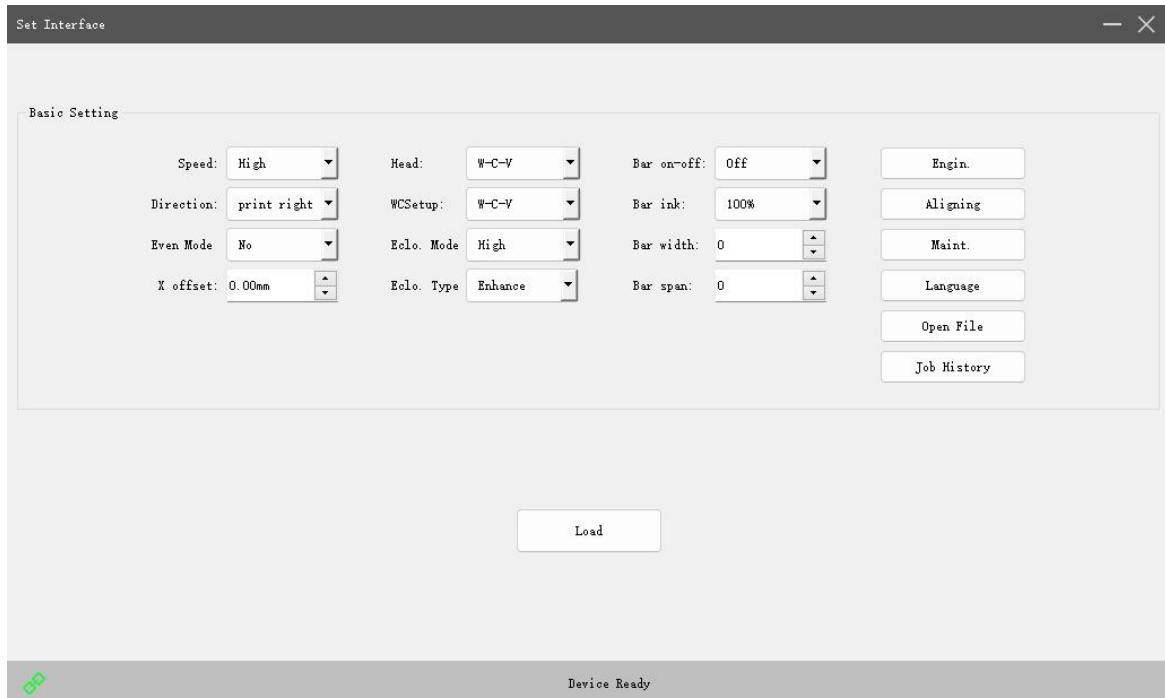
System maintenance



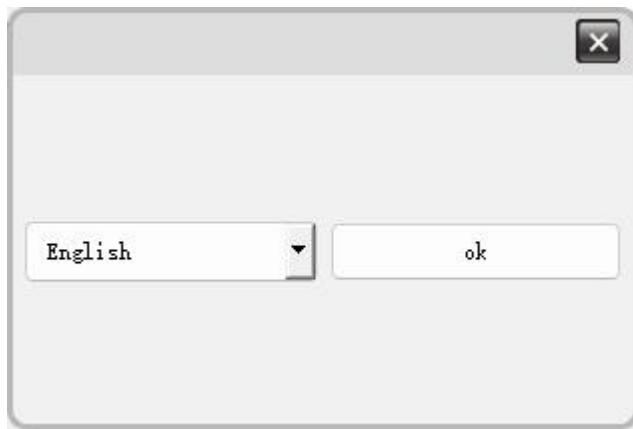
Current temperature of printhead: This is the actual temperature of the printhead.

Set the target temperature: The set temperature range is between 0 and 28 degree. If the current temperature is lower than the target temperature, the heating function will be turned on and stopped at the set temperature.

Language selection



Click language interface such as the following



Click OK after selection

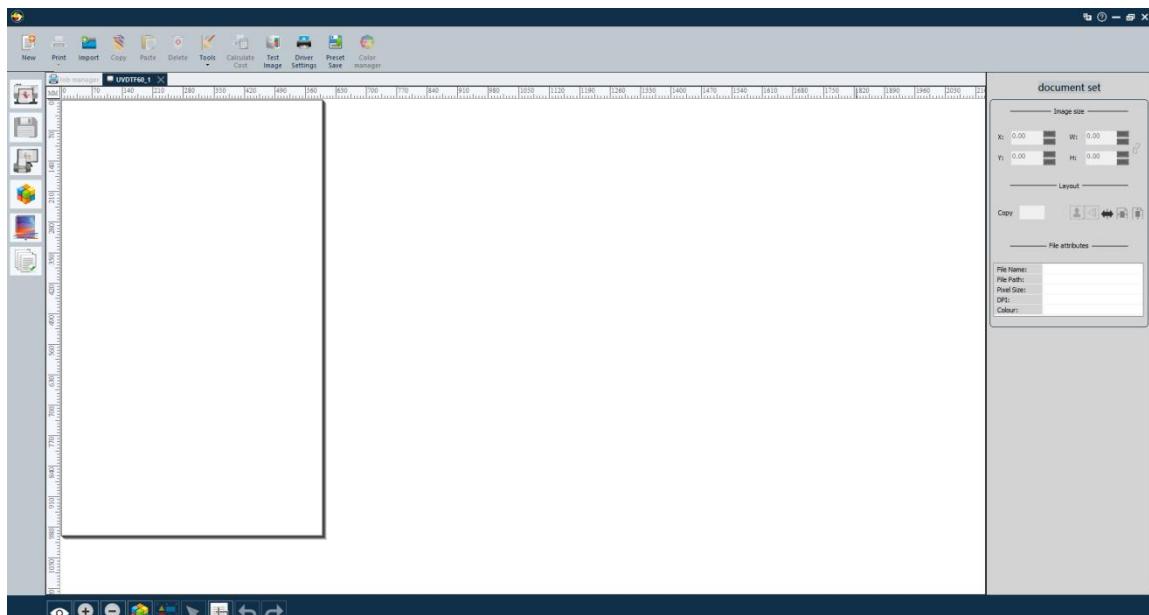
Future Rip usage introduction

6.1 Dongle

-  Plug the dongle into the computer. As shown in the picture on the right, the light will turn on and off at intervals, indicating the operation is normal.
- Observe the top middle part of the software. It indicates that the dongle recognition is normal if there is no display. Display (demo version) indicates that the dongle is not inserted into the computer or the dongle recognition is abnormal.

6.2 Function introduction

Open the software and the main interface of the software will pop up. The following is a brief introduction to the printing process settings and usage.

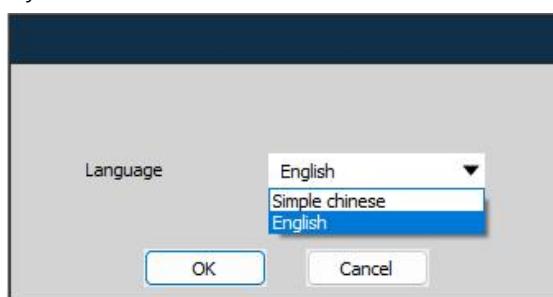


6.2.1 Language switching

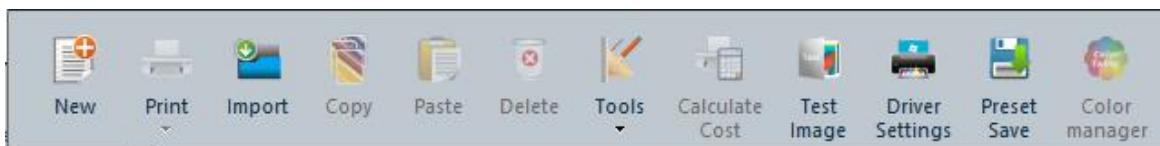
Click the icon displayed on the upper right corner of the software to switch between Chinese and

English: 

The pop-up window displays as follows:



6.2.2 Navigation bar



New: Create a new print task canvas window.

Print: Send for printing.

Import: Import pictures.

Copy: You can copy multiple copies of printed pictures

Paste: Paste the copied image

Delete: Delete the picture

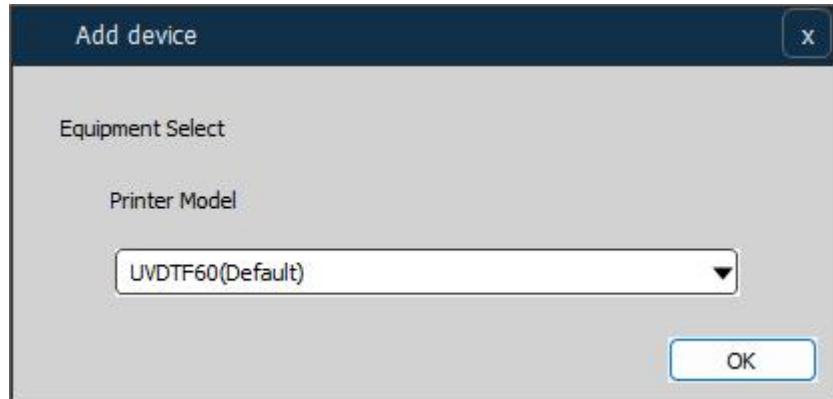
Driver settings: driver parameter settings of the printer.

6.2.3 Main function

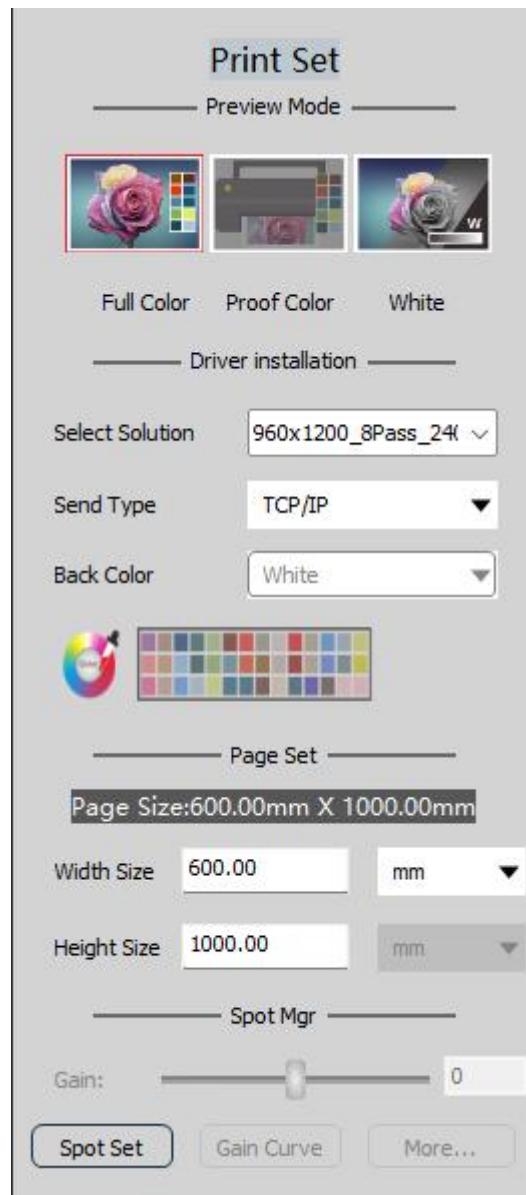
Icon	Explanation
	Printer <u>management</u>
	Document settings
	Print setting
	Color management
	Calibrate the imported color
	Job management

Printer management

Click the printer management icon and the pop-up window will appear as follows:



Printer settings , NC UVDTF60 model does not need to be modified, just click OK.



Print settings



Click the print settings icon and the pop-up window will appear as follows:

Install driver program

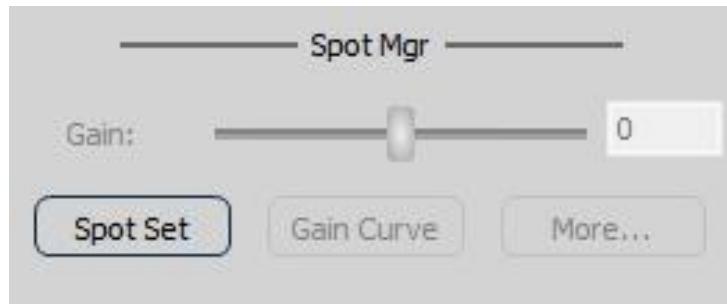
Icc curve:960x900 6pass, 960x1200 8pass

Method: File, network (default setting)

Page setting

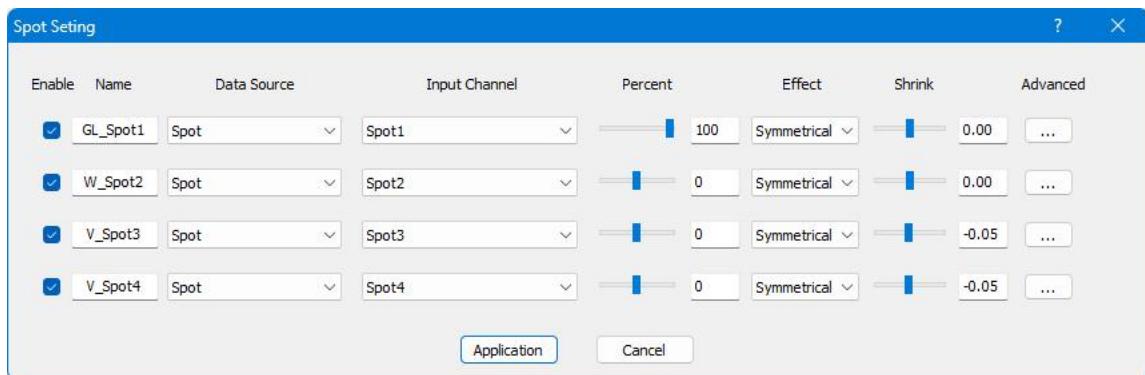
Canvas size: width is 600mm, while the height without limit. (Click [Enter] to save while modifying the value of size)

Spot color management



Spot color settings

Click [Spot Color Settings] in the software menu bar, and set it in detail as shown below



Enable: If checked, the corresponding spot color printing will be enabled. If not checked, spot color printing will not be enabled.

Check glue for spot color 1 and 2 to enable white ink spot color printing; check varnish for spot color 3 and 4 to enable varnish spot color printing;

Data source: Select the ink output method corresponding to the spot color. Take white ink as

an example (the same to the varnish) to introduce the functions:

Blank	No data and white ink can not be printed.
Image color of background (the same density)	Based on the maximum color density of the image, white ink with the same thickness is printed on the colored areas of the image. Transparent and pure white areas do not print.
Image color of background (the image density)	White ink is printed according to the color of the picture. The darker the color, the thicker the white ink, and the lighter the color, the thinner the white ink; transparent and pure white areas are not printed.
Image color of background (inverse image density)	White ink is printed according to the color of the picture. The darker the color, the thinner the white ink, and the lighter the color, the thicker the white ink; transparent and pure white areas are not printed.
Spot color	<p>Print white ink by using the spot color data when the image was created;</p> <p><u>Note: Future Rip prints spot color data and supports images such as Tiff, PDF, and AI exported from PS; Please view the spot color video tutorial for the production and application of spot colors;</u></p>
Total	Print the entire image with 100% concentration of a special color (white ink or varnish)

Input channel: Spot color 1, spot color 2, spot color 3, spot color 4 can be selected.

Spot color 1→the first spot color data contained in the picture.

Spot color 2→the 2nd spot color data contained in the picture.

Spot color 3→the 3rd spot color data contained in the picture.

Spot color 4→the 4th spot color data contained in the picture.

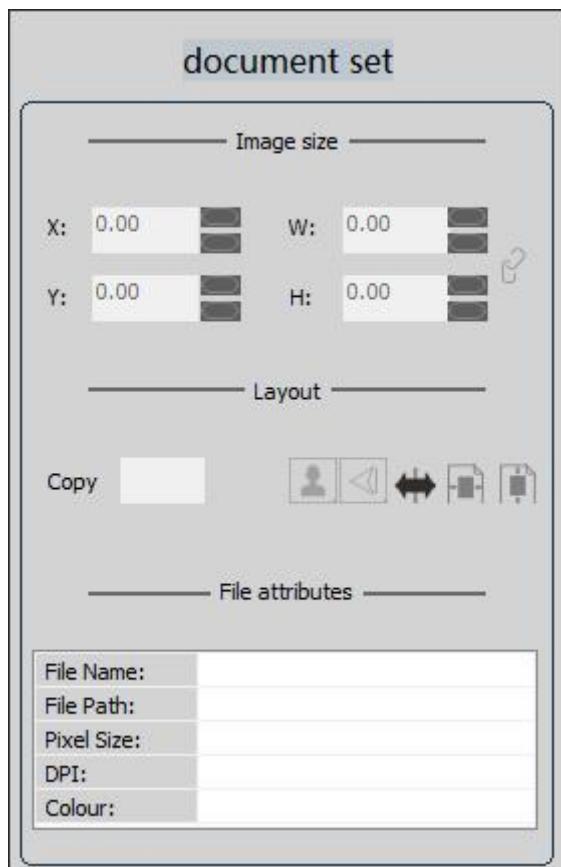
Generally, choose spot color 1 for white ink and spot color 2 for varnish.

Density: The spot color data can increase or decrease the printing density based on the current value. The adjustment range is -100%~+100%.

Effect: Even mode.

Reduce and enlarge: Spot color data printing is reduced or enlarged and diffused. The adjustment range: -5 to +5.

As shown in the picture above, after the settings are completed, click [Apply] and choose to print white ink or varnish spot color data.



Document settings

Click the document settings icon. The right side of the interface displays as follows:

Position and size

X white edge and Y white edge to modify the offset image,
W means width, H means height to modify the size.

	Aspect ratio, one-way scaling mode
	Aspect ratio, scaling mode proportionally

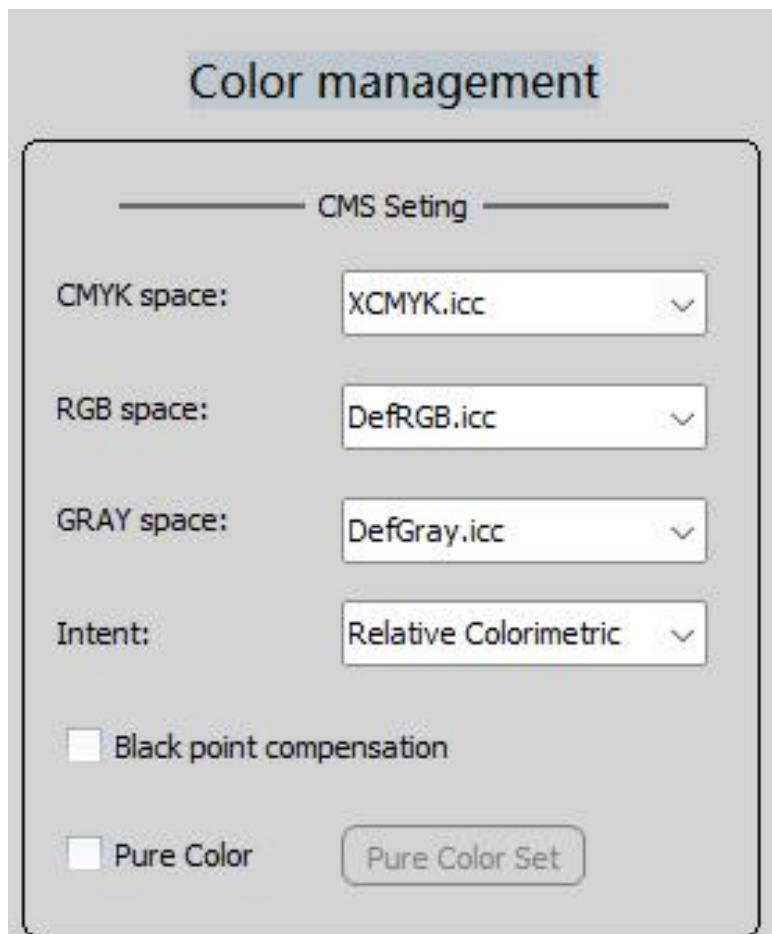
Typesetting:

Copy many pictures and typeset automatically, rotate 90 degree to the left and then to the

right. Center horizontally, mirror horizontally, mirror vertically, center vertically and other shortcut icons.

File properties:

File name, file path, pixel size, resolution, original color system



Color arrangement

Click the color management icon  as detailed below:

CMS settings

- 1、CMYK space
- 2、RGB space
- 3、GRAY space
- 4、Intention
- 5、Black spot compensation

Output color correction

OK

Reset all

Preview (p)

———— Brightness/contrast ————

Brightness:

0

Contrast:

0

Brilliance:

0

Reset

———— Color balance ————

Levels (L)

0

0

0

Cyan



Red

Magenta



Green

Yellow



Blue

Reset

Output color correction



Click the output color  correction icon, the details are as below:

Brightness/Contrast

Brightness, contrast, vividness, and overall ink volume adjustment.

Color balance

Adjust R、G、B.

Job management



Click the function management icon  for details as follows

Name	Create date	Solution	Size	Printer	Processed	Print count
UVDTF60_1	2025/05/13 14:21	960x1200_8Pass_240628	100.00mm X 49.99mm	UVDTF60	100%	1
UVDTF60_1	2025/05/13 14:12	960x1200_8Pass_240628	100.00mm X 49.99mm	UVDTF60	100%	1

Identification job management (display print image data, print history): name, time, file type, size, printer.

6.2.4 Bottom function keys

	Preview page
	Enlarge
	Shrink
	The sign is always lighted and turn on the curves
	Curves is off
	Check all
	Move the selected picture
	Indicate the size of picture and cropping feature

Introduction to the function of key panel

7.1 The content of first page

The following content will display after the initialization action is completed.

首页	属性显示	打印方向 Direction[only way][Bidi]
		打印速度 Speed
		羽化程度 Soften
		墨量显示 Ink level display
		打印起点定位 Print start position
	载体移动 Carrier movement	按上下键移动纸张 Move paper with up and down keys
	喷嘴检测 Nozzle detection	test快捷功能键 test key
	暂停 Pause	按下pause快捷功能键 Press pause key
	自动清洗 Automatic cleaning	clean快捷功能键 clean key

7.2 Menu list

Click [ENTER] can display menu interface on the main interface. Click [EXIT] back to the previous screen.

LV1	LV2	LV3	Details
Setup menu	Auto Maintenance	Auto clean	
		Flas spray while standby, and waiting time, ink volume of flash spray, intervals for absorbing ink can be set up.	
		Device Address	Setup default value after proving password、user-defined
		Station POS	Center the printhead and cap top, click "ENTER" and choose to save station position and click "ENTER" to save the setting
		Spurt POS	Spurt position is at ink station or not
	Station Setup	Wipe POS	Move the wiper to the right side, which is also the center of anti-collision strip and printhead. Click "ENTER" and choose to save the wiper position and click "ENTER" to save.
		Wiper POS	NOT pop-up

		Wiper Height	Setup the height of wiper
		Car Cap POS	Ink station is unnecessary to setup.
		Cap Height	The height of ink station when fixing the printhead
		Print Spurt POS	Setup the spurt position and frequency of print cart
Maitenance	Nozzle Test		Print test strips directly and this equals to TEST under the status of standby
	Clean Nozzle		Choose the printhead that need to be cleaned, the printer will began to clean automatically, that is the following three actions: pump ink/wiper/spurt. Click Clean can enter the process under the status of standby.
	Manual Pump		Choose the printhead that need to be cleaned and the printer will enter the
	Wipe Nozzle		The printer wipe once
	Flush		The printer spurt repeatedly and click EXIT to close according to the actual situation
	Cap Head		The printhead go back to the ink station.
	Inking		Choose printhead and inking automatically
	Clean Cap		Click the upper key to pop up the wiper and click the botton key to make the ink pump work and remove the waste ink.
Auxiliary func	Ink Circulate		The interval, interval time and intensity of stirring ink
	Warn Paper		Turn on or off the alarm of empty paper.
	FAN SETUP		Setup the mode and intensity of suction platform
	AfterPrint PaperBack		Setup the retreat distance after printing
	UV Lamp Setting		Setup the UV lamp parameter after proving the password

	Cap Right Set	The printhead can go back to the ink station by clicking TEST and observing whether the spurt position is inside the station
Dev.Mgr.		Take notes of the version information of the device
Restore Deault		Recover the value of device
Langluage		Change the language of key panel(only Chinese and English)

Introduction to proofing operation process

Taking printing UV DTF as an example, the following is the printing operation process.

8.1 Confirm the material and height

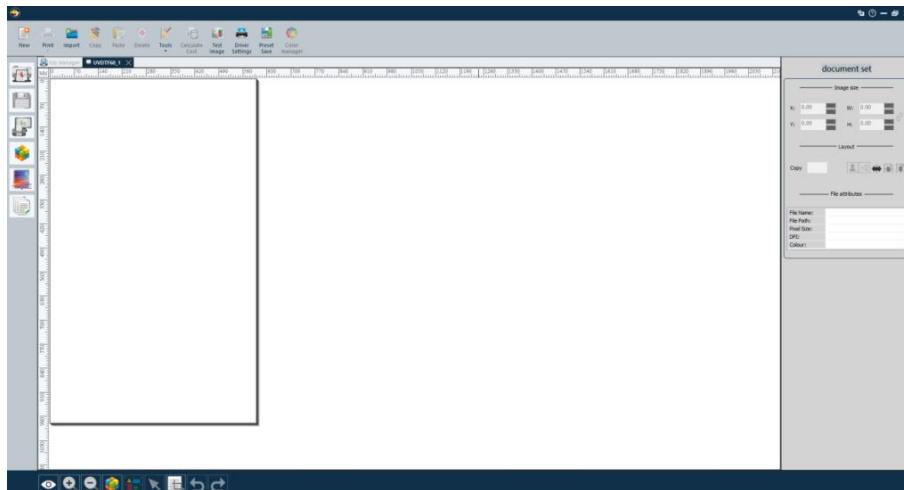
Place the A film of appropriate size onto the platform so that it fits tightly with the it.

Confirm that the height difference between the print head and the paper surface is between 2-3mm.

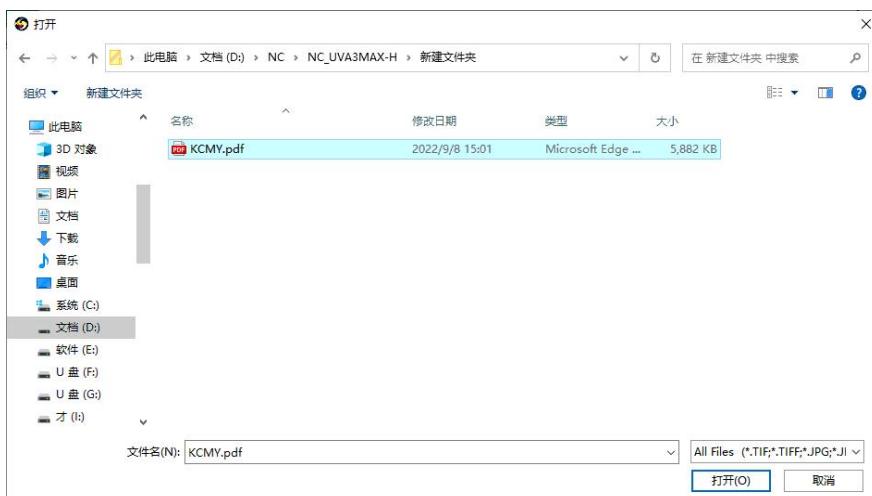
8.2 Import pictures

Open the Future Rip software, click the [Import] button in the upper left corner of the

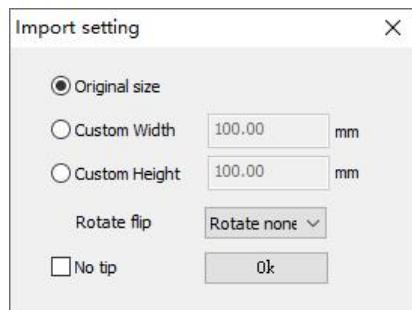
software , find the stored picture, select it and click to open.



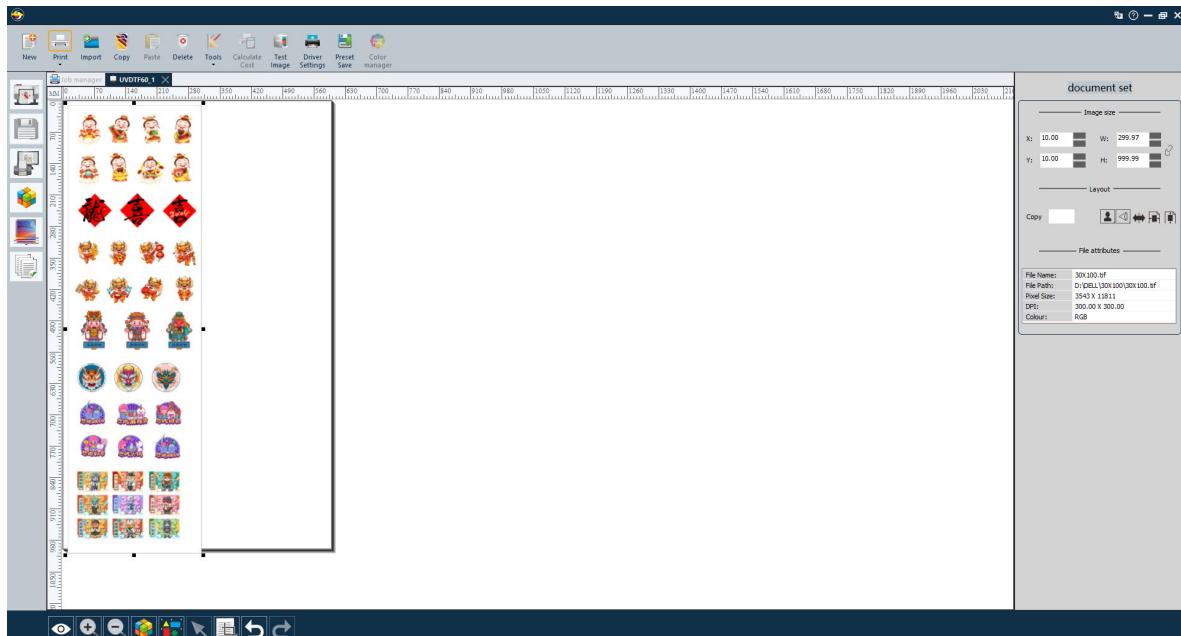
The pop-up window is as follows. Select the picture and click to open it.



The pop-up window is as follows and then click OK

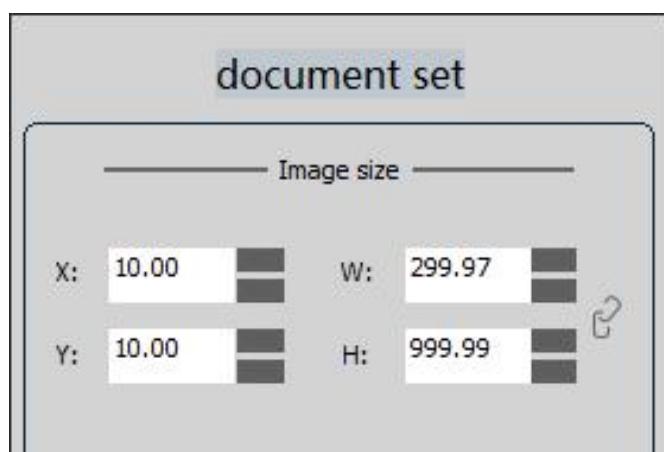


详细如下：The details are as follows:



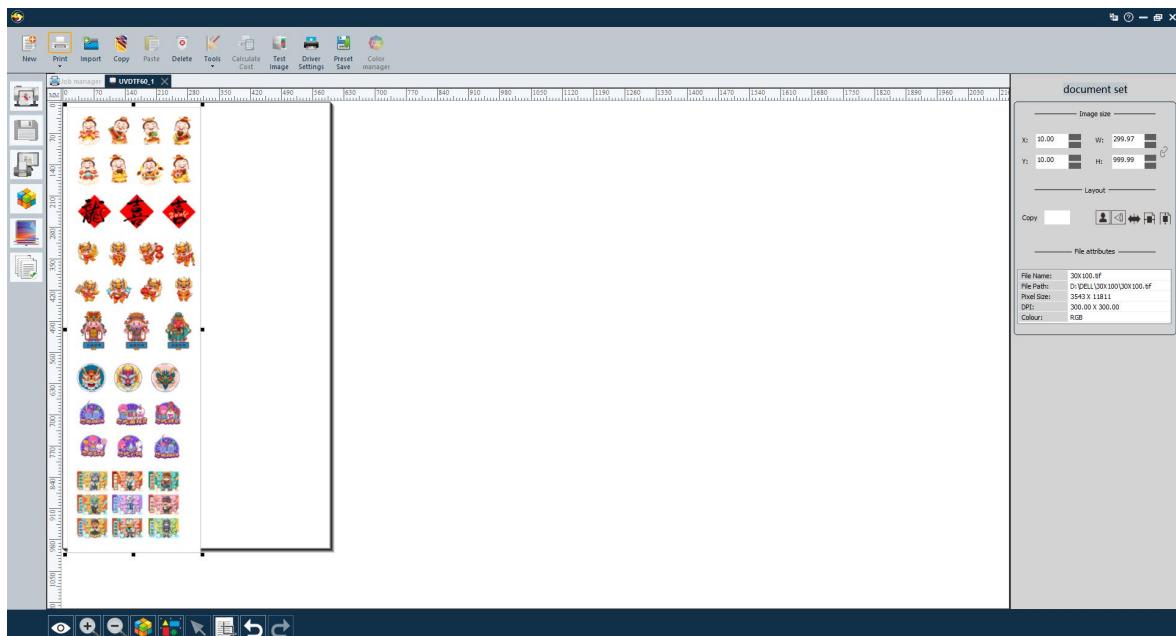
8.3 Confirm printing conditions

Image offset

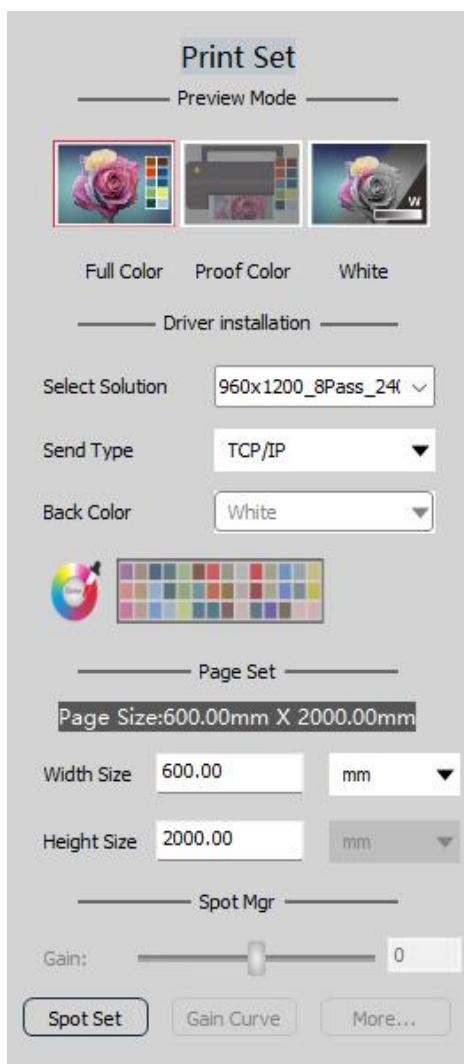


Click the Document Settings icon and set the offset position to move 10mm to the right and 10mm down.

As shown on the right:

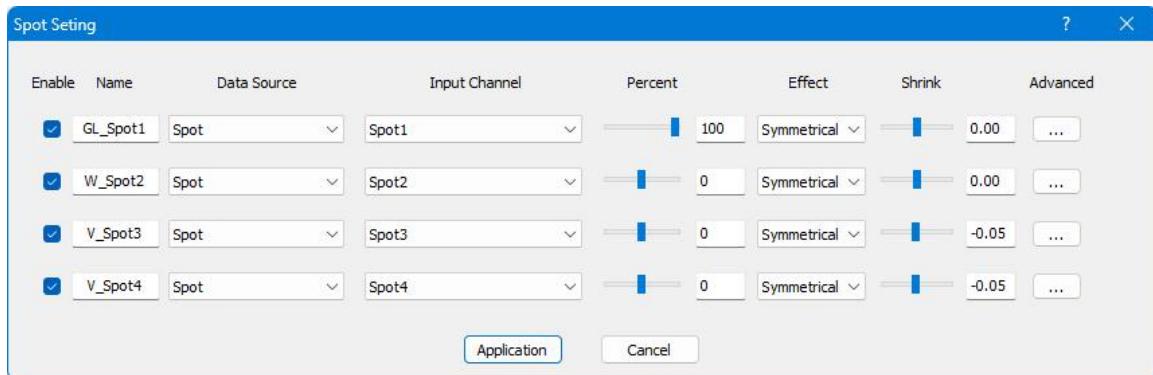


Click Print Setting



The details as below:

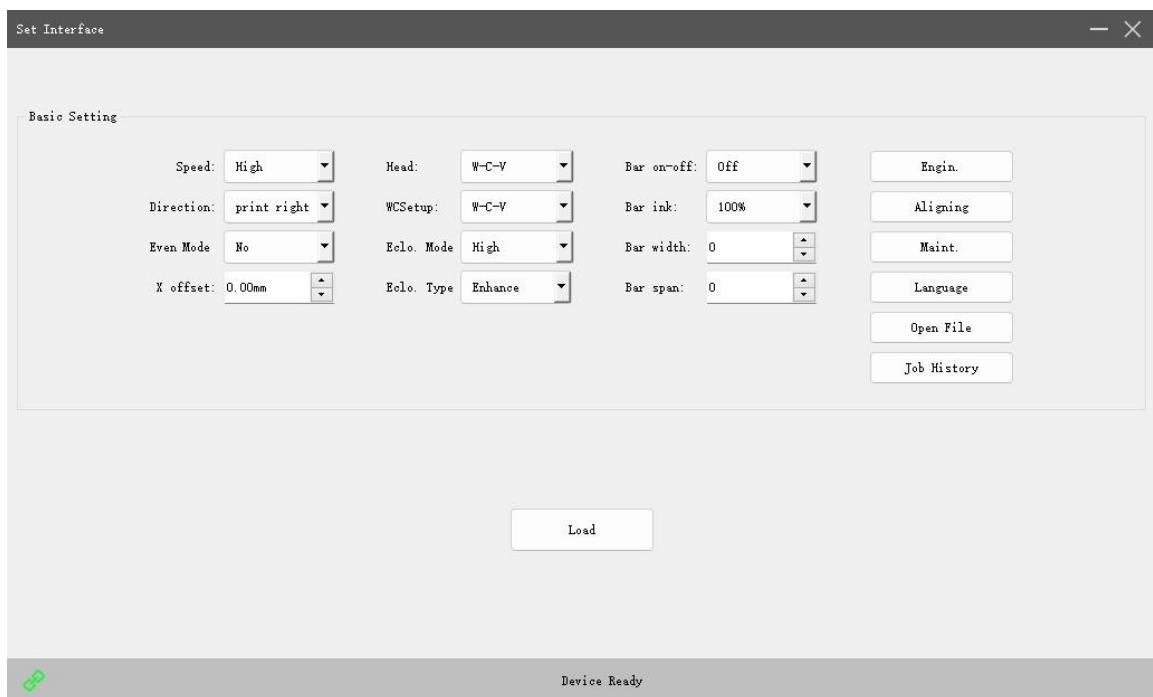
- ①Choose icc (960x900 6pass, 960x1200 8pass)
- ②Select internet as the sending method
- ③Confirm that the width is 600mm, and the height is 2000mm
- ④Spot color setting: Set the spot color of the picture, select spot color 1 for glue and spot color 2 for white ink, spot color 3 and spot color 4 for varnish, and the effect is defaulted even mode.



8.4 Confirm driver setting parameters



Click on the Driver Settings icon in the Future RIP interface as below:

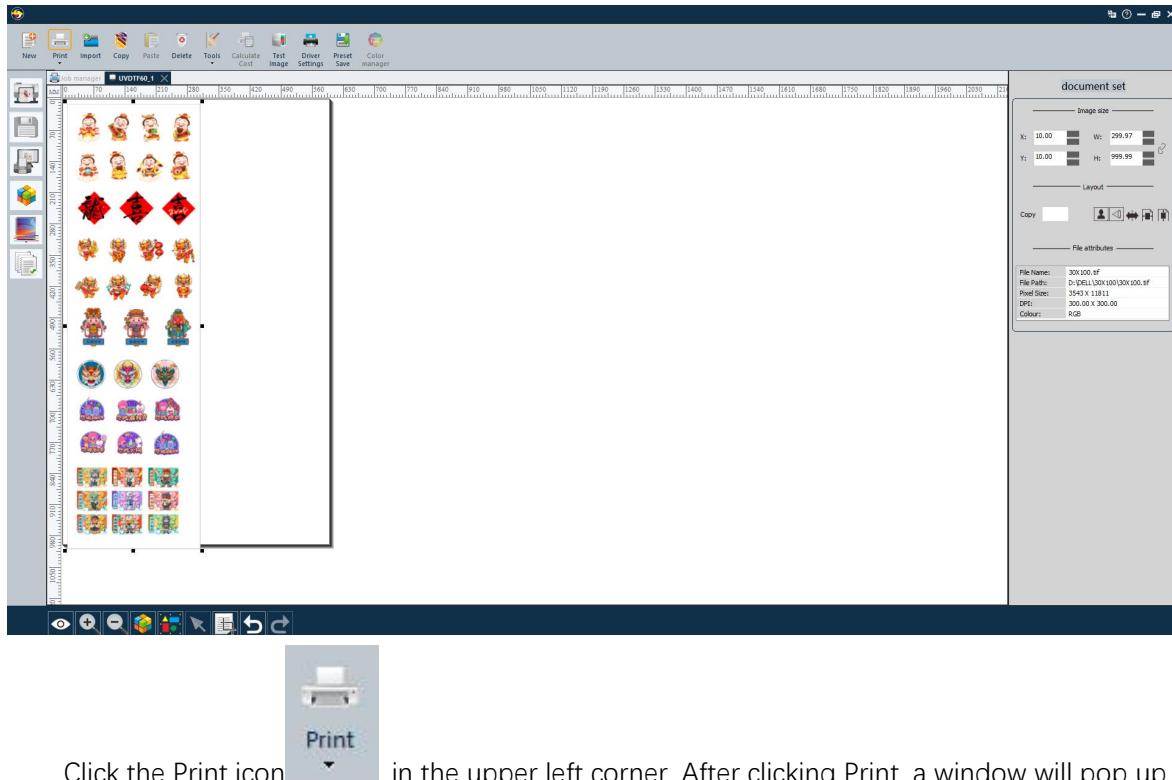


After confirming the X white edge, printing speed, color combination, feathering selection,

printing direction, calibration parameters and other information,

8.5 Print

Return to Future RIP interface



Click the Print icon in the upper left corner. After clicking Print, a window will pop up.

Name	Create date	Solution	Size	Printer	Processed	Print count
UVDTF60_1	2025/05/13 14:21	960x1200_BPass_240628	100.00mm X 49.99mm	UVDTF60	100%	1

Machine maintenance methods and precautions

9.1 Maintenance methods of print head

①There is a board chip inside the print head, which is directly inserted into the print head cable. Pay attention to the contact part between the cable and the head. Be sure to prevent ink dropping. Once it is found that there is water in the head cable part and the head, please remove it immediately. Turn off the machine for a while, disassemble it and dry it before trying it again to test whether it is burned. Remember not to bring water into the machine to use it, otherwise the head and head plate will be burned.

②Since the head cable is closely integrated with the head socket, it is generally not to unplug and plug it. Therefore, contact oxidation, damage, misalignment or other contact merging may occur after a long time. Please pay attention to carefully observe whether these problems occur, and eliminate or replace the head cable, otherwise the head or head board will be burned out.

③Maintenance is necessary when you are not using the machine, and insist on turning it on once a day and printing test strips. If the ink on the test strip is not consistent, you need to clean it automatically to ensure that the test strip is normal. You can print a small picture. If you are not on vacation for more than 3 days, When taking care of it, you should use 3-5 drops of cleaning fluid in the cap top, and then seal the nozzle with the cap top, which will protect the printhead effectively.

④After adding the ink, please add it often but less once a time. The expiry date of the ink is 3 months after opening. If it exceeds 3 months, it will deteriorate, which will affect the printing effect and cause nozzle clogging. It is recommended that the user stir the ink regularly and evenly. And turn on the ink stirring function when using the machine.

⑤It is best to keep the height of the head from the printing material at 2-3mm. Check the printing height in time to avoid damaging to the head.

⑥The sheet metal of the cart must be cleaned regularly to avoid affecting the head.

⑦Avoid printing on transparent, translucent and other light-transmitting materials, which may cause nozzle clogging.

9.2 Capping station maintenance

Since there will be ink droplets remained on the capping station on sheet metal after cleaning or sucking, the capping station should be cleaned regularly on time by alcohol.

9.3 Rail maintenance

The machine guide rail includes the cart guide rail and the contact between the guide rail

and the slider is based on lubricating oil. Please add lubricating oil to the guide rail in time to prevent the guide rail from being rusted and jerky due to lack of oil. It needs to be wiped clean with alcohol before adding lubricating oil.

9.4 Change Damper

Note: replace it once every 3 months.

9.5 Change cap top

Note: replace it once every 3 months.

9.6 Shell sheet metal maintenance

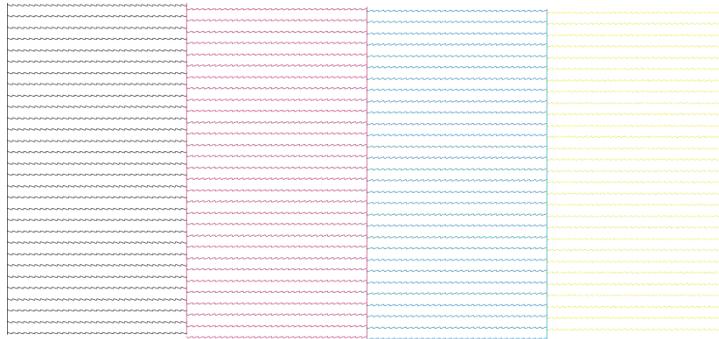
Keep the shell clean, and if there is any ink droplets, please scrub it to avoid the corrosion of the ink on the outer paint surface of the sheet metal.

Common trouble-shooting methods

10.1 The situation of intermittent ink

The following are the common problems:

10.1.1 All the test strips are intact



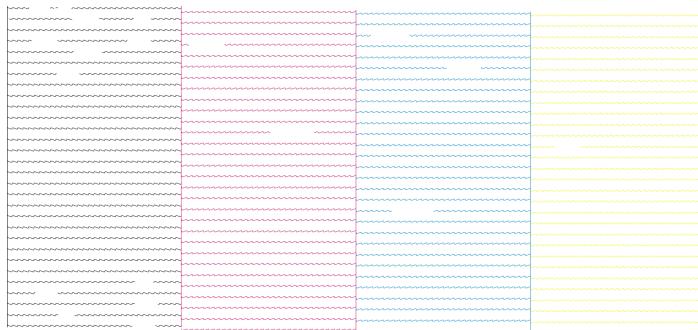
Note: The printhead and device are normal.

10.1.2 Intermittent ink for part of the test strips



Note: It is caused by the ink and you can clean it automatically. If it can not be solved, go ahead and it does not matter.

10.1.3 Severe intermittent ink for part of the test strips



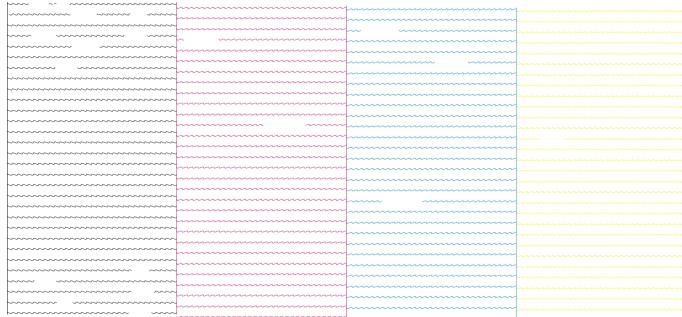
Solution:

1. Extract the damper by syringe, check whether the ink can flow out normally, and eliminate the possibility of blocking and air leaking. If there is any problem, please replace the damper.
2. After replacing the damper, if the ink of the damper is still blocked, please check whether the 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: Please check the damper and printhead firstly.

10.1.4 All the test strips are intermittent

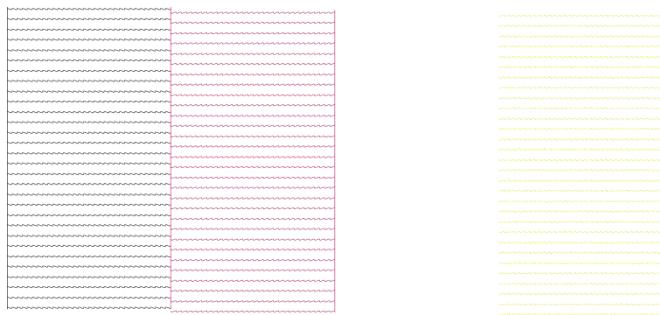


Solution:

- 1.Automatic cleaning, and check whether the ink can be pumped, if the ink cannot be pumped normally, please replace the new cap top or adjust the position again.
- 2.Check whether there is any ink residue on the surface of the head. If there is droplet, please replace the corresponding damper. If there is droplet for different color, please check whether the wiper can scrape the head mirror normally during the automatic cleaning process.
- 3.Manual cleaning, flush the head by syringe, and check whether the head is blocked.

Summary: Please check in detail whether the cap top and printhead are normal.

10.1.5 Color missing of test strips



Solution:

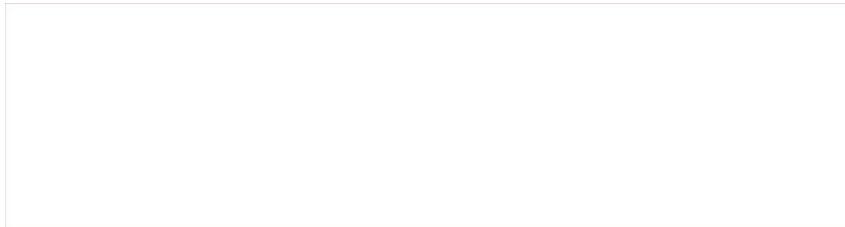
- 1.Extract the ink by syringe from the damper to ensure that the ink can flow out normally, and clean the printhead manually to ensure that the head is not blocked.
- 2.Check whether there are ink stains on the connection of the head line. If so, please clean it and re-test or replace the head.
- 3.Unplug and plug the head wire to check whether the contacts of the head wire are oxidized or

damaged. If so, please replace the head wire and plug it in again.

4.Replace the head board.

Summary: Generally speaking, the voltage of the print head is not transmitted normally. The common reasons are head board, the head line, and the print head. And it may also because that there is no normal ink supply for a single ink, and the print head is blocked.

10.1.6 All the test strips are missing



Solution:

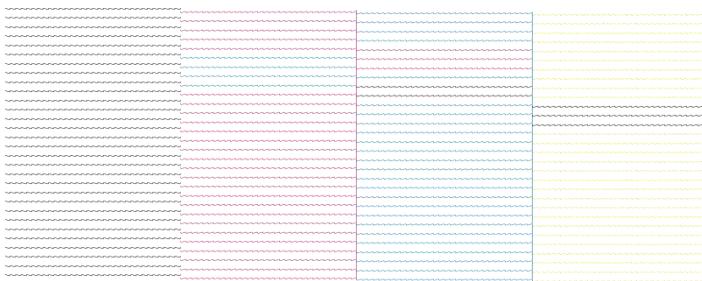
1. Unplug and plug the head wire to check whether the contact point of the head wire is oxidized or damaged. If so, please replace the head wire and plug it in again.

2.Check whether there are ink stains on the head line connection interface of the head. If so, please clean it and re-test or replace the head.

3.Replace the head board.

Summary: The above problems are usually caused by the ink entering the head outlet or the wrong operation after the customer replaces the print head, resulting in head fault, burning the head board or the head, because the head can damage the head board. It is recommended to give priority to the replacement of the head and head line.

10.1.7 Severe blending



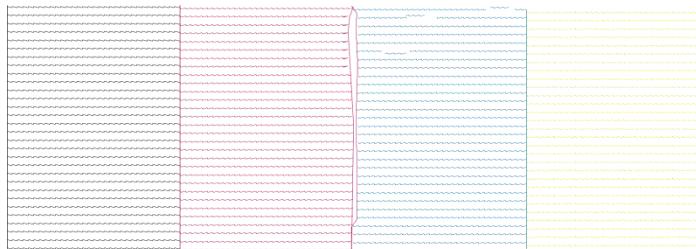
Solution:

1.Please flush the ink firstly, then print a test strip to check whether the blending situation improves. If not, please check whether there is ink residue on the surface of the head. If there is droplet, please replace the corresponding damper. If there is droplets for multiple color, please check whether the wiper can scrape the head mirror normally during the automatic cleaning process.

2.Replace the printhead.

Summary: Check whether there is residue on the printhead.

10.1.8 Ink flying



Solution:

- 1.Check the height between the head and the material is within 2-3mm.
- 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 from the damper, and then clean the print head.
If the problem cannot be solved, it is recommended to replace the ink.

Summary: If there is no change about the environment, it is generally because that the machine being put on hold for a long time.

10.2 Software UV (demo version)

- 1.检查加密狗灯是否亮灯, 如不亮请更换电脑 USB 转接口或更换加密狗。Check if the dongle light works or not, if not, replace the dongle or try different USD connector.

10.3 UV lamp does not work

- 1.测量 UV 灯电源线通断: Check if the uv lamp wire has connection problem or not;
- 2.UV 灯供电电源是否通电, 是否有电压输出, 更换 UV 灯供电电源。Check if the uv lamp power box supply power or not. If not, replace the power box;
- 3.测量主板相应端子, 在打印过程中是否有 24V 电压输出, 如没有输出更换主板。Check the uv lamp connect port on the mainboard and see if there's 24V voltage be supplied. If not, replace the mainbaord;
- 4.更换 UV 灯。Replace UV lamp.

10.4 Ink is not dry

All the product is not dry

Please check if the uv lamp works during printing. If not, refer to 9.3.

The edge of printed picture is not dry:

- 1.Check and correct the uv lamp parameter;
- 2.Confirm the version information of the device and upgrade the program.

10.5 Error code

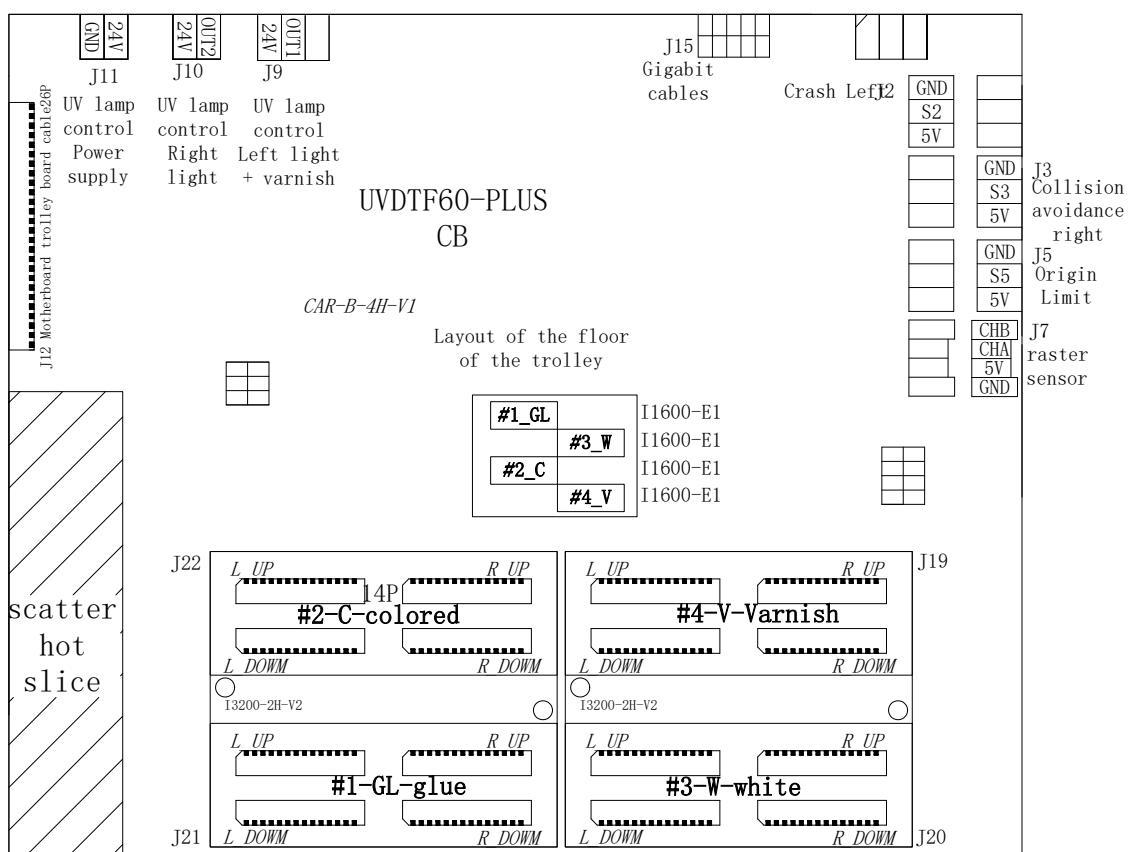
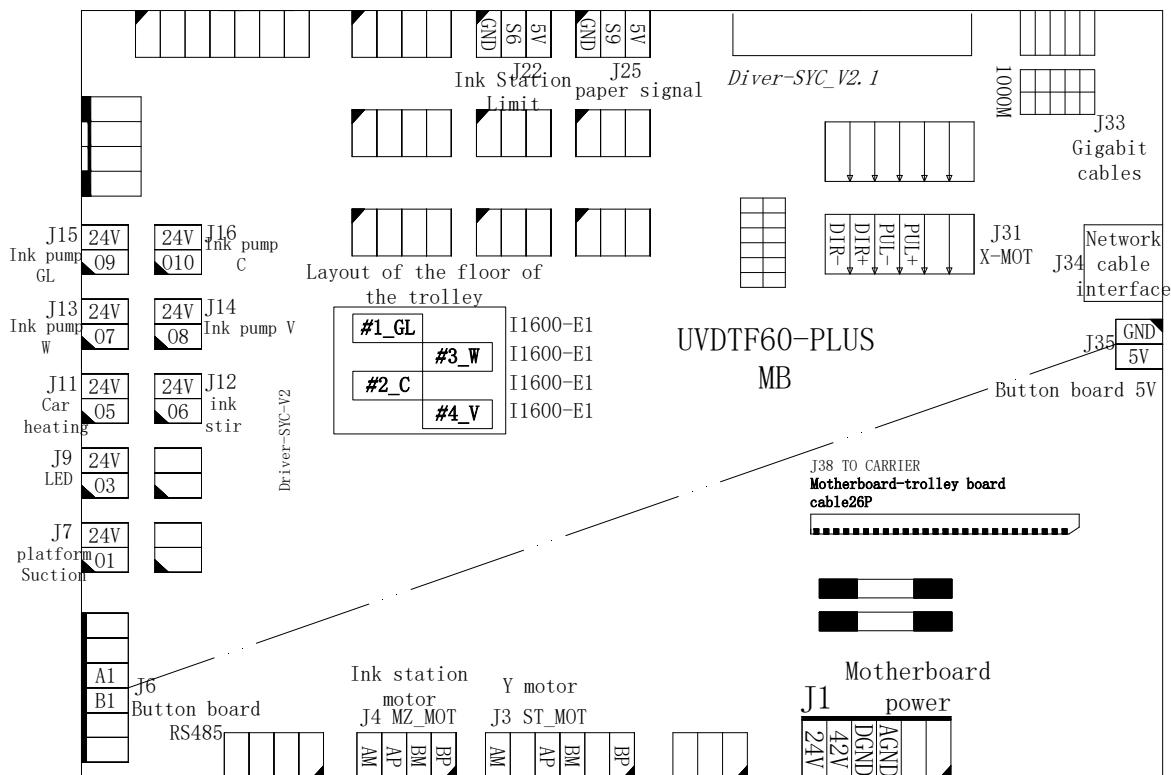
Error 1	Wrong PC driver
Error 2	The available printing area/time is not enough
Error 3	The available printing area/time is 0.
Error 4	Home position limited sensor problem
Error 5	Parameter initialization error
Error 6	Cart error
Error 7	Parameter table ID does not match registration ID
Error 8	Cart transmission ratio is too small
Error 9	Cart transmission ratio is too large
Error 10	UI Parameter initialization error
Error 11	Wavetable is empty
Error 12	Cart reverse error
Error 13	Printing carriage stops
Error 14	cart position error
Error 15	Servo motor self-test distance is not enough
Error 16	Driver board alarm
Error 17	The UI parameter ID does not match the cart parameter ID.
Error 18	IIP address conflict error
Error 19	Ink tank initialization error
Error 20	Ink tank level warning
Error 21	Ink tank level is zero
Error 22	UI parameter table beta version
Error 23	No time limit is supported
Error 24	Time limit read error
Error 25	Time limit has expired
Error 26	The time was illegally modified
Error 27	Parameter table head type error
Error 28	Print head automatic detection error
Error 29	UI reset exception error
Error 30	Detect ink station motor or sensor errors
Error 31	Panel nozzle test fill data error
Error 32	Flashjet timeout error before printing
Error 33	nozzle test timeout error
Error 34	SDR startup detection abnormality, cannot be detected
Error 35	Paper pressure sensor error
Error 36	The selected ink sequence does not have a corresponding waveform.

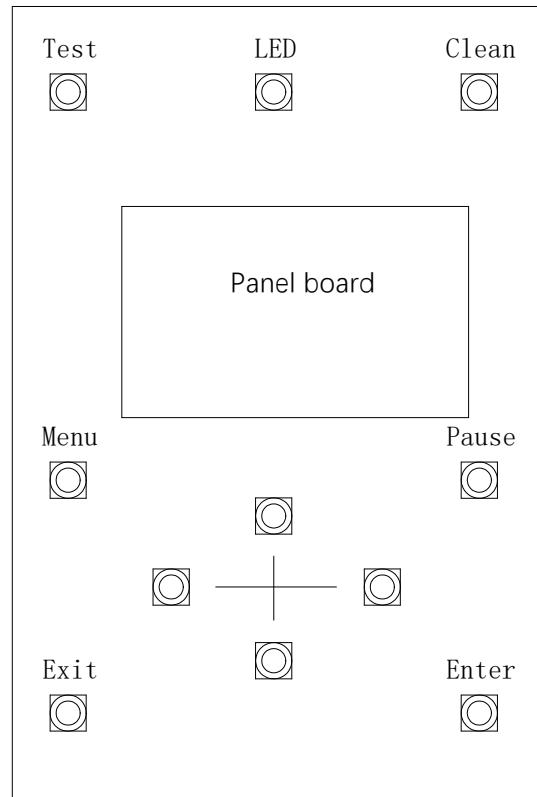
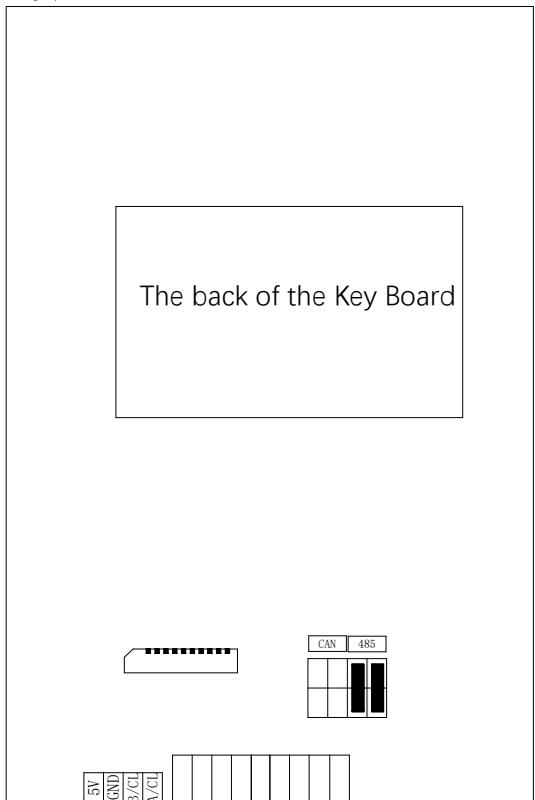
Error 39	Encoder strip missing
Error 40	Waste ink alarm
Error 41	Ultra wide alarm
Error 42	Printing touches the Y maximum limit
Error 43	Printing touches the Z maximum limit
Error 50	Ink level monitoring alarm
Error 51	Ink is not activated
Error 101	For R&D internal testing errors
Error 102	For R&D internal testing errors
Error 103	For R&D internal testing errors
Error 104	The cart has great resistance
Error 105	Cart reverse direction
Error 106	Width exceeds
Error 107	cart zero sensor error
Error 108	Encoder strip detection error
Error 109	SDR detection error
Error 110	PC driver error
Error 111	Not enough squares
Error 112	Ink lift station sensor error
Error 113	Mainboard and trolley board communication error
Error 114	Print the square number as 0
Error 115	Fiber optic cannot communicate
Error 116	Empty paper alarm
Error 117	Parameter table ID does not match registration ID
Error 118	Parameter list is invalid
Error 119	There is no main program written on the cartridge board
Error 120	Print head lift motor error
Error 121	Paper feeding limit
Error 122	Paper feed initialization error
Error 123	Anti-collision
Error 124	Anti-collision during initialization
Error 125	Ink spilled
Error 126	Cart transmission ratio is too small
Error 127	Cart transmission ratio is too large
Error 128	Wrong type of head for trolley plate
Error 129	The through-beam sensor pauses printing during printing
Error 130	External ram error
Error 131	Position error when the cart stops
Error 132	The position of the cart is wrong when moving

Error 133	Multi-machine system startup exception error
Error 134	SDR startup detection abnormality, cannot be detected
Error 135	The ink station expansion board is not connected
Error 136	Temperature alarm
Error 137	Humidity alarm
Error 138	FPGA reset timeout
Error 139	Failed to apply for external SRAM for 485 initialization
Error 140	Communication failure in multi-machine system
Error 141	Printing exception in multi-machine system
Error 142	Main ink bottle empty
Error 143	Waste ink bottle full
Error 144	The paper extension board is not connected
Error 145	There is an error in the operation of the paper expansion board
Error 146	Ink pump motor board not connected
Error 147	No network connection from the slave machine
Error 148	Communication failure of master-slave 485 in multi-machine system
Error 149	No time limit is supported
Error 150	Time limit read error
Error 151	Time limit has expired
Error 152	The time was illegally modified
Error 153	Multi-machine system synchronization failed
Error 154	Head automatic detection error/cart cover is opened abnormally (X33 model)
Error 155	The spreading stick has not fallen
Error 156	Slave machine self-test error
Error 157	ead alarm
Error 158	ead alarm 2
Error 159	UV light sensor
Error 160	Bottle clamping front sensor
Error 161	Bottle clamping sensor
Error 162	bottle lift sensor
Error 163	White border is too big
Error 164	Retract the paper to the end
Error 165	Ink supply timeout
Error 166	SWATH print waiting cart timeout
Error 167	Cancelable ink station error
Error 168	head temperature is too high

Error 169	head voltage power supply abnormality
Error 170	Distributed message distribution connection timeout
Error 171	The currently selected wavetable is empty
Error 172	The ink station sensor error occurred during the movement of the trolley.
Error 173	The head is inserted backwards, wrongly, incorrectly, and ink is inserted.
Error 174	There is a problem with the connection line between the secondary development data cartd and the control cartd.
Error 175	The cart is detected to be stopped, but the current pass printing is not completed.
Error 176	The machine head negative pressure gauge will alarm if the air pressure difference is too large.
Error 199	CPU exception error (program ran away, access to address prohibited)

Introduction and definition to board line





Maintenance rules

12.1 After-sales service and quality-warranty policies

From the date of the contract, the whole machine has a one-year warranty, except for accessories such as printhead, cap top, ink pumps/peristaltic pumps, tubes, cartridges and damper that come into contact with ink. If the technician is required to provide door-to-door service, the customer shall bear the technician's transportation and accommodation costs.

12.2 Ask for help

If you have any problems, please ask us for help:

12.2.1 Check user manual

12.2.2 Get more information from the website(<http://www.happycolor.com.cn/>)

12.2.3 Keep in touch with the dealership.

12.3 Customer information column: please refer to the following chart

Information column	
Name:	
Product:	
Version:	
Address:	
Phone number:	

12.4 Non-warranty items

12.4.1 If the product is damaged, it is due to the ink that does not come from Nocai.

12.4.2 If the product is damaged, it is because that the printer is not used under unsuitable environment(such as power voltage, temperature and humidity)

12.4.3 Failure and damage caused by improper storage by the user (such as rodent infestation, insect infestation, liquid infiltration, foreign body ingress, etc.), or loss of parts

12.4.4 Breakdowns and damage caused by human factors.

12.4.5 Failure and damage caused by failure to follow the usage method and main matters noted on the product instructions.

12.4.6 Failure and damage caused by the user's handling.

12.4.7 Force majeure.

12.5 Warranty policies

12.5.1 In the event of loss or damage of the included accessories (user manual, software), Nuocai

does not provide them again.

12.5.2 We do not assume any responsibility for indirect losses incurred by users or future earnings due to product failures.

12.6 Notes

12.6.1 Move.

12.6.1.1 Do not pull the ink frame beam and print table forcibly when moving the printer.

12.6.1.2 Two people are required to hold the printer's foot cup and move it smoothly.

12.6.2 Operating environment

Operating environment	Temperature	25°C-28°C
	Humidity	35%-65%