NC-UV0609MAX-II



User Manual

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

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Notice

Please read these instructions before using the machine

- 1. Machine should not be used by children or the disabled. If 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 analysis

1.1 Graphic analysis of the front of the machine

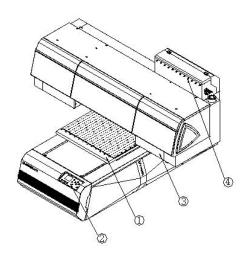
1) Printing platform: printing material

2 Key panel: Display panel for operating the

machine

3 Ink station: Clean unit

4 Cartridge: Store and add ink



1.2 Graphic analysis of the back of the machine

1) Power: It is used to energize the machine

②Faucet: It is used to connect the cable

③Driving wheel of motor: Driving wheel of the

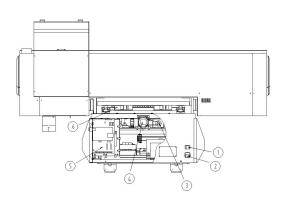
motor for Y axis

4) Platform motor: Motor of Y axis

5 Mainboard: Headboard supply power, XY axis

control motor signal

6 Suction fan of platform: Hold on the material



1.3 Graphic analysis of operation panel and ink station

1) Wiper: Clean the residue ink of printhead

②Wiper sensor: Origin positioning of the wiper

3 Ink station sensor: Lift up and down limit of ink station

4Ink station motor: Motivation resource for lifting up and down the ink station

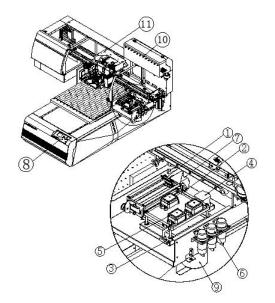
⑤Cap top: Clean the printhead

©Peristaltic pump: Motivation for cap top and cleaning the printhead. The speed can be adjusted.

Wiper motor: motor source of wiper

10 Ink alarm light: prompt the rest ink volume

11) Print cart: used for printing, LED curing



1.4 Graphic analysis of key panel

1) Key of lowering beam: beam will lower

②Key of lifting up the beam: beam will lift up

③Left shift key of cart: cart will move to the left

⑤Front shift key of platform: printing platform will move to the front

©Right shift key of cart: cart will move to the right and shortcuts for equipment maintenance

7 Confirmation key of menu settings

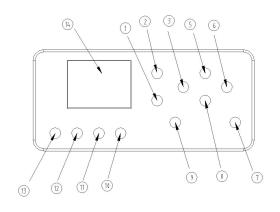
8 Back shift key of platform: print platform will move to the back

9Exit Key : menu will exit

®Suspension key of printing: shortcut key of cleaning

①Test shortcut key: shortcut key of testing nozzle

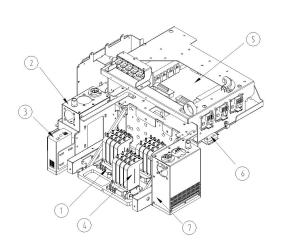
12 Function menu key



- (3) Key of switching on/off suction platform fan
- 14 Display panel of printer: display statics

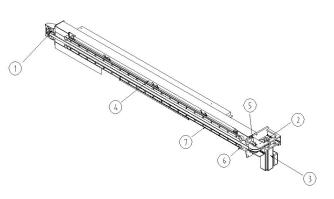
1.5 Graphic analysis of the cart

- 1) Printhead: used for printing and ink discharge
- ②Larger UV lamp: white and color ink curing
- ③Smaller UV lamp: varnish ink curing
- Secondary cartridge: ensure the continous supply for ink and filter impurities
- **S**Mainboard of the cart: inkjet procedure, control printing
- **6**Origin positioning of cart: initial position-limit for cart
- Anti-collision device for printhead: protect the printhead



1.6 Graphic analysis of the beam

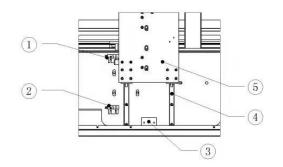
- 1) Driven wheel of beam motor: Motivation
- wheel for the motor of X-axis
- ②Driving wheel of beam motor: Motivation wheel for the motor of X-axis
- ③Beam motor: move the cart to the left and right
 - 4 Encoder strip: X-axis control the size
 - ⑤Sheet metal for origin sensor: initial position-limit for X-axis
 - 6 Limit position gel: cart position-limit



7 Rail of cart: left and right movement rail for cart

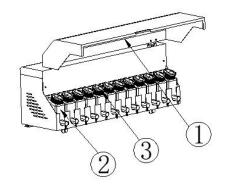
1.7 Graphic analysis of the right side of the machine

- 1) Lift position-limitsensor: lift equipment for position-limit
- 2 Lower position-limit sensor: lower equipment for position-limit
- ③Lift and lower side board and top board: protect the printhead from dropping
- 4)Lift and lower rail: lift and lower rail
- ⑤Lift and lower side board: support head of the equipment



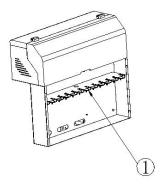
1.8 Graphic analysis of the cartridge

- ①Cover plate of cartridge: protection board for cartridge
 - ②Ink storage cartridge: store ink
 - 3 Cover of ink cartridge



1.9 Graphic analysis of ink supply system

1) Butterfly-shape filter: filter impurities in ink



Initialization confirmation

2.1 Preparation

Make sure that the machine is well positioned, and the local power supply voltage (220V or 110V) matches the machine.

2.2 Assure operate-on normal

Turn on the power supply. Turn on the main power switch at the back of the machine, click the boot button on the front panel, then the machine will start and perform the initialization action.

The complete initialization action procedure of the machine is as follows:

[The ink station descends to its lower-limit position \rightarrow the wiper moves forward for a small segment, then turns backward to the back-limit position \rightarrow the cart moves left for a small segment \rightarrow the platform moves forward for a small segment, then turns backward to the back-limit \rightarrow the cart moves right to the limit position, then turns left to move directly above the ink station (the position of sealing head) \rightarrow the ink station seal the head \rightarrow OK]

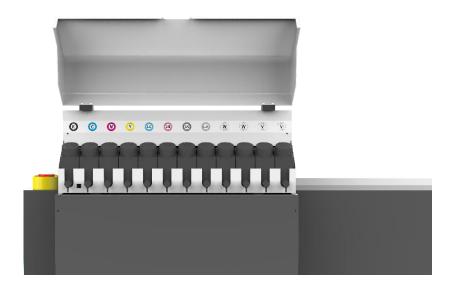
2.3 Confirm that the motion is normal

[Connect the computer and the machine with the optical fiber \rightarrow open the driving software \rightarrow display that online is normal at the left corner \rightarrow control the left, right and front and back in the driver, Z-axis control up and down \rightarrow the machine can feedback normally]

(More instructions of online driving software are described in the following)

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 the ink, protective measures need to be taken. The bottle mouth can be wrapped with paper after adding ink.



3. Then add ink manually, as is shown in the picture:

Click Right button during Standby status, enter the device maintenance to find "add ink manually", click the "Enter" button to add ink









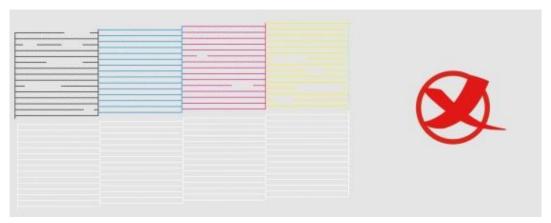
4. Press the confirm button and the machine will start to pump ink. Observe the waste ink bottle until the ink is pumped out to confirm that the ink path is clear,

the ink storage is completed, as is shown in the picture:

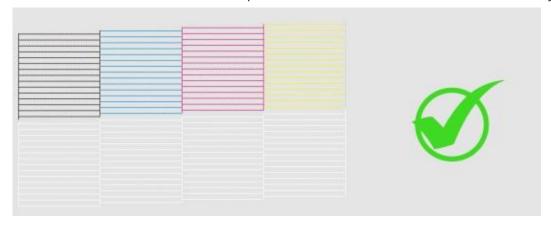
- 5. Pay attention that if the ink from waste ink bottle flow out of the ink tube smoothly, click the "Exit" button and ink-pumping will stop.
- 6. Then select "Automatic cleaning", click on the "Enter" button, select the corresponding printhead, the machine will clean the printhead automatically



7. Refer to the following sampling operation as the following, place a transparent plastic sheet (or other suitable material to observe, such as glass) on the platform and click on the "Nozzle test" to print the test strip, if there is a lack of color or ink-suspension phenomenon, please continue to clean the printhead until the test strip is out completely, it means that the ink installation is completed.



Test strips are intermittent, "Auto clean"is necessary



Test strip is OK

Install and illustrate the driver

4.1 Computer configure

- ①System version must be Win7, Win8, or Win10 on a 64-bit system. RAM: larger than 4GB; Hard disk: greater than 250GB.
- ②Computer must be equipped with Gigabit network card and gigabit network cable, only in this way the software can be normal online.
 - ③IPv4 address of the computer is set to be obtained automatically.

4.2 Install the runtime environment

Open the UV0406 device file on your computer (download it from the official website or have it sent by after-sales technician) and find vcredist_x64.exe and WinPcap 4 1 3.exe.

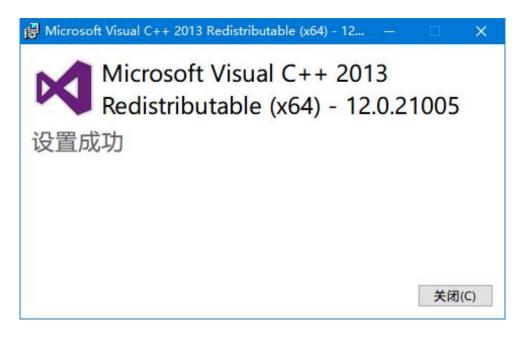
4.3 Install vcredist x64.exe

Operate with right-click as an administrator, choose "agree" and click on the Install in turn, just as the following:

Choose the "I agree with permissive conditions", click on the Install



Pop-up Window will hint that the setting is successful, click "Close", then it is completed.



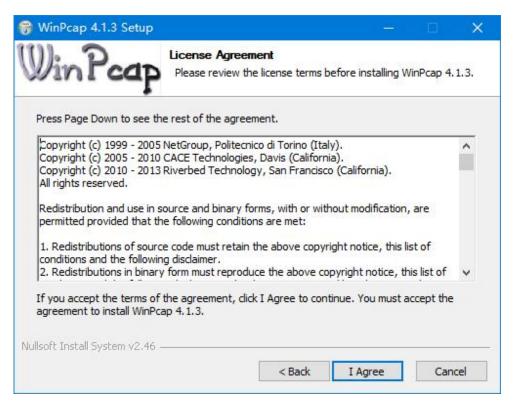
4.4 Install WinPcap_4_1_3.exe

Find out <a>\inv \text{WinPcap_4_1_3.exe}, operate with right-clickas an administrator, just as the following:

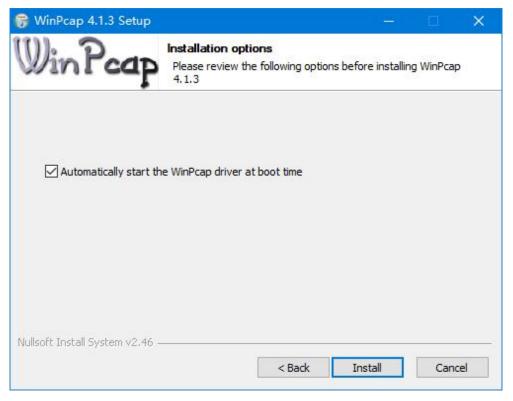
Click "Next"



Click I Agree,



Click Install.



Click Finish



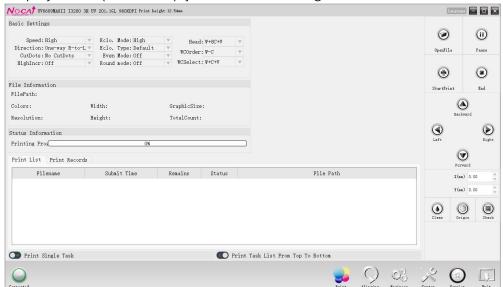
4.5 Install the driver

Connect the printer to the computer using the network cable supplied in the standard accessories package to find the Nocai driver software

【UV0609MAX_I3200_3H_ATools_V129GL_20220822.exe】 (download it from the official website or have it sent by after-sales technician)

Double click [UV0609MAX_I3200_3H_ATools_V129GL_20220822.exe] The picture is as follows, then click the button at the left corner.

Display online(successful), just as the following

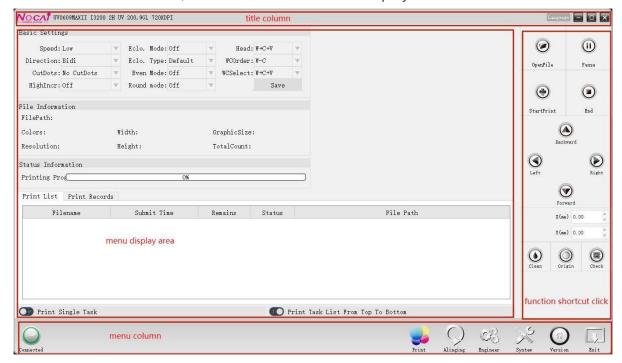


Introduction to driver settings

5.1 Classification of function

The following will introduce the details, as shown below:

There are four parts: the software display interface is divided into title column, function shortcut button, menu column and menu display area.



Title column: Display content from left to right: the Nocai Logo, driver name (including nozzle model, quantity, version number and printing accuracy), Chinese and English interface [Laguage] , hide, enlarge, exit shortcut icon, etc. .

Function shortcut button: The right side of driver is fixed to display the commonly used function area. Including open the file, start printing; move the button to the front, back, left, right; settings of X and Y movement white edge; cleaning, nozzle back to zero, nozzle detection and other commonly used functional areas.

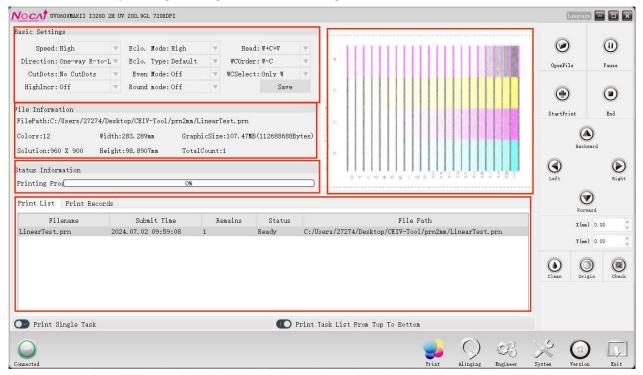
Menu column: Left: online button; Right: printing control, callibration and guidance, engineering pattern, system maintenance, version information, exit function.

Menu display area: display printing control, callibration and guidance, engineering pattern, system maintenance, version information.

Menu column includes printing control, engineer mode, callibration and guidance, system maintenance, version information, exit function. The following are the details:

5.2 Printing control

The default printing settings are as following:



Basic setting:

Printing speed: high-precision, low-speed, standard, high-speed; printing speed getting faster in turn. In general, you can choose standard printing;

Printing direction: divided into two-way, one-way from right to left, one-way from left to right;

Eclosion type: default, not optional.

Eclosion: it is divided into low, medium and high. The higher the eclosion, the better the print quality is, but the slower the print speed is.

Order of white and color: divided into white color and color white

Setting of white and color: if only choose white, it will only print white; other settings are the same as above.

Printhead: printhead should match the printer; the default mode is white, 8 color and varnish.

Even mode: Yes or No.

Interception: there are no interception, 1/2 reservation and 1/4 reservation.

Choose not to truncate in flat mode; choose to remain 1/4 in round bottle mode, you can choose to remain 1/2 for the case of low precision.

Round bottle mode: Yes or No.

High increment: Yes or No; 4PASS print in normal mode, which approaches the

effect of 6PASS and eclosion mode.

File information: file path, the number of color, resolution, width, height, graphics size, total score and other prn/prt file information.

Status information: display the percentage of the current print progress.

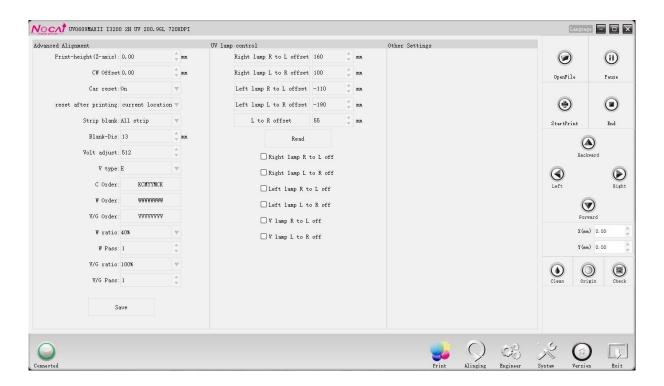
Print task window:

Including file name, submission time, number of copies remaining, status, file path and other file information. You can check the box below to print a single task, or print a classification table in order from top to bottom.

Prn/prt preview window:

Display a preview of the effects of the current task.

5.3 Engineer mode



Advanced settings

Whether to skip blank area or not: it is divided into on and off. It will skip when printing for blank areas in the picture.

Empty print distance: after printing, the cart go back more distance, unit distance is mm.

Voltage adjustment: default 512. According to the actual printing situation, under the guidance of after-sales technician to add and subtract values.

Voltage type: default S. It is suitable for standard print height 2-3mm.

White ink ratio: 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%. You can reduce the amount of white ink out proportionally.

Time of white ink: 1Pass, 2Pass, 3Pass, 4Pass, 5Pass,

White ink sequence: WWWWWWW. When W is changed to N, the corresponding channel is closed.

Color ink sequence: KCMYcmLl. The channel can not be closed.

Varnish ratio: 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%. You can reduce the amount of white ink proportionally.

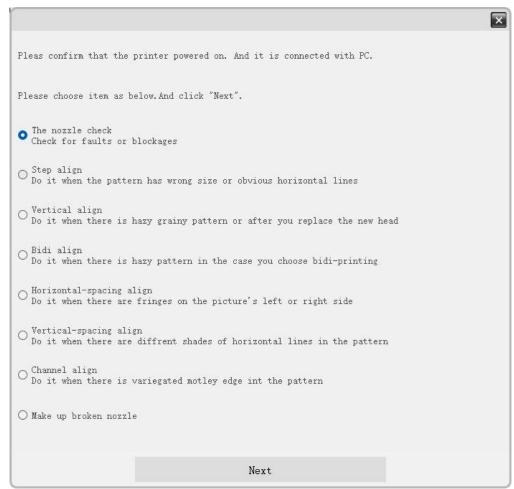
Varnish frequency: 1Pass、2Pass、3Pass、4Pass、5Pass。

UV lamp control

Learn more details about UV lamp calibration instructions.

5.4 Calibration

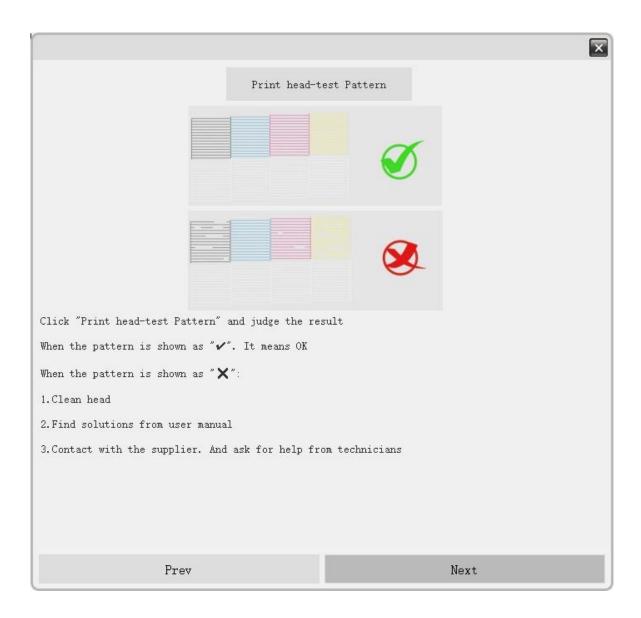
Click on the Calibration guidance, the software will pop up the following calibration process interface.



If you are going to install the new machine, replace the printhead or the printhead is hit, the calibration work should be completed from the top th buttom.

(1)Check the nozzle

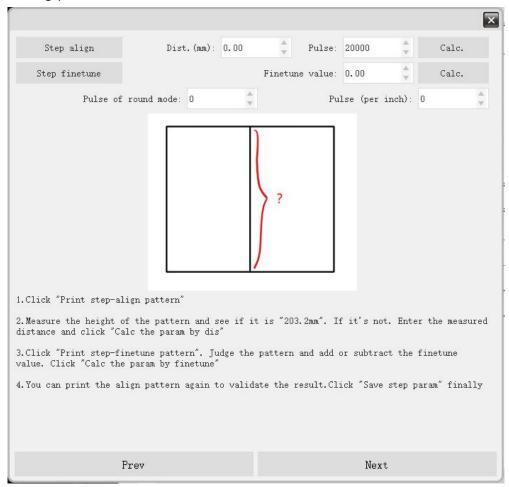
Click Next, go to the interface of nozzle detection details, operate according to the prompt.



After confirming that the printhead is OK, click Next. The software enters the main calibration interface and selects the step-by-step calibration automatically.

2Step calibration

Click Next and the software will enter the screen of Step calibration details. Click on the print step calibration diagram, coarse calibration; then click on the print step fine-tuning pattern.



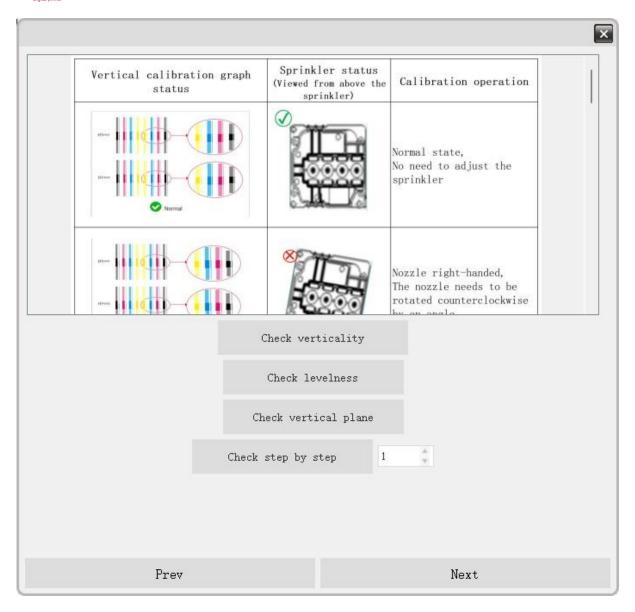
The fine-tuning pattern is as the following:

Purpose: Make corresponding line of 0 and baseline coincide.

After calibration, click Next, the software will enter the main calibration interface and select vertical calibration automatically.

(3) Vertical calibration

Click Next and the software will enter the screen of vertical calibration details.



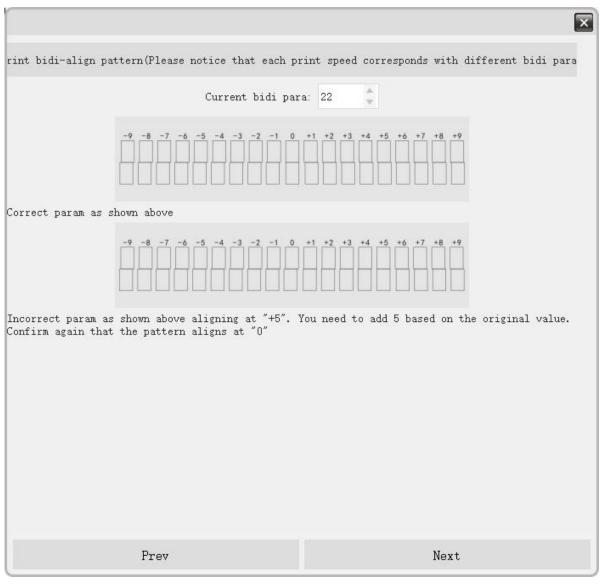
Click on "Print vertical calibration pattern", as shown in the above. The white and color printhead should be adjusted, click Next, the software will enter into the main calibration interface and select two-way calibration automatically.

Click on the "Horizontal alignment calibration pattern", you can follow the method shown above, the white and color printhead should be adjusted.

Click on the "Vertical alignment calibration pattern", according to the method shown above, the white and color printhead should be adjusted.

4 Bidirection calibration

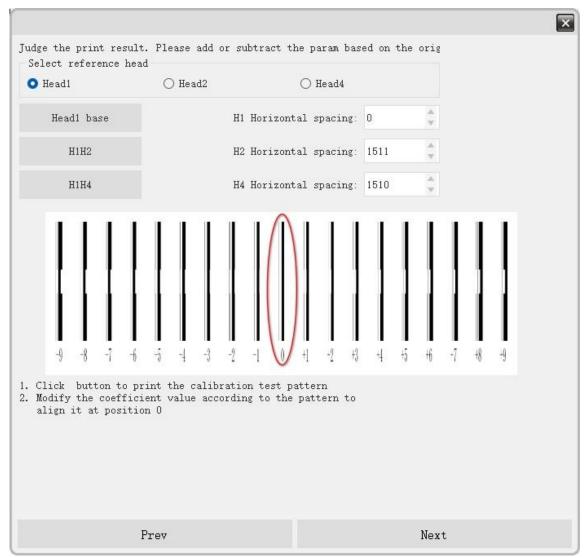
Click Next to enter the bidirection calibration details interface.



Click"Print Bidirection calibration pattern", as shown in the above, adjust it and then click Next, the software will enter into the main calibration interface, and select the head horizontal spacing automatically .

5Head horizontal spacing

calibration



Click Next and the software will enter into head horizontal spacing calibration.

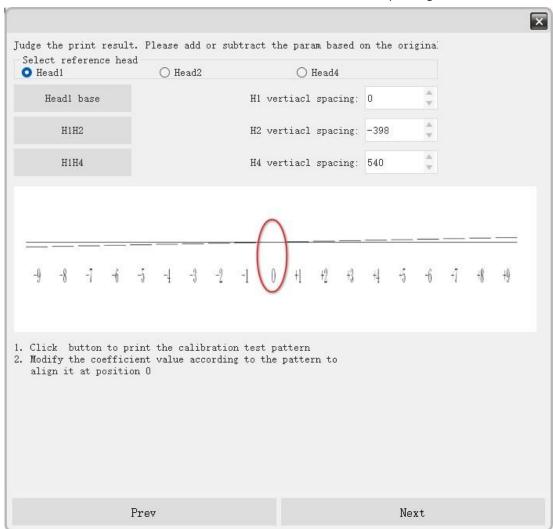
In the case of nozzle 1 as a benchmark, observe the calibration diagram after printing to see the coincidence of black and white lines. For example, if "+ 3" black-and-white line adjustment coincidence is the best, the current horizontal spacing coefficient + 3; if "-3" black-and-white line adjustment coincidence is the best, the current horizontal spacing coefficient will minus 3. Debug it repeatedly until the number "0" corresponds to the black-and-white line, it is a straight line.

Click and save after debugging.

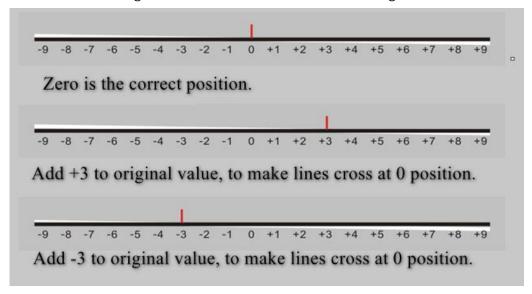
Click Next, the software will enter the main calibration interface and select the head vertical spacing calibration automatically.

6Head vertical spacing calibration

Click Next and the software will enter into head vertical spacing calibration.



Calibration diagram and method are as the following:

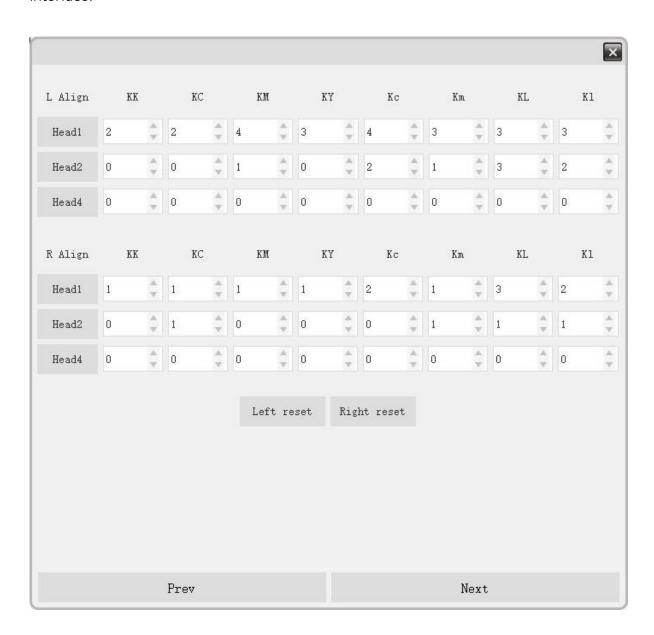


Keep it after debugging.

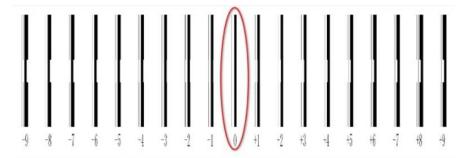
Click Next, the software will enter into the main calibration interface and select color registration calibration automatically.

7Color registration calibration

Click Next, the software will enter into the Color registration calibration interface.



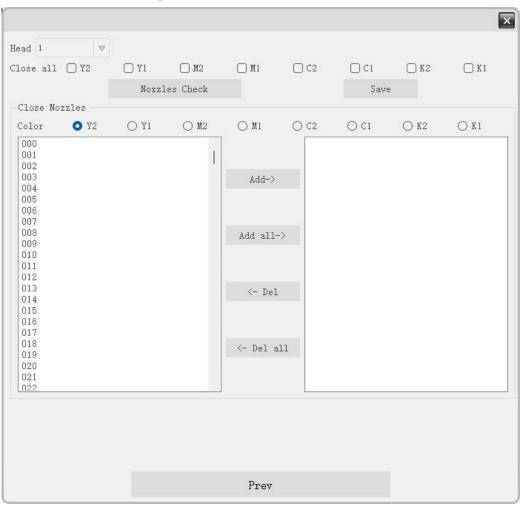
Calibration diagram is as the following:



Look at the printing calibration diagram to see the coincidence of color line and black line. Take CH1 red-black color as an example: if "+ 3" red-black line adjustment coincidence is the best, the current horizontal distance coefficient plus 3; if "-3" red-black line adjustment coincidence is the best, the current horizontal distance coefficient minus 3. Debug until the number "0" corresponds to the best coincidence of red and black lines, it is a straight line.

Click and save when debugging is completed. Click on the Next, the software will enter into the main calibration interface and select broken needle compensation automatically .

®Broken needle compensation





Click Next, the software will enter into the broken needle compensation interface.

Color: K, C, M, Y, Printhead 1, 2, 3.

Click the nozzle detection and print the corresponding color calibration diagram, observe and record the corresponding values of broken needle, fill in the hole in turn to add the check.

The calibration process is completed and closes the calibration window.

5.5 System maintenance

Click System maintenance and the software will enter the screen of System maintenance.



The page is divided into 4 sections: cleaning and maintenance, nozzle temperature maintenance;

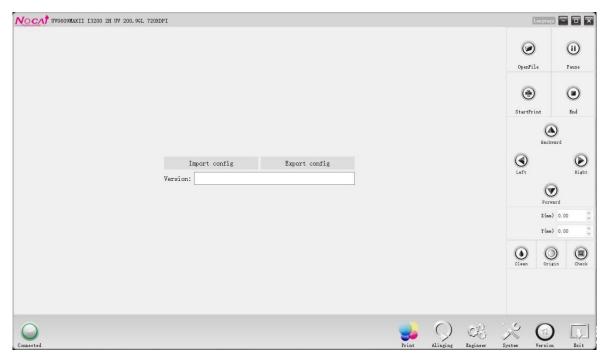
Cleaning and maintenance: Manual ink-pumping, stop manual ink-pumping maunally, scraping, ink-washing, stop ink-washing, seal the head, stop cart, stop papering, start positive pressure test.

Nozzle temperature maintenance: observe the real-time temperature of the nozzle;

5.6 Version information

Click Version information and the software will enter the interface of Version

information.



Export Configuration File: export the parameters in online software as a file with the suffix PFG format for backup.

Import Configuration File: import the parameters file from the previous export backup to restore the parameters.

Version information: Specific information about the system version.

FlexiPRINT 19 Software installation

6.1 FlexiPRINT 19 Hardware introduction

1. The front, back and inside are as follows:







2. A software USB stick inside.



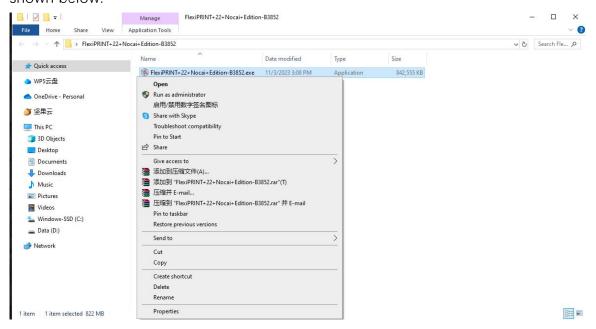


6.2 FlexiPRINT 19 Software installation

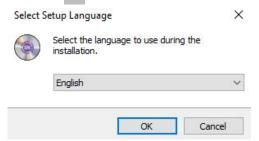
1. Open the software box, take out the software installation USB-disk and plug it in the computer USB interface, (USB-disk will light blue). Open this computer and double-click the FSNOCAI19, as shown below:



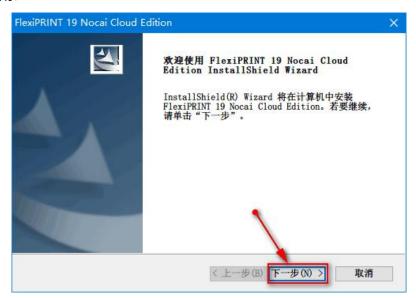
Find the program Autorun.exe, click right button, operate as an administrator, as shown below:



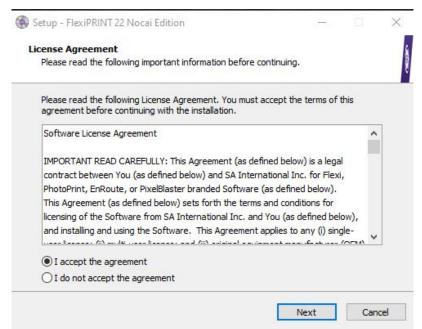
2. Pop-up dialog interface, select the language required to install the software (default is Chinese), and then click OK:



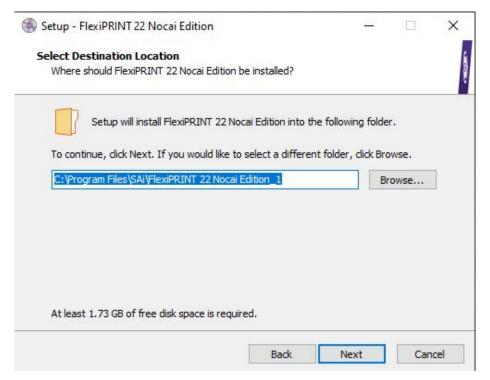
3. Click Next:



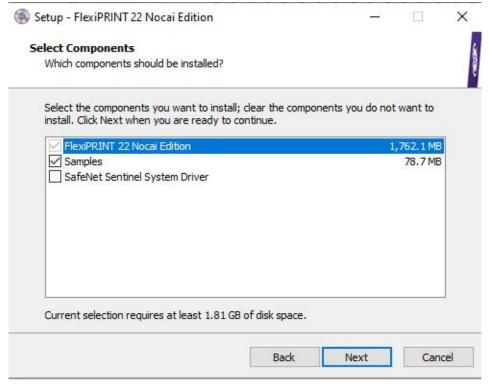
4. Accept the terms and click Next:



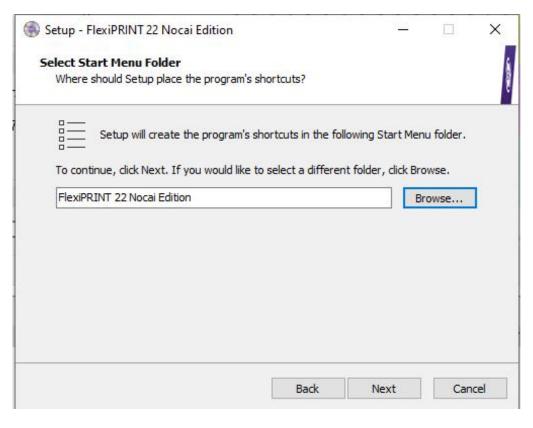
5. Click browse to set the installation path of the software. The default installation is on disk C. Click Next:

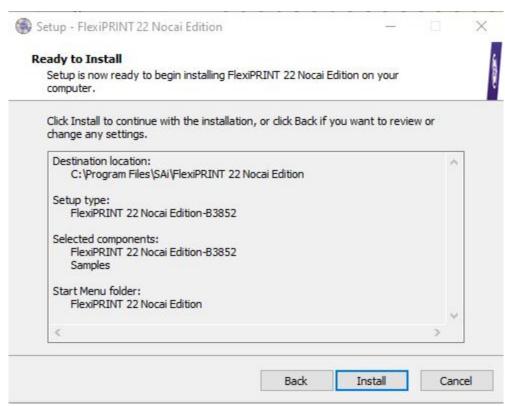


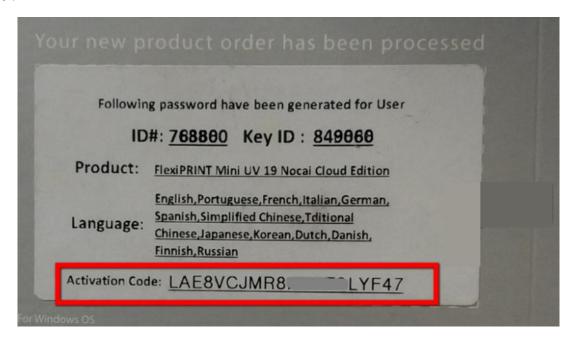
6. Check the main program to be installed (note not to check the SafeNet Sentienel System Driver program) and Click Next:

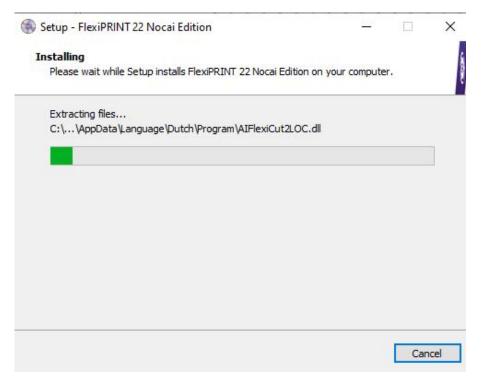


7. Pop-up dialog interface and click Next:

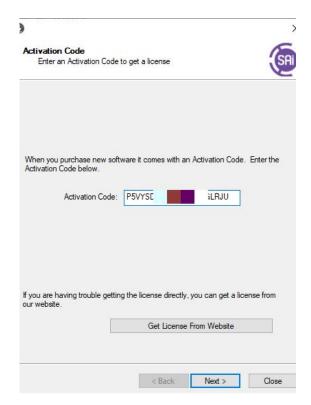




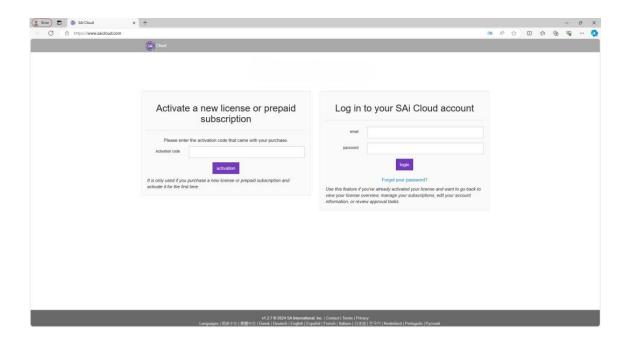




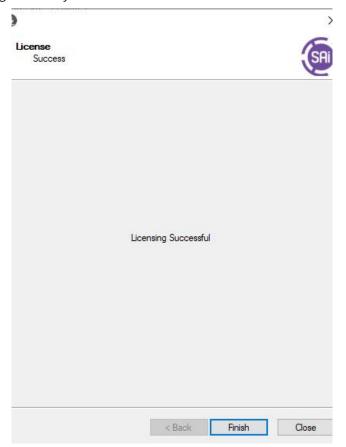
8. During the installation process, a dialog will pop up, find the <u>Activation Code:</u> <u>XXXXXXXXXXXXXXX</u> on the back of the CD-ROM box and put it into the following dialog, then click Next:



- 9. The first activation of the site will pop-up the following tips of activation steps, please enter the tip site to activate.
- 10. Click the link: https://www.saicloud.com/ As shown below, apply for a registered email address, log in and turn off the web page after activation. Follow the prompts to proceed to the next step:



11. If there is no prompt for website activation, then skip step 9, 10. Click Next, it will go directly to the successful authorization section.



12. Click Finish. Wait a few minutes, click the dialog.



Two icons will appear on the desktop to indicate that the software is installed.



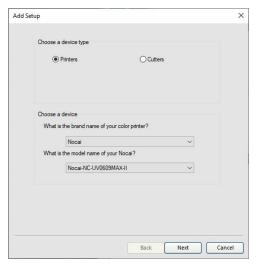
6.3 FlexiPRINT 19 Port settings

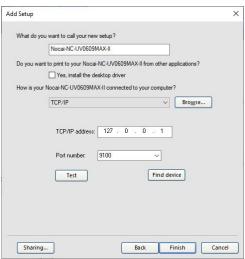
Click , open the software by operating as administrator. The desktop pops up to add device ports, as shown below: brand name"Nocai", the model number is "Nocai-NC-UV0609MAX.

Click Next after selecting:

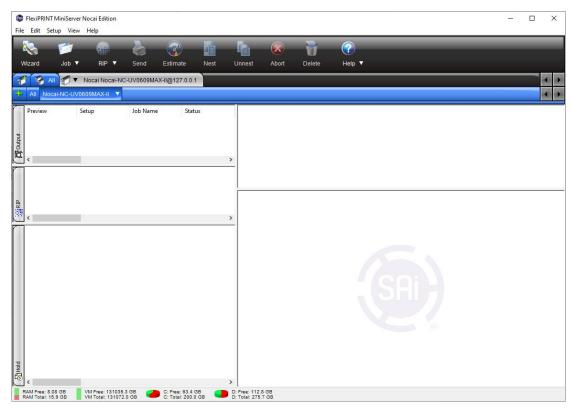
FlexiPRINT MiniServer Nocai Edition

Select TCP IP as the connection mode, TCP/IP, put into 127.0.0.1 and then click OK, as shown in the figure below:





After Port setting, the diagram is as shown below:

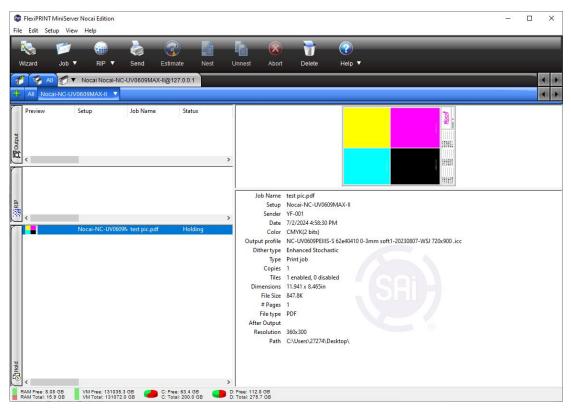


6.4 FlexiPRINT 19 Introduction to sampling of software

1Add job graphics



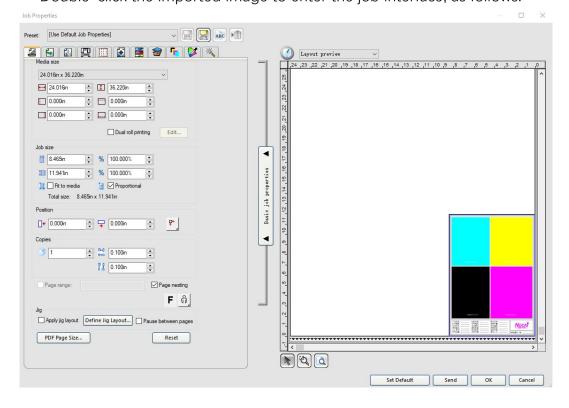
- 1. Job"select the file path to add the file for the job;
- 2. "Encoder strip image processor" pre-process documents that need to be printed.
 - 3. "Send" is to send an edited work;
 - 4. "Abort" is to interrupt a work that is printing;
 - 5. "Delete" is to delete the work file inside;



Click"Job" to add the file, (you can also pull the picture into the frame directly) as shown below:

2Preset

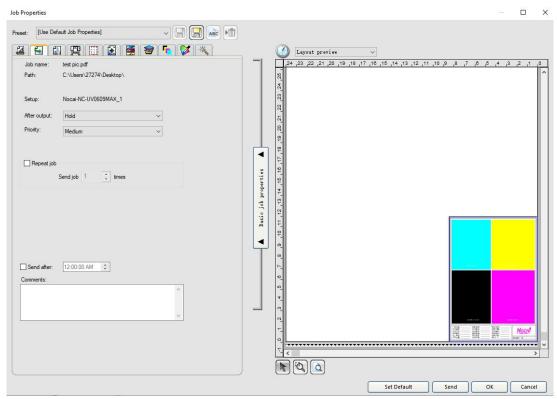
Double-click the imported image to enter the job interface, as follows:



- 1.Medium size: the realizable size;
- 2.Job size: it refers to the size of the picture, choose it according to the ratio;
- 3.Position: it refers to the adjustment of the picture on the printing platform, the printing position can be selected according to the arrow;
- 4.Copy: it refers to the copies of one-time, the spacing settings is on the right side.

5.Area settings: the "F" on the right is the mirror setting, and the "Human" button is the pattern orientation adjustment.

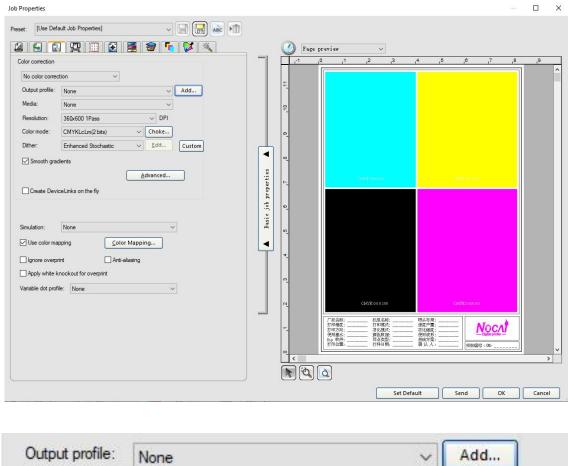
③Job panel

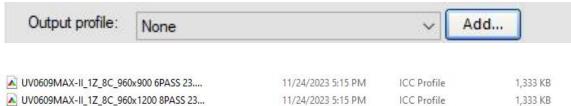


- 1.After the output: the following options are after the picture printed, save that is to remain the picture, delete that is not preserved after printing;
- 2.Repeat: Repeat refers to the time for sending the work, choose the work repeatedly, for example if you send job settings 2 times, the machine will print twice.

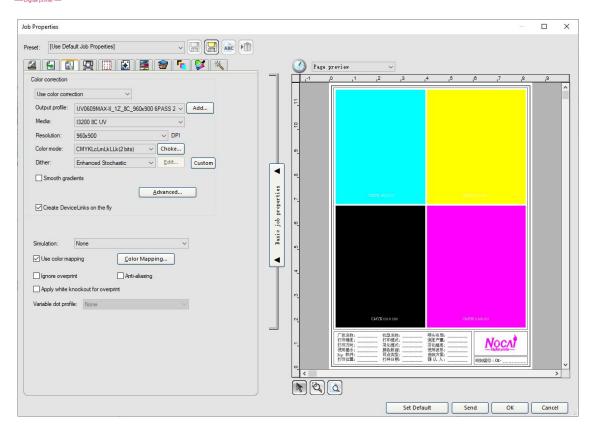
4 Color arrangement

1. Click "Output profile" in the Color management and add it. Find the ICC folder internal (curve file) to add it, the following profile will be generated automatically;

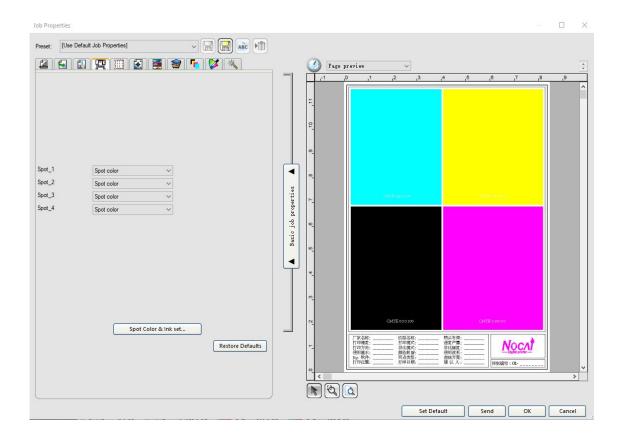




When the curve is added successfully, it looks like this:



Printer selection



Color 1, Color 2, Color 3 and Color 4 in printer selection panel. The following are the introduction:

None -None means only print white color;

<u>Spot color</u> -Spot color is Spot color printing (please check out the Spot color video for Spot color applications)

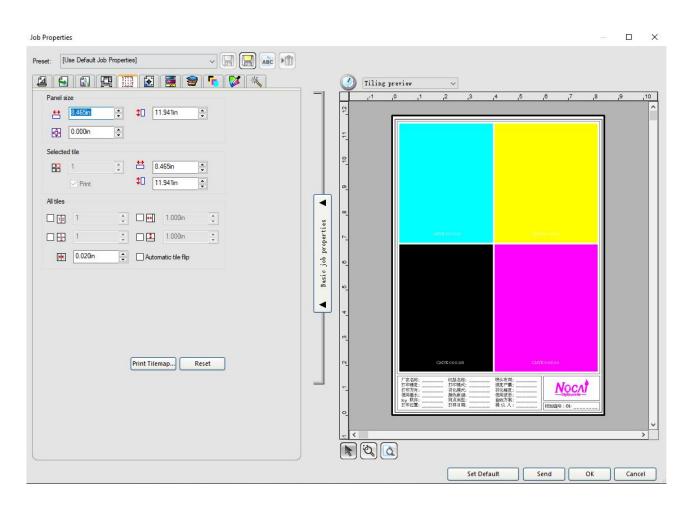
<u>Under color</u> -Under color software prints the amount of white ink according to the color of an image. The darker the color, the thicker the amount of white ink, and the lighter the color, the thinner the amount of white ink.

<u>Fill color</u> - Fill color software prints the amount of white ink based on the color of the image. The darker the color, the thinner the white ink, and the lighter the color, the thinner the amount of white ink.

Substrate - substrate prints the white.

The customer selects options based on actual usage.

6Collage and clip selection



Collage inside the size adjustment and custom screenshot printing, click right can clip to increase or decrease directly .

7Set default and print

Click on the default setting, the settings above will be saved as the default settings. When you re-add the picture of job file, the parameters will be the same as this setting.

Once the settings are complete, click "save" the settings defaults, and then click OK.



Then enter the online driver to print color settings, according to your own drawing and printing requirements for white color settings. Click "Save" after the completion.

After setting up the products on the printing platform, and adjust the printhead of ink cart and the height to print (generally about 2-3 mm), and then click Send, you can print pictures.

Maintenance method and announcements of machine

7.1 Maintenance method of printhead

There is a board chip inside the printhead, which is inserted with the printhead wiring directly. Pay attention to the contact part between cable and printhead to prevent ink from dropping. Shut down immediately once you found that the water-like substance between wiring part and printhead, remove and dry it quickly. Test again whether it is burned out or not, remember not to use the printer with water, otherwise it will burn out the printhead and the headboard.

②Printhead cable is closely integrated with the plug. Generally not put out plug, there will be contact oxidation, damage, dislocation or combine line at other contact after a long time. So you should pay attention to observe whether these problems appear or not, and eliminate or replace the printhead cable, otherwise it will cause the printhead or the headboard burned.

③In the case of not using the machine you must do a good job of maintenance, you had better insist on the daily power-on once a day and test strip printing. The printer will clean automatically if the ink is intermittent to ensure that the test strip is normal. You can print a picture to check. If there is no care more than 3 days, you need to put 3-5 drops of the cleaning fluid into the cap top, and then combine the printhead with cap top. This will play a certain role in the protection.

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

⑤The height between the printhead and the material should be 2-3mm. Confirm the print height timely in order to avoid damaging to printhead.

- 6Sheet metal of cart must be cleaned regularly to avoid effects on the nozzle.
- (7) Avoid printing reflective materials that can cause printhead clogging.

7.2 Maintenance method of ink station

Due to the combination of printhead and cap top for ink pumping or cleaning, there will be ink droplets inside the ink station or on top of the sheet metal. Be sure to scrub it with alcohol on a regular basis or in a timely manner to keep the ink

station clean.

7.3 Maintenance method of encoder strip

Encoder strip is set in the card slot in order to control the accuracy of the components. If encoder strip is out of the slot, it will be scratched by encoder sensor during work, and there is a direct scratch in the future and the accuracy will reduce or caused the cart crash by not reading data correctly. So make sure to check the encoder position, whether the encoder sensor in the middle of the position or not, and whether there is friction or not. In the dust or dirty air the encoder will appear misalignment and other issues, so please clean it up(by alcohol), keep the encoder clean and undamaged. If there are scratches caused by misalignment, please replace it in a timely manner.

7.4 Maintenance method of rail

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

7.5 Maintenance method of suction platform

The platform possess suction function, there are a lot of dense holes on the platform to produce suction force on the platform to the material, so please keep the platform clean to avoid blocking the suction holes caused by the suction is not smooth or the suction is not strong, and the fan may be damaged if the water is sucked into the wind holes.

7.6 Change damper

Replacement is recommended once every 3 months.

7.7 Change the cap top

Replacement is recommended once every 3 months.

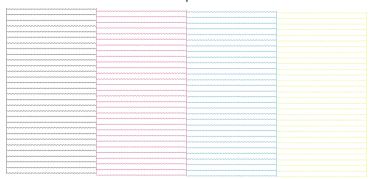
7.8 Maintenance of shell sheet metal

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

Common trouble-shooting method

8.1 Examples of intermittent ink

Test strips are all out

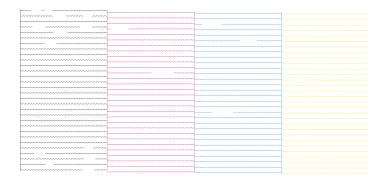


Partial intermittent ink of the test strip



Explanation: Intermittent ink of test strip partially. This is caused by the corrosion damage to the printhead. You can clean it automatically. If automatic cleaning can not resolve this problem, you can continue to use, it does not affect the effect.

Severe intermittent ink on test strip partially



Solution:

1.Draw out the ink from damper by syringe, it can check whether the ink can flow normally. This can exclude the possibility of clogging and leakage. If there is any

problem, please replace the damper.

2.After replacing the damper, if you extract ink from the damper, there is still a clogging phenomenon, please check whether the ink tube, connect head of damper is clogged or not.

3.Clean the printhead manually to ensure that the printhead is not clogged.

Summary: If there are the problems above, it is usually because the damper or printhead is clogged, please check them firstly.

Almost total intermittent ink of the test strip

Solution:

- 1.Auto-cleaning, check whether it can draw out ink or not, if it can not draw out ink normally, please replace the cap top or re-adjust the position.
- 2.Check whether there is ink on the surface of the printhead: if there is a droplet of single color, please replace the corresponding damper; if there is a droplet for multiple color, please check whether the ink-drop can scrape the mirror surface of the printhead normally during the automatic cleaning process.
- 3. Manual cleaning, use a syringe to flush the printhead and check whether the printhead is clogged.

Summary: Please examine ink-pumping and scraping of the cap top and the printhead.

Test strip is lack of color block



Solution:

Plug and unplug the printhead cable, check whether the contact of the printhead cable are oxidized or damaged, if so, please replace the printhead cable and check again.

Check whether there is any ink stain on the printhead cable connection interface of the printhead, if so, please clean and retest or replace the printhead.

Replace the headboard.

Pump ink from the damper by syringe to ensure that the ink can flow out normally, and clean the printhead manually to ensure that the printhead is not clogged (the above problem of a missing color, the general situation is that the printhead voltage is not transmitted normally. Commonly situation: head board, head line and printhead problems, but does not exclude the possibility that the ink is not supplied and the printhead is clogged.

All the test strips are blank

Solution:

- 1.Plug and unplug the printhead cable, check whether the contact of the printhead cable are oxidized or damaged, if so, please replace the printhead cable and check again.
- 2. Check whether there is any ink stain on the printhead cable connection interface of the printhead, if so, please clean and retest or replace the printhead.
 - 3. Replace the headboard.

Summary: The above problems generally occur due to the ink entering the nozzle plug or the customers operate the device by mistake after replacing the printhead, resulting in short circuit of the nozzle, burning the head board or the printhead, because the printhead will damage the headboard, but the nozzle board will not damage the nozzle, it is recommended to give priority to replacing the printhead and replacing the new head line.

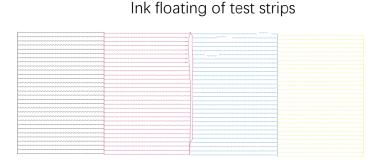
Color mixing: large scale of color mixing

Solution:

1.Please flush ink first, then print a test strip to observe whether the color mixing situation is improved. If not, please check whether there is residue on the nozzle surface. If there are individual ink droplets of a certain color, please replace the corresponding damper. If there are multi-colored ink droplets, please check whether the scraper can scrape the nozzle mirror surface normally during the automatic cleaning process.

2.Replace the printhead.

Summary: Please check whether there is ink residue on the nozzle surface firstly.



Solution:

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

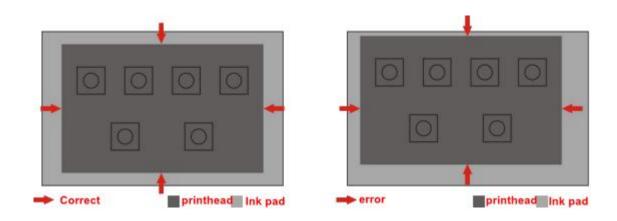
- 2.Printing environment should be from 15 °C to 30 °C.
- 3. Check whether the cap top can pump ink normally or not.
- 4. Stir the floating ink evenly, and pump ink 10ml or more from damper by syringe, and then clean the printhead. If it can not be resolved, replace the ink is better.

Summary: When you meet the above problems, if there is no special change in the surrounding environment, it is probably because the machine is left for a long time generally, thus resulting in ink precipitation.

8.2 Clean without pumping ink

Solution:

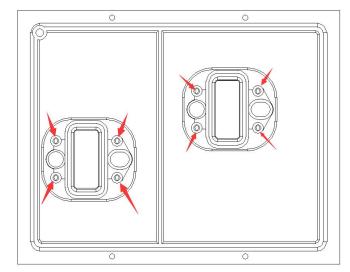
- 1. Pour the cleaning fluid into the cap top, and make sure whether the cleaning fluid can be pumped out, if not, please replace the ink pump.
- 2.Check whether the connecting tube of the cap top is detached or clogged, please reconnect or replace it.
 - 3. The cap top is damaged or aging, please replace (firstly).
- 4. Check the position of the cap top and the nozzle correctly, the cap top can not be sealed the nozzle (priority) as shown below:



Adjust the combination part of the cap top and the printhead mirror, you need complete it patiently. The square edge of the cap top is generally located inside the edge of printhead mirror(inside the iron sheet); if it is located outside the edge of the iron sheet, as shown in the figure on the right, it means that the printhead and the cap top leak gas and can not pump ink, the test strip can not be adjusted to normal.

Please refer to the diagram.

5. The method for adjusting the cap top to the left, right, before and after are shown in the figure below:



As shown in the picture above, adjusting the position of the cap top to apply to the misalignment of the printhead, the cap top can be adjusted in a wide range. It is easy to complete, loosening the screw of cap top is capable.

6.Micro-movement of printhead(front and back)

Summary: The machine has been used for a long time, and if you reinstall the printhead and cap top, it may result in the position deviation, then you need to adjust the position between printhead and cap top. The specific deviation must be combined with difference between the bottom of the nozzle and the cap top and then clean automatically. If there is ink droplets on the mirror of printhead while cleaning, which stands for the pumping of the ink is normal.

8.3 Great resistance of cart

- 1. The printhead cart moves to the center of the machine and operate on, the printhead cart does not move and reports an error.
- 1.1 Move the cart by hand to see whether it can be pushed, if so, please check whether the indicator light of X-axis drive motor is on or flashes red to report an error, and whether the KIMI screws of the motor pulley are tightened.
- 1.2 Check whether the cart board is light or not, if not, replace the data cable of cart board.
 - 1.3 Replace the cart board.
- 1.4 Check the pulse signal line of X-axis motor. Loose connections, breakage, and aging and so on.



1.5 Replace the headboard.

Summary: check the hardware of the machine.

- 2. The printhead cart moves to the center of the machine and operate on, the printhead cart move to the left and reports an error.
 - 2. 1Replace data cable of cart board.
 - 2.2 Replace head board.
 - 2.3 Replace mainboard.

Summary: Cart board cannot accept the commands from the mainboard if the problems above appear.

- 3. The printhead cart moves to the center of the machine and operate on, the cart moves to the right and reports an error.
- 3.1 Check whether the encoder sensor is illuminated, if not, replace the encoder sensor.
- 3.2 Whether the encoder strip has obvious scratches or not, if so, please replace a new one.
- 3.3Whether the encoder strip has ink, grease, dust, if so, please clean it with alcohol.
- 3.4Whether the encoder strip stuck in the middle of the encoder sensor, and moving back and forth without scratching.
 - 3.5 Whether the encoder strip stuck in the encoder sensor.
 - 3.6 Replace cart board.

Summary: The cart has received the command from the mainboard, but the encoder sensor cannot read the data correctly.

- 4. The machine reports errors from time to time while printing
- 4.1 Replace the encoder strip if there is scratch.
- 4.2 Clean it by alcohol if there is ink, dust and grease.
- 4.3 Whether the encoder strip is stuck in the middle of encoder sensor and not be scratched.
 - 4.4 Whether the belt of X-axis motor is loose or not.
 - 4.5 Whether the KIMI screws of motor wheel is tight.

- 4.6 Replace the cable of head board.
- 4.7 Check whether the temperature of the X-axis drive motor is above 50 degrees or not, if so, please reconnect the signal cable of X-axis drive. Or check whether the X-axis drive motor is parallel to the transverse belt installation (PS: It is normal if it is under 50 degree).

Summary: The encoder sensor can read the data but there will be error feedback.

- 5. The cart moves to the middle, turns on, moves to the left, then moves to the right, and quickly crashes to the left after reaching the ink station, and returns to the middle to report an error.
 - 5.1 Check whether the origin sensor is offset or not.
 - 5.2 Replace the origin sensor of cart.
 - 5.3 Replace the cable of origin sensor.
 - 5.4 Replace the cart board.
 - 四、Error of limit position sensing.
 - 1. Replug in and out the cable.
 - 2. Replace the front and back limit sensor.
 - 3. Check whether the limit sensor connecting wire is loose, broken and aging.
 - 4. Replace the headboard.

8.4 Ink is not dry

All products are not dry:

1. Check whether the UV lamp is light while printing, if not, please solve it (refer to the UV lamp is not lighted solution)

The left and right edges of the product are not dry:

- 1. Confirm the version number of the equipment information (pull down the machine setup menu to find the equipment information).
- 2. The manufacturer need to confirm the version number and upgrade the machine version.
- 3.Adjust the UV lamp irradiation distance in the advanced settings of the driver panel.

Error code

- Error code 104: Cart resistance is large, encoder signal is abnormal, motor or motor signal is abnormal.
- Error code 105: Cart reverse, encoder AB phase opposite, motor direction opposite
- Error code 106: Width exceeded, check the width of the picture at the starting point of printing.
- Error code 107: Zero point of cart sensor error, abnormal origin cart sensor signal
 - Error code 108: Encoder detection error, encoder signal abnormal
 - Error code 109: SDR detection error, return to factory for maintenance
 - Error code 110: PC driver error, usage of PC print tool error
- Error code 111: Insufficient number of squares, Insufficient number of registered squares
- Error code 112: Lifting and lowering ink station sensor error, Lifting ink station sensor abnormal
- Error code 113: Cart board of main board communication error, fiber optic wiring or program problems
- Error code 114: Printing square number is 0, registered square number is used up
 - Error code 115: Fiber optic cannot communicate, fiber optic wiring abnormal
 - Error code 116: Empty paper alarm, material exhausted
- Error code 117: Parameter table ID does not match with registry ID, parameter exception error
 - Error code 118: Parameter table invalid, parameter abnormality error
- Error code 119: The cart board did not write the main program, program abnormality error
 - Error code 120: Nozzle lift motor error, head lift motor sensor abnormality
 - Error code 121: Paper seeding limit, table board limit sensor abnormal
- Error code 122: Paper seeding initialization error, table board limit sensor abnormal
 - Error code 123: Anti-collision, Anti-collision triggered or not connected
- Error code 124: Collision avoidance, collision avoidance triggered or not connected during initialization
 - Error code 125: Ink overflow, check the safety bottle

Error code 126: Cart gear ratio too small, motor gear ratio too small

Error code 127: Cart transmission ratio too large, motor gear ratio too large

Error code 128: Nozzle type of cart board error, mainboard parameter table can not match the cart board "FPGA"

Error code 129: Printing in the counter sensor to pause printing, infrared sensor to check the foreign body

Error code 130: External ram error, board error and return for repair

Error code 131: Position overrun error when cart stops, 200mm motor or encoder abnormal, motor or encoder abnormal, motor power abnormal

Error code 132: Position error when cart moves, 5000mm motor or encoder abnormal, motor power supply abnormality

Error code 133: Multi-machine system startup abnormality error, multi-machine system startup abnormality, not detected

Error code 134: SDR power-on detection abnormal, detection can not be detected, SDR detection abnormal reoperate-onplease return to the maintenance after many times

Error code 135: Ink station diffusion board is not connected, check whether the ink station diffusion board is connected normally

Error code 136: Temperature alarm

Error code 137: Humidity alarm

Error code 138: FPGA reset timeout, restart the machine, please return to repair for many times

Error code 139: Failed to apply external SRAM for 485 initialization.

Error code 140: 485 communication failure in multi-machine system

Error code 142: Main Ink Bottle Empty

Error code 143: Waste Ink Bottle Full

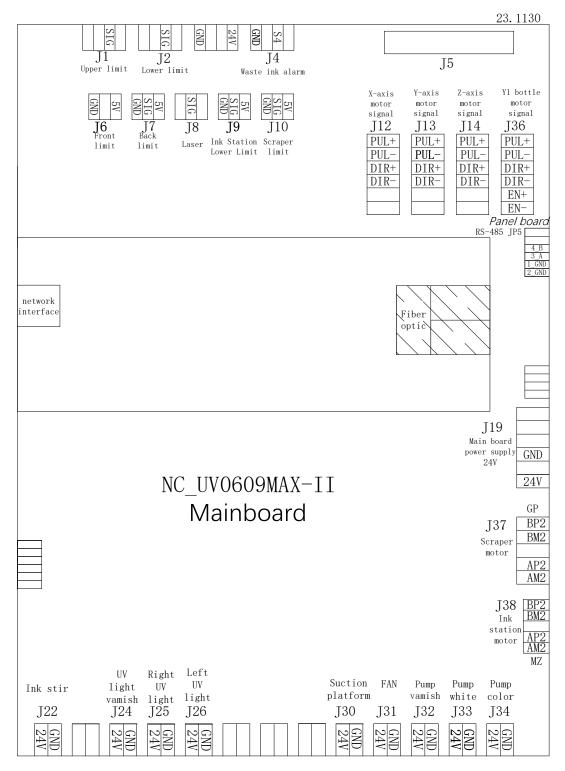
Error code 154: Cover Open Alarm

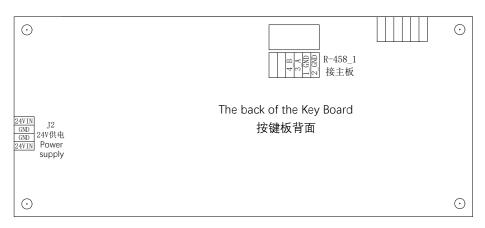
Error code 171: Wave Meter Empty

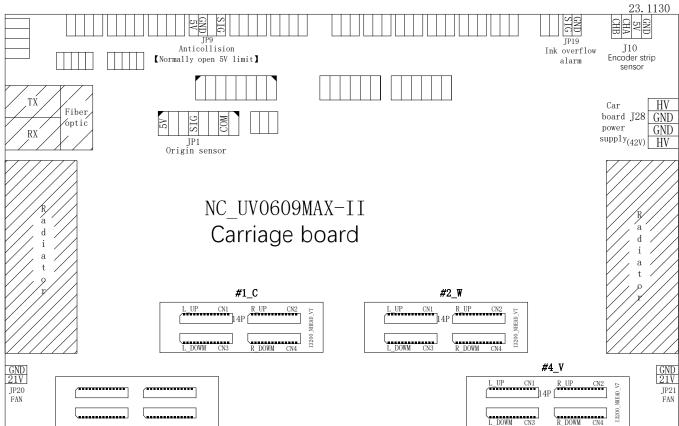
Error code 173: Printhead cord anti-plugging reversed

Introduction to board circuit

UV0609MAX-II board definition and connection illustration







Maintenance rules

11.1 After-sales and quality warranty policies

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

11.2 Seeking for help

If you have any problems while using the machine, please ask for help according to the following steps:

- 11.2.1Check the user manual
- 11.2.2Search the official website for more

information.(https://www.gznuocai.com/)

11.2.3Keep in touch with the local dealer for help.

11.3 Customer information column: Refer to the following table

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

11.4 Non-warranty items

- 11.4.1 If the product is damaged, it is due to the ink that do not come from Nocai.
- 11.4.2 If the product is damaged, it is because that the printer is not used under wrong environment(such as power voltage, temperature and humidity)

- 11.4.3 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.
 - 11.4.4 Breakdowns and damage caused by human factors.
- 11.4.5 Failure and damage caused by failing to follow the usage method and main matters noted on the product instructions.
 - 11.4.6 Failure and damage caused while handling.
 - 11.4.7 Force majeure.

11.5 Warranty policies

- 11.5.1 In the event of loss or damage of the included accessories (manuals, software), Nuocai does not provide them again.
- 11.5.2 We do not assume any responsibility for indirect losses incurred by users or future earnings due to product failures.

11.6 Announcements

- 11.6.1 Move.
- 11.6.1.1 Do not pull the ink frame beam and print table forcibly when moving the printer.
- 11.6.1.2 Two people are required to hold the printer's foot cup and move it smoothly.

11.6.2 Operating environment

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