



NC-DLP-120

User Manual

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Notice

Please read these instructions before using the machine

1. Machine should not be used by children or the disabled.If needed,please under the supervision;
2. Please use original supplier's spare parts and ink under instruction;
3. Make sure the power voltage is same as power cable and machine which shown on the Nameplate;
4. Only suitable to be used indoors and better suggest to have air conditioning inside the room to keep stable working temperature and humidity;
5. Dismantle the wooden case and the foot cup fixed frame and put it on a stable table before using;
6. Do not use the machine in a environment which has fire,dust and wetness;
7. Do not use the machine in a humid house;
8. Do not put sundries on the machine itself,machine printing table and surroundings;
9. Please keep a stable temperature in the working room,not suggest to use machine where environment over 30 degrees or below 15 degrees;
10. Do not use any broken cable to provide electricity;
11. If power supply is broken,please stop to using the machine;
12. Power off machine when u clean or fix machine;
13. Please use the machine according to local legal policy;
14. Make sure the head not touch anything before sending picture printing.Height sensor do not work when meets transparent materials;
15. When machine is working,eyes will feel sick if staring at the UV lamp for a long time,better suggest to wear ultraviolet-proof glasses;
16. When needed to move the machine,at least require 2 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,may touch ink tube,ink bottle and ink cap and some parts,please protect in advance;
18. The table which used to put the machine should be make sure it's stability to place the machine and protect machine from shaking during working;
19. Not recommended to use UV LED lamp high load printing for a long working time;
20. Make sure machine is normally grounded;
21. Do not use the machine in thunderstorm day,avoid lightning strikes;
22. If your ink is not come from Nocai,after sale service will not be provide.
23. The driver needs to be turned off before the machine is powered off.
24. The machine requires 0.6MPa compressed air.

Illustration of machine loading and unloading forklift force positions

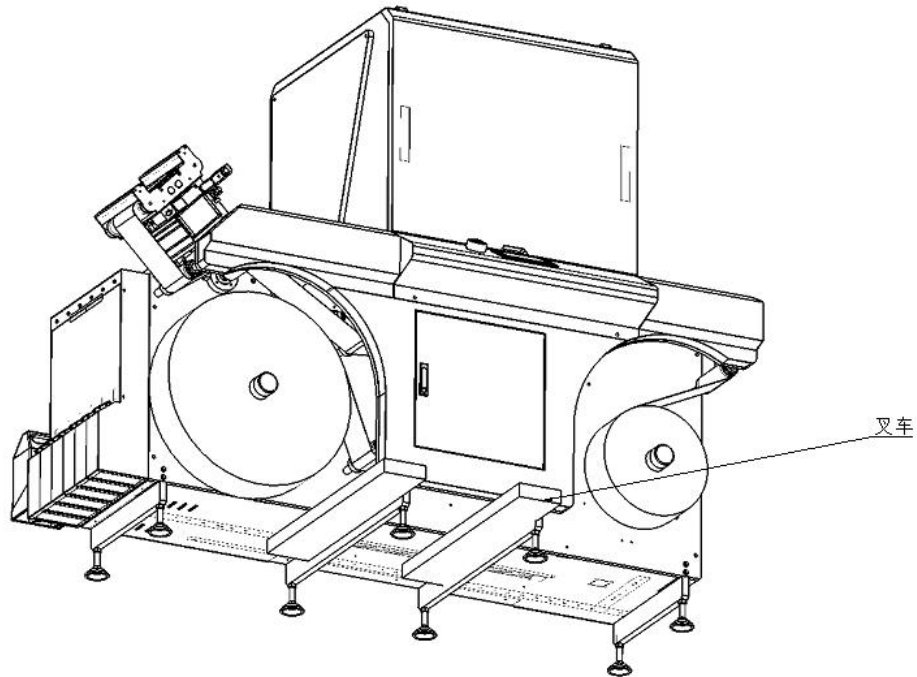
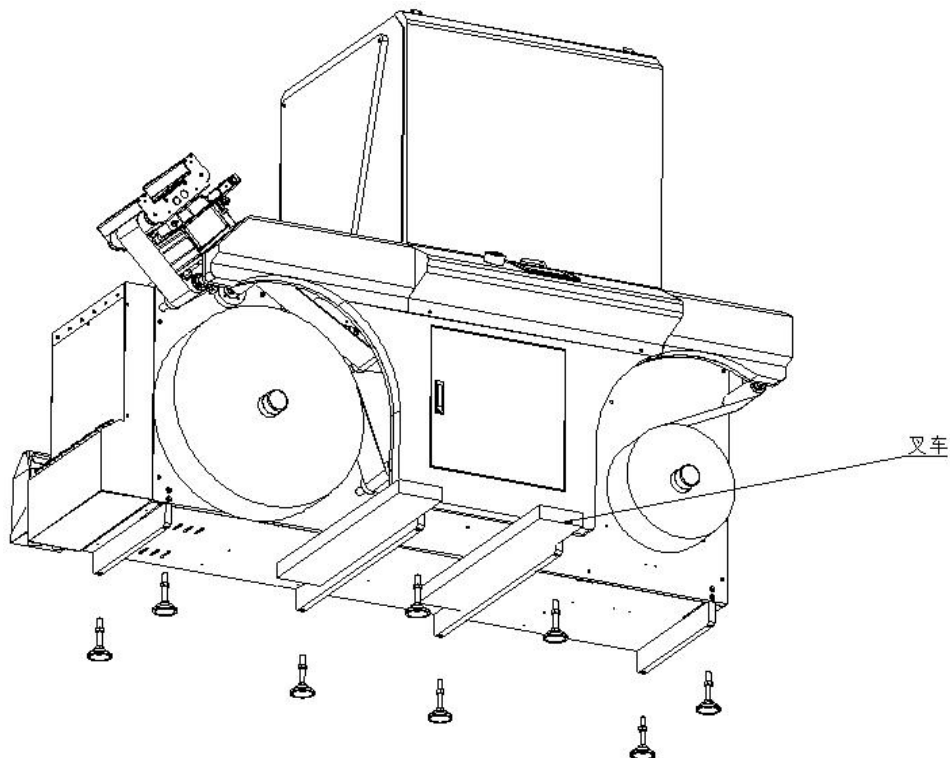


Illustration of machine loading and unloading foot cup installation position



The foot cups are removed when the machine is first boxed.

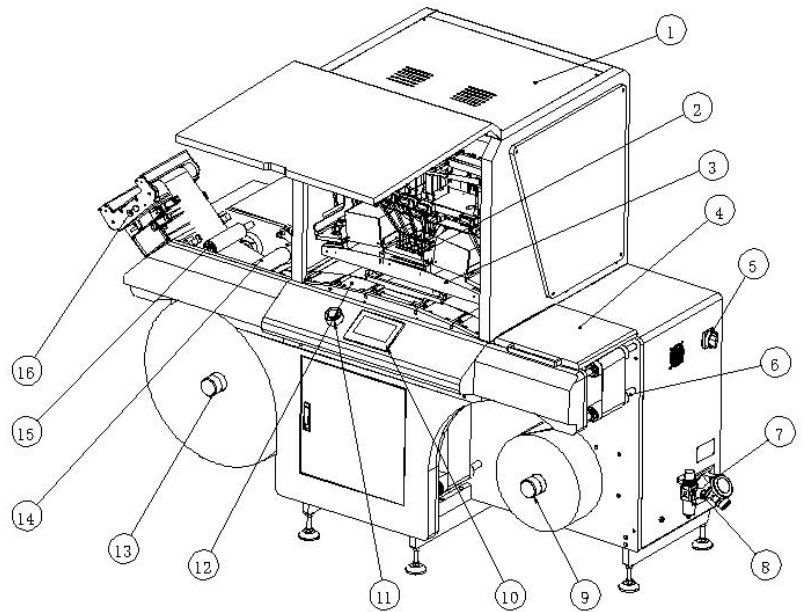
When the machine arrives at the customer's site, it needs to be forked up to install the foot cups after unpacking.

2、Machine introduction and graphics analysis



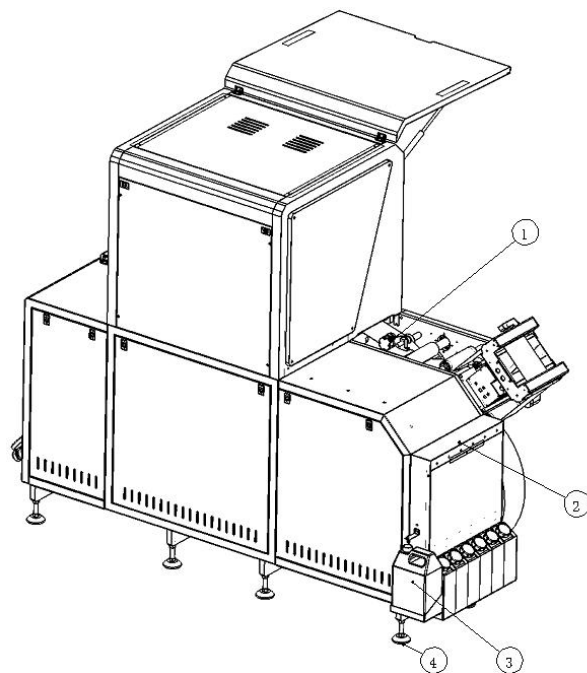
1.Graphic analysis of the front of the machine

- ① Machine cover
- ② Printing cart
- ③ Ink station
- ④ Cover of viewing port
- ⑤ Abrupt stop/Startup&Shutdown button
- ⑥ Paper
- ⑦ Plug to power supply
- ⑧ Air filter
- ⑨ Winding up the air rise shaft
- ⑩ Touchscreen
- ⑪ Abrupt stop button
- ⑫ Printing platform
- ⑬ Unwinding of the air shaft
- ⑭ Hauling shaft
- ⑮ Threading-paper shaft
- ⑯ Deskewing device



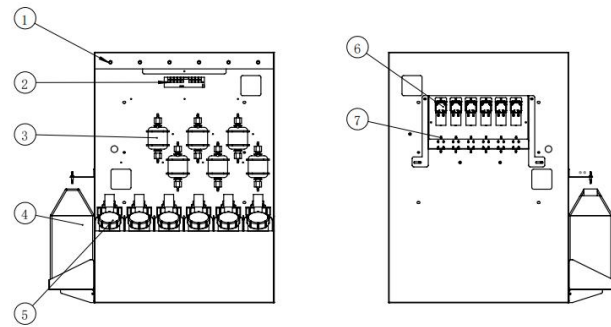
2.Graphic analysis of the back of the machine

- ① Encoders
- ② Ink supply module
- ③ Waste ink bottle
- ④ Foot cup



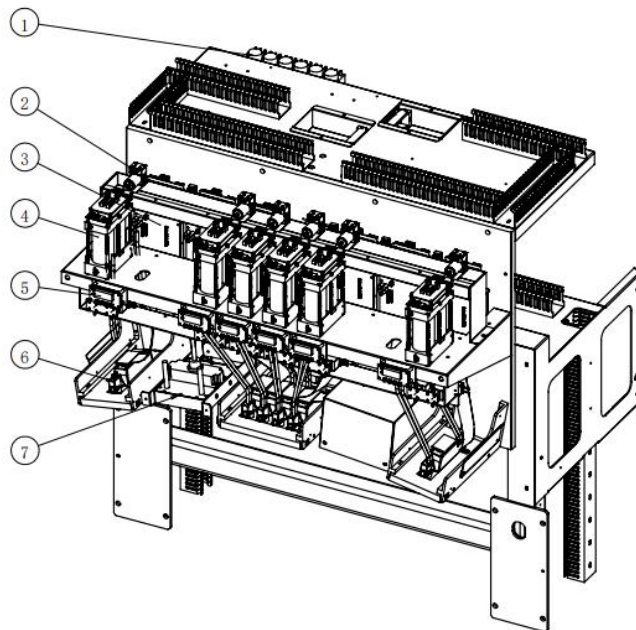
3. Ink supply module

- ① Ink-out indicator
- ② Level plate
- ③ Filter
- ④ Waste ink bottle
- ⑤ Main ink cartridge
- ⑥ Ink supply pump
- ⑦ Ink supply solenoid valve



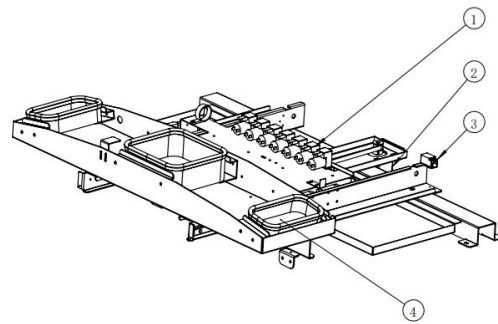
4. Analysis of the cart of the machine

- ① Safety bottle
- ② Circulation pump
- ③ Cart board
- ④ Ink supply settings
- ⑤ Control panel of ink supply settings
- ⑥ Printhead
- ⑦ UV lamp

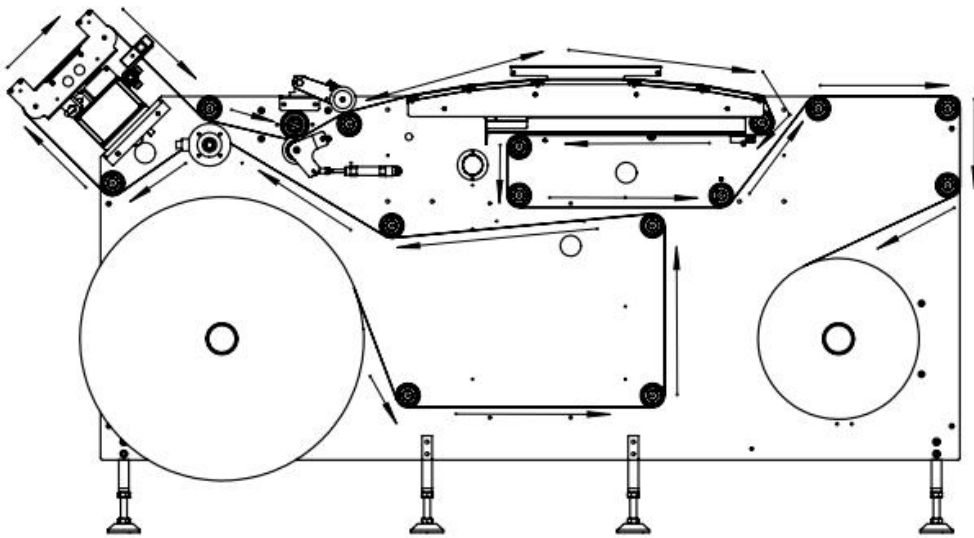


5. Ink station

- ① Ink pump
- ② Ink station motor
- ③ Ink Station Origin Sensor
- ④ Printhead Tray

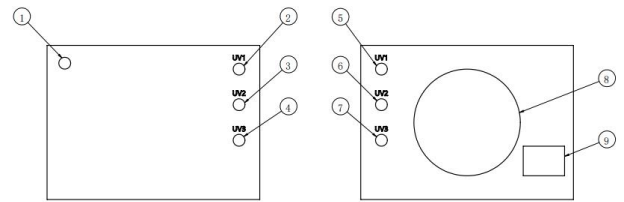


6. Machine paper threading diagram



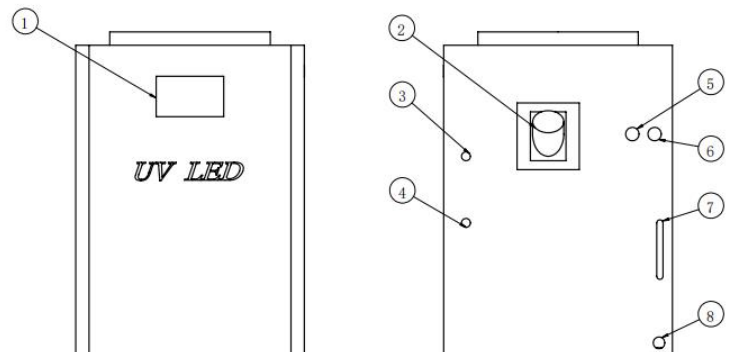
7. UV lamp electric box

- ① Power indicator
- ② UV lamp 1 Power Adjustment Knob
- ③ UV lamp 2 Power Adjustment Knob
- ④ UV lamp 3 Power Adjustment Knob
- ⑤ UV lamp 1 connector
- ⑥ UV lamp 2 connector
- ⑦ UV lamp 3 connector
- ⑧ Cooling Fan
- ⑨ Power switch



8. UV lamp water tank

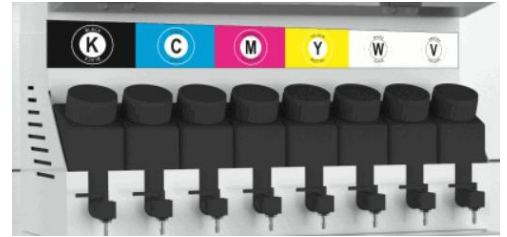
- ① Operation panel
- ② Water filling port
- ③ Power supply
- ④ Electric box signal port
- ⑤ UV lamp water inlet
- ⑥ UV lamp water outlet
- ⑦ Water ruler
- ⑧ Drainage outlet



3.How to add ink

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

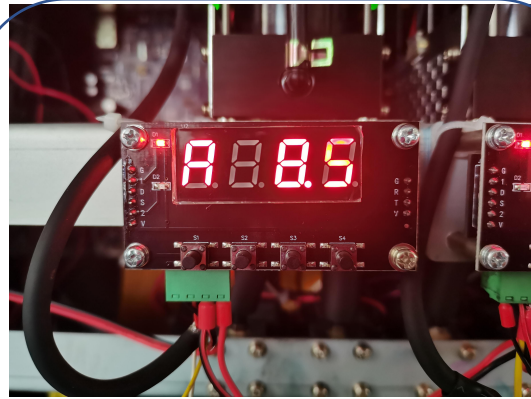
In order to prevent the ink from leaking out and contaminating the shell metal when adding the ink, protective measures need to be taken. The bottle mouth can be wrapped with paper.



Ink is automatically loaded into the secondary cartridge when power is applied, as is shown in the picture:

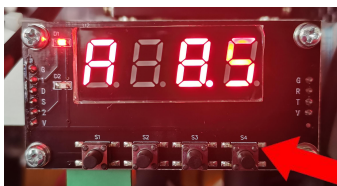


The secondary cartridge control board in the inking state is displayed as shown in the following figure

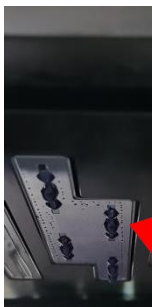


Displays current cycling pressure when inking is complete

Press and hold the S4 button on the secondary cartridge control board to start to press the ink, observe ink dripping from the interface of the printhead, as is shown in the picture:



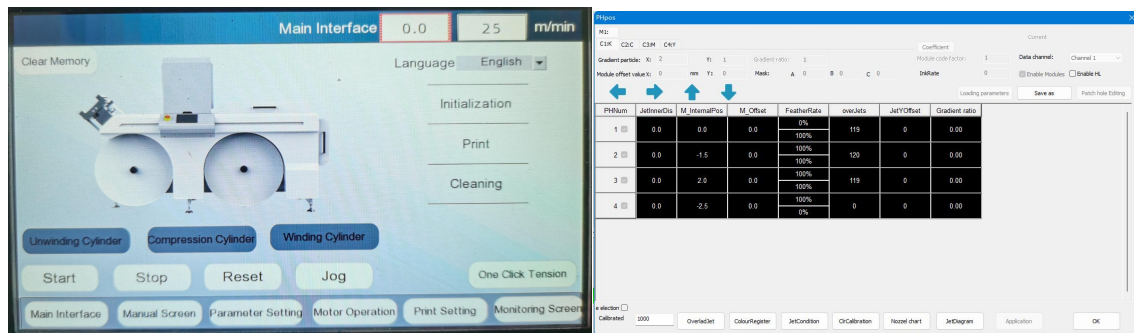
Press and hold the S4 button



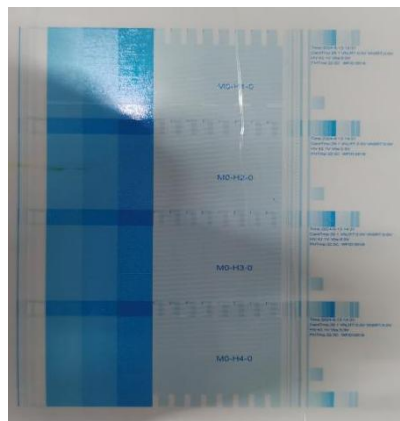
Pay attention, the interface of the nozzle ink drops down about 5 drops, you can release the control board button

Then wipe the ink off on the interface of the printhead with sub-fine non-woven fabric to complete the cleaning.

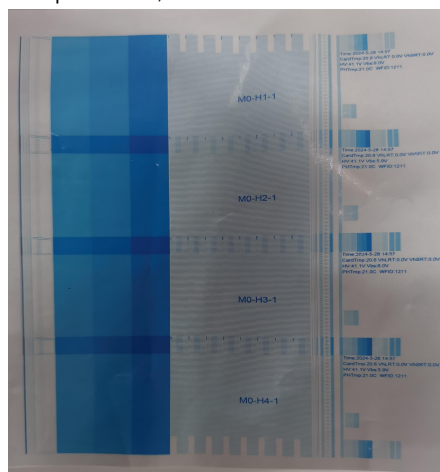
Refer to the following sampling operation as the following, after threading the paper, sending nozzle status picture within the driver, starting UV lamp electric box and water tank, click [Unwind Cylinder][Pressurized Cylinder][Winding Cylinder] on the touchscreen. Then press [One-touch tensioning] to tighten the paper. Set the speed, press and hold [Start] button, start printing test strips, if there is a lack of color or ink-aupension phenomenon, please continue to clean printhead until test strip out completely, ink installation completed.



Reference:



Test strip breaks, need to clean continuously.



Test strip normal

The machine goes into standby and waits for the software to be installed.

4. Install and setup the driver

1.1 Computer requirements

①System version: must be Win7, Win8, or Win10 on a 64-bit system.

Display language: Chinese or English


CPU: Recommended to choose i5 or above or equivalent;

Memory: 8GB or more recommended;

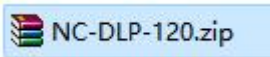
Hard disk: 250GB or more recommended.

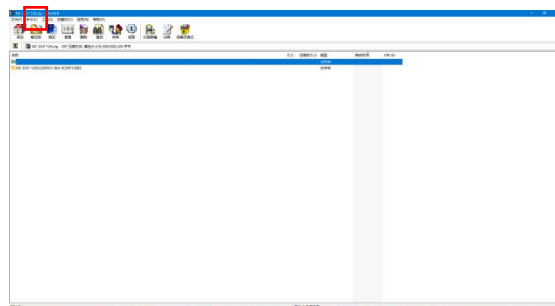
②Computer must be equipped with Gigabit network card and gigabit network cable, only in this way software can be normal online.

③IPv4 address of the computer is set 192.168.100.XXX.Subnet mask is set to 255.255.0.0, Not choose IPv6.

Operation procedures: Find the two icons , click right button, choose 【Open network and Internet setting】 -lick Change adaptor choice , double-click local connection (or Internet)-click attribute-cancel tick Inter protocol version 6 (TCP/IP6) tick Inter protocol version4 (TCP/IPv4) double-click and open it, -choose the following IP address(S)- inside IP address (I) fill in 192.168.100.XXX-inside the subnet mask (U) fill in 255.255.0.0. Click OK to finish.

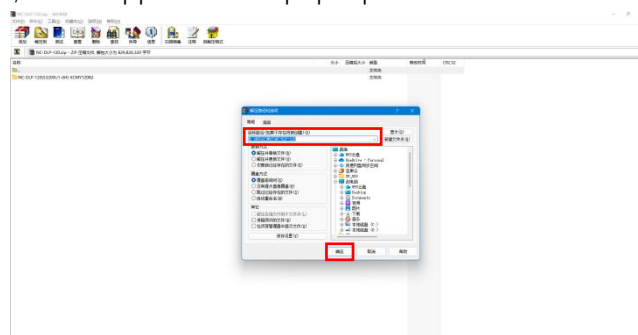
1.2 Install the driver

Open the name of NC-DLP-120 , get it or download it from official website www.happycolor.com.cn. Unzip to complete the installation directly, the details are as follows:



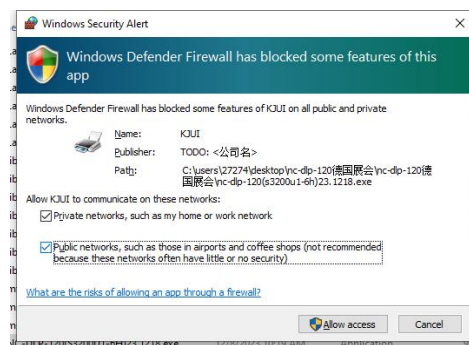
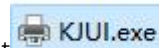
Click [Unzip to]

Ensure installation position, it will appear such a pop-up window:

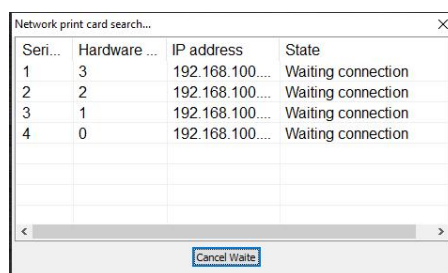


Click OK, wait for the unzip.

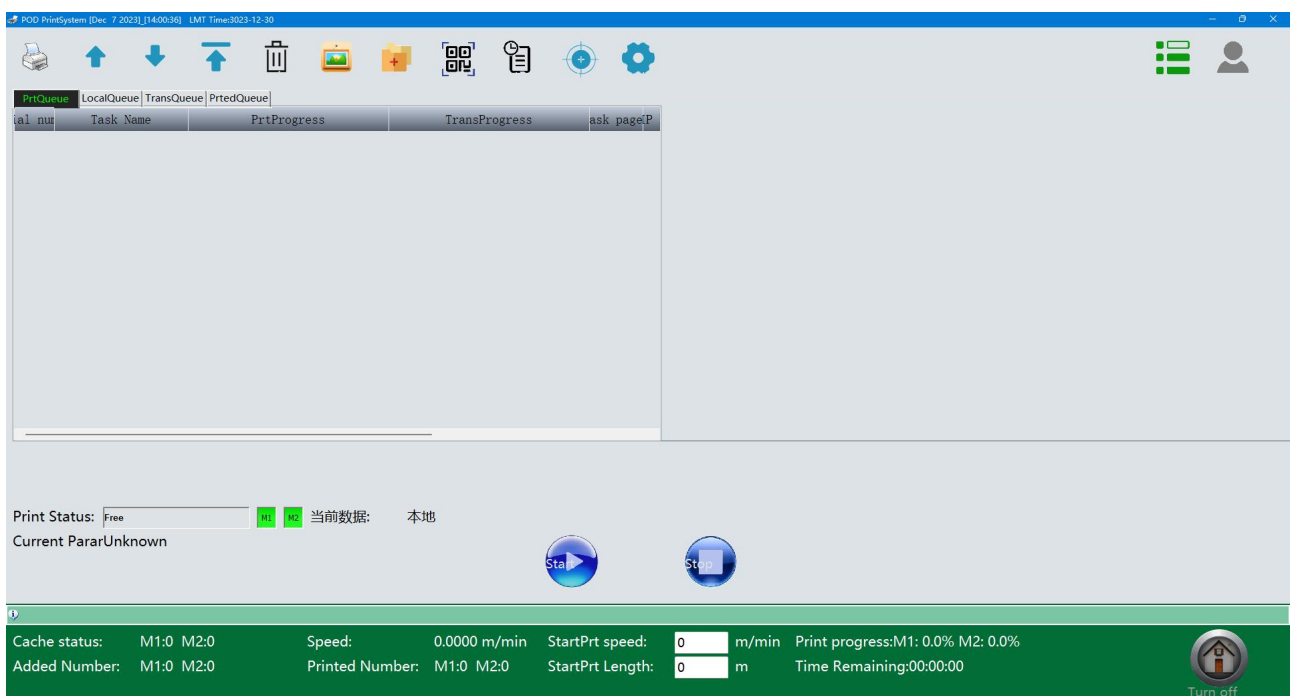
After the unzip, installation of the software is complete. Find the driver file in it. Software autostart, the pop-up window is as follows:



Tick Private and Public Networks, click Access, start the software, the pop-up window is as follows:



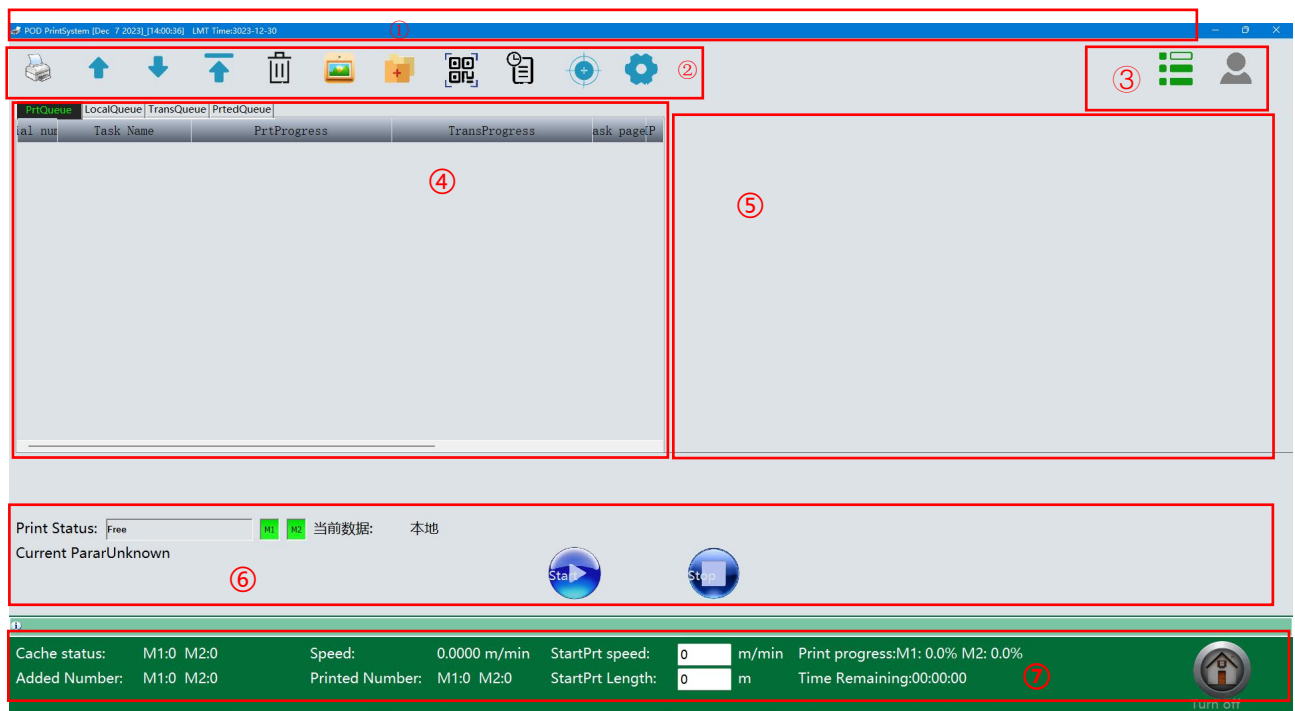
The driver turns on auto-online. Online (sussess), enter the interface of driver, the picture is as follows:



2 The setup and introduction of driver function

There are some details,the picture is as follows;

The interface of the software is divided into seven parts①Title column、②Function Shortcut key、③Menu column、④Printing list、⑤Preview image、⑥Printing control⑦Printing information.



2.1 Title column and shortcut function key

①Title column: Name of driver、 driver version、 driver expiration.

②Function shortcut key area (from left to right) :

Add printing: Adding tasks to the print queue that are already in the print queue.

Up: Tasks in the print queue move up.

Down: Tasks in the print queue move down.

Sticky on Top: Tasks in the print queue move to the top.

Delete: Delete the task.

Picture option: External prt file to the printing queue.

External task: Adding variable files to the printing queue

QR code: No need to use.

Printing record: Check printing record

Position of printhead:Change printhead calibration

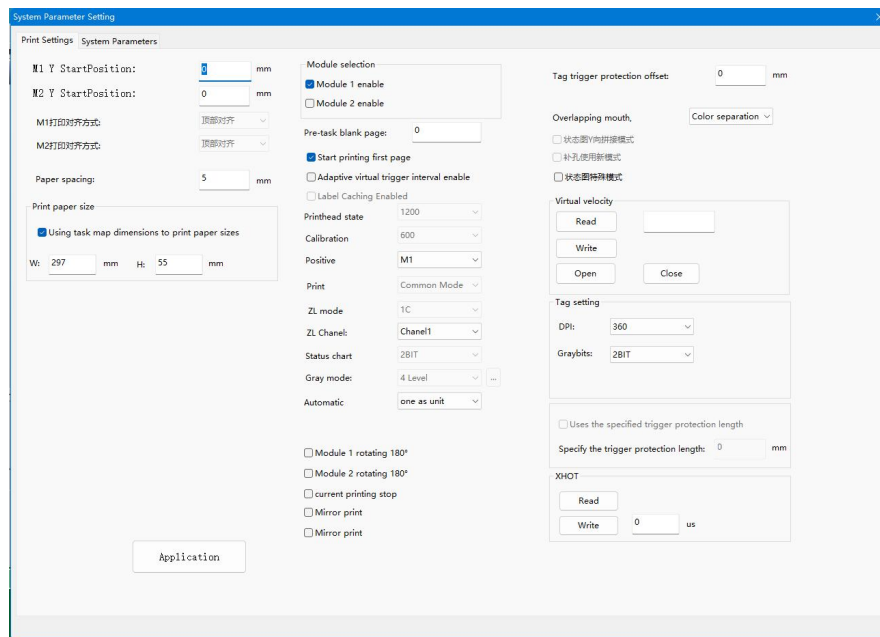
Setting :Setting driver parameters and printing parameters

Menu column includes version information、 setting、 test、 position of printhead、 printhead voltage、 edit template、 external data、 shutdown and log in and other functional icons,the details are as follows:

2.2 Setup

The setting page is shown as the picture:

Printing setting interface:



Module 1Y start printing position: Setting the Y-direction white edge;

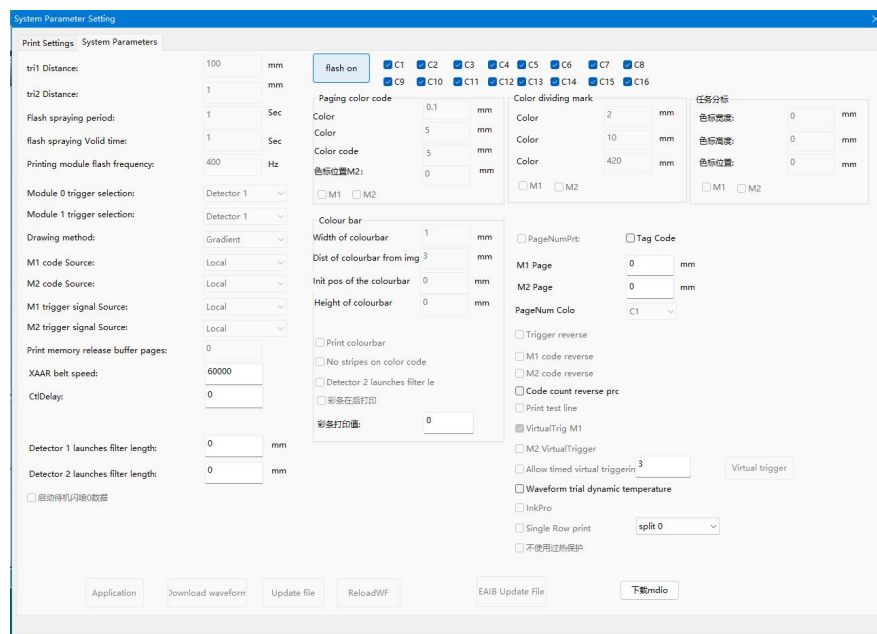
Paper spacing: Spacing between two tasks;

Size of printing paper: Print at original size or fixed length and width;

Application: Keep changes;

Unspecified options are options that do not need to be changed or are not commonly used.

System parameters interface:



Distance between detector 1 and module: Setting the X-direction white border for the first task:

Nozzle flash spray period: Time between nozzle flashes;

Nozzle flash spray time: Nozzle flash time;

Nozzle flash spray time: Nozzle flash time;

Ink pumping method: Feathuring method;

Pagination color signal: Add a secondary color signal sensor before the picture;

Start flash spraying: The nozzles are flashing;

Colored stripes: Print colored stripes;

M1 code count reverse: Change when the speed is abnormal;

M1 mainboard of virtual trigger signal: Toggle sensor triggering or virtual triggering;

Download wave form: Download new wave form;

Update file: Update board file;

ReloadWF: Applying waveforms after downloading waveforms;

Application: Keep changes;

Unspecified options are options that do not need to be changed or are not commonly used.

2.3 Printhead position

The screenshot shows the 'PHpos' software window. At the top, there are tabs for 'M1:' and 'Current'. Below the tabs, there are several input fields: 'Gradient particle: X: 2, Y: 1, Gradient ratio: 1', 'Module offset value X: 0 mm, Y: 0', 'Mask: A 0, B 0, C 0', 'Coefficient', 'Module code factor: 1', 'Data channel: Channel 1', 'InkRate: 0', 'Enable Modules', and 'Enable HL'. There are also buttons for 'Loading parameters', 'Save as', and 'Patch hole Editing'. Below these fields is a table with 8 columns: PHNum, JetInnerDis, M_InternalPos, M_Offset, FeatherRate, overJets, JetYOffset, and Gradient ratio. The table has 4 rows of data. At the bottom, there is a row of buttons: 'e election', 'Calibrated', '1000', 'OverladJet', 'ColourRegister', 'JetCondition', 'ClrCalibration', 'Nozzel chart', 'JetDiagram', 'Application', and 'OK'.

PHNum	JetInnerDis	M_InternalPos	M_Offset	FeatherRate	overJets	JetYOffset	Gradient ratio
1	0.0	0.0	0.0	0%	119	0	0.00
				100%			
2	0.0	-1.5	0.0	100%	120	0	0.00
				100%			
3	0.0	2.0	0.0	100%	119	0	0.00
				100%			
4	0.0	-2.5	0.0	100%	0	0	0.00
				0%			

C1:K: Change different color.

Gradient granule: Spreading of ink dots in the X and Y directions at the nozzle splicing.

Gradient propotion: Change different feathuring method.

Module offset: The color is offset in the Y or X direction as a whole.

Data channel: The output channel corresponding to the color.

Starting module: You can choose whether or not to print that color.

Nozzle number: 1 is the first channel of the color, which is only inked when checked

Internal distance of nozzle: Adjustment when there is a gap between adjacent channels during test strip printing

Position within the group: Color set adjustment between different channels of the same color

Intergroup offset: Calibrates left and right color set between different colors

Pumping point ratio: Pumping point ratio: The amount of ink feathered at the splice, 0% is no feathering, the maximum is 180

Number of overlapping nozzles: The number of nozzles that overlap between the two channels of the splice

Pumping point compensation: Calibrate the upper and lower color set between different colors

Pumping point ratio: Change the feathering method for individual channels 0 for hard splicing.

1:gradient feathering 3:triangular splicing (for adjusting positional calibration within the group)

Number of calibration copies: Number of copies of the calibration chart to be printed

Calibration of overlapping nozzles: Print calibration charts of overlap nozzles.

Color set within modules: Print calibration charts within the modules.

Nozzle status: Print a graph of the status of the nozzles, which can be calibrated vertically.

Color set calibration: Print calibration plots of intergroup offsets and pumping ratios

Application: Keep the changed parameters.

OK: Exit the interface

2.4 Calibration procedures

Click on Login in the upper right corner and type ry123 (letters should be lower case)

Click Printhead position, change calibration parameters according to the different calibration charts.

When installing, replacing, or bumping the printhead on a new machine, perform the calibration in order from top to bottom to complete the calibration.

①Check nozzles

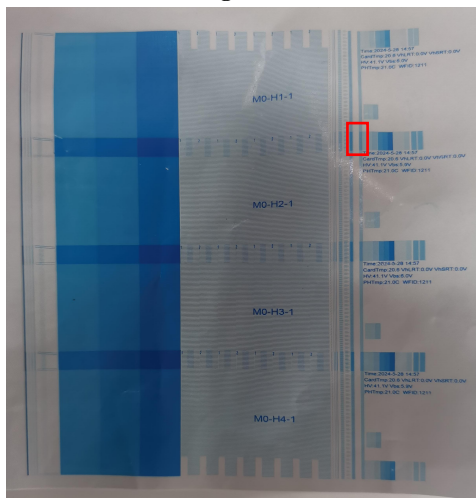
Click Nozzle status, after the data transfer is completed and then press and hold the touch screen to Start printing the test strip.

The screenshot shows the PHpos software interface. At the top, there are tabs for M1, C1:K, C2:C, C3:M, and C4:Y. Below these are various input fields for Gradient particle (X: 2, Y: 1), Gradient ratio (1), Module offset value (X: 0, Y: 0), Mask (A: 0, B: 0, C: 0), InkRate (0), and Coefficient (1). There are also checkboxes for Enable Modules and Enable HL. A table with 8 columns (PHNum, JetInnerDis, M_InternalPos, M_Offset, FeatherRate, overJets, JetYOffset, Gradient ratio) displays data for 4 rows. The bottom of the interface has a status bar with a 'e election' checkbox, a 'Calibrated' status, and several buttons: OverladJet, ColourRegister, JetCondition (highlighted with a red box), ClrCalibration, Nozzel chart, JetDiagram, Application, and OK.

PHNum	JetInnerDis	M_InternalPos	M_Offset	FeatherRate	overJets	JetYOffset	Gradient ratio
1	0.0	0.0	0.0	0%	119	0	0.00
				100%			
2	0.0	-1.5	0.0	100%	120	0	0.00
				100%			
3	0.0	2.0	0.0	100%	119	0	0.00
				100%			
4	0.0	-2.5	0.0	100%	0	0	0.00
				0%			

②Vertical calibration

After confirming that the nozzle status is OK, observe the nozzle vertical calibration chart on the test strip by a magnifying glass and adjust the nozzle vertical according to the calibration chart.



通过状态图里面这个位置，看右边的线是偏上还是偏下，去调喷头位置

③Calibration of overlapped holes

Click Calibration of overlapped holes inside Nozzle position. Print the corresponding calibration chart and change the specific values within the number of overlapping nozzles.

PHpos

M1:

C1:K C2:C C3:M C4:Y

Gradient particle: X: Y: Gradient ratio:

Module offset value X: mm Y: Mask: A B C

← → ↑ ↓

Coefficient: Module code factor: InkRate:

Current: Data channel:

☒ Enable Modules ☐ Enable HL

Loading parameters

PHNum	JetInnerDis	M_InternalPos	M_Offset	FeatherRate	overJets	JetYOffset	Gradient ratio
1 <input checked="" type="checkbox"/>	0.0	0.0	0.0	0%	119	0	0.00
				100%			
2 <input checked="" type="checkbox"/>	0.0	-1.5	0.0	100%	120	0	0.00
				100%			
3 <input checked="" type="checkbox"/>	0.0	2.0	0.0	100%	119	0	0.00
				100%			
4 <input checked="" type="checkbox"/>	0.0	-2.5	0.0	100%	0	0	0.00
				0%			

Selection ☐

Calibrated 1000

The calibration chart is as follows:



First, find the overlapping lines in frame ①, write down the corresponding values, and then add the corresponding values in frame ②, which is the number of overlapping holes of the nozzle. (For example line 20 overlaps with line +100, the overlap hole is $20+100=120$)

④Color set calibration within module

Click **Color set** within calibration, print **Color set within module** calibration chart, Change the **position values** in the group according to the calibration chart.

PHpos

M1: C1:K C2:C C3:M C4:Y

Gradient particle: X: 2 Y: 1 Gradient ratio: 1 Coefficient: 1 Module code factor: 1 Data channel: Channel 1

Module offset value X: 0 mm Y: 0 Mask: A 0 B 0 C 0 InkRate: 0

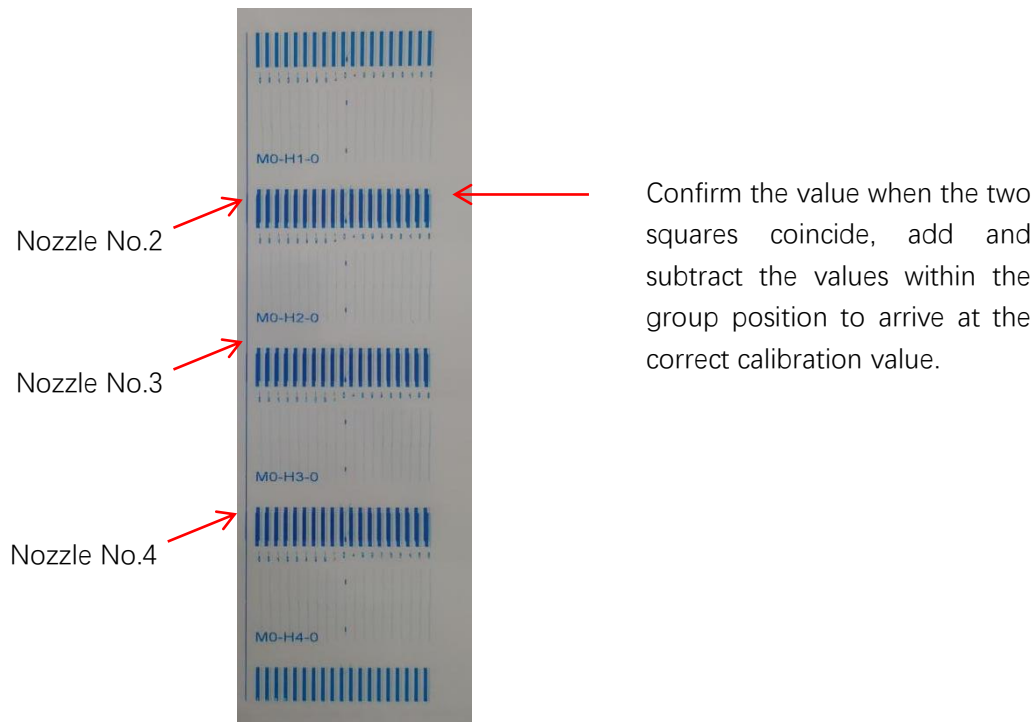
Enable Modules Enable HL

Loading parameters Save as Patch hole Editing

PHNum	JetInnerDis	M InternalPos	M_Offset	FeatherRate	overJets	JetYOffset	Gradient ratio
1	0.0	0.0	0.0	0% 100%	119	0	0.00
2	0.0	-1.5	0.0	100% 100%	120	0	0.00
3	0.0	2.0	0.0	100% 100%	119	0	0.00
4	0.0	-2.5	0.0	100% 0%	0	0	0.00

e election ☐ Calibrated 1000 OverladJet ColourRegister JetCondition ClrCalibration Nozzel chart JetDiagram Application OK

The calibration chart is as follows:



⑤Color set calibration

Click Color set calibration, print Color set calibration. Change the values of intergroup offset and pumping point compensation according to the calibration chart.

PHpos

M1: C1:K C2:C C3:M C4:Y

Gradient particle: X: 2 Y: 1 Gradient ratio: 1 Coefficient: 1

Module offset value X: 0 mm Y: 0 Mask: A 0 B 0 C 0 InkRate: 0 Data channel: Channel 1

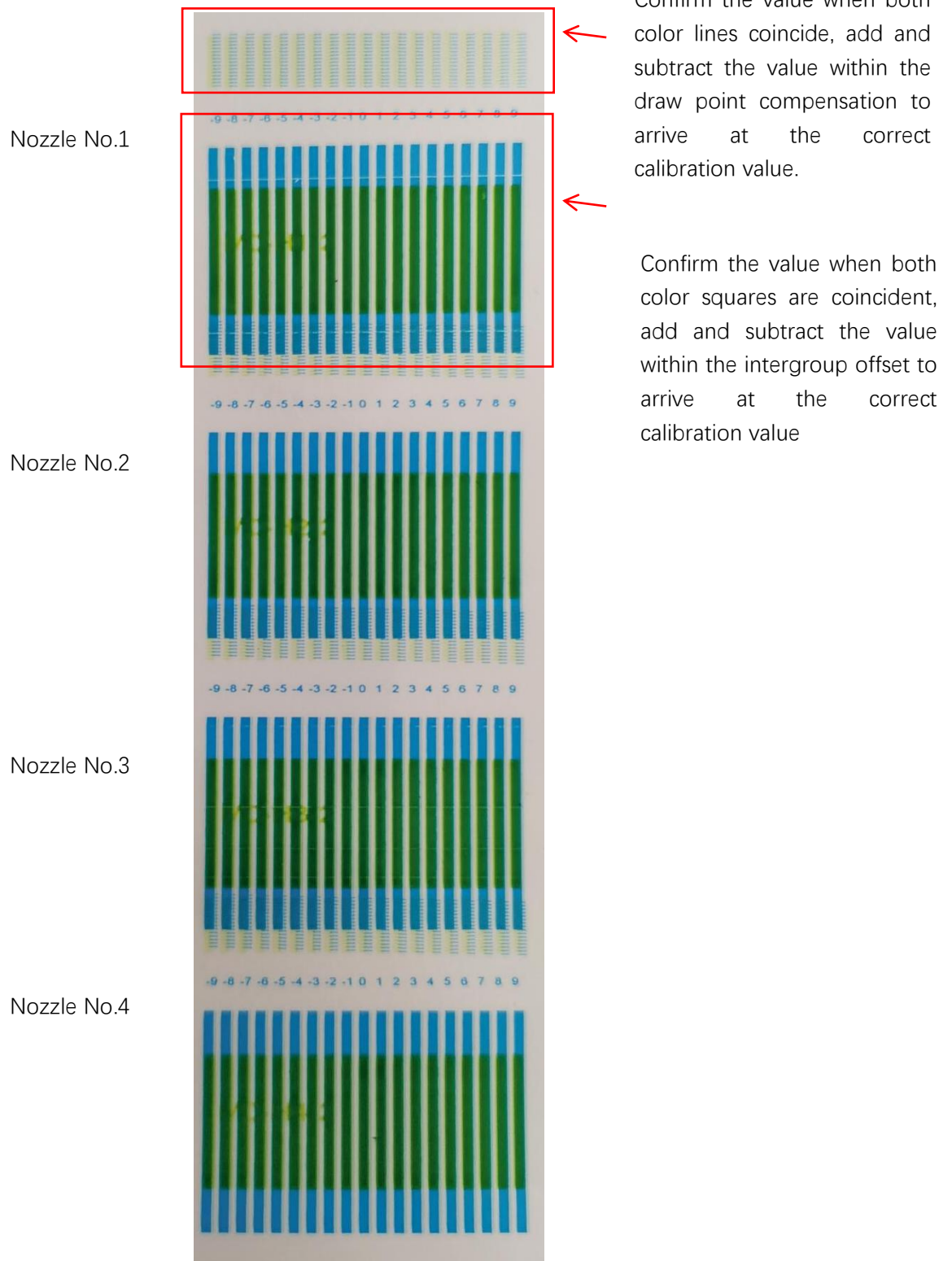
Enable Modules Enable HL

Loading parameters Save as Patch hole Editing

PHNum	JetInnerDis	M_InternalPos	M_Offset	FeatherRate	overJets	JetYOffset	Gradient ratio
1	0.0	0.0	0.0	0% 100%	119	0	0.00
2	0.0	-1.5	0.0	100% 100%	120	0	0.00
3	0.0	2.0	0.0	100% 100%	119	0	0.00
4	0.0	-2.5	0.0	100% 0%	0	0	0.00

e election ☐ Calibrated 1000 OverladJet ColourRegister JetCondition **ClrCalibration** Nozzel chart JetDiagram Application OK

The calibration chart and debugging method are as follows:



⑥Change the color calibration

Click on the option in the red frame below to change the color for appeal calibration

PHpos

M1: C1:K C2:C C3:M C4:Y

Gradient partide: X: 2 Y: 1 Gradient ratio: 1

Module offset value X: 0 mm Y: 0 Mask: A 0 B 0 C 0

Coefficient: 1 Module code factor: 1 Data channel: Channel 1

InkRate: 0

☒ Enable Modules ☐ Enable HL

Loading parameters Save as Patch hole Editing

PHNum	JetInnerDis	M_InternalPos	M_Offset	FeatherRate	overJets	JetYOffset	Gradient ratio
1 <input checked="" type="checkbox"/>	0.0	0.0	0.0	0%	119	0	0.00
				100%			
2 <input checked="" type="checkbox"/>	0.0	-1.5	0.0	100%	120	0	0.00
				100%			
3 <input checked="" type="checkbox"/>	0.0	2.0	0.0	100%	119	0	0.00
				100%			
4 <input checked="" type="checkbox"/>	0.0	-2.5	0.0	100%	0	0	0.00
				0%			

e election ☐

Calibrated 1000 OverladJet ColourRegister JetCondition ClrCalibration Nozzel chart JetDiagram Application OK

⑥Keep calibration data

Click Application to keep calibration data, click Keep.

PHpos

M1: C1:K C2:C C3:M C4:Y

Gradient partide: X: 2 Y: 1 Gradient ratio: 1

Module offset value X: 0 mm Y: 0 Mask: A 0 B 0 C 0

Coefficient: 1 Module code factor: 1 Data channel: Channel 1

InkRate: 0

☒ Enable Modules ☐ Enable HL

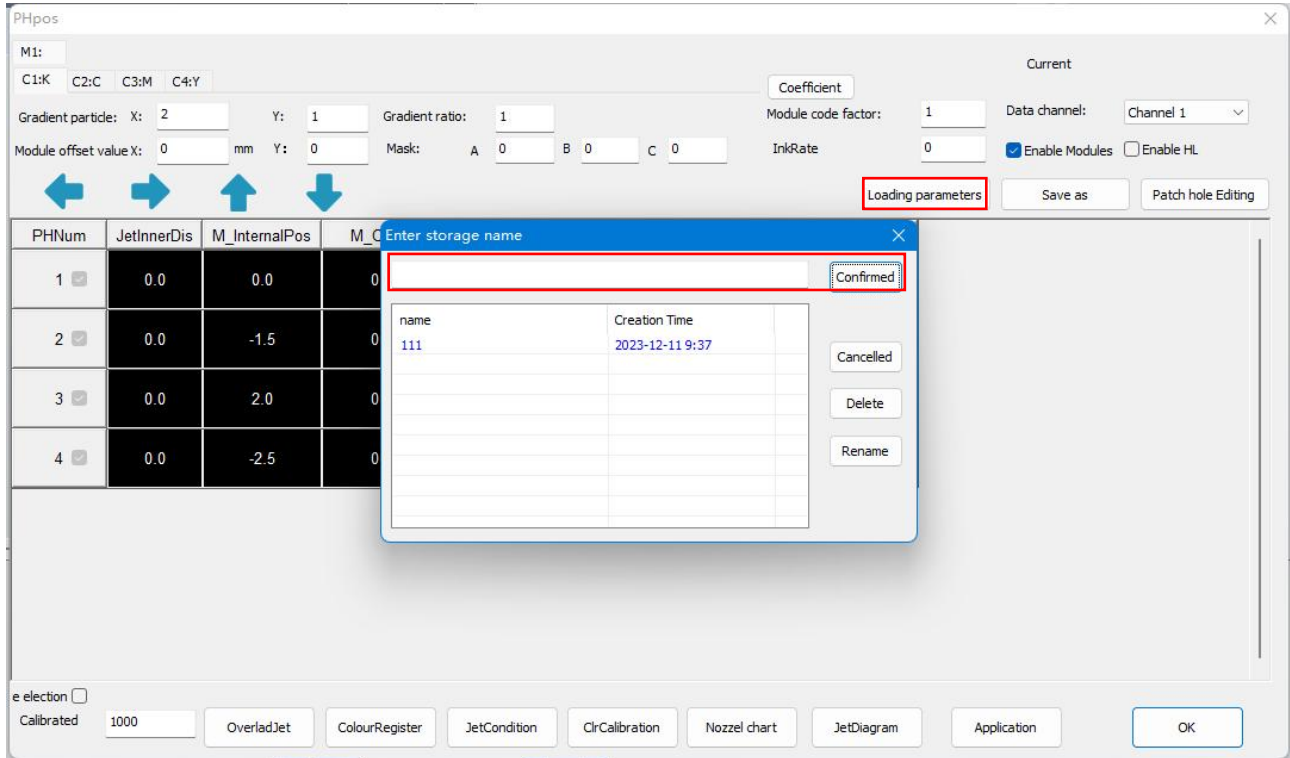
Loading parameters Save as Patch hole Editing

PHNum	JetInnerDis	M_InternalPos	M_Offset	FeatherRate	overJets	JetYOffset	Gradient ratio
1 <input checked="" type="checkbox"/>	0.0	0.0	0.0	0%	119	0	0.00
				100%			
2 <input checked="" type="checkbox"/>	0.0	-1.5	0.0	100%	120	0	0.00
				100%			
3 <input checked="" type="checkbox"/>	0.0	2.0	0.0	100%	119	0	0.00
				100%			
4 <input checked="" type="checkbox"/>	0.0	-2.5	0.0	100%	0	0	0.00
				0%			

e election ☐

Calibrated 1000 OverladJet ColourRegister JetCondition ClrCalibration Nozzel chart JetDiagram Application OK

Edit the name of the calibration file, click OK to keep it, and then click Load Parameters to read the corresponding file.



The calibration process is now complete, just close the calibration window.

2.7 Shutdown

Click Shutdown , the software will be closed automatically after OK.

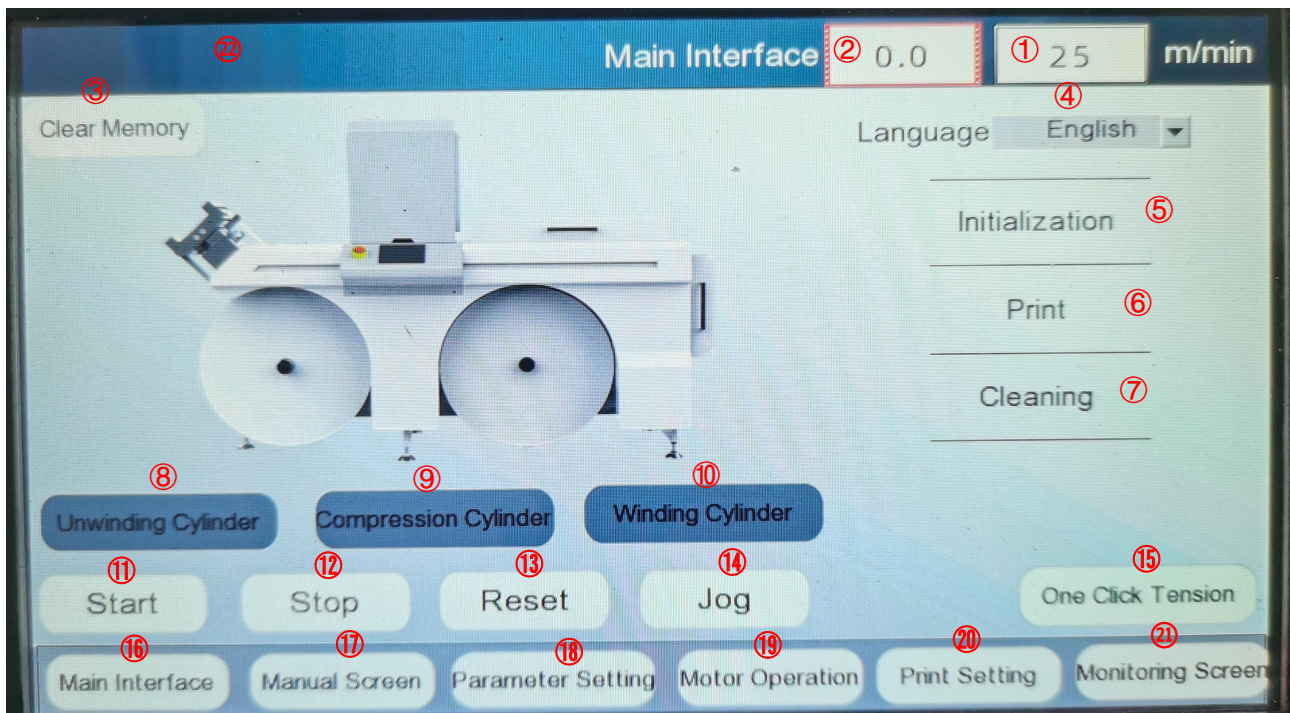
2.8 Introduction of touchscreen

①.Splashscreen



Click to enter the touch screen program

②.Main screen

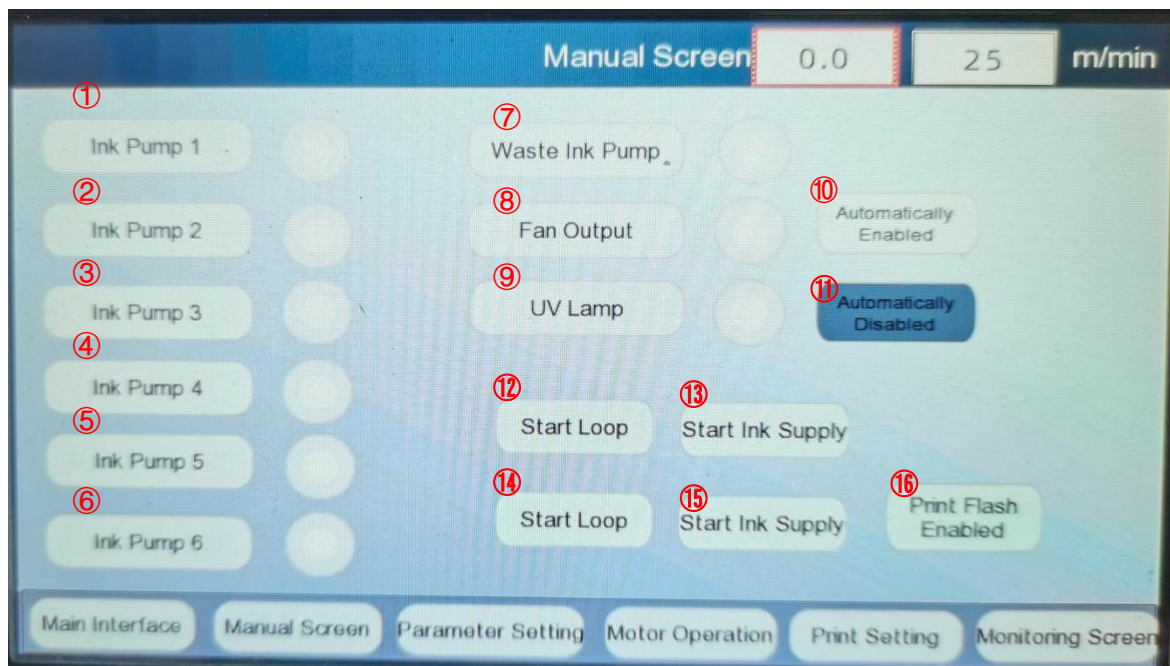


①: Setting the paper travel speed

②: Practical paper-feeding speed

- ③: Restore to the turned on state
- ④: Change language
- ⑤: Initial action
- ⑥: Cart reaches printing position
- ⑦: Not in use currently
- ⑧: Unwinding the air shaft open/close
- ⑨: Pressure roller clamping/unclamping
- ⑩: Unwinding air shaft open/close
- ⑪: Start paper-feeding
- ⑫: Stop paper-feeding
- ⑬: Eliminate the alarm
- ⑭: Point paper-feeding
- ⑮: Paper tension
- ⑯: Enter the main interface
- ⑰: Enter manual interface
- ⑱: Enter the parameter setting screen
- ⑲: Enter the motor operation screen
- ⑳: Enter the print setup screen
- ㉑: Enter the monitoring screen
- ㉒: Alarm column

③.Manual interface



- ①: Ink pump 1 Startup\Stop
- ②: Ink pump 2 Startup\Stop
- ③: Ink pump 3 Startup\Stop
- ④: Ink pump 4 Startup\Stop
- ⑤: Ink pump 5 Startup\Stop
- ⑥: Ink pump 6 Startup\Stop
- ⑦: Waste ink pump Startup\Stop

- ⑧: Suction Startup\Stop
- ⑨: UV lamp On\Off
- ⑩: Air suction and paper-feeding Startup\Stop automatically
- ⑪: UV lamp paper-feeding Startup\Stop automatically
- ⑫: Not in use
- ⑬: Not in use
- ⑭: Not in use
- ⑮: Not in use
- ⑯: Flash spray before printing Startup\Stop

④. Picture of parameter setup

The first page:

Parameter Setting 0.0 25 m/min

	Unwinding Axis	Winding Axis		Unwinding Axis	Winding Axis
① Tension Setting(kg)	5.0	5.0	⑦ Minimum Diameter(mm)	50.0	82.0
② Tension Coefficient	1.0	1.0	⑧ Maximum Diameter(mm)	800.0	800.0
③ Speed Limit(r/min)	200	150	⑨ Diameter Presetting(mm)	200.0	83.0
④ Tension Display(kg)	0.0	5.0	⑩ Actual Diameter(mm)	200.0	83.0
⑤ Motor Torque(N·m)	-0.1	0.1	⑪ Initial Diameter Setting		
⑥ Paperless Alarm(mm)	80.0		⑫ Initial Diameter Setting		
			⑬ PID Output	0.0	0.0

Unwinding Axis PID Setting

PID Ratio	2.0	PID Differential	0.0
PID Integral	1.0	PID Limiting	500.0

Navigation buttons: Main Interface, Manual Screen, Parameter Setting, Motor Operation, Print Setting, Monitoring Screen

The second page:

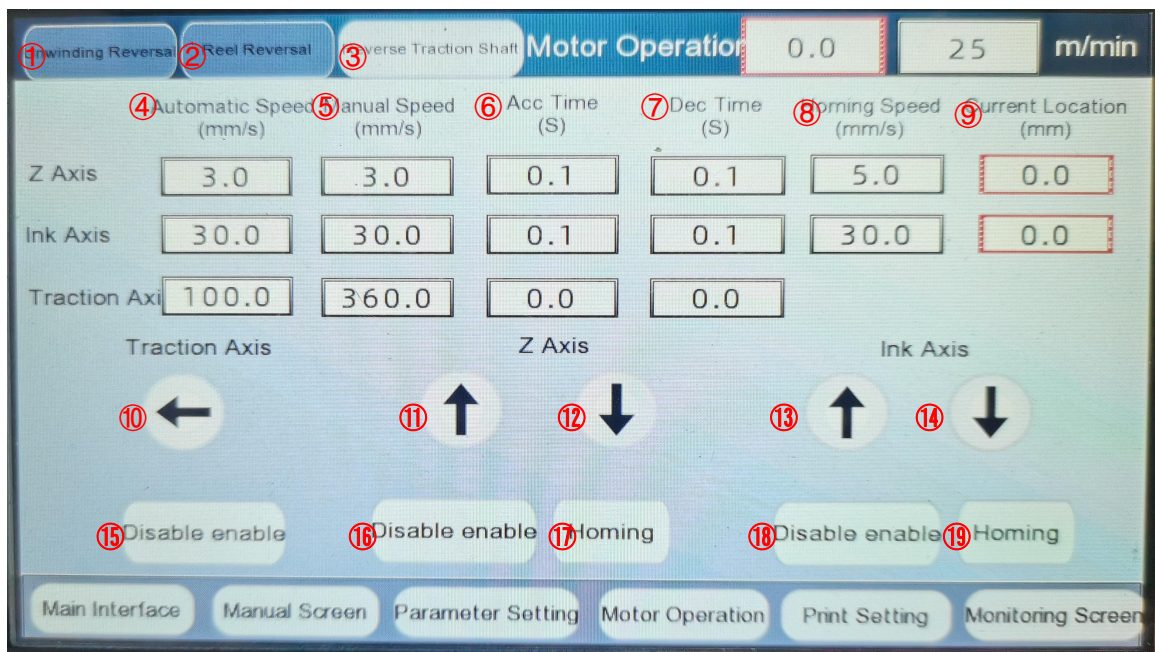
Parameter Setting 0.0 25 m/min

⑯ Paperless Sensor Filtering 0.28

Navigation buttons: Main Interface, Manual Screen, Parameter Setting, Motor Operation, Print Setting, Monitoring Screen

- ①: Setting the unwind and rewind shaft tension
- ②: Setting the coefficient for unwind and rewind shaft tension
- ③: Setting the largest rotary speed unwind and rewind shaft tension
- ④: Setting the practical unwind and rewind shaft tension
- ⑤: Setting the practical torque for unwind and rewind shaft motor
- ⑥: Setting the alarm rolling diameter for unwind and rewind shaft
- ⑦: Setting the smallest rolling diameter for unwind and rewind shaft
- ⑧: Setting the largest rolling diameter for unwind and rewind shaft
- ⑨: Setting the predetermined rolling diameter for unwind and rewind shaft
- ⑩: Setting the practical rolling diameter for unwind and rewind shaft
- ⑪: The given initial rolling diameter for unwind shaft
- ⑫: The given initial rolling diameter for rewind shaft
- ⑬: Display the practical PID output for unwind and rewind shaft
- ⑭: Not in use
- ⑮: Skip to the second page for parameter setup
- ⑯: Delayed paper-break error after paper-break sensor trigger

⑤. Picture for motor setup

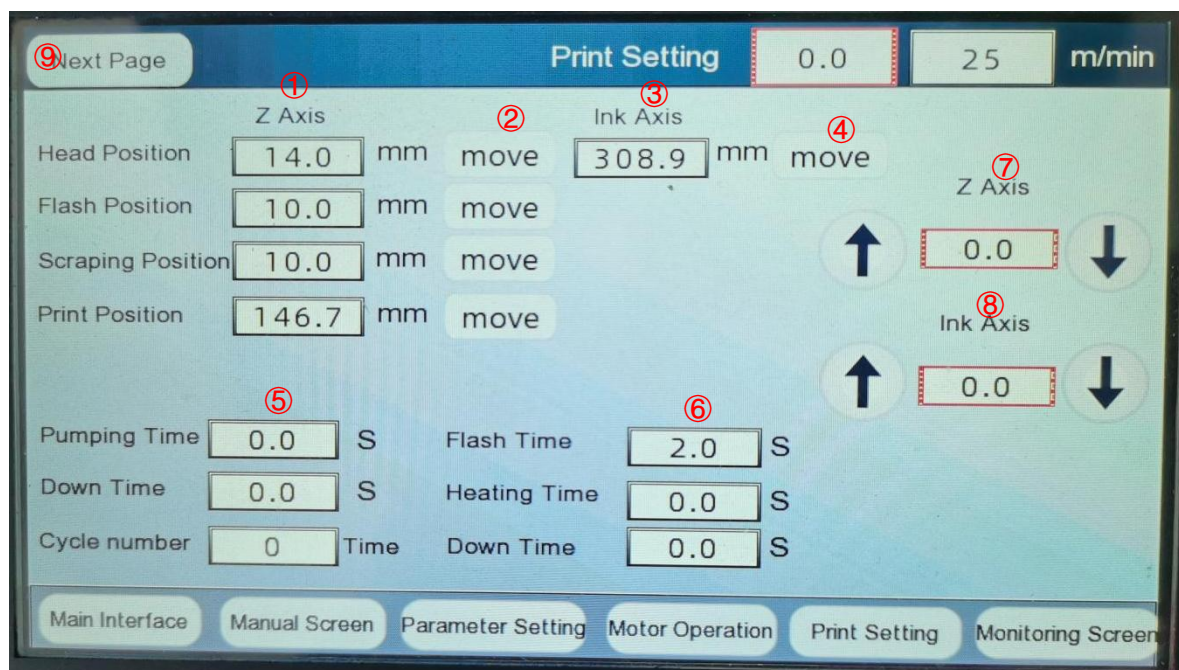


- ①: Setting the unwind shaft rotate forwards and backwards
- ②: Setting the rewind shaft rotate forwards and backwards
- ③: Setting the traction shaft rotate forwards and backwards
- ④: Setting the automatic speed for Z axis/ink station axis/traction shaft
- ⑤: Setting the manual speed for Z axis/ink station axis/traction shaft
- ⑥: Setting the acceleration time for Z axis/ink station axis/traction shaft
- ⑦: Setting the deceleration time for Z axis/ink station axis/traction shaft
- ⑧: Setting the return speed for Z axis/ink station axis/traction shaft
- ⑨: Setting the current position for Z axis/ink station axis/traction shaft
- ⑩: Positive rotation of the traction shaft

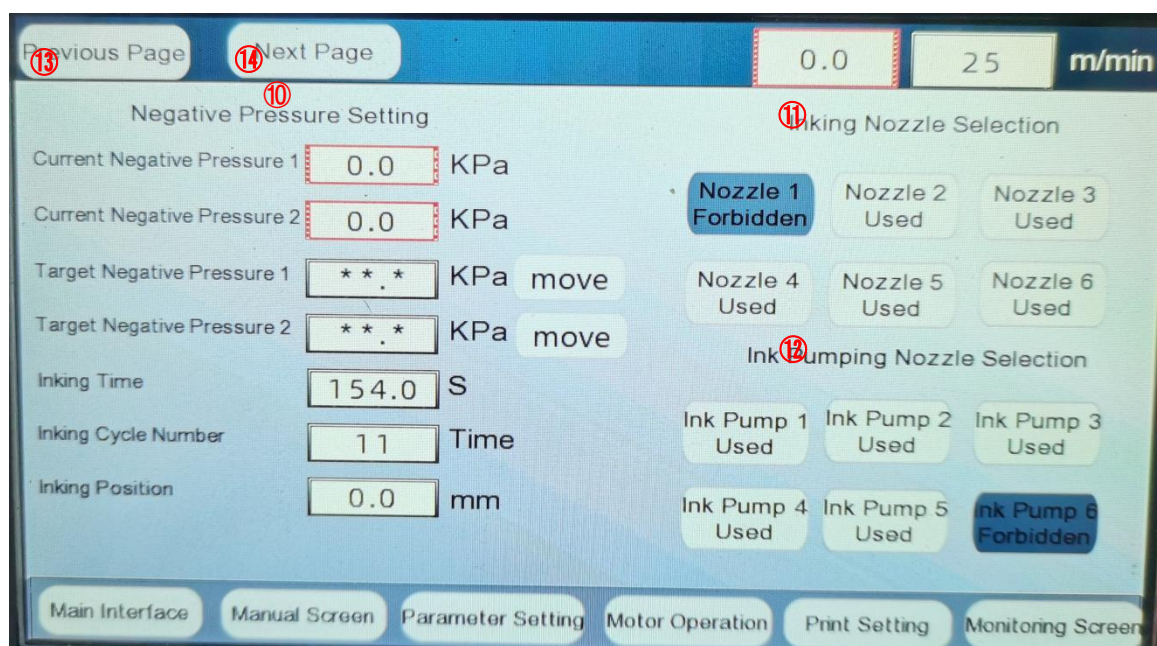
- ⑪: Above the Z shaft
- ⑫: Below the Z shaft
- ⑬: Ink station running inside
- ⑭: Ink station running outside
- ⑮: Traction shaft switch-off
- ⑯: Z shaft switch-off
- ⑰: Z shaft return to the original site(press and hold)
- ⑱: Ink station shaft switch-off
- ⑲: Ink station shaft return to the original site(press and hold)

⑥. Picture for printing setup

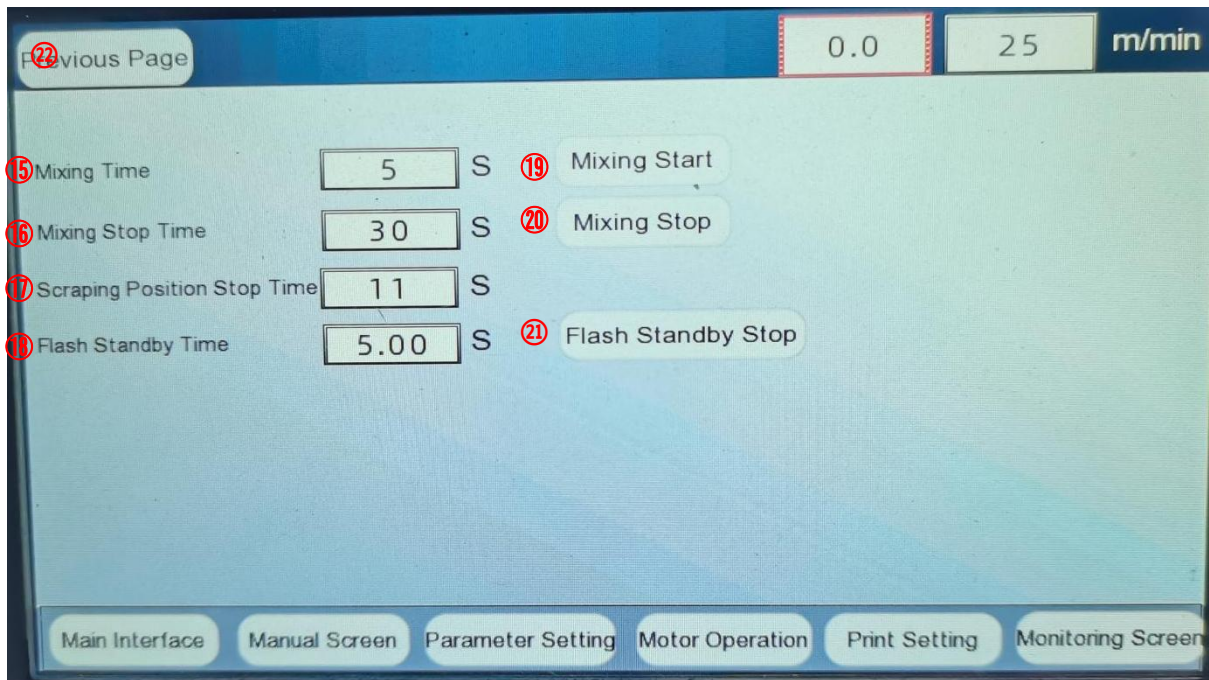
The first page:



The second page:

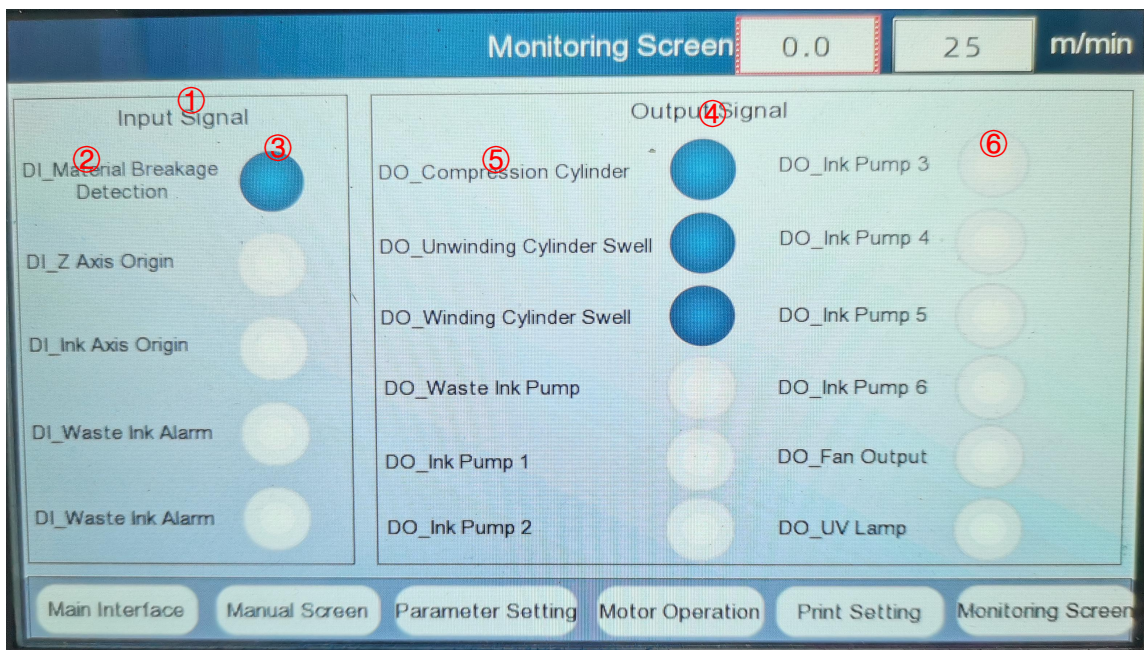


The third page:



- ①: Setting Z shaft head-sealing height\flash spray height\ink scraping height\printing height
- ②: Move Z-axis to the corresponding height
- ③: Setting the position of the head-sealing shaft of the ink station
- ④: Move ink station shaft to the corresponding height
- ⑤: Not in use
- ⑥: Not in use
- ⑦: Practical position display and control for Z-axis
- ⑧: Practical position display and control for ink station shaft
- ⑨: Skip to the second page of printing setup interface
- ⑩: Not in use
- ⑪: Not in use
- ⑫: Not in use
- ⑬: Skip to the first page of printing setup interface
- ⑭: Skip to the third page of printing setup interface
- ⑮: Setting the ink mixing time
- ⑯: Setting the time interval between ink mixing
- ⑰: Not in use
- ⑱: Interval of flash spray in standby
- ⑲: Ink Mixing Switch-on manually
- ⑳: Ink Mixing Switch-off manually
- ㉑: Turn off standby flash spray
- ㉒: Skip to the second page of printing setup interface

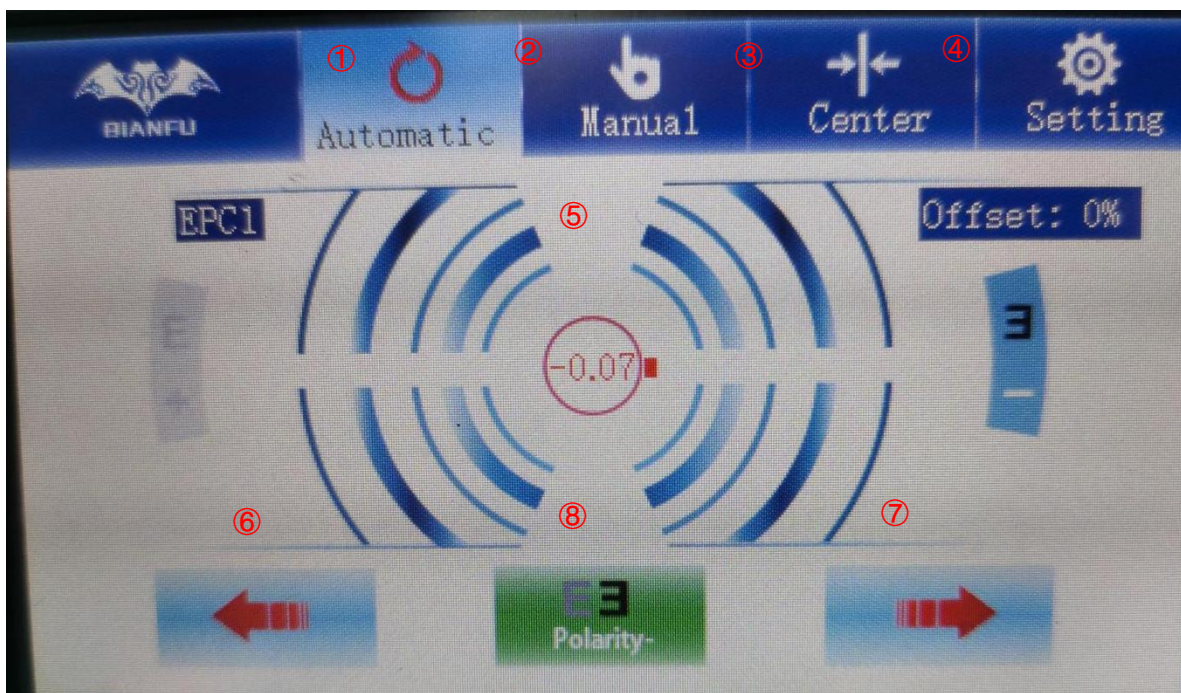
⑦. Monitoring picture



- ①: Input signal monitoring
- ②: Practical input signal
- ③: Signal indicator
- ④: Output signal monitoring
- ⑤: Practical input signal
- ⑥: Signal indicator

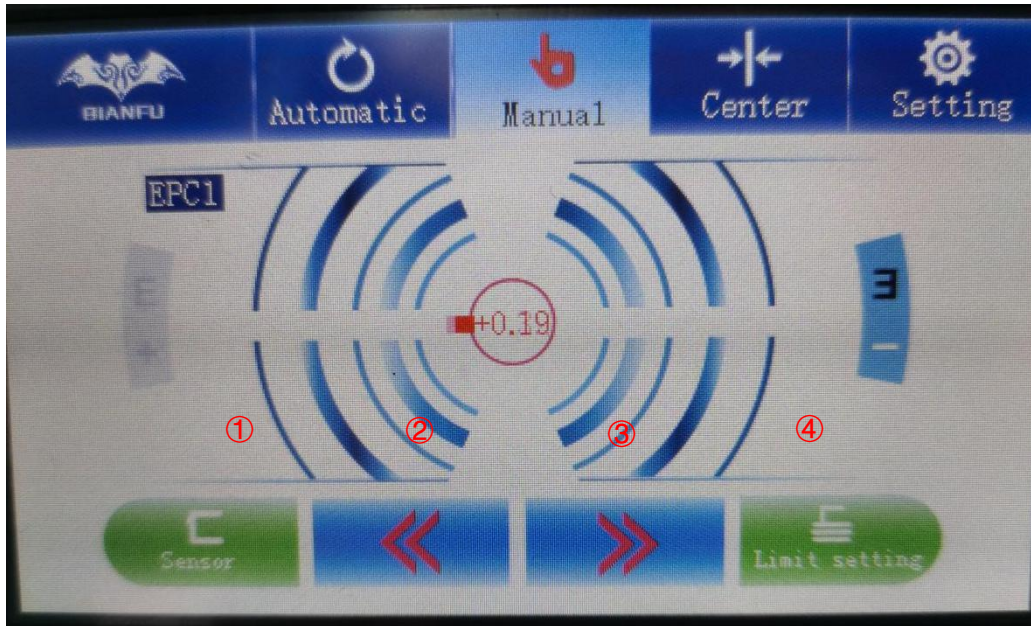
2.9 Introduction of deskewing device

①. Automatic interface



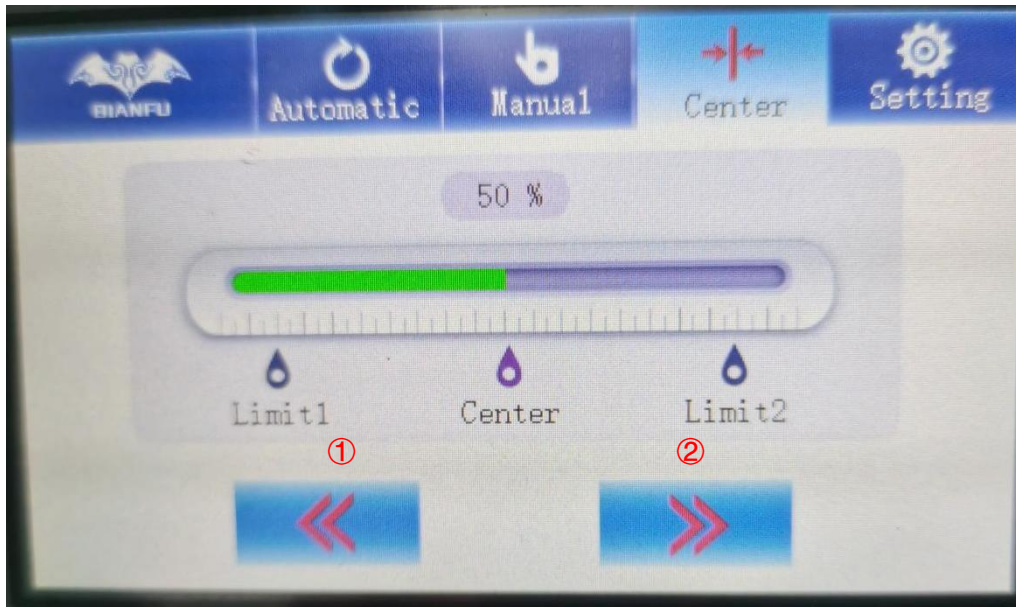
- ①: Automatic mode
- ②: Manual mode
- ③: Deskewing device return to the center
- ④: Setup interface
- ⑤: Practical deviation for paper
- ⑥: Deviation value decrease
- ⑦: Deviation value increase
- ⑧: Replace sensor polarity

②.Manual interface



- ①: Setting the type of the sensor
- ②: Left deviation of the deskewing device
- ③: Right deviation of the deskewing device
- ④: Setting the deflection limit

③.Center interface



- ①: Left deviation from the center
- ②: Right deviation from the center

④.Setup interface



- ①: Speed during manual operation
- ②: Speed during automatic operation
- ③: Speed gain during automatic operation
- ④: Blind spot of sensor measurement
- ⑤: Center deviation value of sensor
- ⑥: Settlement adjustment
- ⑦: Setting at first power-on
- ⑧: Change each system settlements
- ⑨: Specific information for deskewing device

5.FlexiPRINT Software installation

5.1 FlexiPRINT 19 Hardware introduction

1.Front、 back、 inside are as follows:

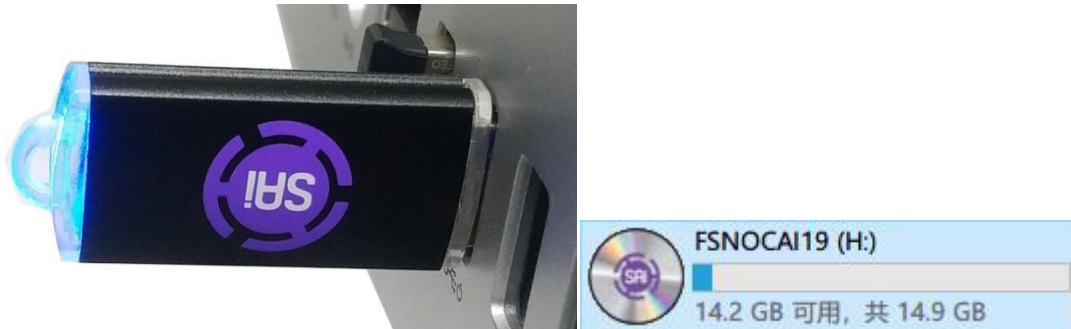


2. Inside is the USB of software installation.

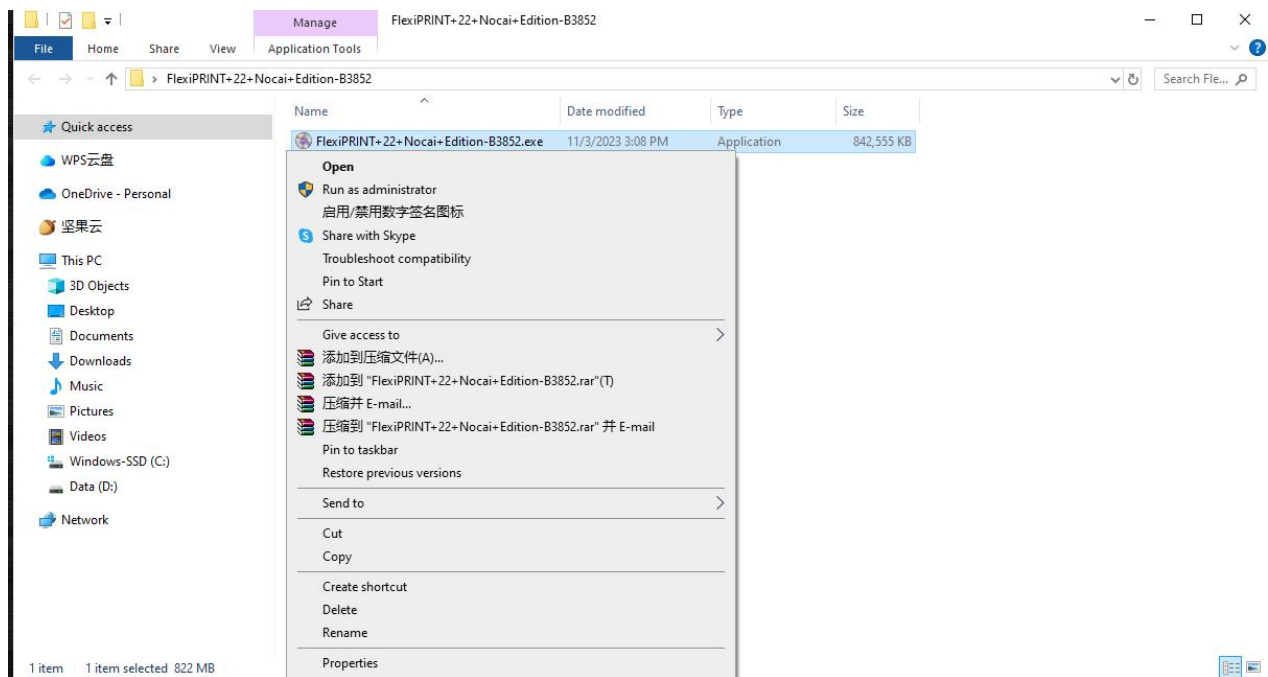


5.2 FlexiPRINT 19 Software installation

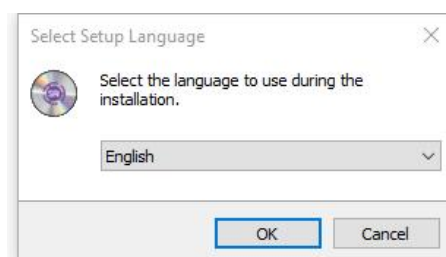
1. Open the software box, put out the USB and plug it into the USB port of your computer. (USB: blue light)
Open the computer, double-click USB file of FSNOCAL19, the picture is shown as follows:



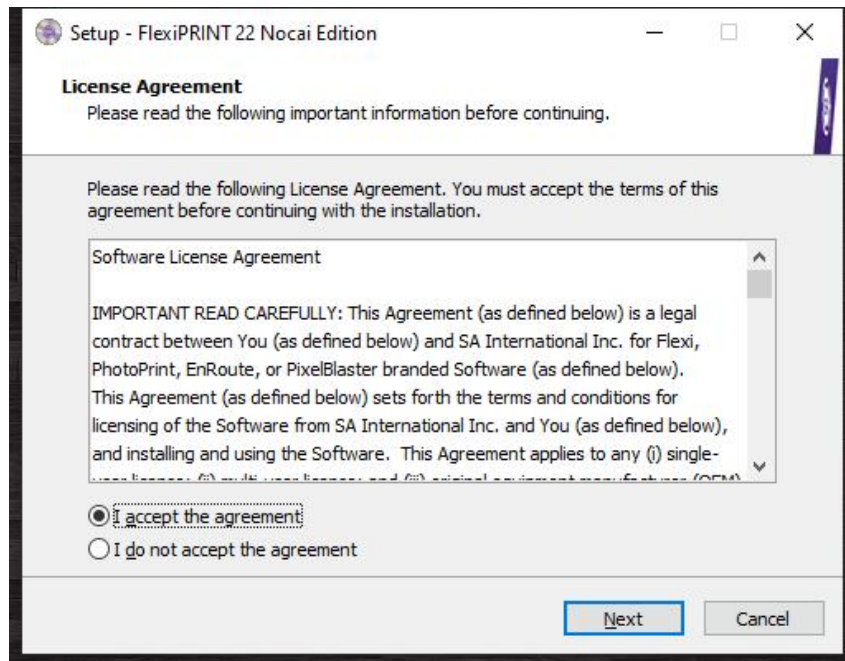
Find the procedure Autorun.exe, click right button, operate as administrator, the picture is shown as follows:



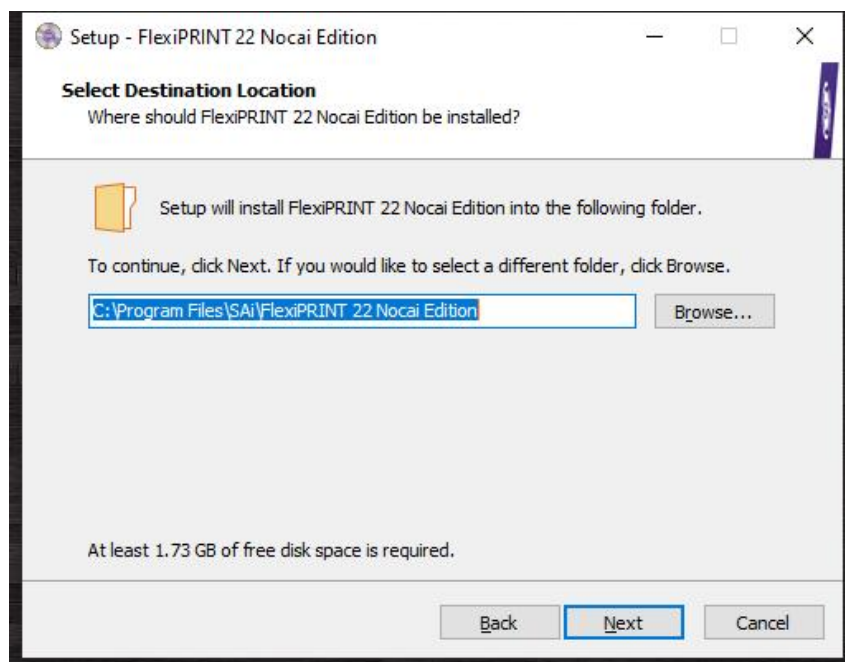
2. Pop-up dialog box, select the language required to install the software (Chinese is defaulted), then click OK:



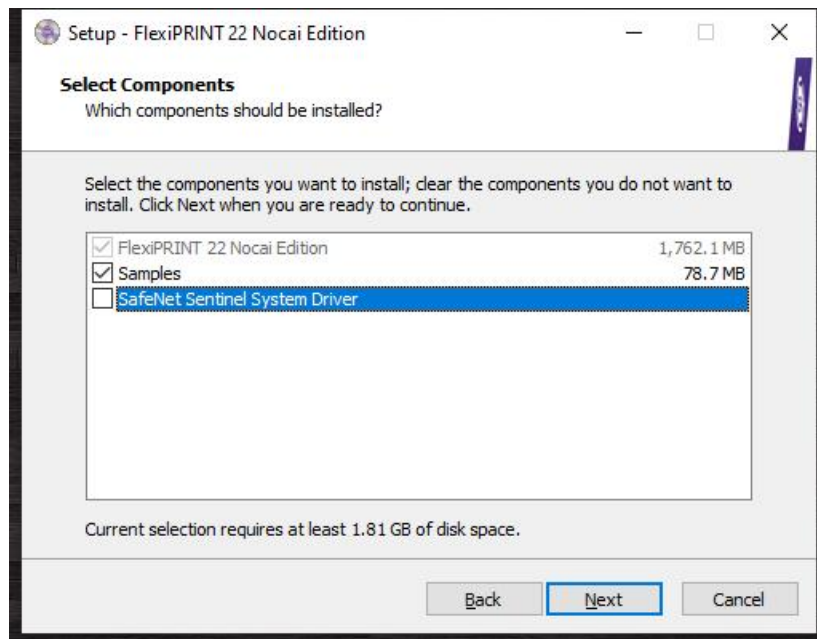
3. Click Next, continue to install:



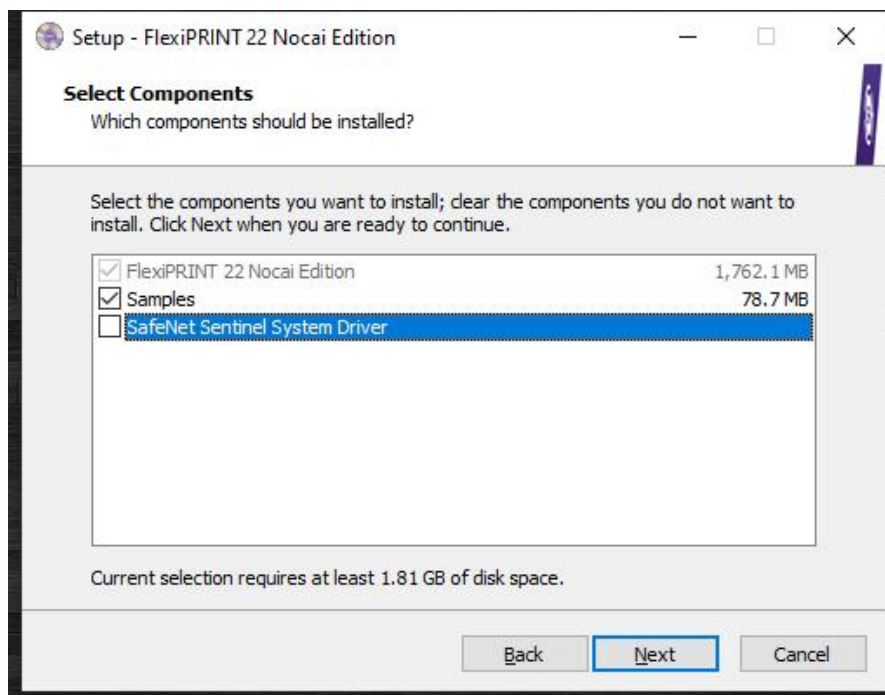
4. Accept the requirements and click Next:



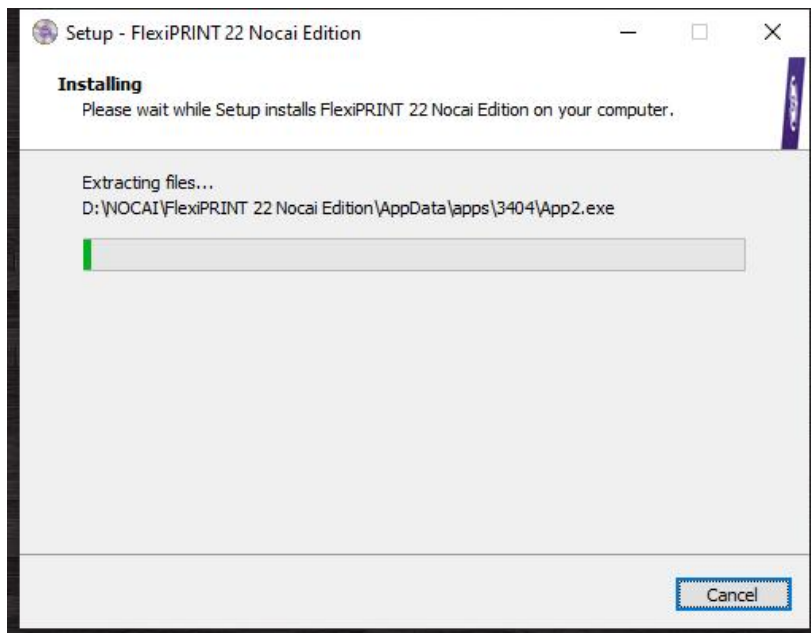
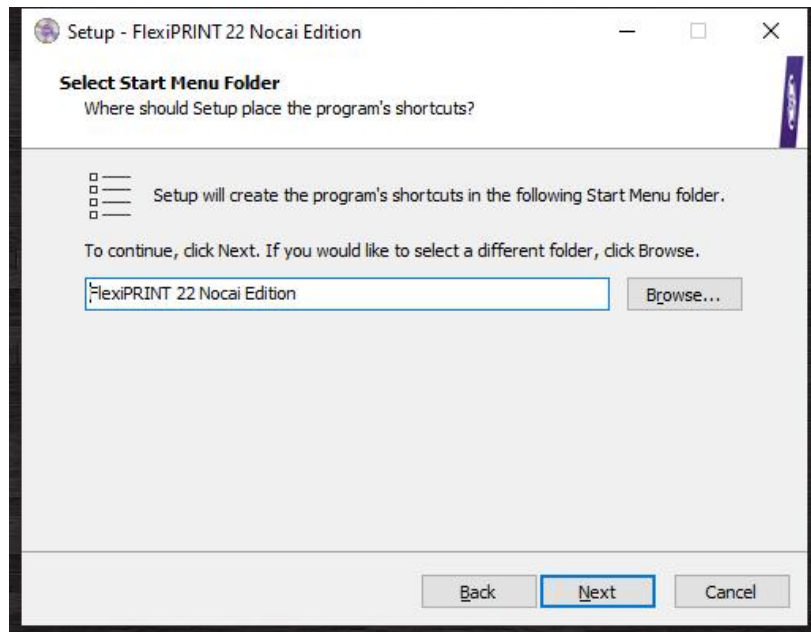
4. Click Browse to set the installation path of the software, which is installed in C disk by default, click Next:



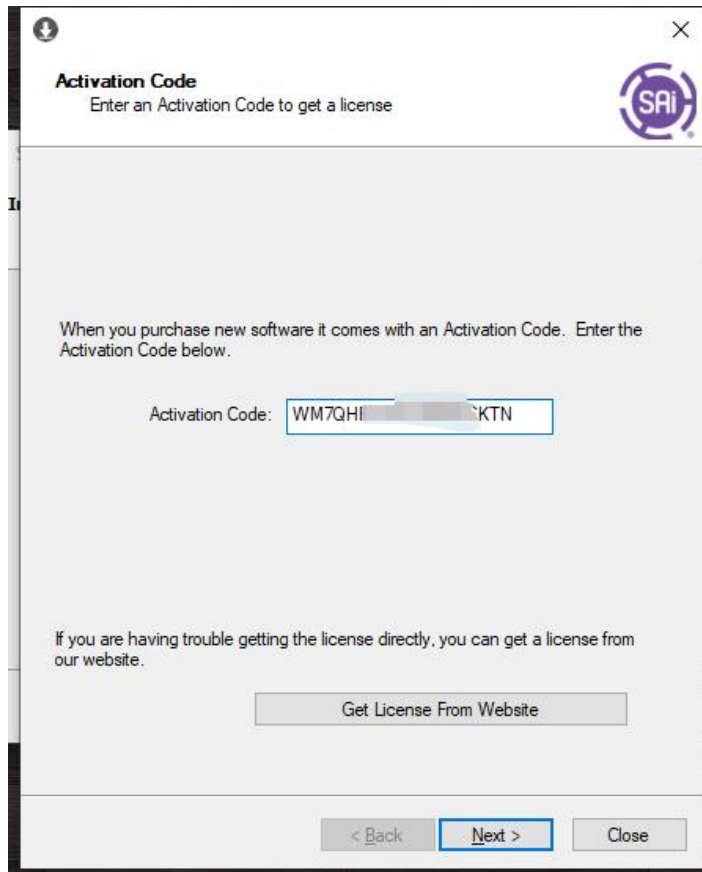
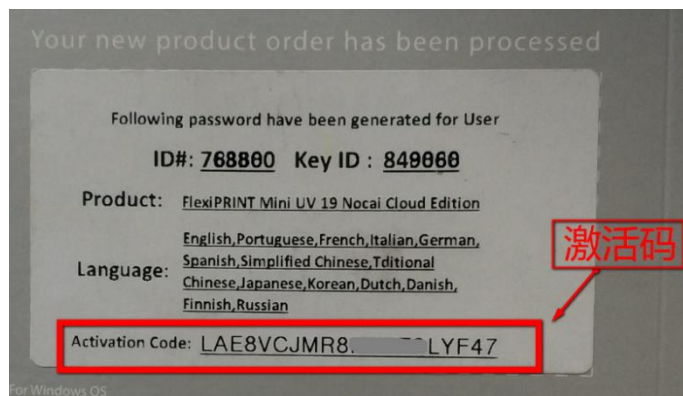
5. Confirm the main programs to be installed as shown in the figure (Not tick: SafeNet Sentinel System Driver procedure), click Next:



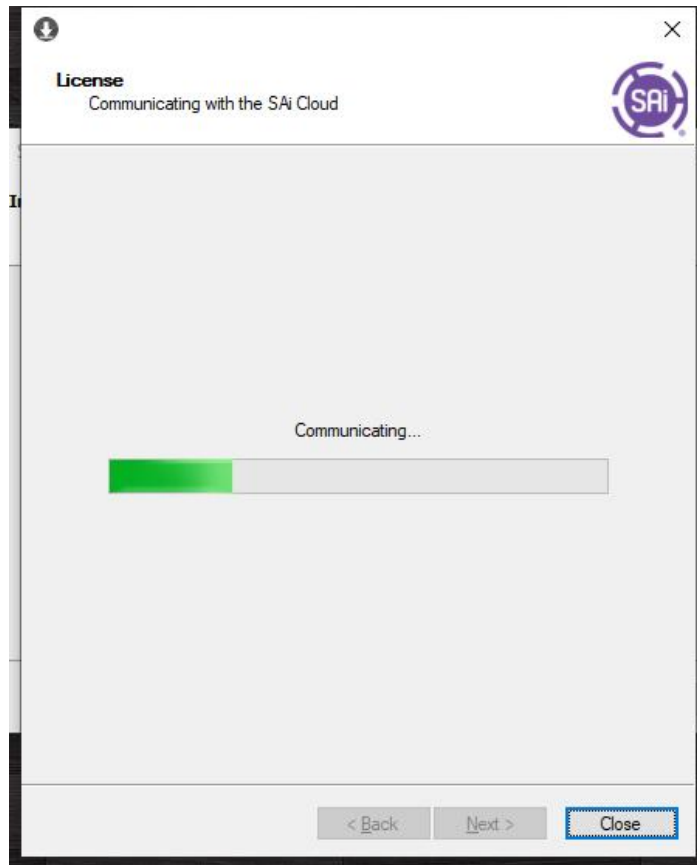
6. Pop-up a dialog, click Next:



7.A dialog will pop up during installation, enter the activation code , find Activation Code : XXXXXXXXXXXXXXXXXXXX from the back and input it into the dialog, click Next:



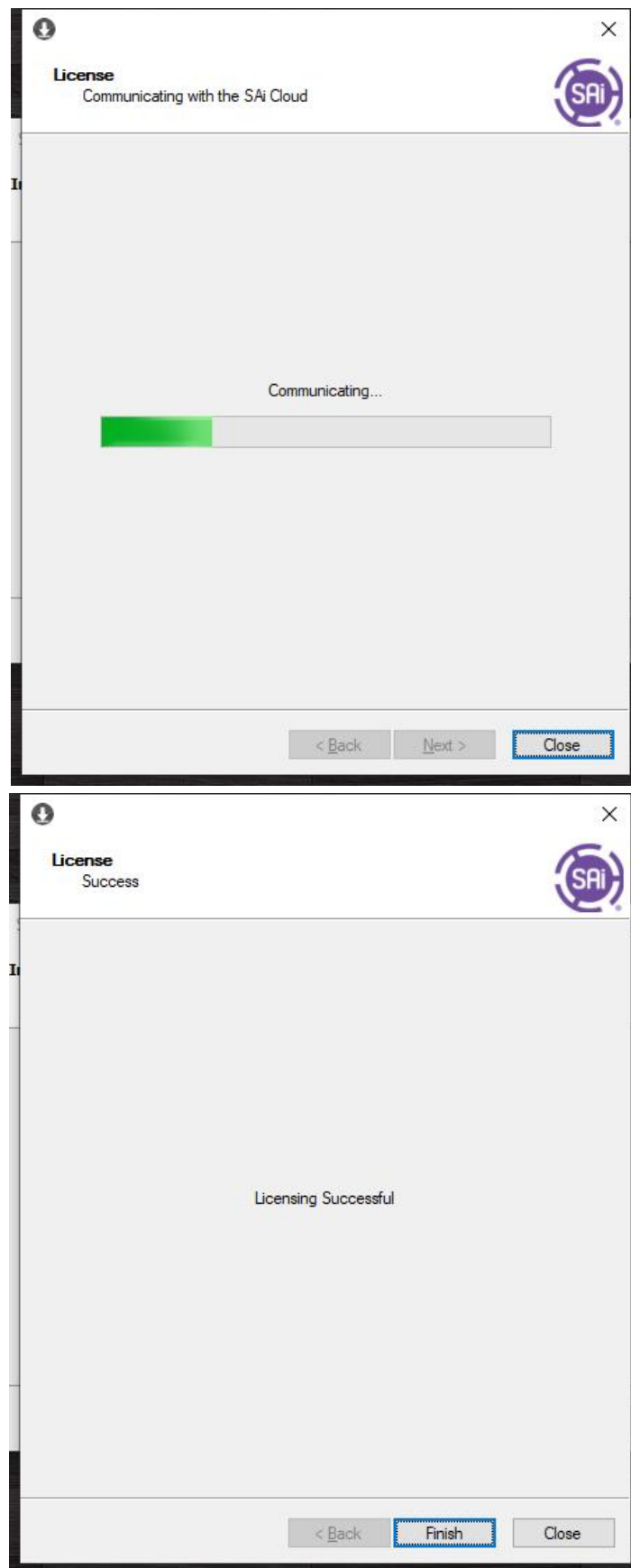
8.First activation will have website activation steps and pop up the following prompt. When prompted to this step please go to the prompted website to activate it first.



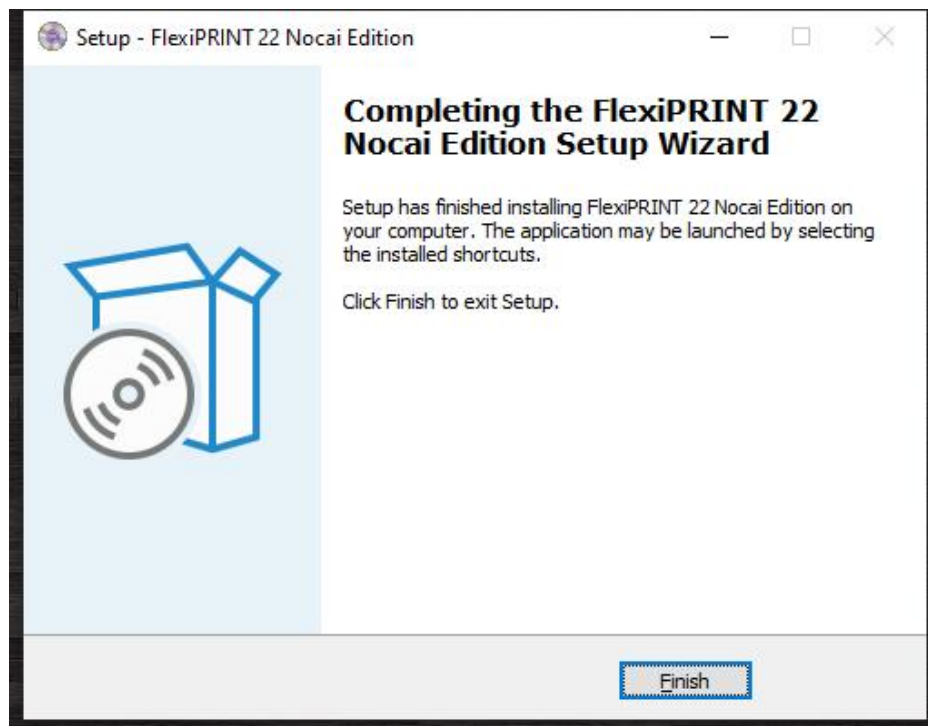
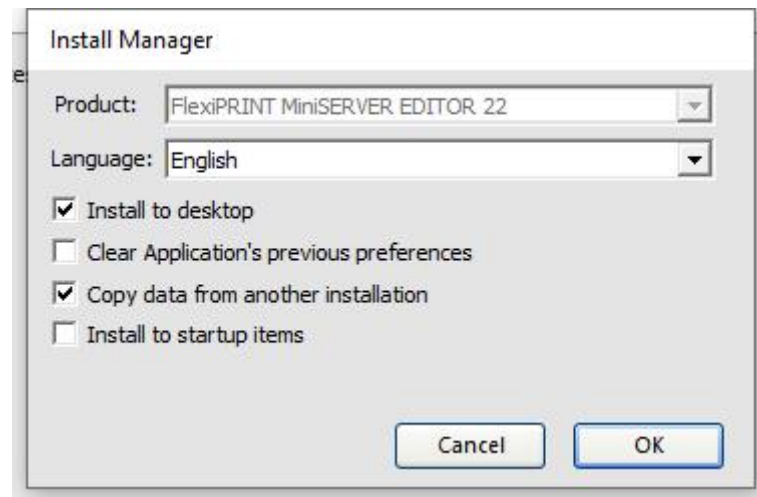
9. Enter the link: <https://www.saicloud.com/> as is shown in the following picture, apply for register an email, log in to activate and then close the page, according to the prompts, click Next:



11. If you are not prompted for web activation, skip steps 9 and 10 and click Next, and you will be taken directly to the authorization success section.



11. Click OK. Wait for a few minutes, pop up a dialog and finish it.



There will be two icons like this, it means the software installation is finished.

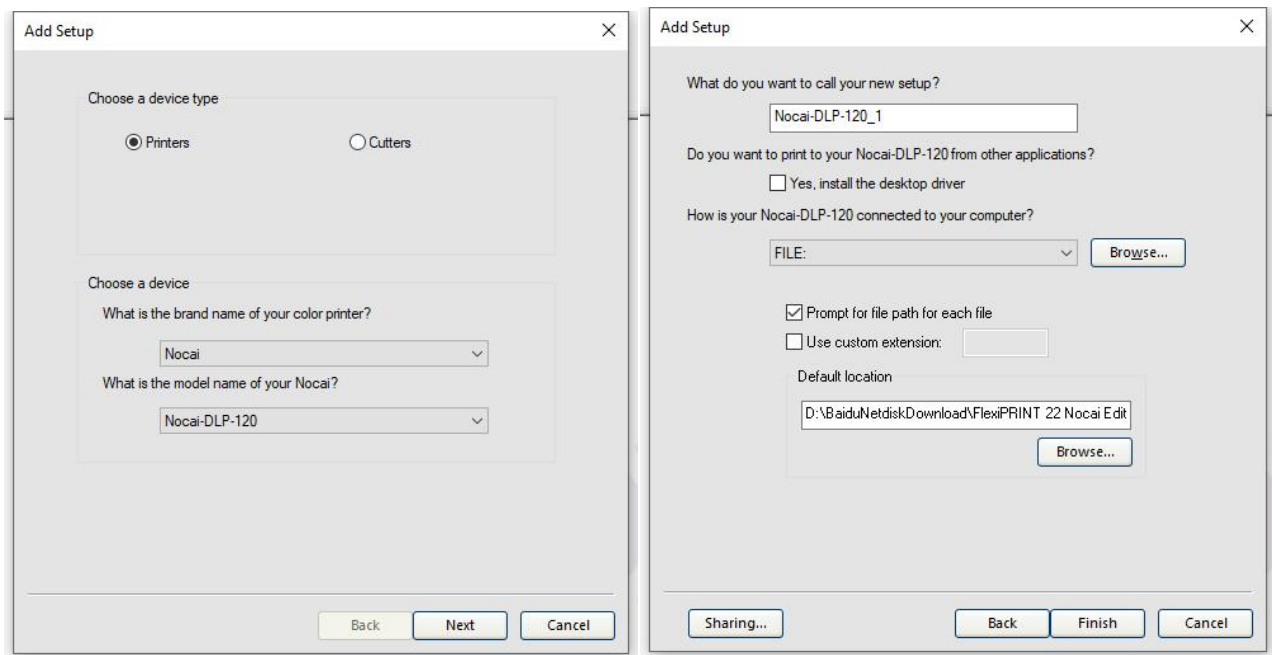
5.3 FlexiPRINT 19 Port setting



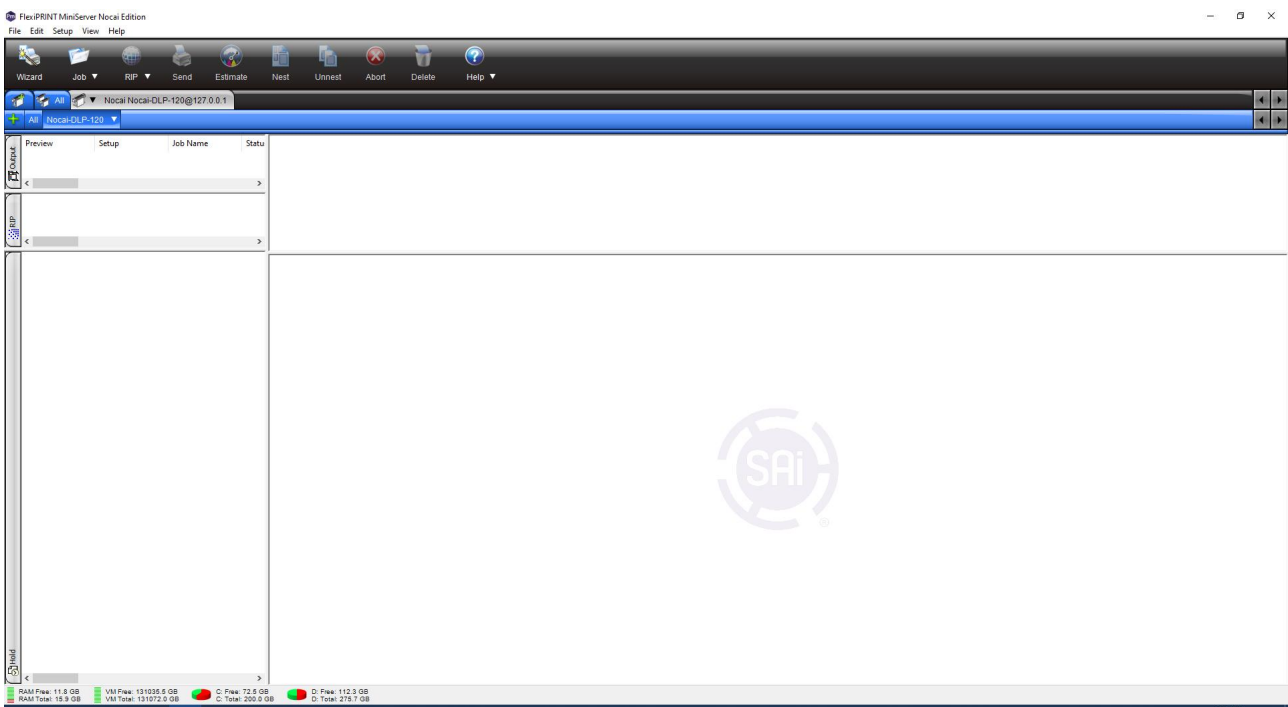
Click the software icon, operate as the administrator, the software can be opened. The desktop will pop up to add the device port, as is shown in the picture: brand name "Nocai", model number

“Nocai-NC-Cyclone-120,

Connect mode TCP/IP , TCP/IP input 127.0.0.1 and click OK, as is shown in the picture :



After finishing the machine port, as is shown in the picture:



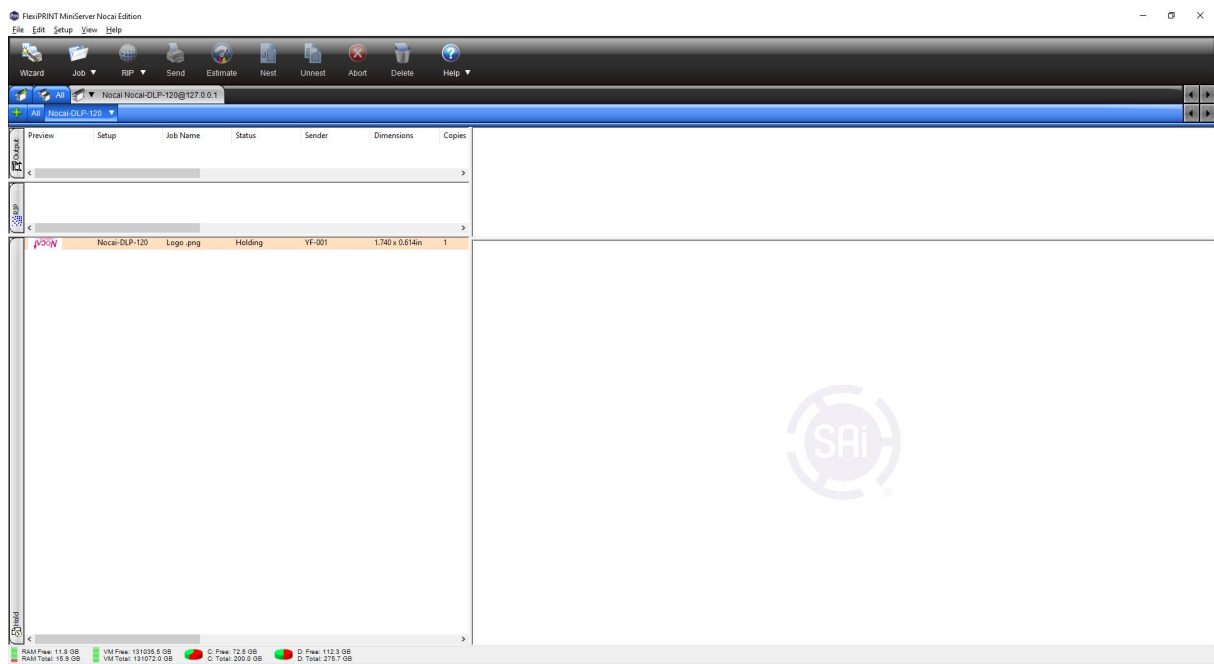
5.4 FlexiPRINT 19 Software sampling operation

①Add operation picture



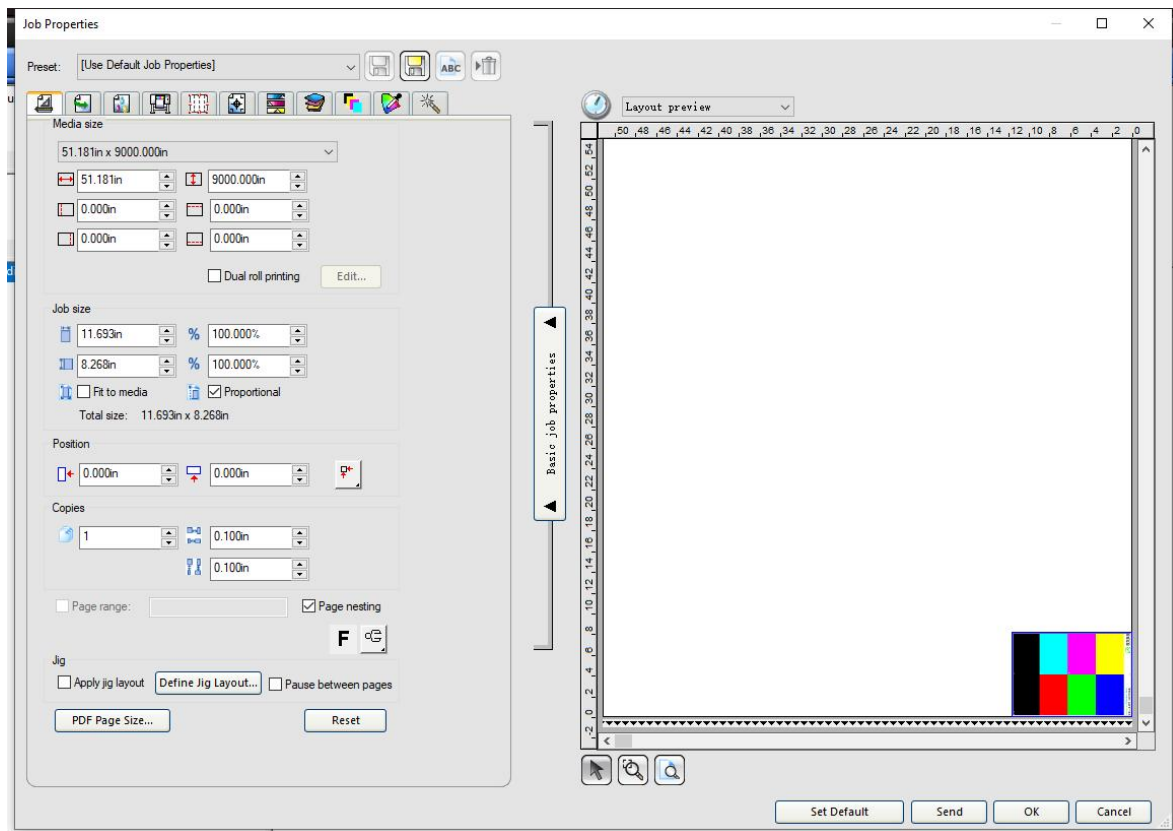
1. "Work" Select the file path to add the work's files;
2. "Encoder image processor" Pre-processing documents that need to be printed in advance;
3. "Suspend work" suspend the printing work;
4. "Delete" delete the document;

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



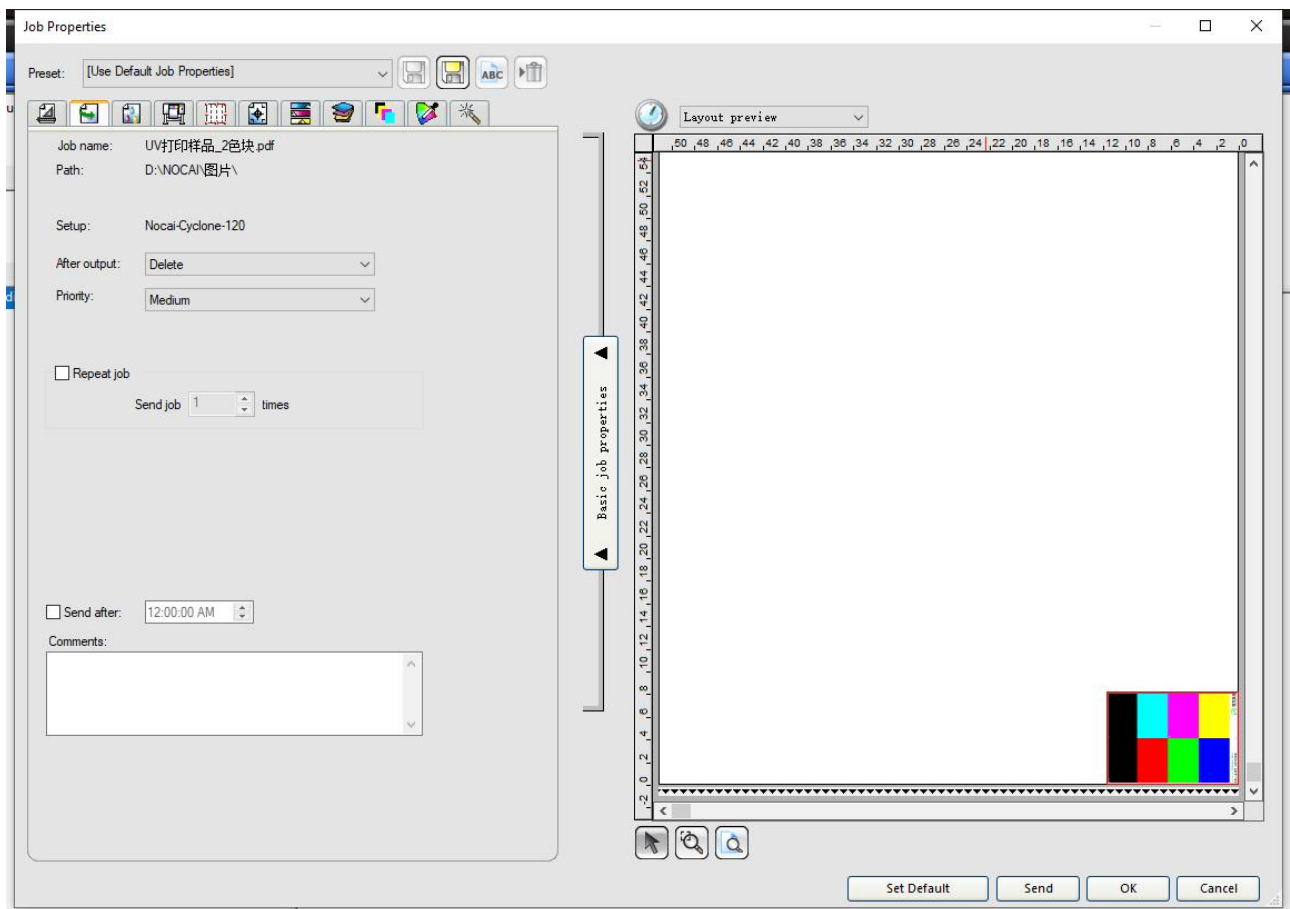
②Edit

Double-click on an imported image to access the Work Nature screen to organize it, as is shown in the picture:



1. Media size: the printing size of the machine;
2. Work size: Refers to the size of the picture to be printed, in accordance with the ratio of columns
3. Position: Refers to adjusting the printing position of the image on the printing platform, which can be selected according to the arrows;
4. Copy: This refers to the setting of the number of copies of the image to be printed at one time, and the spacing setting is on the right.;
5. Area setting: "F" on the right is the mirror setting, and the "Human shape" button is direction adjustment of the pattern .

③Operation panel

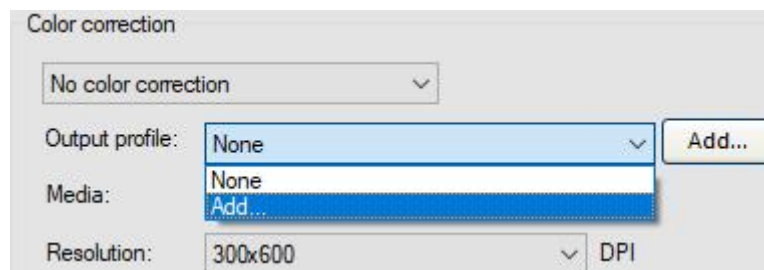
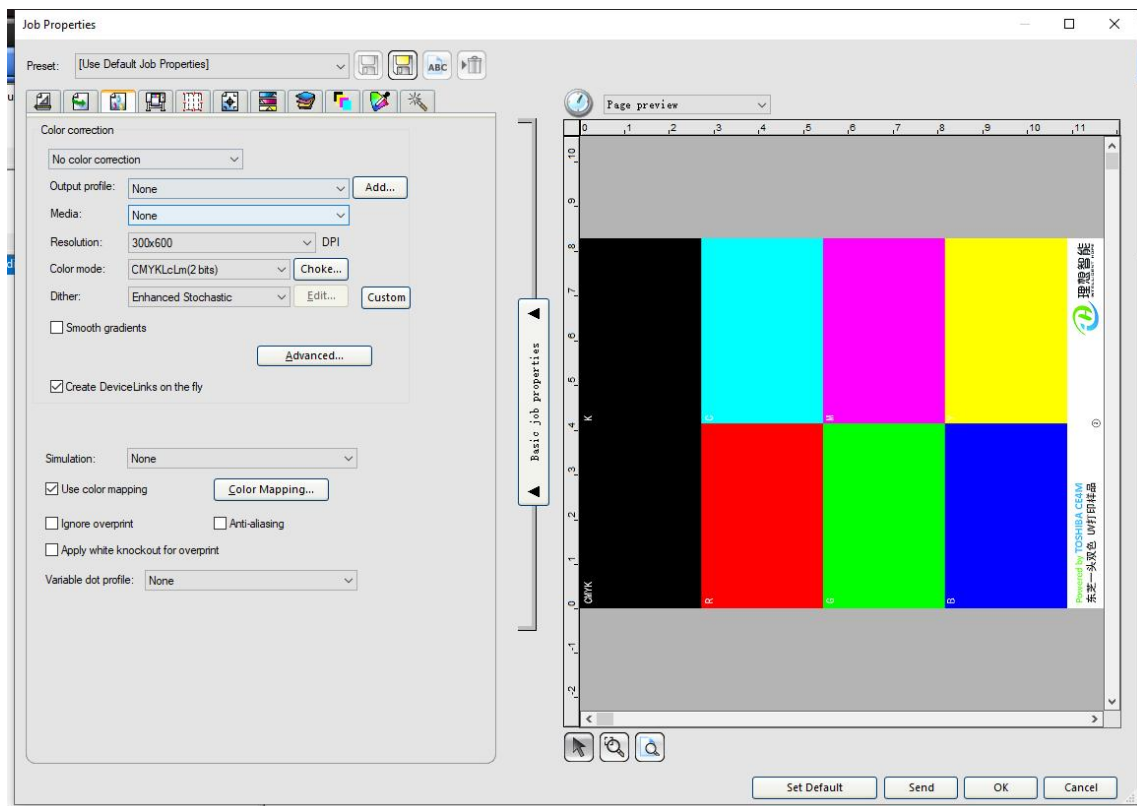


1.After output: After the selection of items that is the handling of the picture after printing, retained is to keep the picture after printing; delete is that the picture is not retained after printing;

2.Repeat work: Repeat refers to the number of times the work is sent to print, check Repeat, such as sending the work 2 times, the machine will print two times in a row.

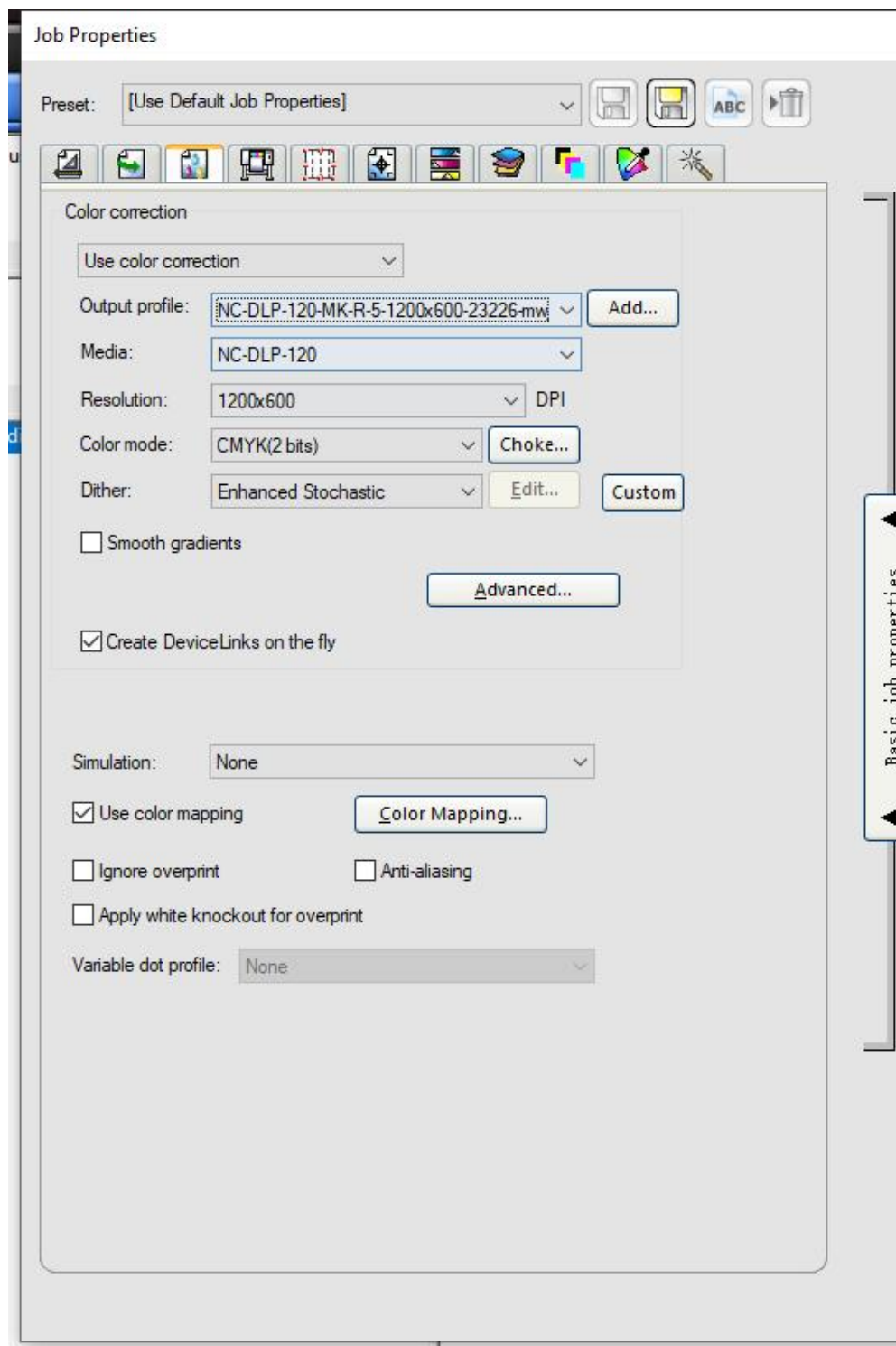
④Color arrangement

1.Click the "Output profile" inside Color management, click Add, find the icc folder inside (curve file) to add in, the following configuration file will be generated automatically.

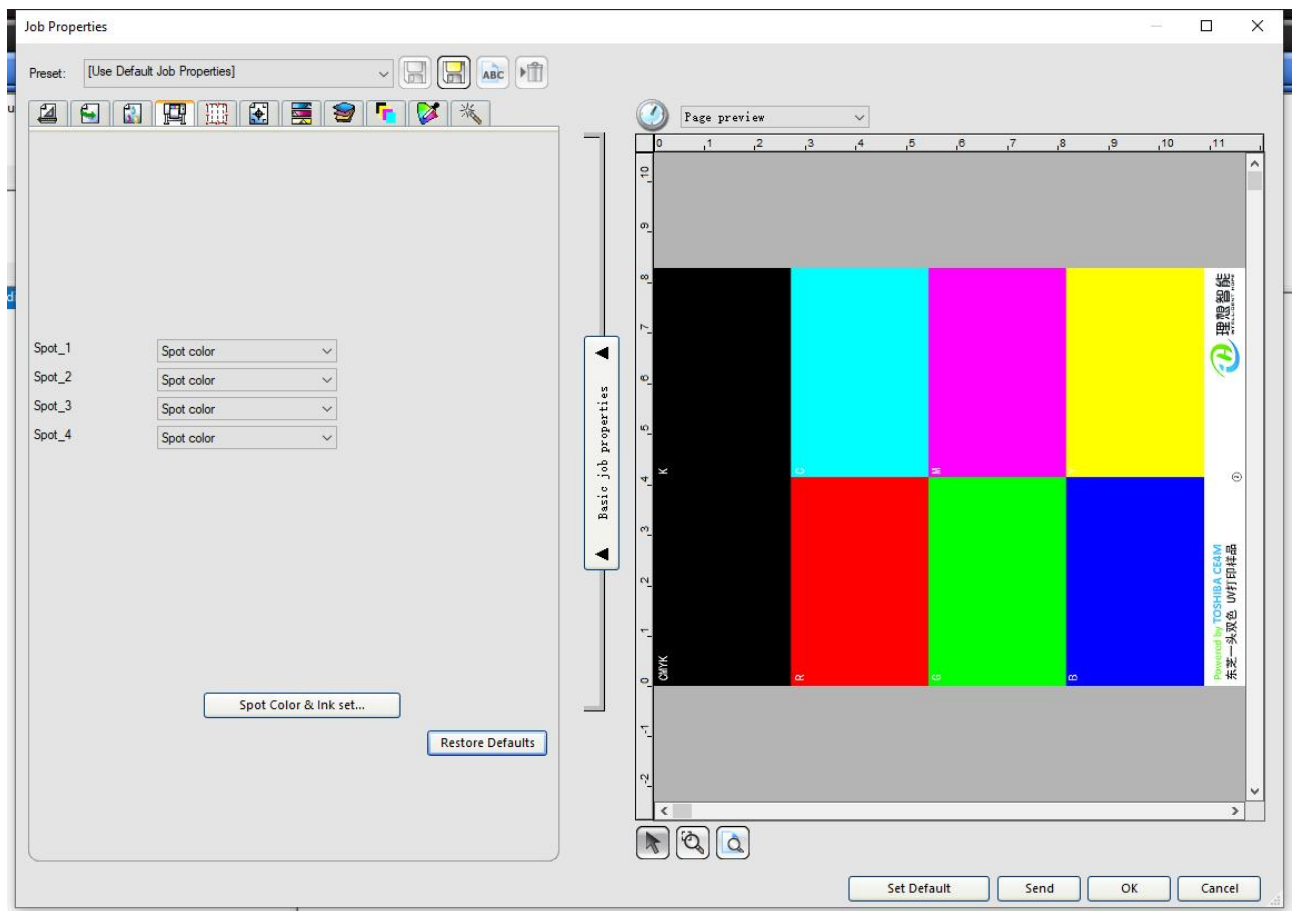


NC-Cyclone-120_TB_NC1200_1200x600_221103MWJ-2.icc	2022/11/3 16:43	ICC 配置文件	1,292 KB
NC-Cyclone-120_TB_NC1200_1800x600_221103MWJ-2.icc	2022/11/3 15:52	ICC 配置文件	1,292 KB
NC-Cyclone-120_TB_NC1200_1800x600_221103MWJ .icc	2022/11/3 15:07	ICC 配置文件	58 KB
NC-Cyclone-120_TB_NC1200_1200x600_221103MWJ .icc	2022/11/3 14:44	ICC 配置文件	58 KB
NC-Cyclone-120_TB_NC1200_1200x600_221101MWJ-2 .icc	2022/11/1 18:20	ICC 配置文件	58 KB
NC-Cyclone-120_TB_NC1200_1200x600_221101MWJ .icc	2022/11/1 18:20	ICC 配置文件	58 KB

The curve is added successfully as shown below:



⑤Printer option



Printer option panel: spot color 1、spot color 2、spot color 3 and spot color 4, the following are option introduction:

None Only color, not white;

Spot color Spot color printing (For spot color application, please check out the spot color video tutorials)

Under color The software prints the amount of white ink according to the color of the picture, the darker the color, the thicker the amount of white ink; the lighter the color, the thinner the amount of white ink;

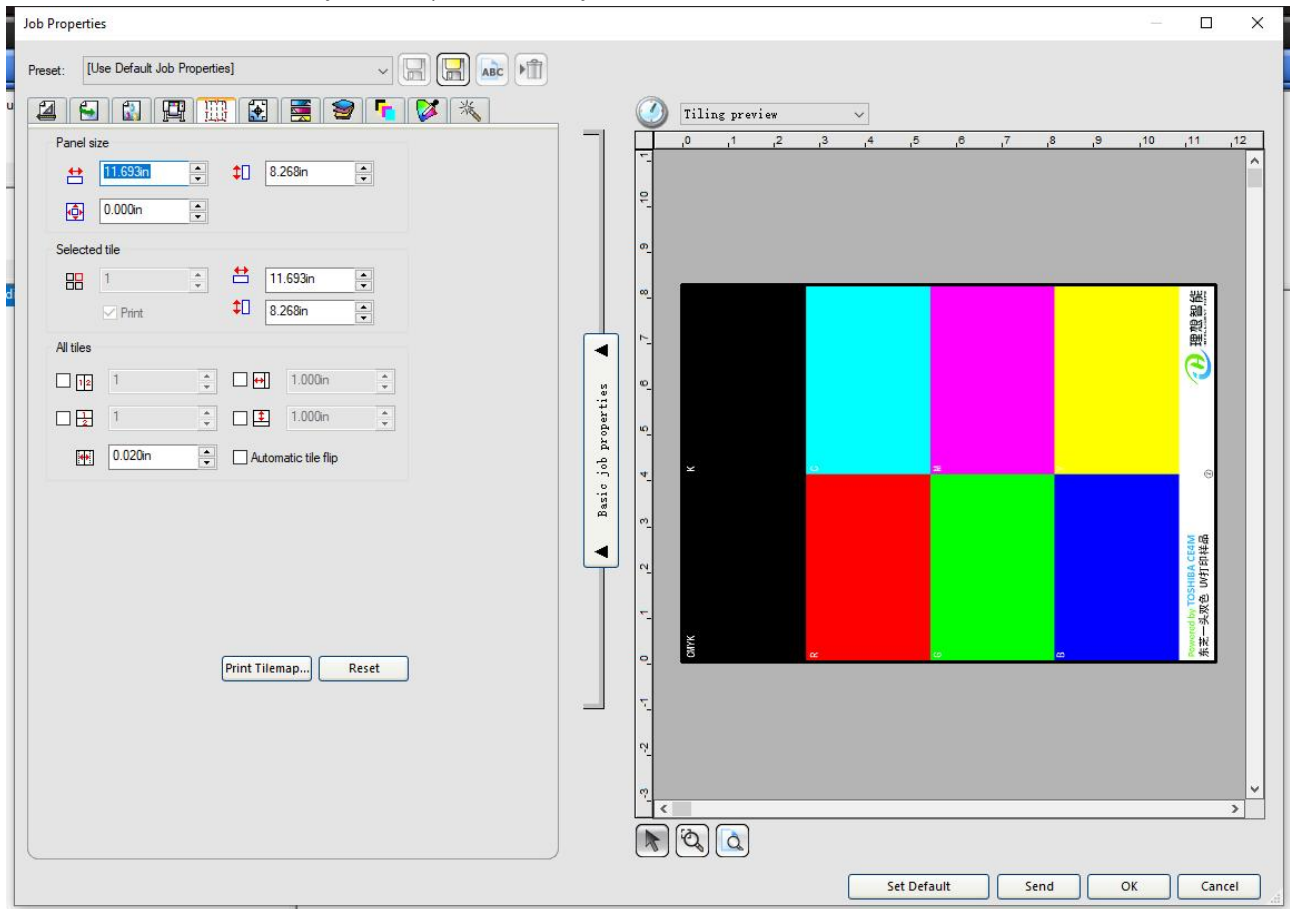
Fill color The software prints the amount of white ink according to the color of the picture, the darker the color, the thinner the amount of white ink; the lighter the color, the thicker the amount of white ink;

Substrate Print the white ink under the bottom

Customers can choose options according to the practical situation.

⑥Splicing option

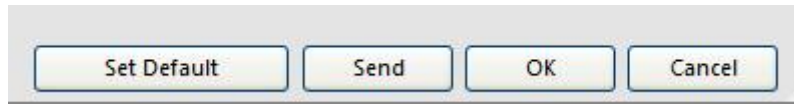
Adjust the size and customize the screenshot printing inside the splicing, the right side of the mouse can increase or decrease by the crop box directly.



⑦Setting the default value

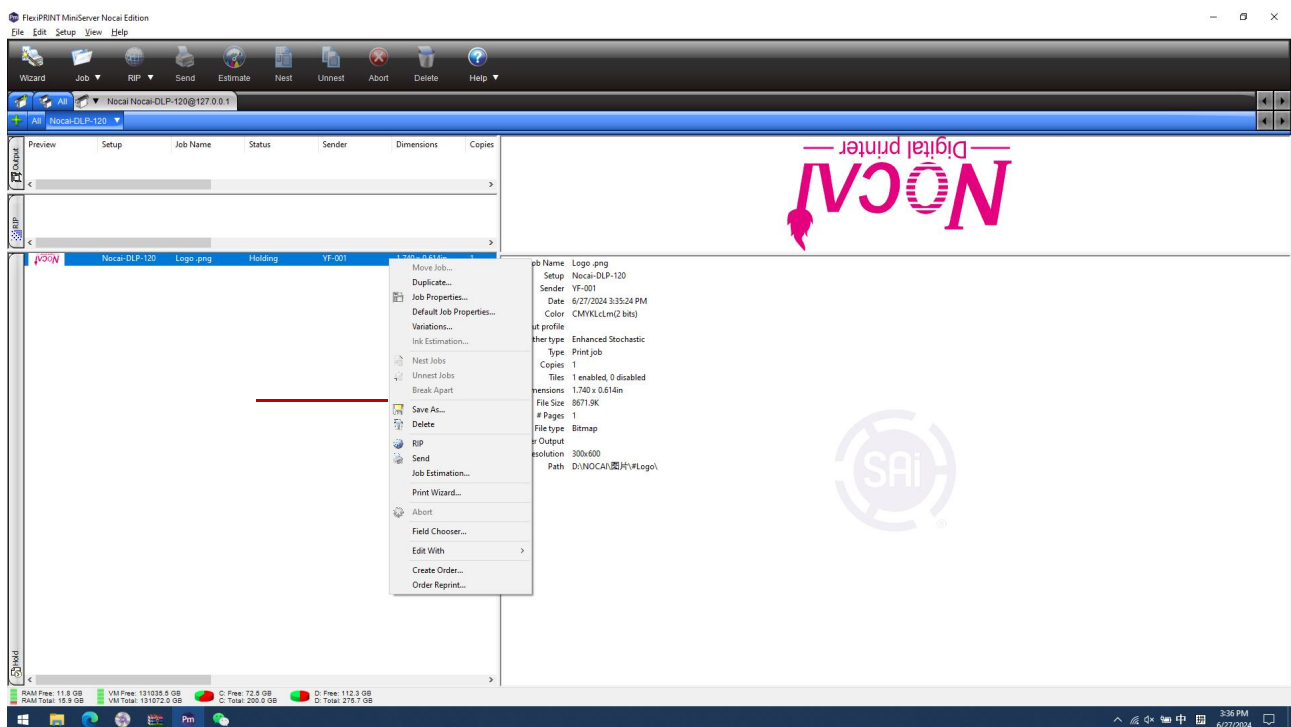
Click to set Default, the above settings will be saved as default settings, and the parameters will be the same to the current settings when you re-add the image work file.

Click to keep Defaults after the settings, then click OK. As is shown in the following:



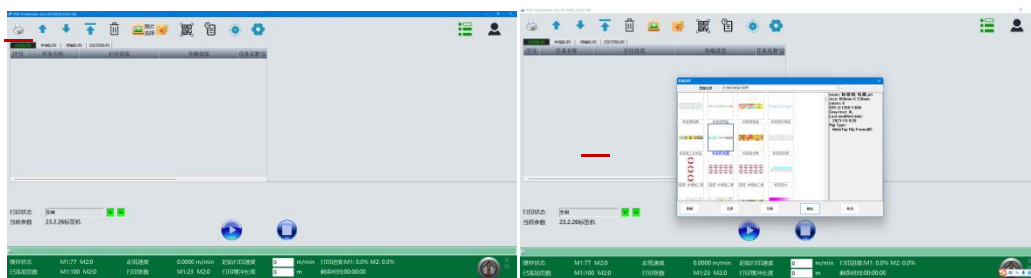
⑧Keep prtfile

Select Save As with right-click at the picture with the printing parameters, choose a suitable location and save the prt file of the picture



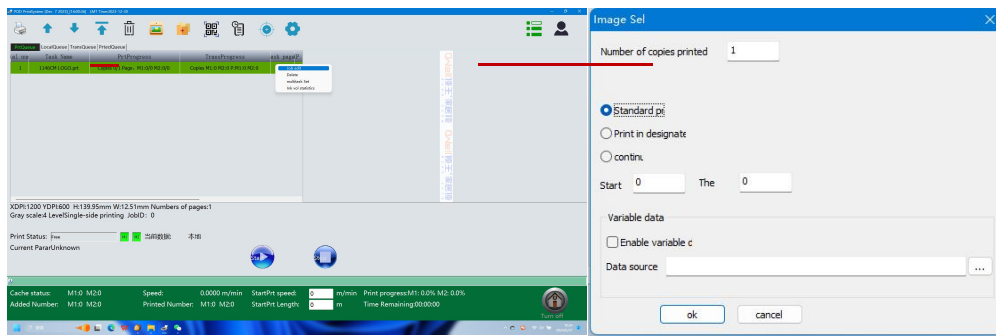
⑨Choose the file

Open the driver, click “picture option”. Select the prt file you just stored, click OK and add the file.



⑩Printing setting

Select the file you just added in the printing list, right-click to open the task editor, you can set the number of copies to be printed



⑪Print

Preparations before printing:

Click Start inside the driver, waiting for the print status progress bar to turn green.

Deskewing device turn into Automatic.

Click Unwind cylinder, Presurized cylinder, Winding cylinder on the touchscreen, and then ensure unwind shaft and rewind shaft up, after clamping the paper by the press rollers, click One-touch tensioning on the touchscreen to make sure that the paper is tight. Set the paper travel speed.

Open the power supply of the UV lamp electric box and water tank, adjust the UV lamp power on the electric box, make sure the water circulation of UV lamp is normal and then you can start printing:

Click Print on the touchscreen and wait for the cart to reach the printing position. Press and hold Start.

Printing starts when the paper starts to run.

8.Maintenance method and announcements

8.1.Maintenance method of printhead

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

②Due to the nozzle plug and the printhead line is tightly connected, not unplug. So after a long time there will be contact oxidation, damage, misalignment or contact another line, so when unplugging the nozzle line you need to pay attention to observe these problems carefully, and exclude or replace the nozzle line, otherwise it will result in the burnt out of the nozzle or nozzle board.

③When not using the machine you must do a good job of maintenance, adhere to the daily power-on once and test strip printing, test strip broken ink to be automatically cleaned to ensure that the test strip is normal. You can print a small picture, you have to use the cleaning fluid 3-5 drops of ink in the ink cap top when more than 3 days of vacation unattended. And then combine and seal the nozzle and the ink cap top,which will play a certain role in the protection of the ink cap top. ④ When 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 regularly carry out the uniform mixing of the ink and open the cartridge at the white ink mixing switch when using the machine.

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

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

⑦Avoid nozzle clogging by avoiding direct sunlight in the nozzle area and prolonged suspending in mid-air

⑧The UV lamp cannot be activated when the cart is not in the printing position to avoid reflecting light on the printhead.

8.2.Ink station maintenance

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

8.3. Rail maintenance

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

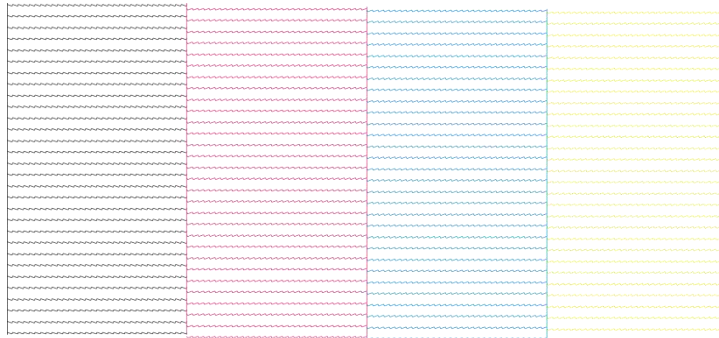
8.4.Maintenance of shell sheet metal

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

9. Ink-breakage problems for test strip

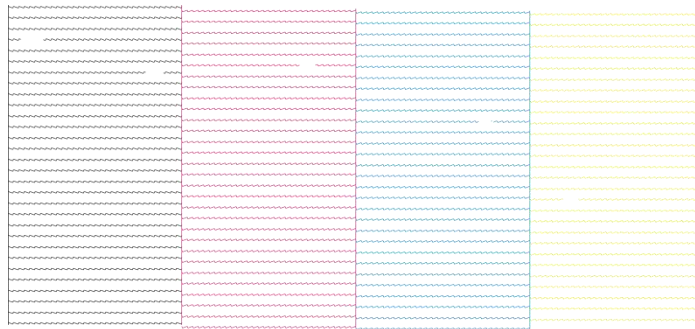
Common examples of ink-supply suspension problems, as is shown in the picture:

9.1 Test strips are all out



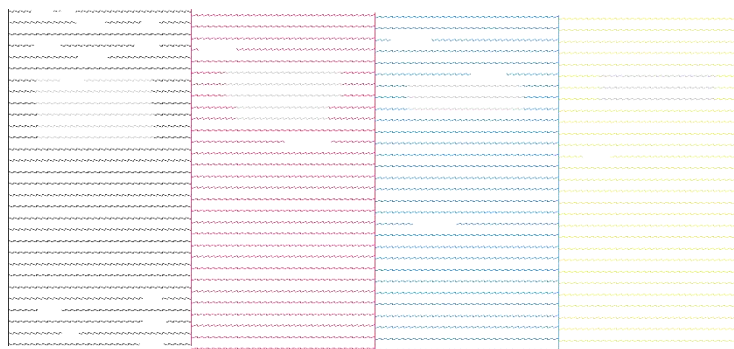
Explanation: Normal condition. This status indicates that the machine printheads are in good condition.

9.2 Partial ink-breakage of the test strip



Explanation: Ink-breakage of test strip partially. This is caused by the corrosion damage to ink on 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 results.

9.3 Severe ink-breakage on test strip partially

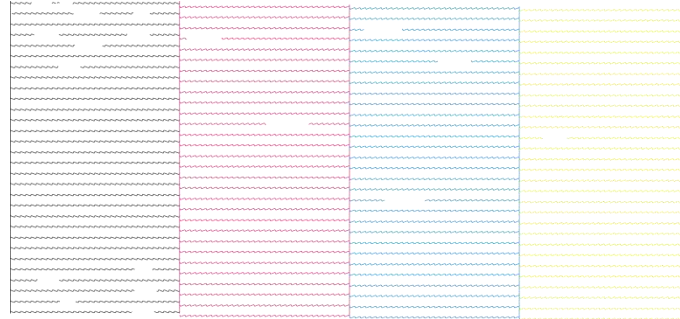


Solution:

1. Prolong the press time
2. Wipe the surface of the printhead with a cleaning fluid

Overview of the problem: If there are the problems above, usually the clogging of printhead, please prioritize the test them.

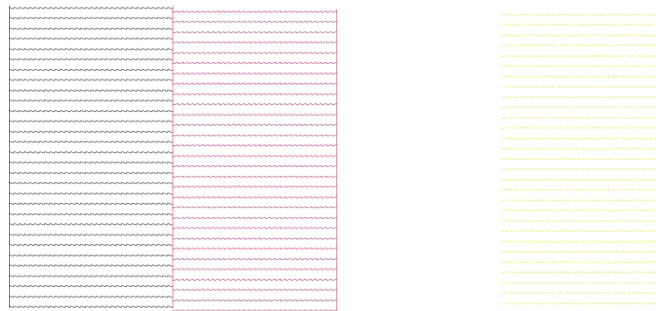
9.4 Almost total ink-breakage on the test strip



Solution:

1. Observe whether the ink droplets on the surface of the printhead are uniform when the ink is pressed.
2. Check whether there is ink residue on the surface of the printhead: if there is a single color ink -drop, please clean it by sub-fine non-woven fabric. If ink still seeps out, the negative or circulating pressure should be reduced.
3. Manual cleaning, use a syringe to flush the printhead, check whether the printhead is clogged.

9.5 Test strip is lack of color block



Solution:

Whether the channel is closed or not in the driver

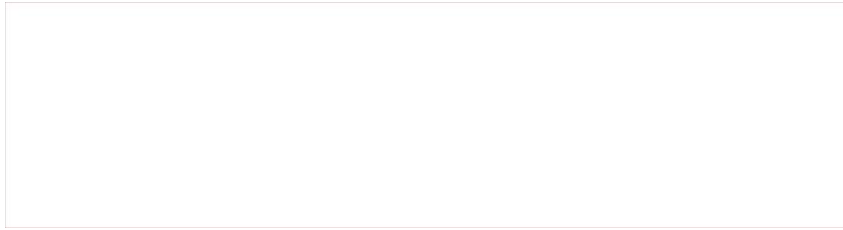
The app version of this printhead board is not correct.

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

Change the printhead.

The above problem of a color is missing, the general situation is that the printhead voltage is not normal transmission, the common problems are: printhead board, printhead line, printhead problems. And it is also possible that a separate ink can not supply normally, or the printhead is blocked.

9.6 No test strips at all

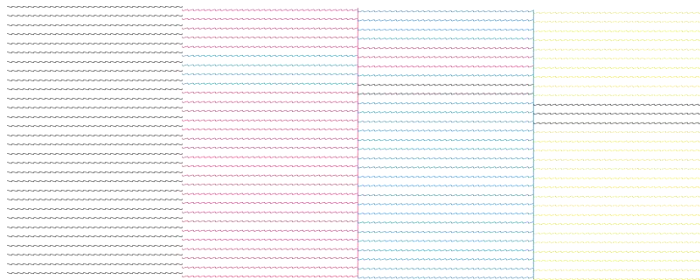


Solution:

- 1.Plug and unplug the printhead cable, check whether the contacts of the printhead cable are oxidized or damaged, if so, please replace the printhead cable and test 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 printhead board.

Overview of the problem: Generally there is ink in the the printhead plug or the customer misuse of the printhead after replacing the printhead, resulting in a short-circuit of the printhead, burned printhead board or printhead, because the printhead will damage the printhead board, but the printhead board does not damage the printhead. It is recommended to prioritize the replacement of the printhead and printhead line .

9.7Color mixing: large scale of color mixing

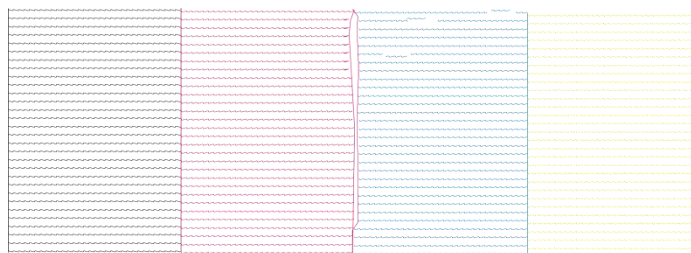


Solution:

- 1.Flash spray.
- 2.Replace the printhead.

Overview of the problem: Generally, there are other colors on the printhead on the non-woven fabric or add the wrong ink. First check whether there is ink residue on the surface of the printhead.

9.8 Ink-floating for test strip



Solution:

- 1.Check that the height between the printhead and the printing material is within 2-3mm.
- 2.Whether the nozzle temperature is 35 degree.
- 3.Stir the floating ink evenly, and then clean the printhead. If it can not be solved, it is recommended to

replace the ink.

Overview of the problem: The above problem occurs if there is no special change of the surrounding environment, usually because the machine has been left for a long time, resulting in the precipitation of ink.

Error code

2 "Failure to send image data! "

10 "Current work item is empty"

41 "Current task is empty! " "Please choose task! "

300 "Different task parameters! " "Please add task with the same parameter."

301 "Failure to obtain the data of task page! " "Please check the task"

302 "The current processing task does not have the same grayscale bit with the startup task! " "Please check the task"

430 "Insufficient data cache" "Print at a low speed! "

468 "Presence of unconfigured cards! " "Please check the configuration! "

469 "Presence a wrong server configuration! " "Please check the configuration! "

470 "Get Board Configuration Failure! " "Please check if the board is linked properly! "

471 "Get EAIB board Configuration Failure! " "Please check if the board is linked noramlly! "

472 "Board configuration CRC error! " "Please check if the board is linked noramlly! "

473 "Board configuration EAIB error! " "Please check if the board is linked noramlly! "

474 "Board can not connect! " "Please check if the board is linked noramlly! "

475 "EAIB board can not connect! " "Please check if the board is linked noramlly! "

476 "Error board communication" ""

501 "Not start printing before writing data" "PRT_Startprint first"

502 "The image written does not match the information printed at the start" "Write after reconfirming the image nature"

503 "The cache queue is full." "Re-upload after waiting, memory pointer can be used continuously"

504 "Copies of number<1 when writing diagram" ""

1000 "Printing task list is empty or file is illegal" ""

1001 "Printing parameter does not match" ""

1002 "Last startup is still printing" "Wait for reception before starting printing"

1003 "The cache queue is full" "Start printing after adding task"

1004 "Starting description for printing image information error! " ""

4102 "The screen exceeds the lower limit position of the printhead group" " ! "

5002 "Initialization error" "Communication error "

5003 "No sufficient resources " " "

5004 "Screenshot height plus y position over image height" "Screenshot decrease or Y position decrease"

7100 "Failure for board download configuration" " Please check if the board is linked? "

10010 "devcfg Backend configuration failure" "Restart after revising the correct configuration"

10011 "The board failed to open the device" "Please try to re-power"

10012 "The board failed to reboot the system(FPGA)" "Please try to re-power"

10013 " Additional board data chain error" "Please check if the encoder data link (SATA)is connected properly"

10014 "Driver board communication error" "Please check if the driver card is linked properly"

10015 "Driver board communication error" "Driver board communication error"

10016 "Printing parameter for board error" "Abnormal condition! "

10021 "Insufficient memory! " " "

10022 "Failure to get virtual memory!" " "

10023 "Too many pages! "

10060 "Failure to download waveform! " "Reboot board or download the correct waveform."

10061 "Board waveform data length or CRC is not correct! " "Please download the correct waveform"

10062 "Board Slection>3! " "Please download the correct waveform"

10063 "Switch protection failure when downloading the waveform! " "Please check the driver card communication"

10064 "Board failed to set grayscale parameter! " "Please check the driver card communication"

10065 "Board waveform voltage<1! " "Please check whether the waveform is correct or not! "

10067 "Board failed to set waveform voltage! " "Please check the driver card communication! "

10070 "Excessive cumulative error counts for board setup waveforms! " "Please check the driver card communication! "

1000000 "Board 1 start printing - failure! "

UV lamp is off

1. Check the power code of the UV lamp is on or off.
2. Whether the power of electric box is 0.
3. Measure the corresponding terminal of the mainboard, whether there is 24V voltage output during printing. If there is no output, replace the mainboard.
4. Replace UV lamp.
5. Whether the connection between UV lamp water tank and electric box is normal.

Ink is not dry

All products are not dry:

1. Check whether the UV lamp is lighted during the printing process, if not, please solve (refer to the UV lamp is not lighted solution)
2. Whether the power of UV lamp is suitable or not.

The edges of the product are not dry:

Whether the edge of the UV lamp is covered.

Whether the UV lamp can light up the paper position.

10 Introduction of board circuit

