

## NC-DX0406(2018) User Manual



**NC-DX0406(2018 )**



<http://wap.happycolor.com.cn>

Guangzhou Nuocai Digital Products Co.,Ltd

## **1. Warning:**

### **Please read this description carefully before using the machine**

- 1.1. Machine should not be used by children or the disabled. If needed, please under the supervision
- 1.2. Please use original supplier's spare parts and ink under instruction
- 1.3. Make sure the power voltage is same as power cable and machine which shown on the Nameplate
- 1.4. Only suitable to be used indoors and better suggest to have air conditioning inside the room to keep stable working temperature and humidity
- 1.5. Dismantle the wooden case and the foot cup fixed frame and put it on a stable table before using
- 1.6. Do not use the machine in a environment which has fire, dust and wetness
- 1.7. Do not use the machine in a humid house
- 1.8. Do not put sundries on the machine itself, machine printing table and surroundings
- 1.9. Please keep a stable temperature in the working room, not suggest to use machine where environment over 30 degrees or below 15 degrees
- 1.10. Do not use any broken cable to provide electricity
- 1.11. If power supply is broken, please stop to using the machine
- 1.12. Power off machine when u clean or fix machine
- 1.13. Please use the machine according to local legal policy
- 1.14. Make sure the head not touch anything before sending picture printing. Height sensor do not work when meets transparent materials
- 1.15. 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
- 1.16. 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
- 1.17. When add ink, may touch ink tube, ink bottle and ink cap and some parts, please protect in advance
- 1.18. 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
- 1.19. Not suggest to use UV LED lamp high load printing for a such long working time

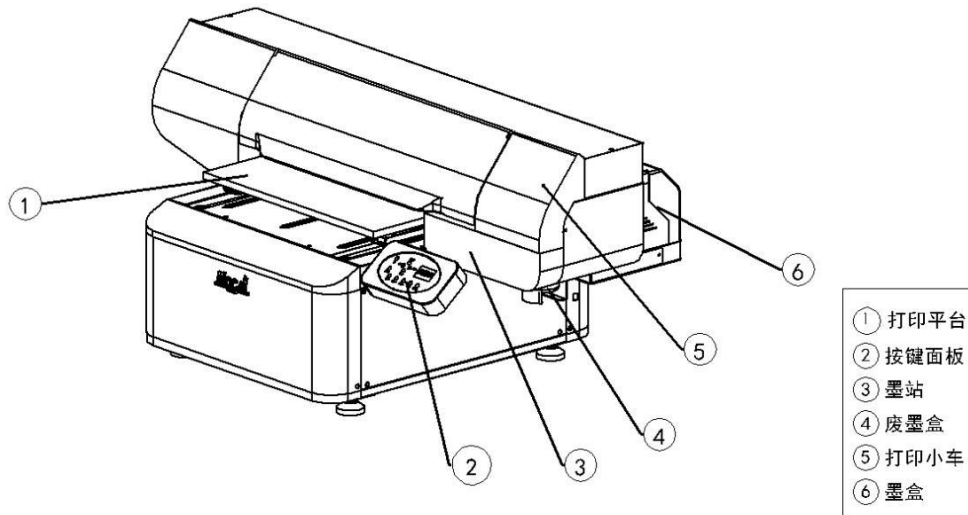
1.20. Make sure machine is normally grounded

1.21. Do not use the machine in thunderstorm day, avoid lightning strikes

1.22. If your ink is not come from Nocai, after sale service will not be provide

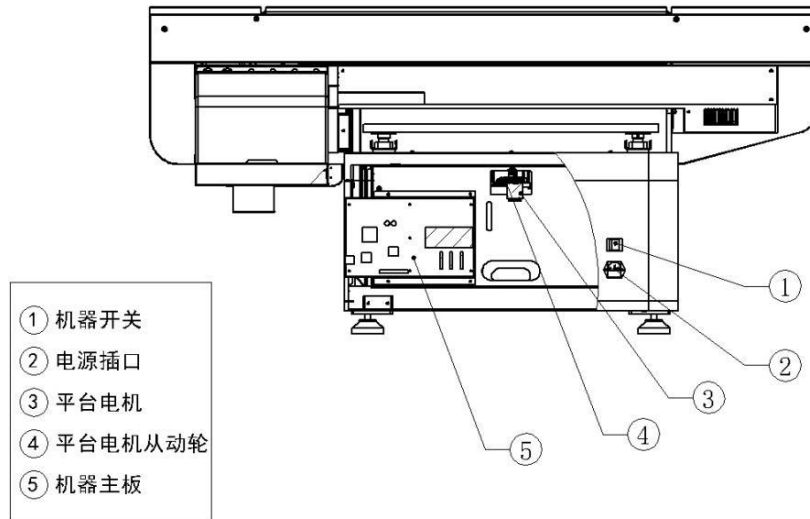
## 2. Machine recognition-Graphics Analysis

### 2.1 Machine Front View



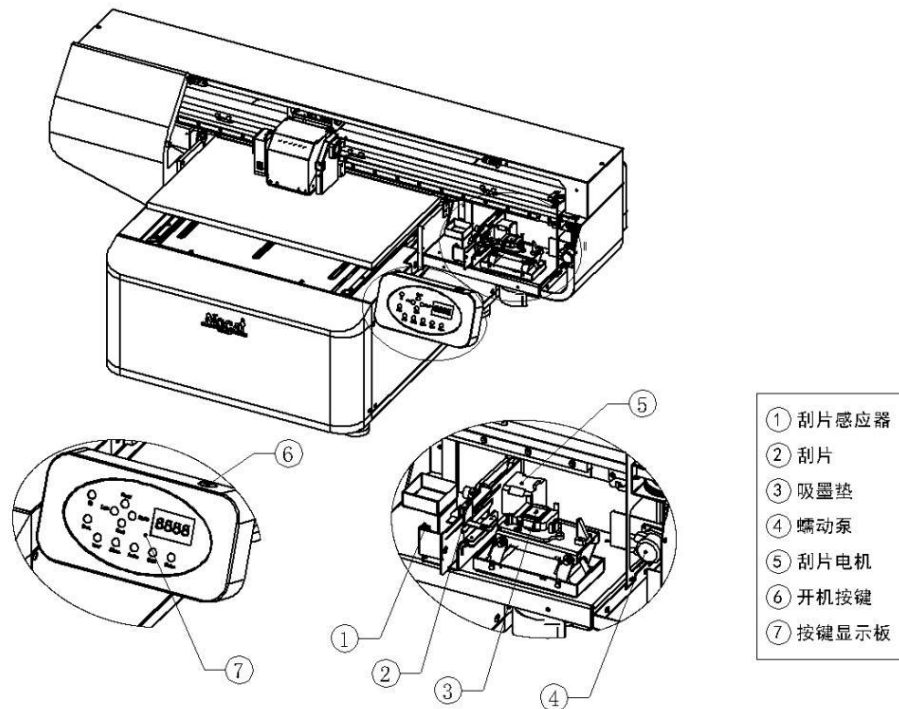
- ① Printing table: Put the printing materials, the maximum length is 61cm, and Maximum width is 50cm, the maximum printing size is 60\*40cm, template can be made to improve working efficiency.
- ② Panel control pane: Adjust and set up machine's operation and internal parameter.
- ③ Capping station: Cleaning unit.
- ④ Waste ink bottle: Collect the waste ink.
- ⑤ Cart: Machine working and printing unit.
- ⑥ Ink tank: Put ink in stock, has the white ink stir and ink lock alarming system.

## 2.2 Machine Back View



- ① Machine switch: Switch button.
- ② Power charger: Connect power box to supply power for printer.
- ③ Platform motor: Control platform to move the motor.
- ④ Platform motor driven wheel: Platform motor energy transmission, driven by drive wheel.
- ⑤ Main board: Machine working control board.

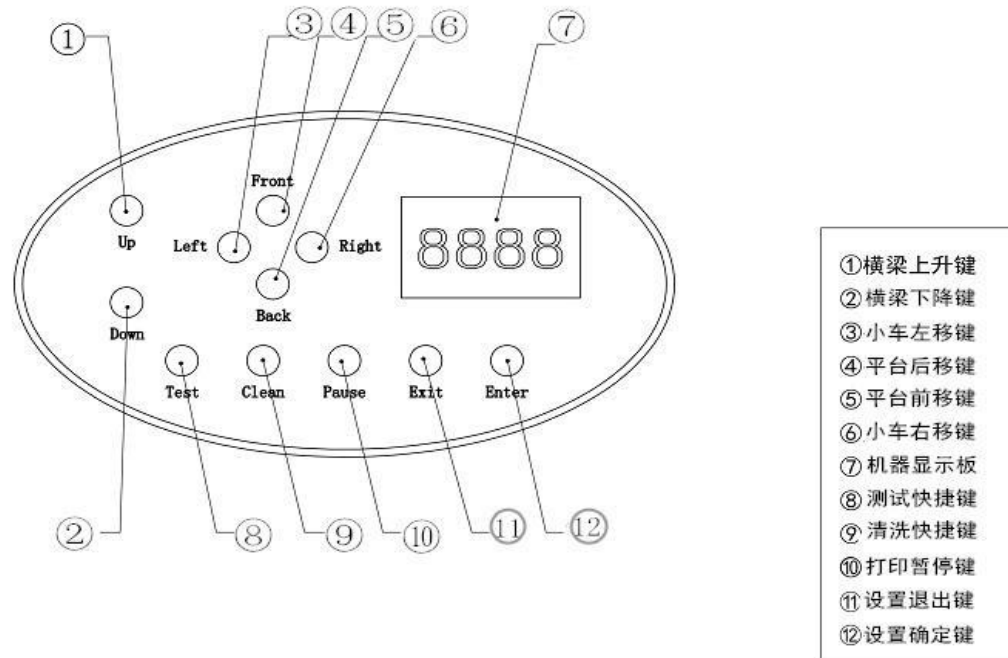
## 2.3 Machine Capping System View



- ① Wiper sensor: Locate the wiper original position.
- ② Wiper: Clean the surface of the head after automatic cleaning.
- ③ Cap top: Suck ink, clean and protect the head.
- ④ Ink pump: Ink sucking, the left one is color ink pump, the right one is white ink pump. Speed can be adjusted at the back of pump.
- ⑤ Wiper motor: Supply power for wiper.
- ⑥ Power button: Open or close machine
- ⑦ Panel board: Operate machine and set up machine parameter.

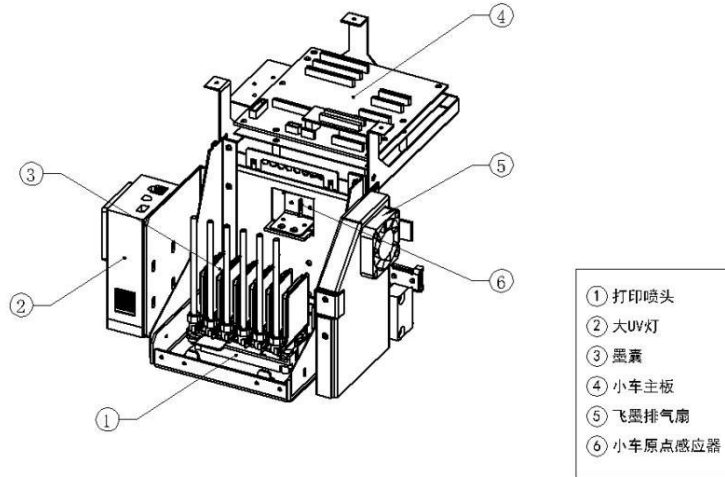
## 2.4 Panel board View

产品按键显示板图解



- ① Bridge up button: Raise the bridge.
- ② Bridge down button: Down the bridge.
- ③ Carriage left button: Make the carriage move to the left side.
- ④ Carriage right button: Make the carriage move to the right side.
- ⑤ Platform front button: Make the platform move to the front side.
- ⑥ Platform back button: Make the platform move to the back side.
- ⑦ Machine control panel: Show the machine parameter.
- ⑧ Test hot key button: Nozzle test.
- ⑨ Clean hot key button: Automatic cleaning.
- ⑩ Print pause button: Pause the printing job.
- ⑪ Set up Exit button: Exit the menu.
- ⑫ Set up enter button: Menu set up enter.

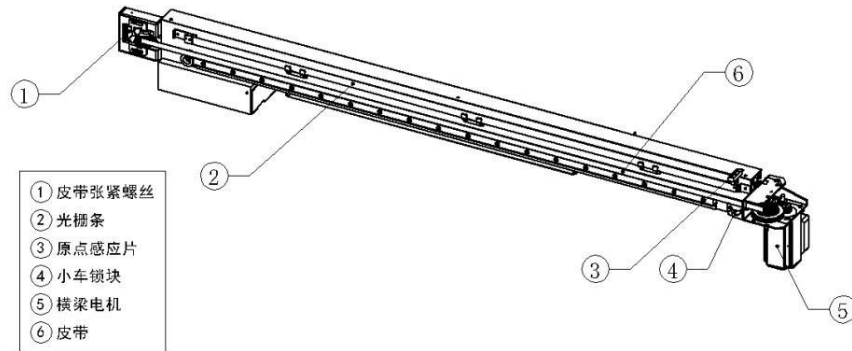
## 2.5 Cart View



- ① Print head: Output the ink, head condition directly affect printing quality
- ② Big UV lamp: Dry the white and color ink
- ③ Damper: Guarantee the continuous supply of ink and filter impurities
- ④ Machine connection, data transmission and ink jet system
- ⑤ Ink exhaust fan: Exclude the flying ink during printing
- ⑥ Carriage original position sensor: Carriage right limit

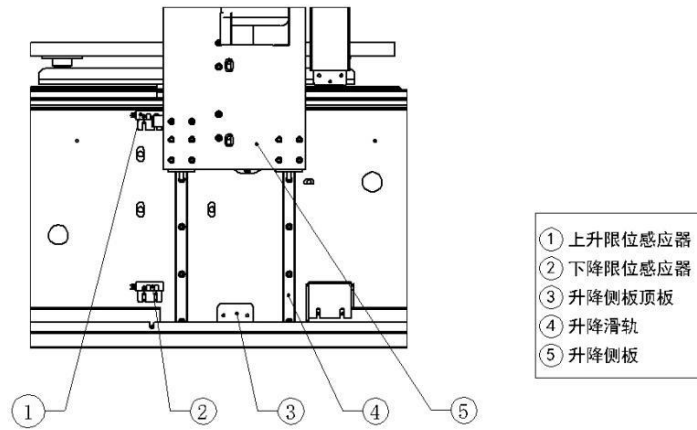


## 2.6 Carriage Beam View



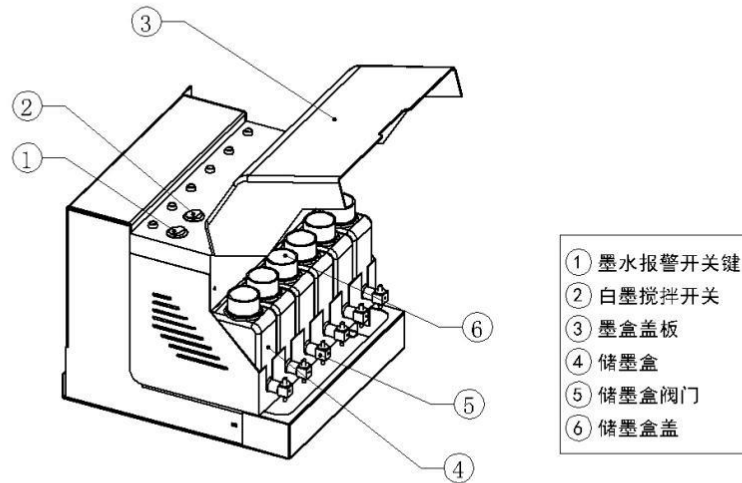
- ① Belt tension screw: Adjust screw tension can tension the belt
- ② Encoder strip: Provide accurate printing size for machine
- ③ Original position sheet: An sheet of original sensor
- ④ Carriage lock sheet: Shut down or during transportation lock the carriage
- ⑤ Bridge motor: Control printing carriage to move
- ⑥ Belt: Bridge motor belt

## 2.7 Machine Right Side View



- ① UP limit sensor: Machine bridge up maximum
- ② Down limit sensor: Machine bridge down maximum
- ③ Up and down siding roof metal sheet: Use roof sheet metal to avoid the bridge move down to the limit when the down limit sensor is broken
- ④ Up and down slide: Up or down the track
- ⑤ Up and down siding: Up or down metal sheet

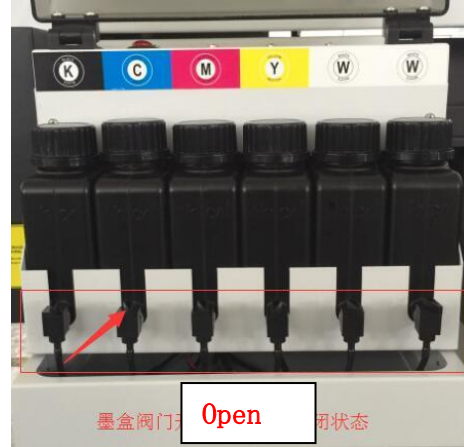
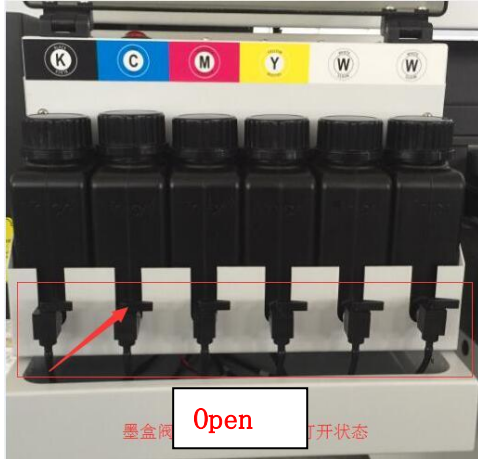
## 2.8 Ink Tank View



- ① Low ink alarming button: When the ink is low, the light will shine to warn customer to add the ink
- ② White ink stirring button: To stir the white ink to let it smoothly flow
- ③ Ink tank cap: Protect the ink tank
- ④ Ink bottle: To stock ink
- ⑤ Ink bottle valve: Control ink flow or not
- ⑥ Ink bottle cap: The cap of ink bottle

### 3. Fill ink into the ink tank

According the picture instruction below, add the corresponding ink to ink tank by the indication of the color mark. The ink tank switch is open horizontally and closed vertically.



When adding ink, in order to prevent the ink from leaking out of the machine cover, protective measures are required: The ink tank mouth can be wrapped with the tissues. After finishing adding the ink, ink tank should not be tightened to help ink flows smoothly.

Firstly click “manual pump” on the control panel as bellow.



Press “Right” into the Maintenance page



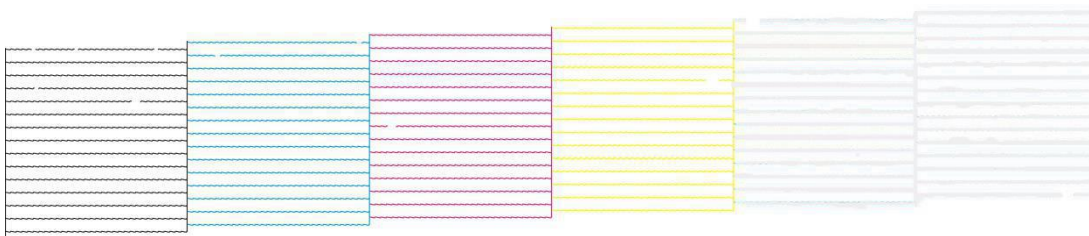
Find Manual Pump, then press Enter

After click “Enter”, machine will start to suck the ink, check whether there is ink flowing into the waste ink tank. If yes, the ink supply system is not blocked. As bellow:

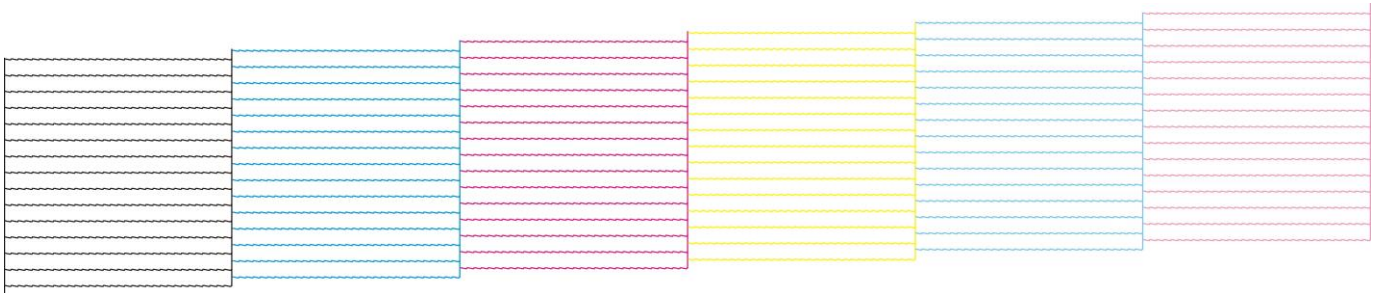


Check whether the inks flows into the waste ink tank from two black ink tubes, if yes, then click “Exit” to cancel “manual pump” process.

Secondly, click “clean”, thirdly, click “Test” to print a nozzle check picture. If there is a lack of the lines, continue to click “clean” to clean the head. Once the nozzle check picture is good enough, then the ink installation process is complete.



Nozzle check: a lack of the lines, machine need to continually clean automatically



Nozzle check : lines are ok.

Machine is in standby mode, next step is to install the software.

## 4. Photoprint Software Installation

### 4.1 Photoprint Software Installation

Insert the standard PHOTOPRINT software CD

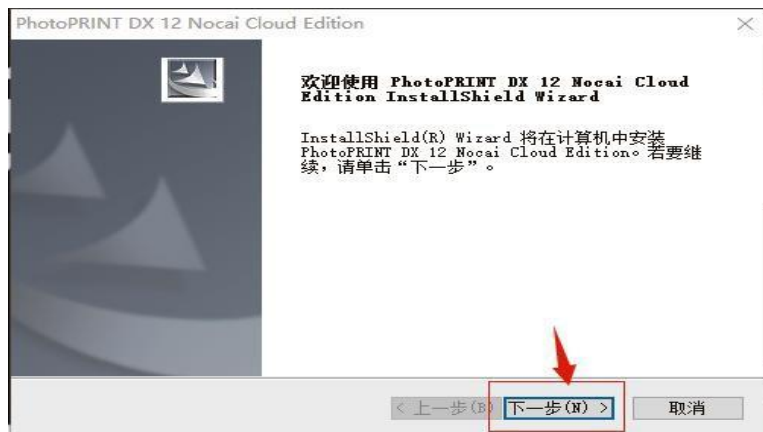


4.1.1 Find the “DVD driver” icon, then double click the icon to open it, then copy all the documents from the CD to the computer, then run the program “Autorun.exe”.

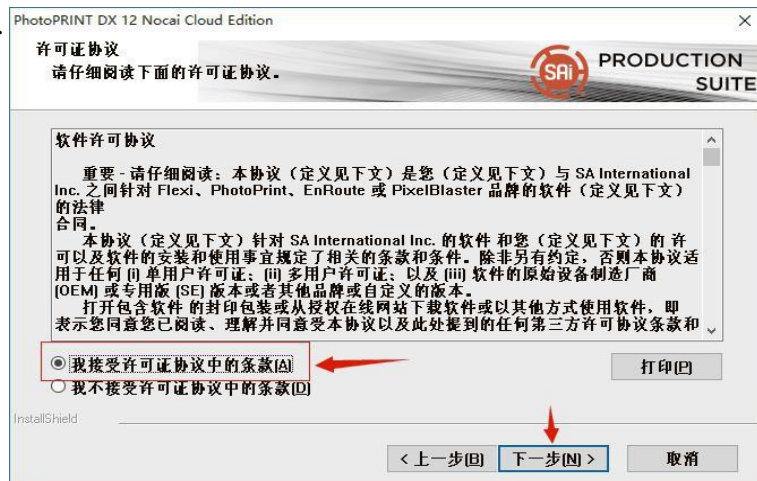
4.1.2 There is a pop-up dialog box, there choose the language that you want for your software



4.1.3 Click “Next” to continue the installation



4.1.4 Accept the clause and click “next”.





4.1.5 Select the disk where you want to install the software, then proceed to the “next” .



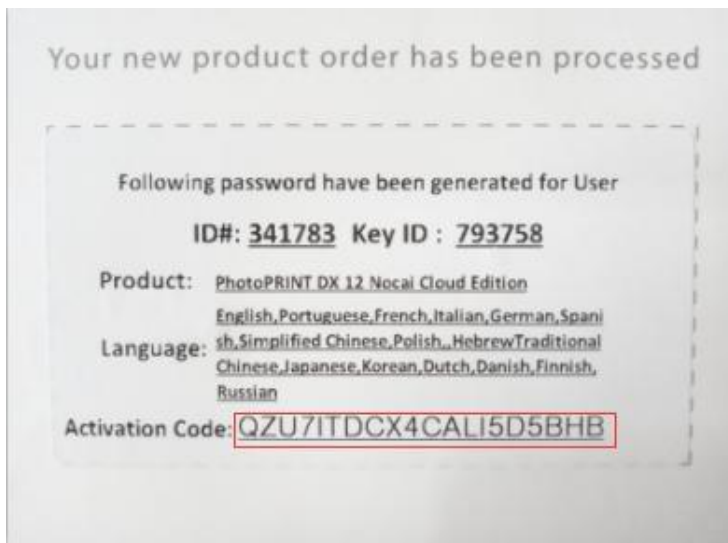
4.1.6 Choose the main programs that are needed to be installed and proceed to the “next” .



4.1.7 There is a pop-up dialog box, then proceed to the “next” .



4.1.8 During the installation, the bellow dialog box will pop up, input the Activation code in it. The Activation code will be found on the back of the software disc box.



After inputting the Activation code, proceed to the “next”

4.1.9 Then Another dialog box will pop up, as bellow:



In this step, please kindly enter the prompt website to activate first.

4.1.10 Enter the link: <https://www.saicloud.com/>





Exit the linked website, return back to the dialog box, proceed to the “next” step according the instruction. ( Note: These steps will be available for the first time activation.

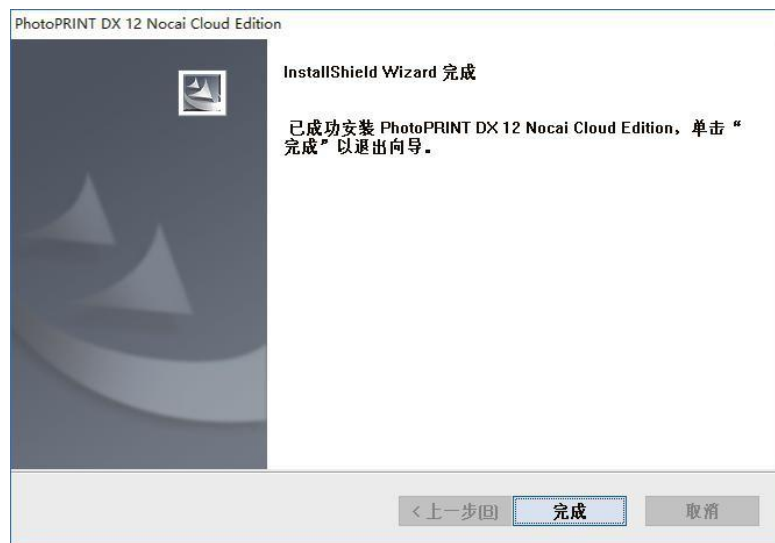
4.1.11 If there is no more instructions, it is the page of “Authorization success”.



4.1.12 Click “Finish”, it will be prompted: the security key is required. Please insert the U disk inside the CD box to the computer, and the computer will read automatically.



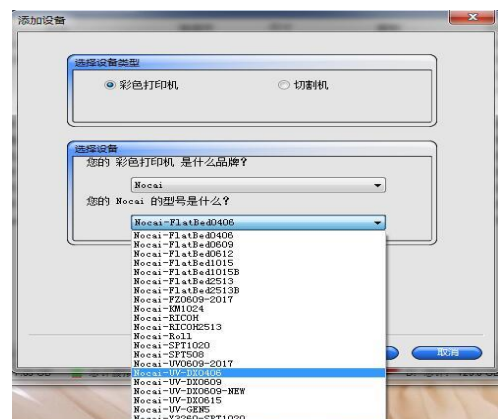
The pop-up dialog shows that the installation is complete.



4.1.13 There are two icons on the desktop and double click “pp” icon to open the software.



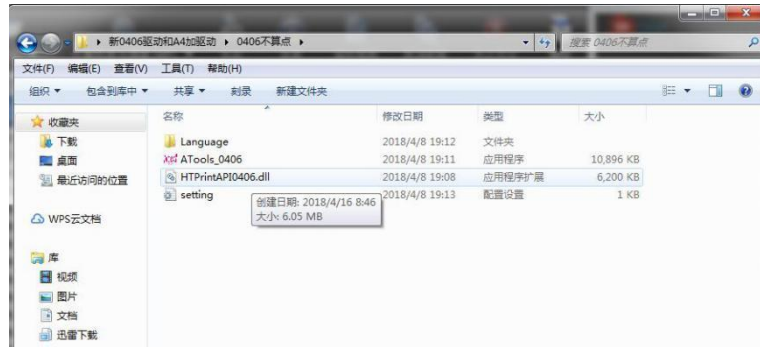
4.1.14 Double click “pp” icon to open the software, there is a tip, brand is “Nocai”. The model of this machine in phohoprint should choose “Nocai-UV-DX0406”, then “Next”, then “finish”.



4.1.15 The installation complete after all the above steps.

## 4.2 Photoprint connection setup

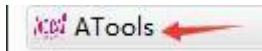
4.2.1 Close the Photoprint software after installation, then copy the “HTPrintAPI0406” file into the photoprint file, as below shows.



Open the Photoprint sign by mouse right button, choose “Properties” item to open it, then “Open file location”.



Then paste the HTPrintAPI0406 into the photoprint file, replace the old HTP file.



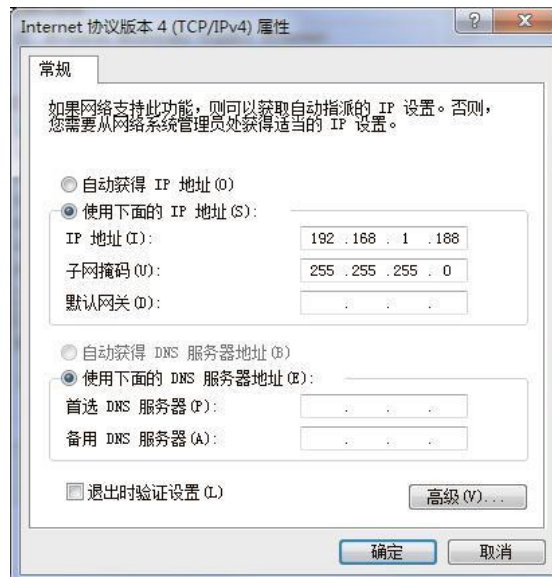
#### P Atool driver installation

##### 4.2.1 Set up the IP of the machine to connect the printer.

Open the “Network and Sharing center” page and find the local connection, open the local connection and open the “Properties”, open the “Internet Protocol Version 4(TCP/IPv4).



Then set up the IP address as “192.168.1.188”, the subnet mask:255.255.255.0 will show accordingly. Then press OK to exit.



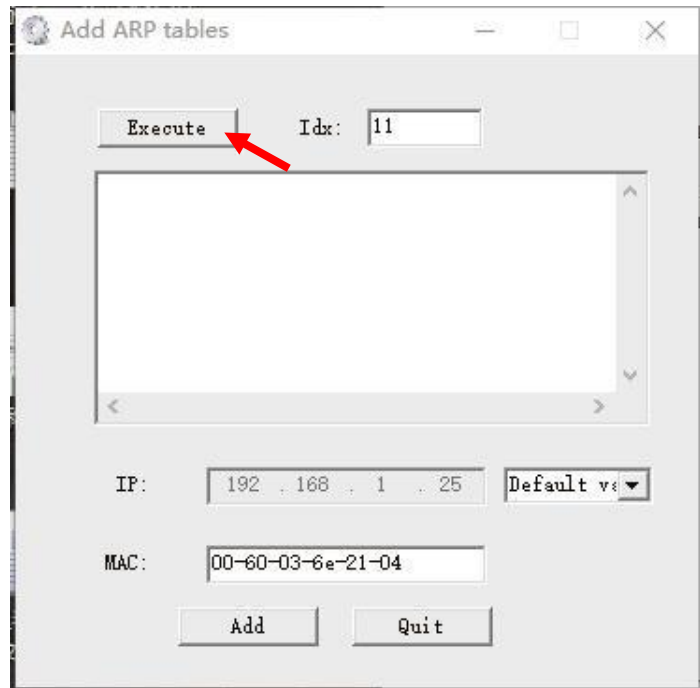
#### 4.2.3 Use Add software to help the P Atool connection.

Find the “Add ARP Table V1.0NU-20141206” in the Driver CD, and open it, “Run as administrator”. Then enter the next page.

	Add ARP Table V1.0NU-20141206	2016/7/12 17:02	应用程序	236 KB
	Add ARP Table工具说明	2016/10/29 17:15	文本文档	1 KB

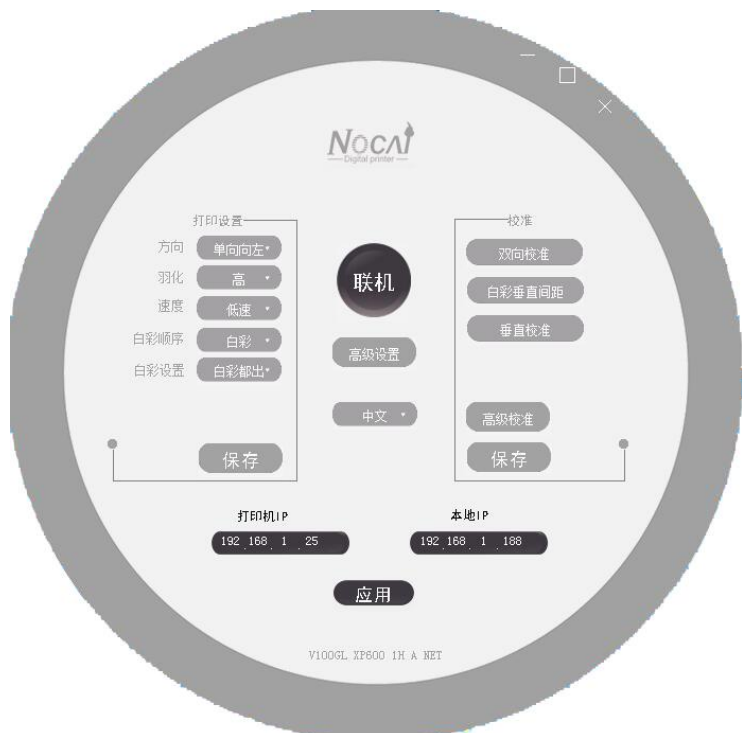
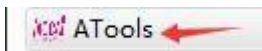
Press “Execute” and find the Idx number for the printer local connection, and enter this number into the Idx item in the software.

Then press “Add”, then “Exit”.



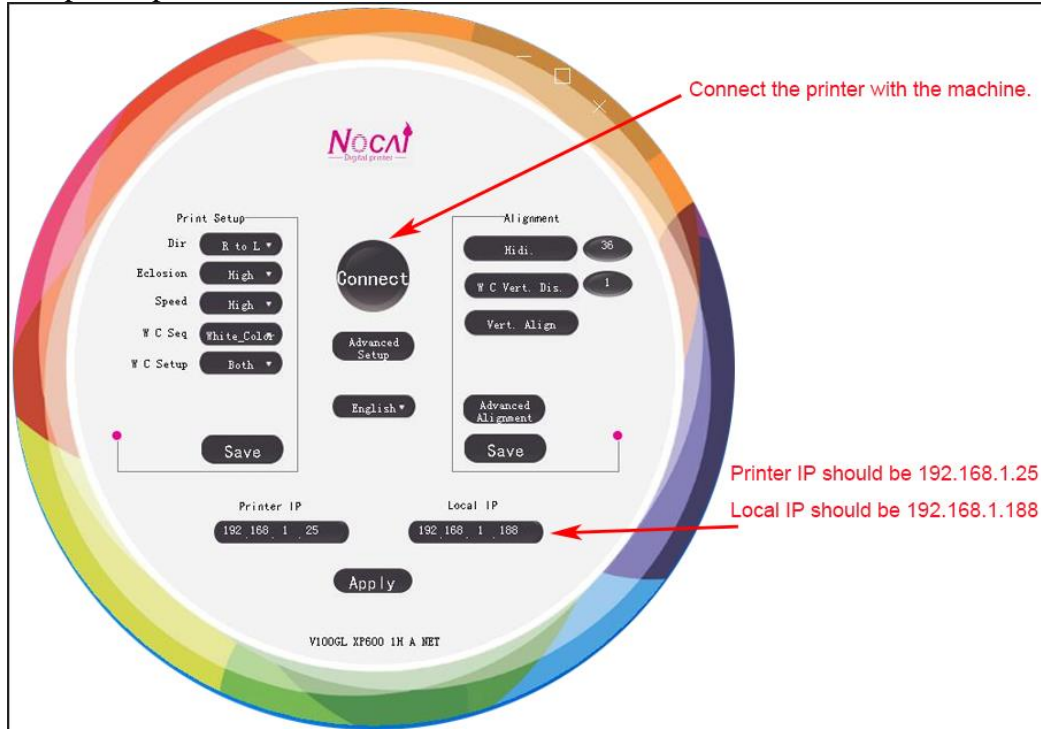
### 4.3 P Atool driver installation and setup

Connect the computer and printer by network cable which we offer, and open the Nuocai driver CD, the open the P Atools, it'll show the below page.



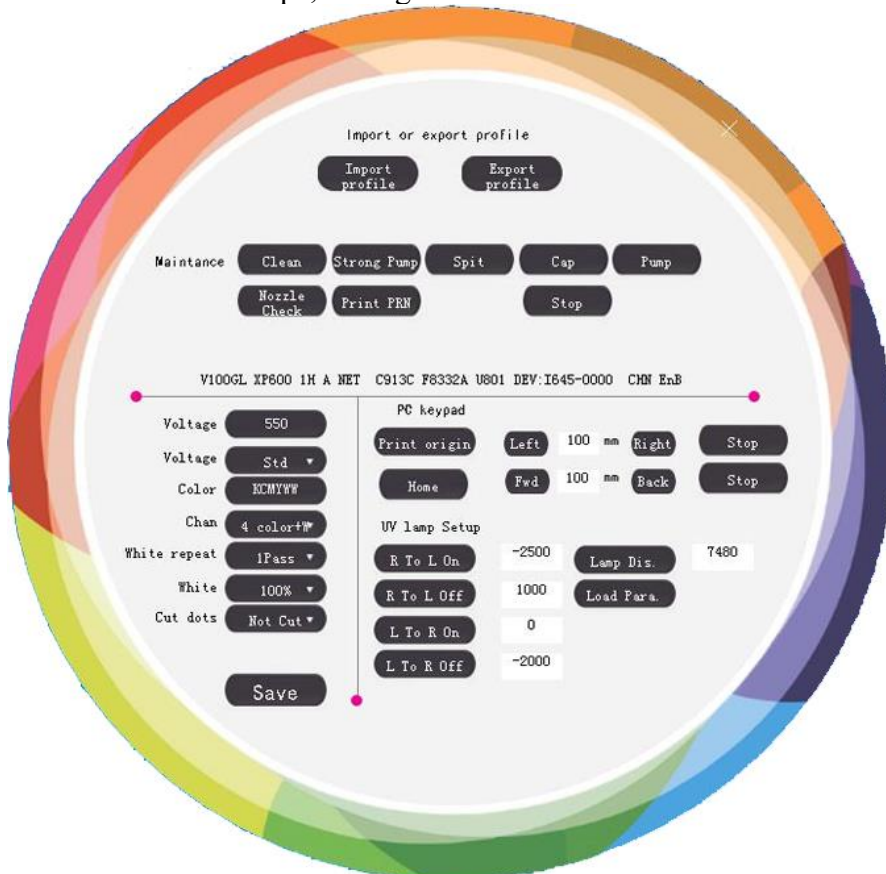


Setup the printer and local IP. Printer IP is 192.168.1.25, local IP is 192.168.1.188.



If both IP are not correct, please press “apply” to adjust it. Then press “Connect” to connect the computer.

Enter “advanced setup”, setting as below:



Enter “advanced Alignment” page, and enter the step align number into the below item, for all the close, low, mid, high Eclosion version, “2020” is the average number.(Please kindly note that there has the stepping number printed on the paper which we put on the plate table, please enter the number accordingly).

Step Alignment

Eclosion **Close**

	Modulus	Distance	
2PASS	2020	mm	Calc.
3PASS	2020	mm	Calc.
4PASS	2020	mm	Calc.
6PASS	2020	mm	Calc.
8Pass	2020	mm	Calc.

**Save**

1. Measure distance between two Cross and write into <Distance>
2. Hit <Calc.> to update, distance equal to 101.6mm is best
3. To reduce the calibration coefficients When Overlapping, Otherwise increase

---

**Left align** **Right align**

Ch5	0	Ch4	0	Ch5	0	Ch4	0
Ch3	0	Ch2	0	Ch3	0	Ch2	0
Ch1	0	Ch0	0	Ch1	0	Ch0	0

**Save**

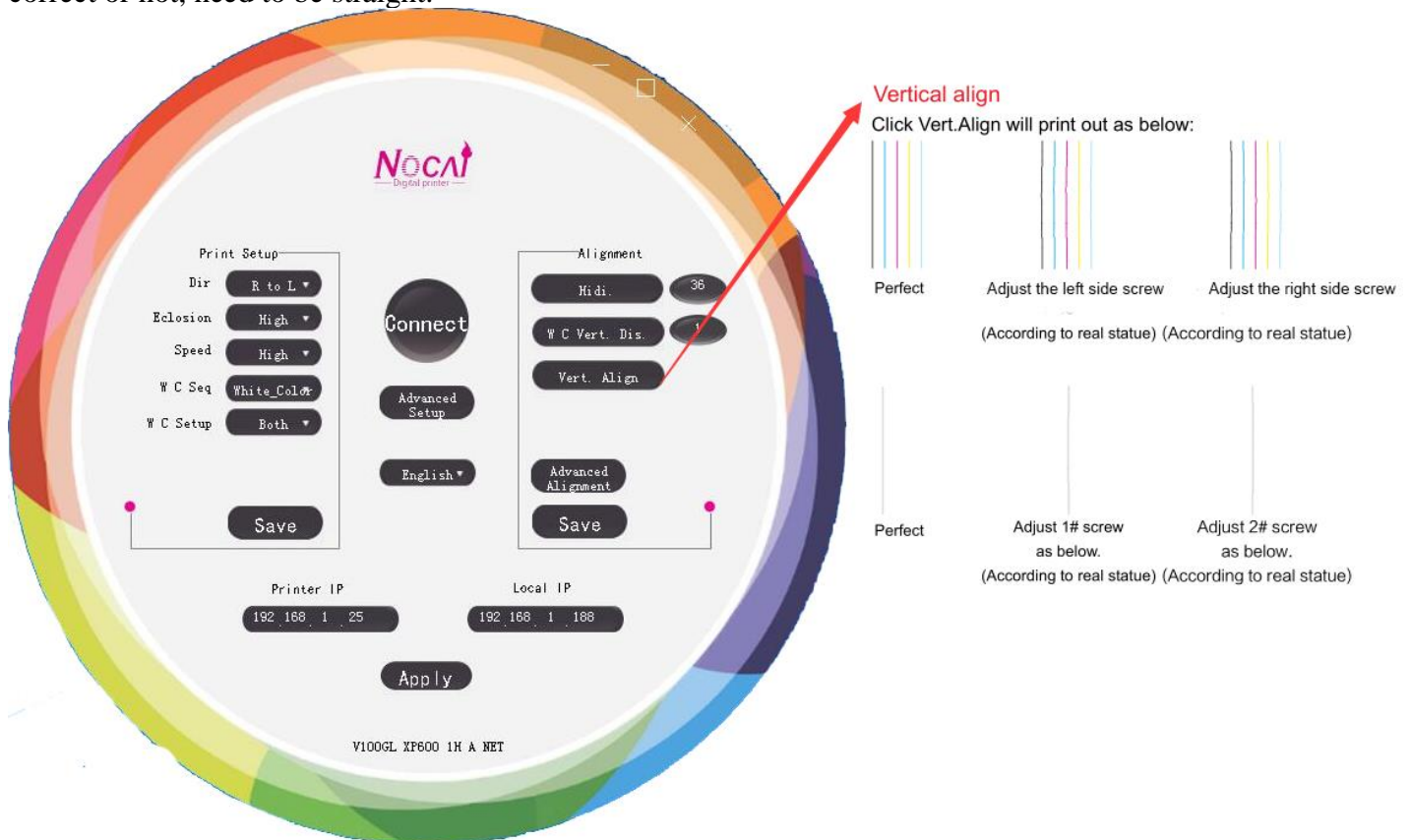


## 4.4 Print setting:

1. Dir: There are three options of the printing direction, R to L & L to R are one way printing, with better quality, yet slow printing speed; Bidi direction is with double printing speed, yet lower printing quality. And when use the Bidi direction printing version, need to do the Hidi alignment for each different print height.
2. Eclosion: the version how to print the ink(we suggest to use high or mid version, better high), can test to see the printing quality in different version.
3. Speed: Print head printing speed, high and low, we suggest using high speed.
4. W C seq: Set print white ink first or color ink first. Normally, white\_colour, however, when need to print reverse, then choose colour\_white, like when print on glass or acrylic which might need to print on the back side and see from the front side.
5. W C set up: Choose to print Both(Both white & color ink), Only color, Only White.

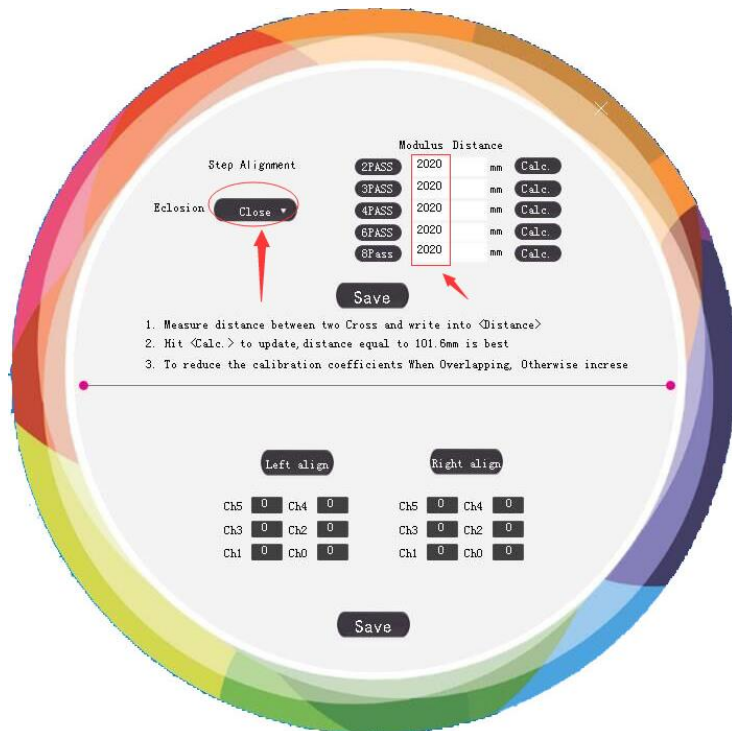
## 5 Print alignment

5.1 For the alignment of the printer, need to do the vertical alignment first and see if the print head installed correct or not, need to be straight.

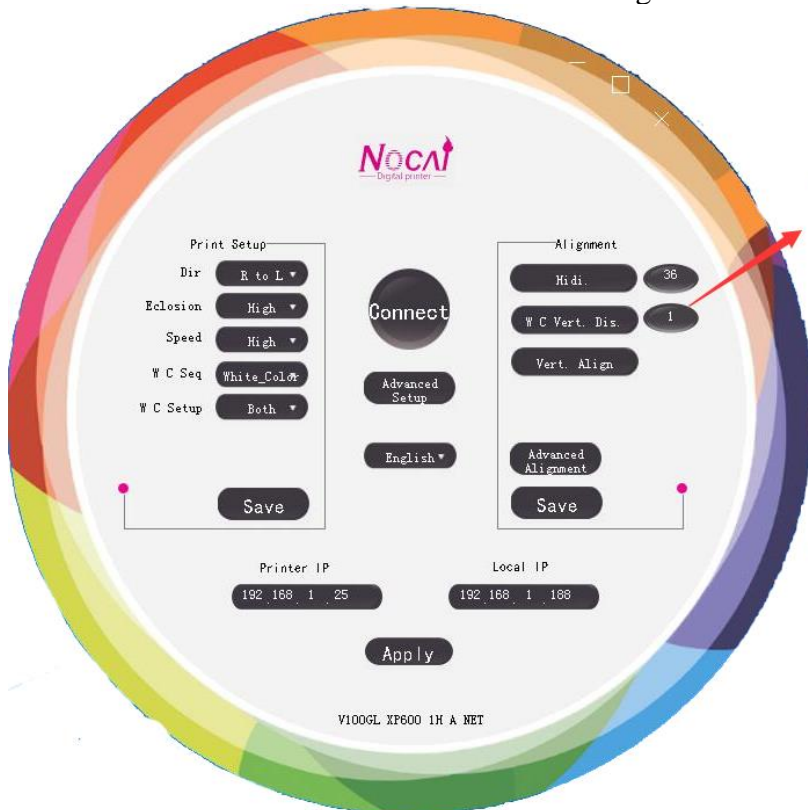


## 5.2 Step Align: Adjust the Y axis direction print size.

Usually, we'll adjust before shipping the printer out and will print the Step align number on the paper which put on the printer plate, just click the driver “Advanced Alignment”, Then enter this page. Then on the basis of enclosion “close” “low” “middle” “high”, separately input the number what we print on the paper of machine print table.



## 5.3 W C Vert. Dis. : Do the white & color ink alignment on vertical direction. 1mm equals 3.



White & Color vertical direction alignment:

Show as below:



Show as below:

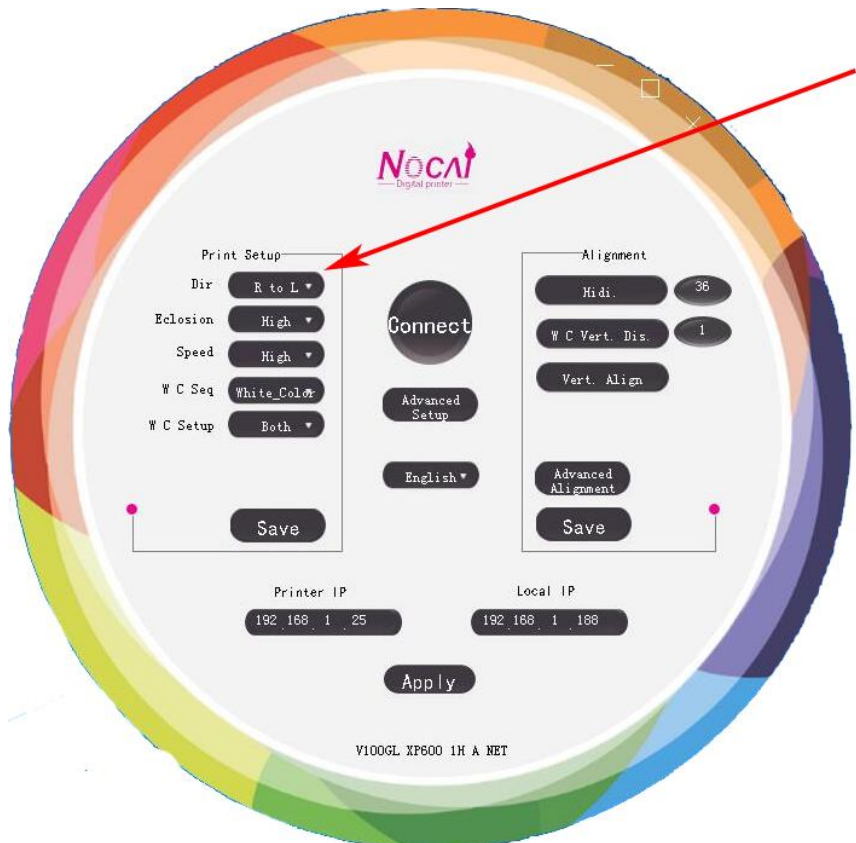


Should add the value till print in straight from horizontal direction.



Should subtract the value till print in straight from horizontal direction.

5.4 Hidi alignment: Do this Hidi alignment when use the Bidi. For each different print height, need to do the Hidi alignment when choose to print Hidi direction version.



Choose "Bidi" here.

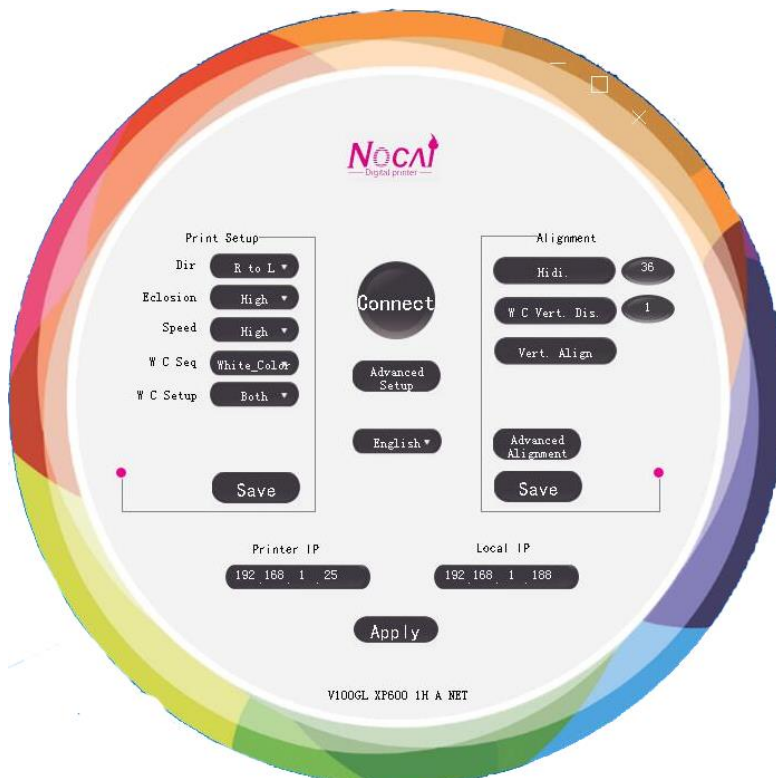
Check and find "+2" is the most straight. Add 2 of the value in box.

Check and find "-3" is the most straight. Subtract 3 of the value in box.

Standard as below:

acceptable Unacceptable

## 5.5 Alignment instruction:



### Attention

After the printer installation need to do the alignments to make sure the correct printing before the production printing.

Or when change the print head, also need to do the alignments

1. Vertical align: To make sure the print head installed straight;
2. W C Vert. Dis.: Align the white and color ink on vertical direction;
3. Step align: No need to test, we've tested before shipping the machine and printed the step align number on the plate stale paper, just need to enter in.
4. Hidi align: When need to print with "Bidi" version, set up the print height then do the Hidi alignment. Each different print height will need to its Hidi alignment.

## 6 Photoprint setup:

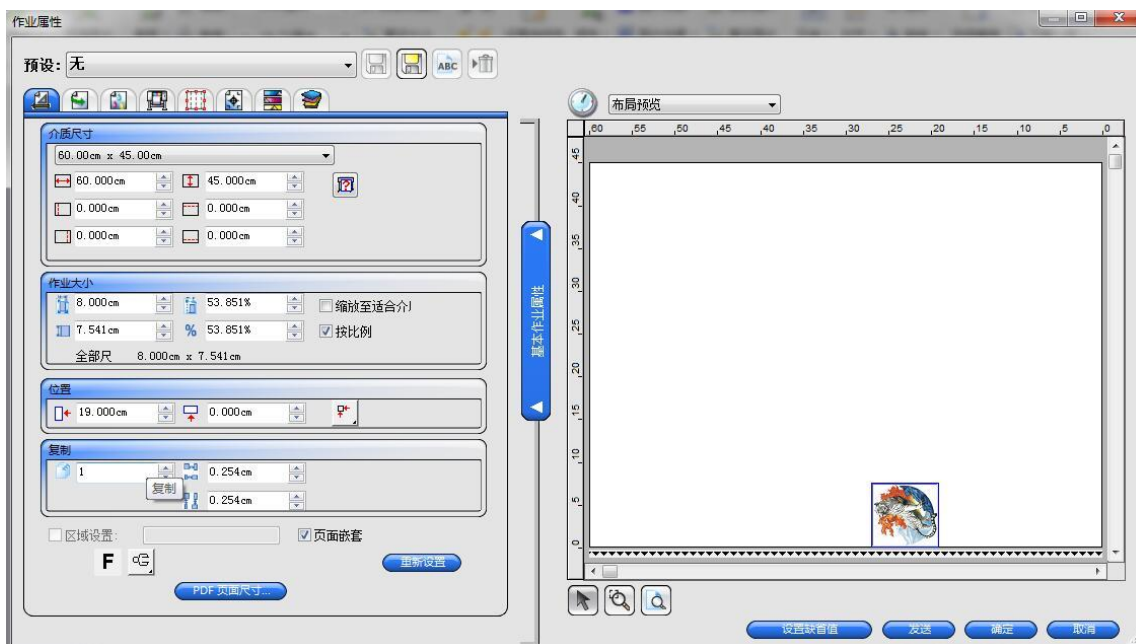


1. Job: Choose the file that need to print;
2. Send: Send the file to the printer for printing;
3. Abort: Stop the printing job;
4. Delete: Delete the file in the photoprint page;



Double click the imported picture then you can do some set up, interface picture is as follows

1. Media size: Print size of the machine;





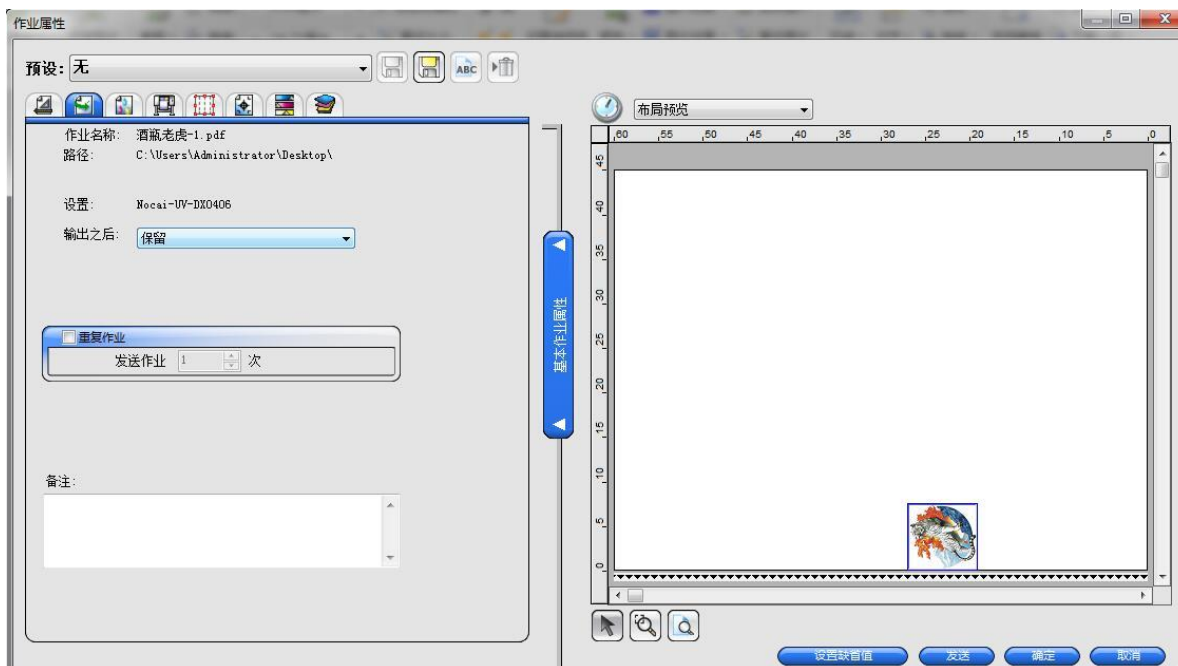
2. Job size: Size of the printing file;

3. Position: The position to the start printing point on the plate table;

4. Copies: Choose how many file wanna repeat and the distance between each file;

File setup: “F” to choose reverse printing or normal printing. Humanoid icons use to choose the direction of the printing file.

## Printing job panel(Hold:Save object and settings;Delete:Delete

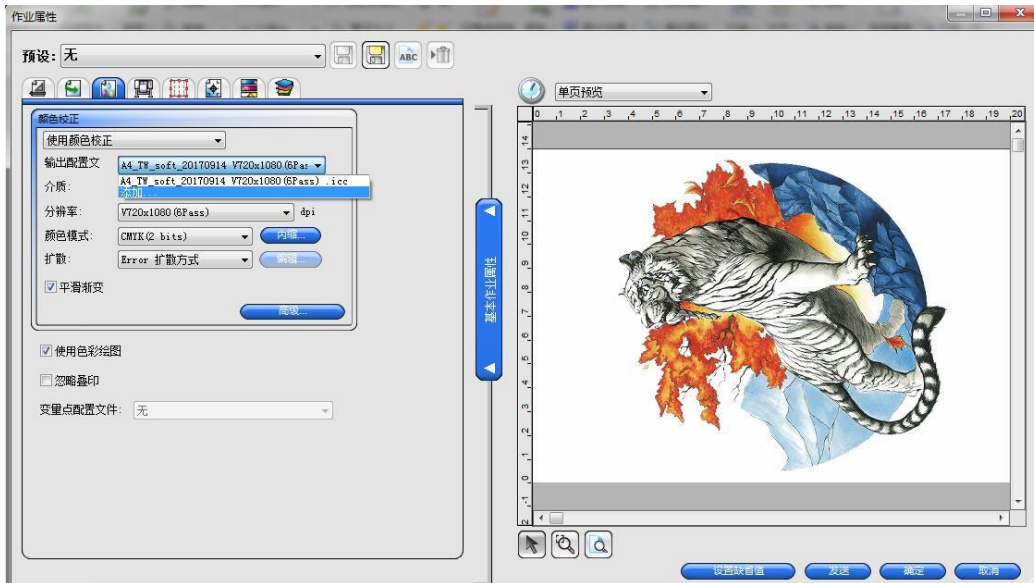


## object after printing;Repeat Object:Print photo repeatedly)

1. After output: Can use to save the file to save all the setup for next printing or delete the file after printing;

2.Repeat job: Set up how many times of this printing wanna repeat. Like if you choose 2, after the first printing, then the machine will start again to print one more time.

## Color Manangement



1. Output file: Choose the correct ICC profile which we offer in the driver CD, then the below items will show accordingly;
2. Ignore overprint: When choose to print spot color version, don't choose this item.

## Printer options:

Inside the options, option 1 and option 2 click default, option 3 and option 4 drop down options:

**None** means print only color without white

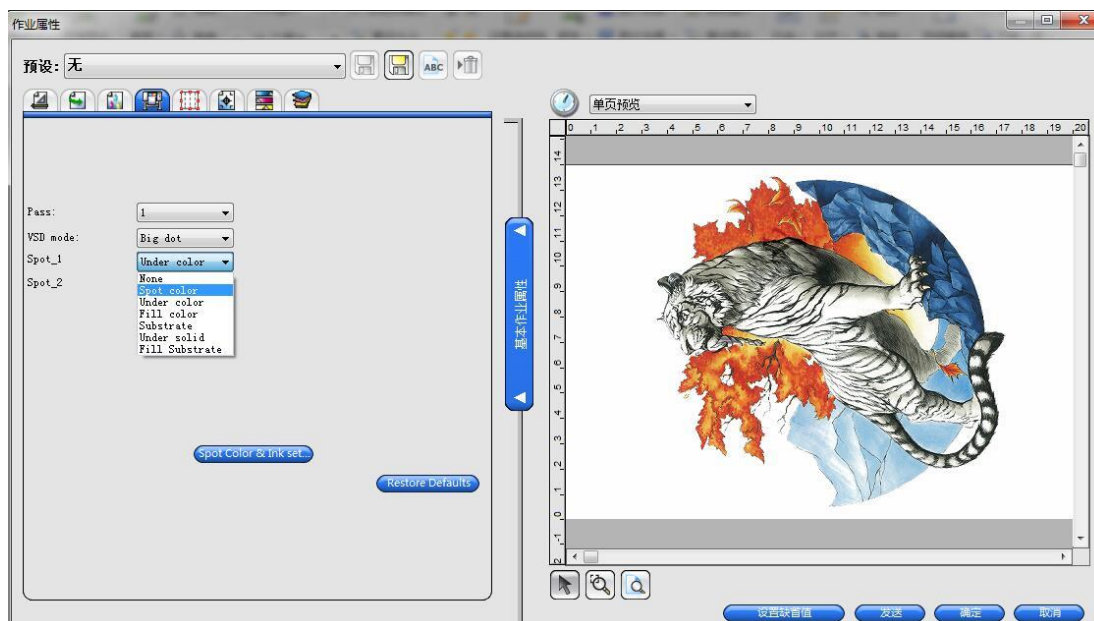
**Spot color** means print white ink in some special parts not the whole file (More detail please check teaching video inside the Nocai CD)

**Under color** means the Photoprint will adjust the white ink volume according to the picture's darkness and lightness, darker part more white ink, lighter parts, less white ink

**Fill color** is the opposite of Under color, darker part less white ink, lighter parts, more white ink

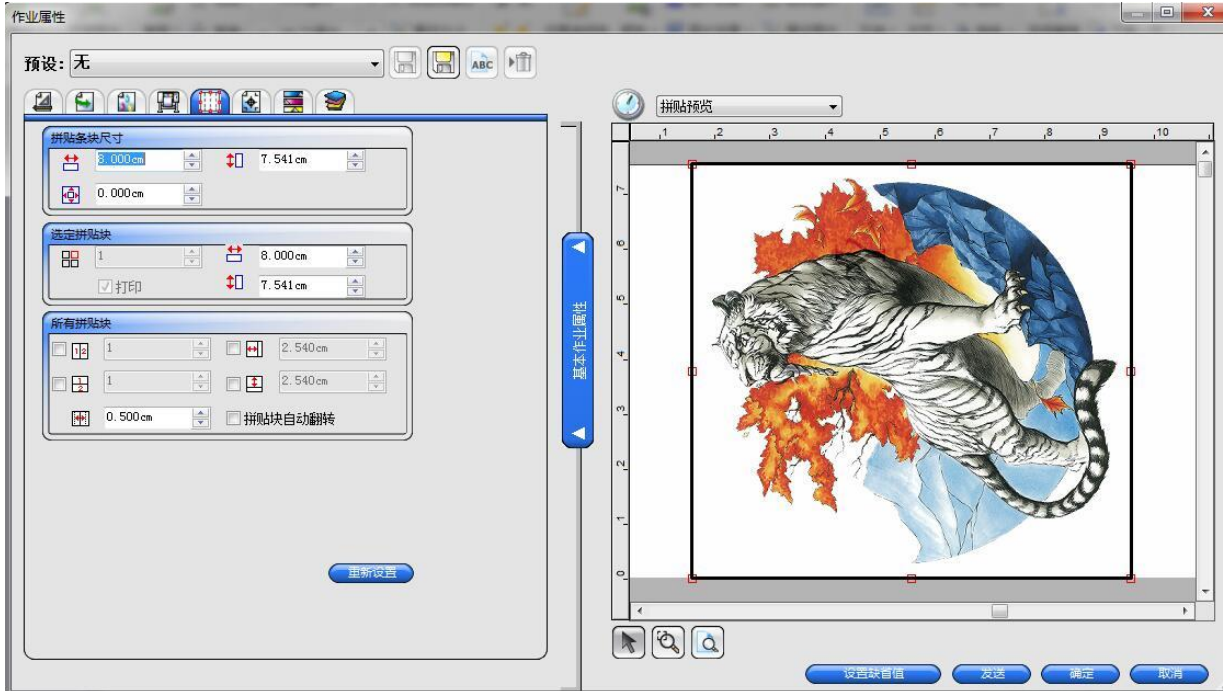
**Substrate** means print white ink on the whole format of the file

Customer should choose the options accordingly.

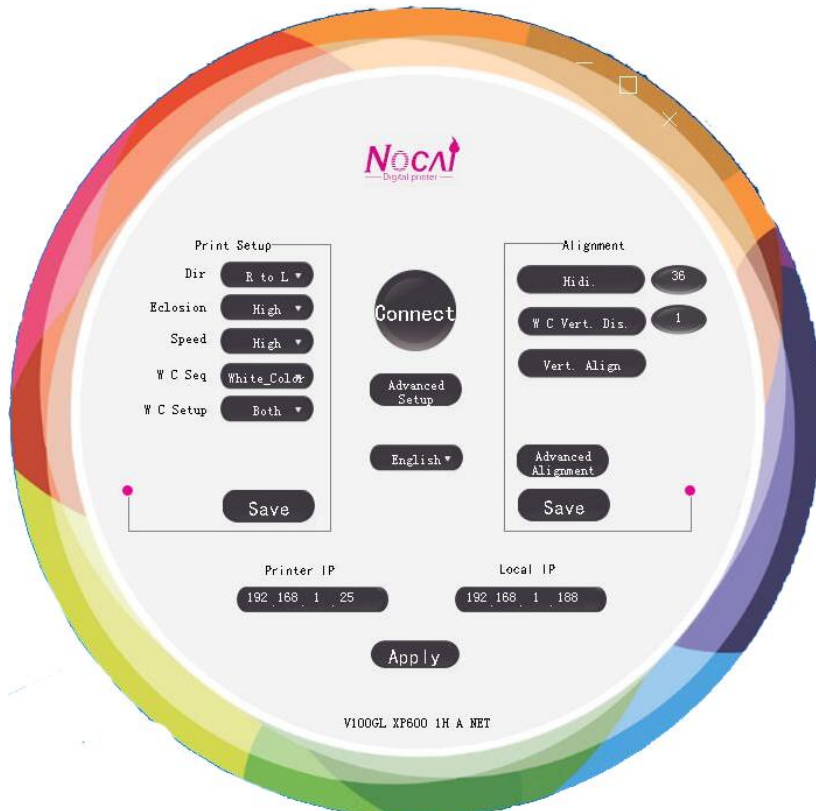


## Paste & cut option:

The picture size can be adjusted by using mouse. Click enter after setting or set up Default value save. Picture is as follows:



Then enter into driver(ATool) to set up the color accounting certain printing requirement and click save after setting. picture is as follows:



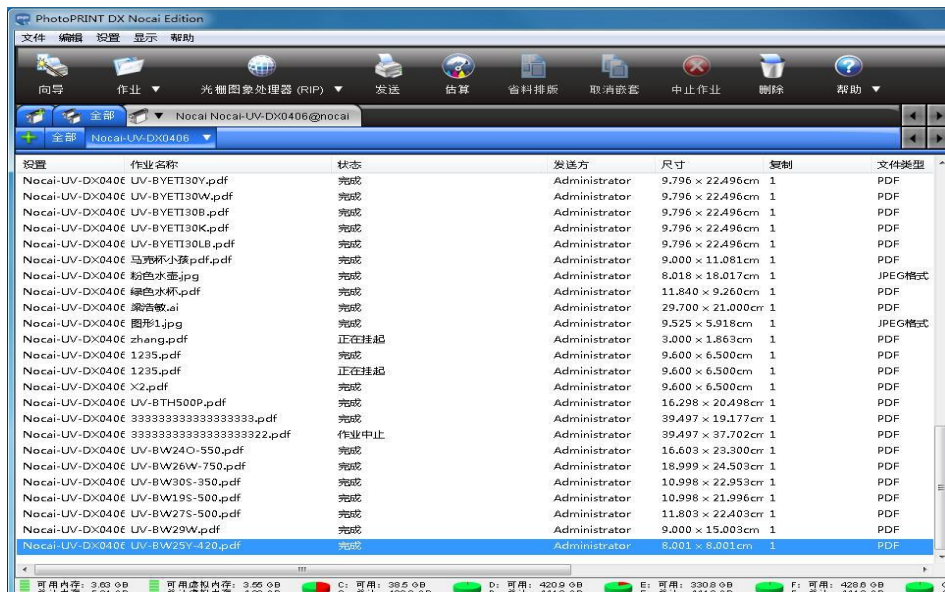
Before printing, when put the printing materials on the plate table, should adjust the print height between the print head and the printing material, 2-3mm. (Adjust by eye)



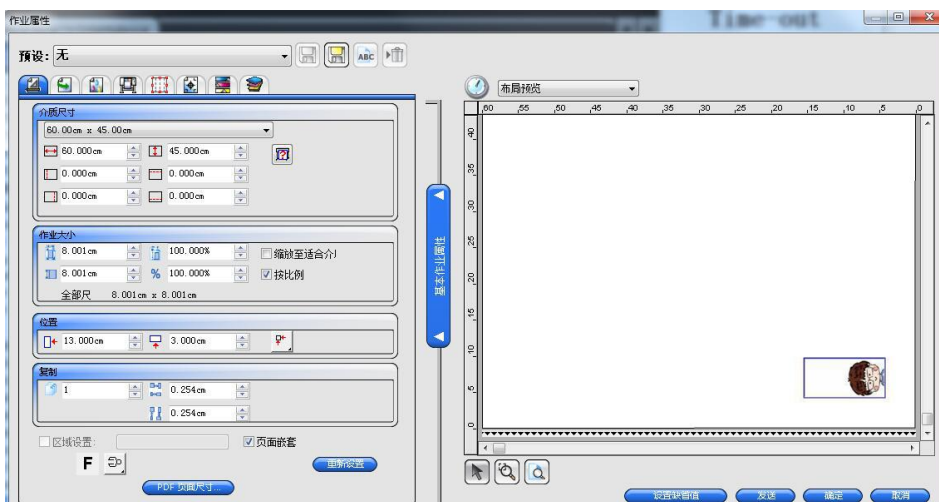
## 7.Common printing position(take phone case as an example)

1.Drag the already-done picture(with spot color) into software.Picture is as follows:

2. Double click the printing file to enter into picture set up function,for example,set up the position left forward to 13.0cm,up forward to 3.0cm.Picture is as follows:

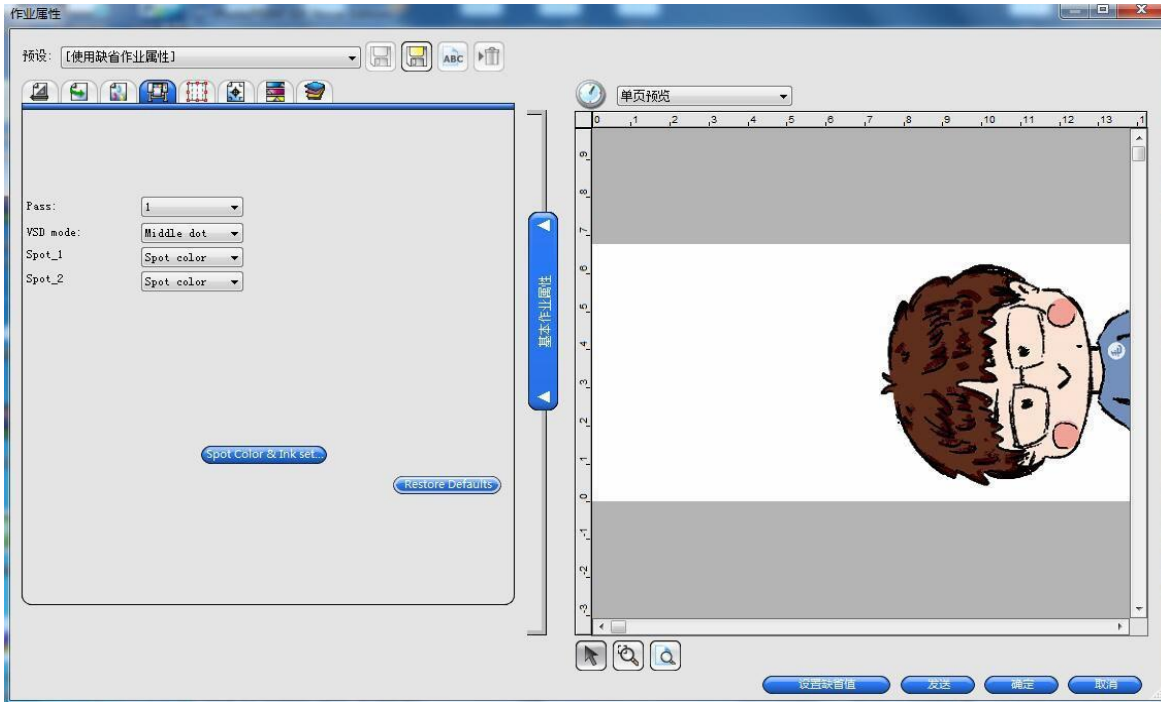


And then set up the position and the size of the file that need to print.





3. Inside the printer options, select Spot\_1 and Spot\_2 (Spot\_1 stands for white ink of the spot color, Spot\_2 stands for white ink of the spot color). Then click “Send”. Picture is as follows:



4. Before printing, when put the printing materials on the plate table, should adjust the print height between the print head and the printing material, 2-3mm. (Adjust by eye)



5. After sending, phone case can be printed directly, when it finished printing, picture is like this



## **8 .Machine maintenance:**

### **1. Print head maintenance:**

- ① There is a small board inside the print head, for which connect with the printhead cable. Please keep the connection port dry, if there's any liquid on the connection port, turn off the machine immediately and take off the cable to clean it. Or it might make the print head & print head to be burnt;
- ② The print head connects to the small board port closely, so should not disconnect and reconnect frequently. After long time using, should check if there's any damage on the print head cable end, if so, change the cable;
- ③ If don't use the machine to production, should at least print nozzle test or a small sample everyday if possible. If the nozzle test has problem, fix it. If need to leave the machine for over 3 days, put 3-5 drops of uv cleaner on the cap top and seal with the machine to keep it moisture.
- ④ Should fill less inks into the ink tank each time, half ink tank is OK. Once open the ink bottle, should use up the ink within 3 months, or the ink will be expired and will effect the print quality or might block the print head. Suggest to stir the ink in the ink tank by using clean stick for every few days(one week). Open the white ink stirrer when printing.
- ⑤ The print height between the print head and the printing material should be 2-3mm, must check the print height before printing every-time to avoid the crash of the print head.
- ⑥ Clean the cart for every few days in case too much waste inks there.
- ⑦ Don't print the reflective materials, or it'll make the print head to be blocked.

**2. Capping system maintenance:** There will have the ink drops after print head cleaning, need to clean the waste ink once it happens by using alcohol.

**3. Encoder strip maintenance:** The encoder strip is use to guide the movement of the cart, if the encoder strip has scratches on it or out of the bars, the encoder strip sensor might not be able to read the encoder strip, then it'll effect the movement of the cart. So, need to check the encoder strip every few days(one week), to see if the it is inside the bars and in the middle of the encoder strip sensor, if there's any scratches and dust on it. Can use the alcohol to clean the dust. If the encoder strip has problem, replace it.

**4. Guideline maintenance:** There has the cart guideline and the plate table guidelines, there are lubricating oil on the guidelines and sliders, need to fill the oil on them after long time to avoid the corrosion and oxidation. If there are too much dust and dirty, then clean by alcohol first, then fill the oil.

**5. Damper:** Suggest to change for every 3 months.

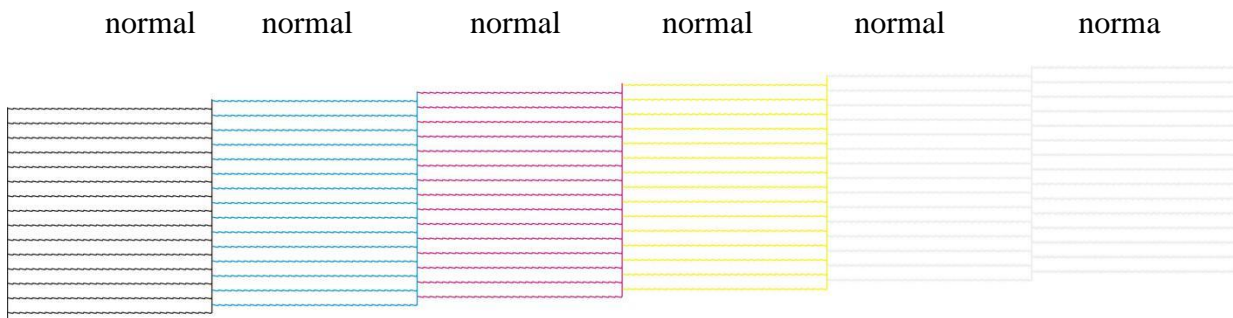
**1. Cap top:** Suggest to change for every 3 months.

2. Outer side cover maintenance: Keep the cover clean and clean the dust or waste ink by alcohol on time to avoid the corrosion

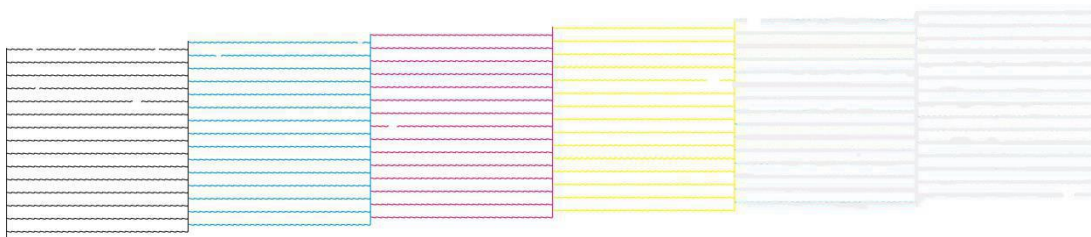
## 9. Solution:

### 9.1: Nozzle test issue:

#### (1). Normal nozzle test

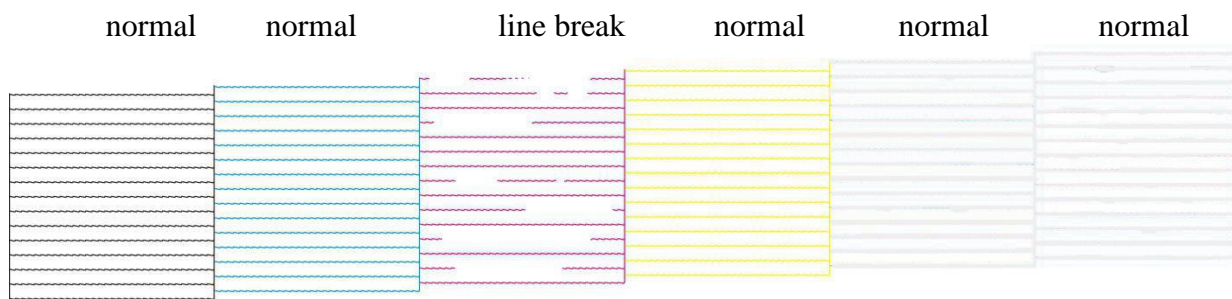


#### (2). Some lines break



Mark: There's a little bit lines break on the nozzle test, it caused by the print head corrosion, try to use the "clean nozzle" to fix it.

#### (3). Badly line break



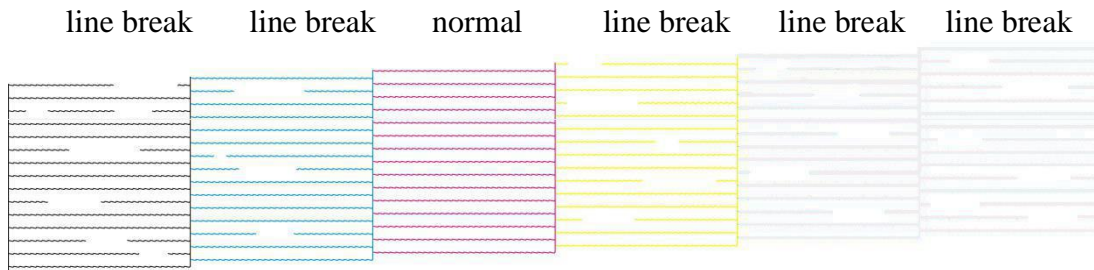
#### Solution:

1. Suck the damper by using syringe to see if the ink come out normally and check if the damper has problem or not, if so, replace the damper;
2. After replacing damper, then check again, if their problem still is, check the if the ink tube is blocked or not;

3. Clean the print head by using syringe with uv cleaner to make sure the nozzle holes are not blocked.

**Mark:** The problem is usually caused by damper and nozzle hole blocking.

**(4) Line break on almost all the nozzle holes**

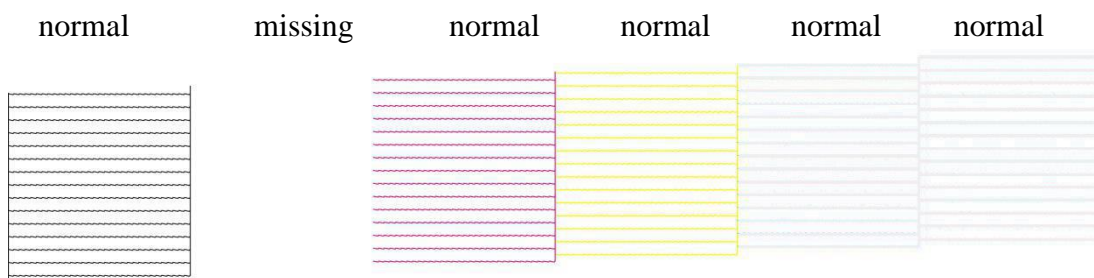


**Solution:**

1. Use the clean function to check if there's ink and bubbles come into the waste ink bottle. If no inks or has bubbles into the waste ink bottle, then try to adjust the print head and cap top position.
2. After cleaning, check if there's any ink remains on the print head surface. If there's only single color ink, then replace its damper; if there has several colors ink remain on it, then check if the wiper can wipe the print head after cleaning or not.
3. Use the syringe with uv cleaner to clean the nozzle channels to see if the channels are blocked or not.

**Mark:** This problem mainly caused by the wrong position of the print head and the cap top, the cap top doesn't seal with the print head well.

**(5) Whole color channel missing**

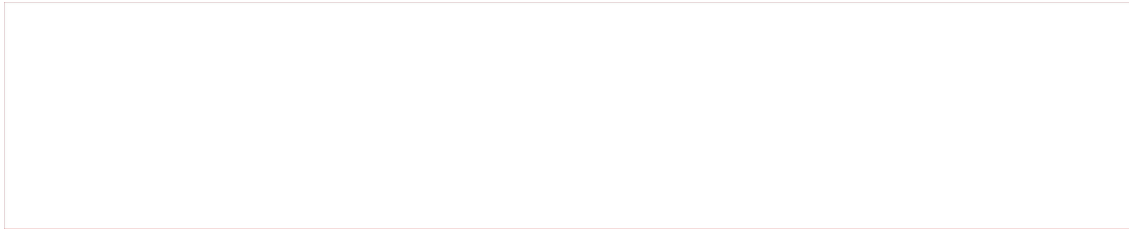


**Solution:**

1. Disconnect and reconnect the print head cable, check if the print head cable has problem or not and if the print head cable insert well or not.
2. Check if there's any ink or liquid in the cable connection port, if so, clean it and test again.
3. Replace the print head board.
4. Use the syringe to suck the damper of the color which is missing, to make sure if there's any block. And use the syringe with uv cleaner to check if this ink channel is blocked or not.



## (6) No ink at all on nozzle test

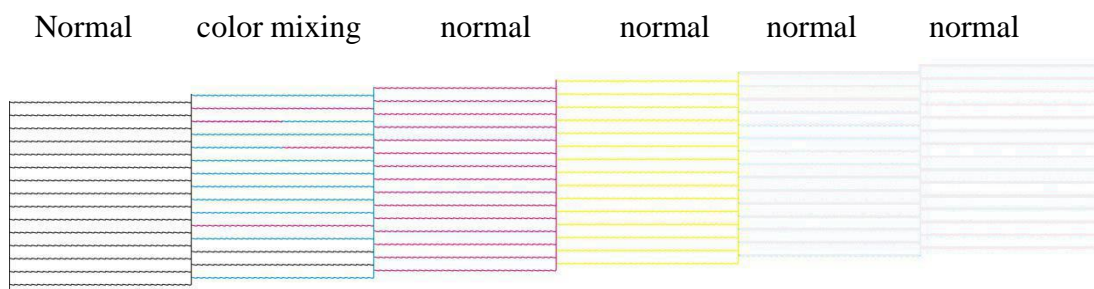


Solution:

1. Disconnect and reconnect the print head cable, check if the print head cable has problem or not and if the print head cable insert well or not.
2. Check if there's any ink or liquid in the cable connection port, if so, clean it and test again.
3. Replace the print head board.

**Mark:** This problem mainly caused by print head or print head board burnt. Since there might has liquid inside the small board of the print head. Suggest change the print head cable, print head and the print head board.

## (7) Color mixing

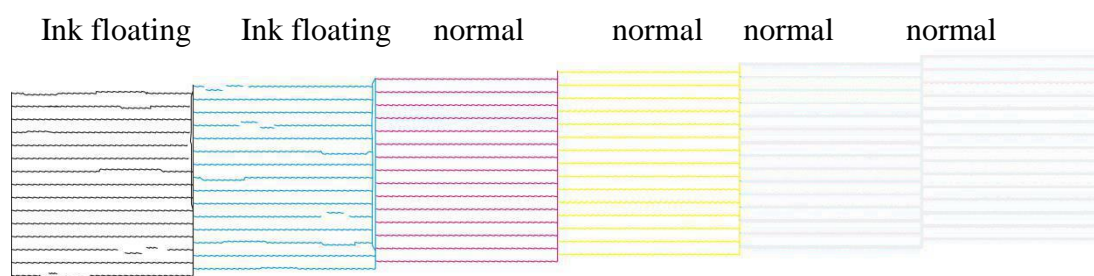


Solution:

1. Use the flush function first, then print nozzle test to see if it becomes better or not. If no, check if there's ink remain on the surface of print head. If there's only single color ink, then replace its damper; if there has several colors ink remain on it, then check if the wiper can wipe the print head after cleaning or not.
2. Replace the print head.

**Mark:** Check if there's ink remains on the surface of the print head first.

## (8) Ink floating



Solution:

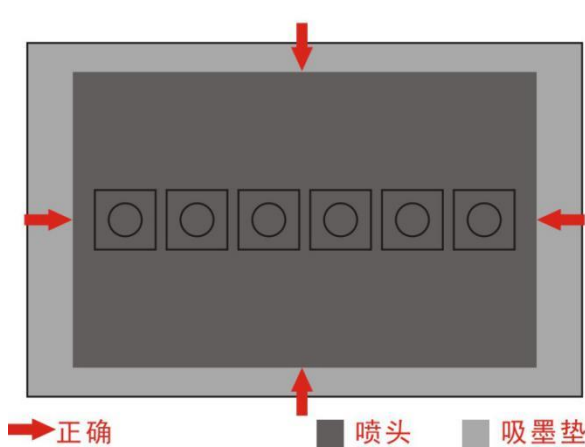
1. Check the print height between the print head and the printing material, it should be 2-3mm.
2. Check the temperature, should be 15°C to 30°C.
3. Check if the damper can suck ink correct or not.
4. Stir the ink which has the floating problem, and suck the damper of this ink out about 10ml, then clean the print head. If the problem still there, suggest to change the ink.

**Mark:** The problem is mainly caused by the precipitation of the uv ink.

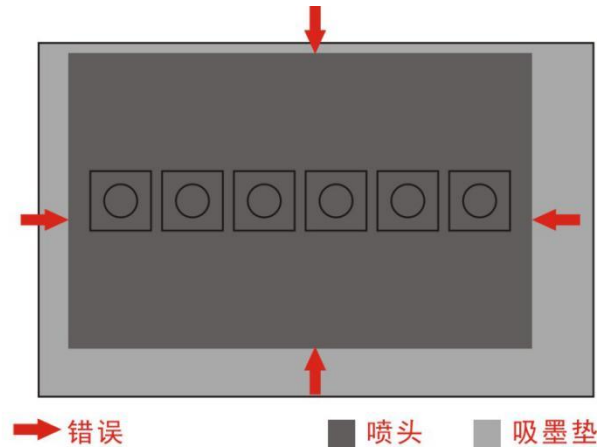
## 9.2 No ink sucking out

Solution:

1. Put some uv cleaner on the cap top, and check if the uv cleaner can be sucked out or not, if no replace the cap top.
2. If the ink tube which connect the cap top on down side connect well not or not, or it blocks or not. Replace this tube if need.
3. Replace the cap top.
4. Check if the cap top seal with the print head well or not, if no, adjust the position of the print head and the cap top( the position like below picture).



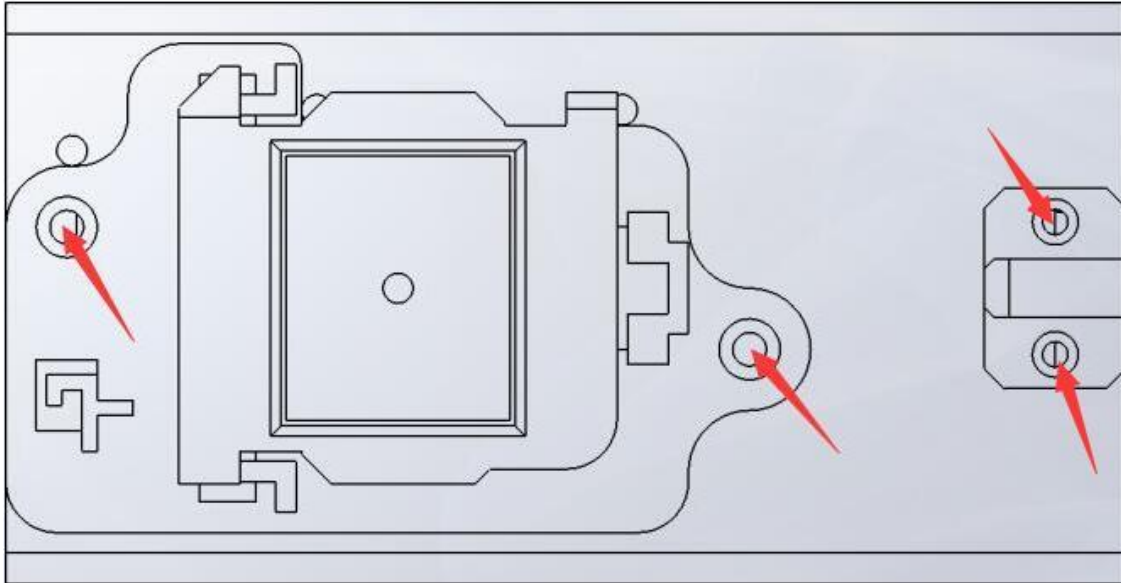
correct position



wrong position

When adjust the position of the print head and cap top, need to make sure the edge of the cap top should seal with the inside edge of the print head or it'll has some ink leaking when sucking the ink.

5. Adjust the cap top on horizontal direction.



As the picture shows above, loose the screws on the cap top and can move the position of the cap top

6. Adjust the print head on vertical direction. Loose the screws on the print head to adjust it.

Mark: The problem might cause by the new print head and cap top installation, then the position of the print head and cap top is not OK.

### 9.3 Cart error problem

1. Move the cart to the middle of carriage beam and turn on the machine, cart doesn't move and error reports.

1.1 When the printer is turn on, move the cart by hand, if the cart can be moved out, then check the of red like on the X axis motor turn on or not. And check the screw which use to secure the X axis belt is tight or not.

1.2 Check the lights on the print head board works or not, if no, replace print head cable.

1.3 Replace the print head board.

1.4 Check the cable on the X axis motor, if it's connects well or not.

1.5 Replace the mainboard.

2. Move the cart to the middle of carriage beam and turn on the machine, cart move to left side and error reports.

2.1 Replace the print head cable.

2.2 Replace the print head board.

2.3 Replace the mainboard(barely has this problem).

**Mark:** This problem cause since the print head board cannot receive the signal from the mainboard.

3. Move the cart to the middle of carriage beam and turn on the machine, cart move to right side and error reports.

3.1 Check if there's light works on the encoder strip sensor, if no, suggest to replace it.

3.2 Check if there's scratch on the encoder strip, if so, replace it.



- 
- 3.3 Clean the encoder strip by alcohol if there is any ink, dust, oil or other dirty on it.
  - 3.4 Check if the encoder strip is in the middle of the encoder strip sensor.
  - 3.5 Check if the encoder strip is in the bars or not.
  - 3.6 Replace the print head board(barely has this problem).

**Mark:** For this problem, the print head board receives the signal from the mainboard, but encoder strip sensor couldn't read the encoder strip.

#### 4. The machine reports error during printing.

- 4.1 Check if there's scratch on the encoder strip, if so, replace it.
- 4.2 Clean the encoder strip by alcohol if there is any ink, dust, oil or other dirty on it.
- 4.3 Check if the encoder strip is in the middle of the encoder strip sensor.
- 4.4 Check the screw which use to secure the X axis belt is tight or not, and the X axis belt is tight or loose.
- 4.5 Replace the mainboard cable.
- 4.6 Check if the temperature of the X axis motor is more than 50°C, if so reconnect the cable on the X axis motor.

**Mark:** For this problem, the encoder strip sensor can read the encoder strip, but will have wrong data to be read.

#### 5. Move the cart to the middle of carriage beam and turn on the machine, cart moves to left size and then right side, then towards and hit the left side fast and back to middle side and reports error.

- 5.1 Check if the zero position sense metal installed straight or not.
- 5.2 Change the black zero position limited sensor.
- 4.3 Change the balck zero position limited sensor cable.
- 4.4 Replace the print head board.

### 9.4 Front and back side limited sensor error

1. Disconnect and reconnect the limited sensor cable.
2. Replace the limited sensor.
  1. Check if the limited sensor cable connects well or not.
  2. Replace the mainboard.
  3. Check if the limited sensor cable connects well or not.
  4. Replace the mainboard.

### 9.5 Error code:

Error 1: PC driver problem, use the correct P Atool driver;

Error 2: The available printing area or time is very less, need to upgrade or authorize to have more printing time or area;

Error 3: Available printing area or time is zero, need to upgreade or authorize to have more printing time or area;

Error 4: Cart black zero position limited sensor problem, repalce the limited sensor or its cable;

Error 5: Initizlization parameter problem, upgrade the P Atool driver;

Error 6: Cart hits on obstacle, check the impingement device;

Error 7: Checking if the P Atool is matches with the printer or not;

---

Error 8: Motor is less powerful, need to adjust the dail up of the motor;  
Error 9: Motor is more powerful, need to adjust the dail up of the motor;  
Error 10: Print head board and mainboard are not match, check which one is wrong;  
Error 11: Default the machine;  
Error 12: Sero motor direction problem, adjust the motor direction code;  
Error 13: Printer stop during printing, encoder strip problem, motor cable loose, belt loose;  
Error 14: Wrong location, check the decoder, motor signal cable and direction  
Error 15: Motor not have enough distance for self-check  
Error 16: Check the print head cable, print head cable port and print head cable.

## **9.6 Carriage beam not be able to up & down.**

1. When up & down it'll have noise, and not be able to move on some height;
2. Please check if there's any obstacle and stuck the up & down gear;
3. Check if the gears on the stepping motor part fit well or not;
4. Check if the stepping motor gear to be damaged or not;
5. Check the stepping motor driver and stepping motor dail up;

## **9.7 Up & down button don't work.**

1. Check the up & down button on the panel control board is OK or not;
2. Check if the stepping motor driver's light work or not, if not, replace the driver;
3. Check if the cable on the stepping motor connects well or not;
4. Disconnect the J1, J2 up & down limited sensor cable, and try to press up & down button again, if it can up & down, then change the limited sensor;
5. Turn on the machine and press the up & down button, during this time, check if the J5 port of PUL+PUL-DIR+DER- send signal out or not(1-3v), if no, replace the main board.(Attention:voltage should affect during click up and down button)
6. Replace the Y Axis motor

## **9.8 Always show initializing on the panel board.**

1. Check the Y axis belt is loose or not, the screw to secure the belt is loose or not;
2. Check if the mainboard cable is insert well or not;
3. Replace the print head board.

## **9.9 Photoprint cannot find the security key.**

1. Check if the light on the dongle works or not, if no, use other machine or replace the dongle;
2. Re install the dongle driver. (Find the installation package inside the Util folder, open it and find the Sentinel folder and install the dongle driver)

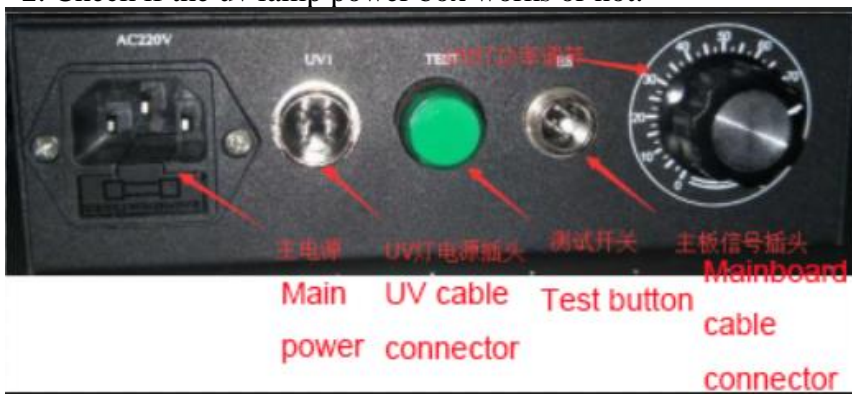
## **9.10 UV lamp doesn't work.**

1. Check the 1-1, 2-2, 3-3, 4-4 ports on the end of the uv lamp cable and see if they are OK or not (like below picture shows)



UV lamp cable

2. Check if the uv lamp power box works or not.



UV lamp power box

3 .Please check if there's 24V voltage output from the J26(varnish lamp) & J27(uv ink lamp), if no, replace the mainboard.

4 . Replace the uv lamp.

## 9.11 UV ink not dry.

1. All the products on the table not dry: Check the uv lamp, refer to the below uv lamp doesn't work solution.

2. Left and right side of the printing job are not dry:

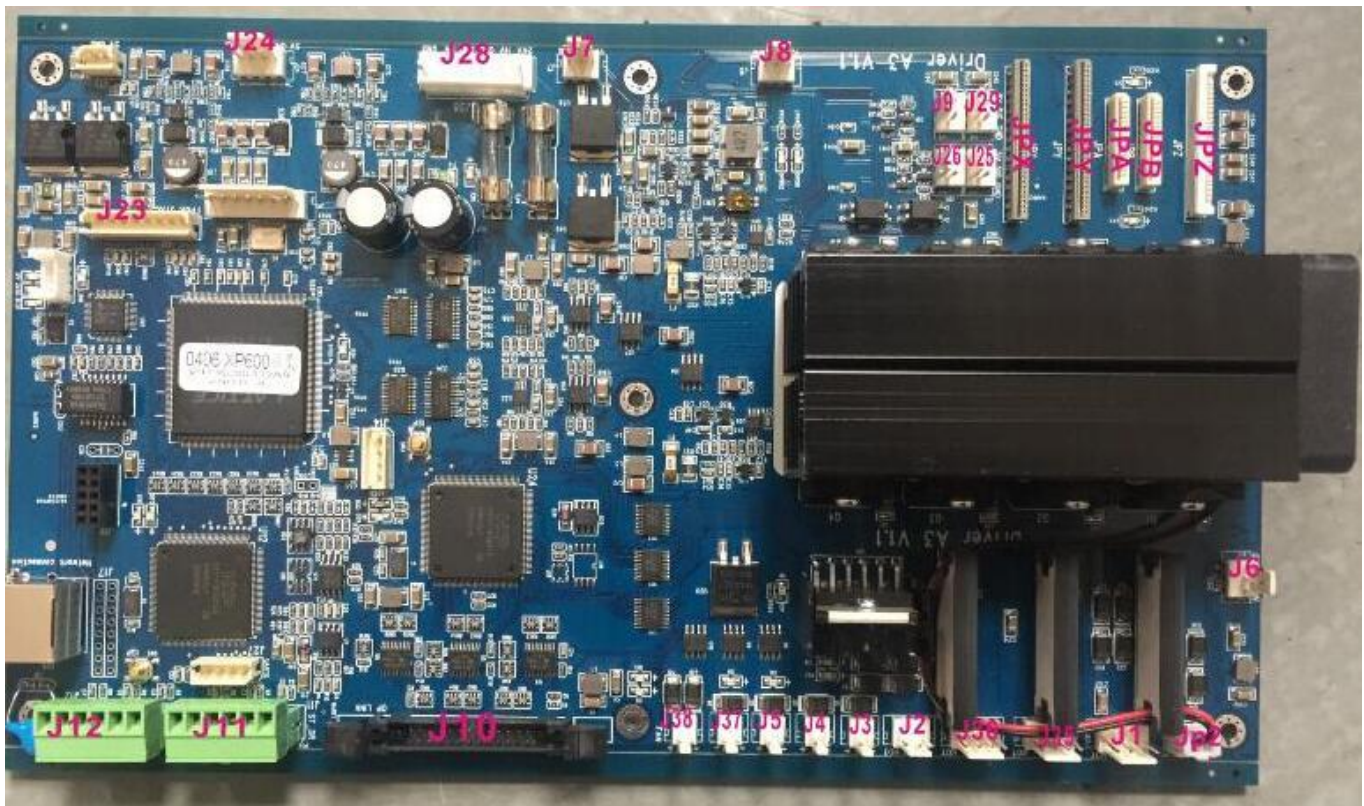
A. Find the printer information and see if need to upgrade the machine system or not;

B. Adjust the uv lamp distance data in the P Atool driver.

3. Front and back side of printing jog are not dry:

A. Upgrade the HIPrintAPI06092.dll file;

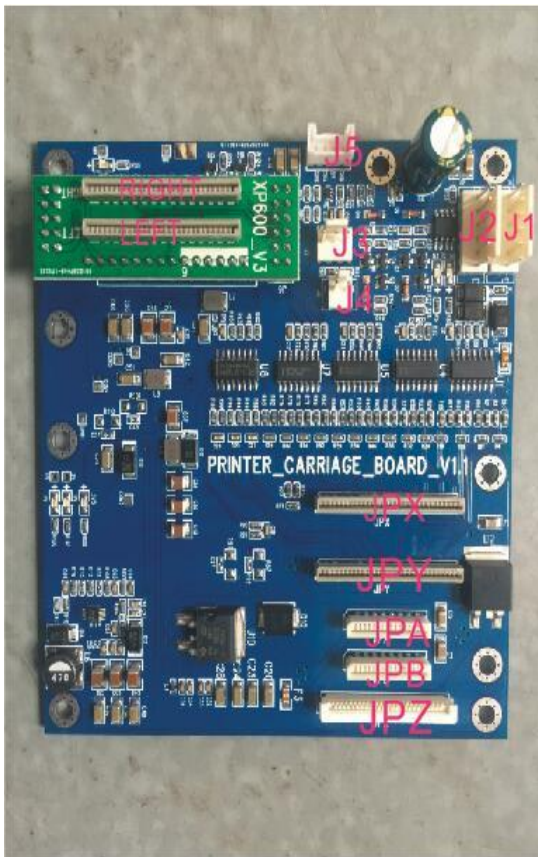
## 10. Main board:





J1: Y axis motor	JP2: Mainboard Fan	J3: Ink pump
J4: White ink circulation	J6: Wiper limited sensor	J7: Front side limited sensor
J8: Back side limited sensor	J10: Front board grey cable	J11: Stepping motor signal cable
J12: X axis motor signal cable	J23: Original position limited sensor	J24: Ink tank board
J25: Upper limited sensor	J26: Down side limited sensor	J28: Mainboard power supply
J29: Height sensor	J36: Wiper motor	J38: Vacuum table fan

## 11. Print head board:



J1: UV lamp	J2: UV lamp Fan	J5: Encoder strip sensor
LEFT: Left print head cable	RIGHT: Right print head cable	

## 12. Color array of XP600 print head

KCMWYW

