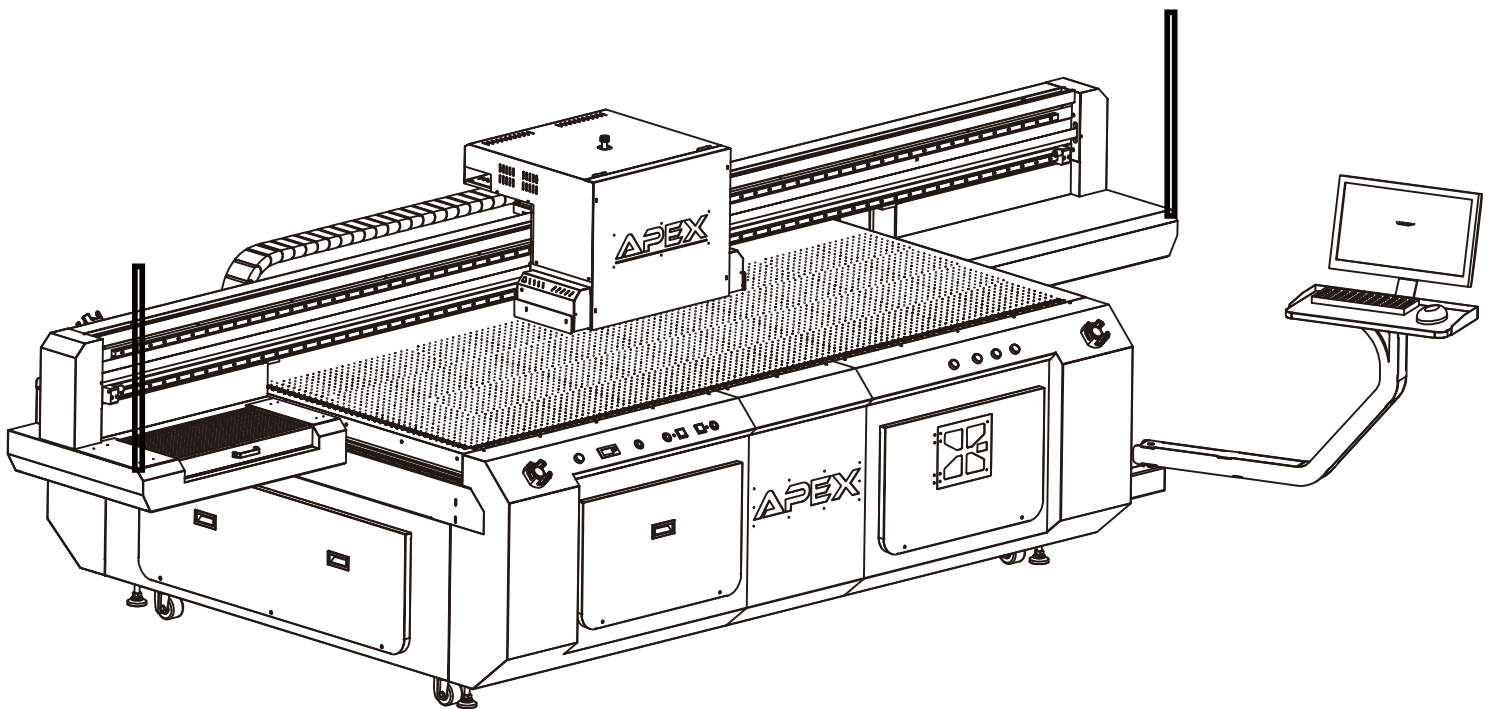




# RH-2513/1610

## USER MANUAL



[www.apex-jet.com](http://www.apex-jet.com)

# CONTENT

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# 1.Warning

---

When use this machine, please always follow the below steps, and be sure to follow all the label on the printer: all warnings and tips.

Please read the user manual before operate.

Please always save this user manual properly.

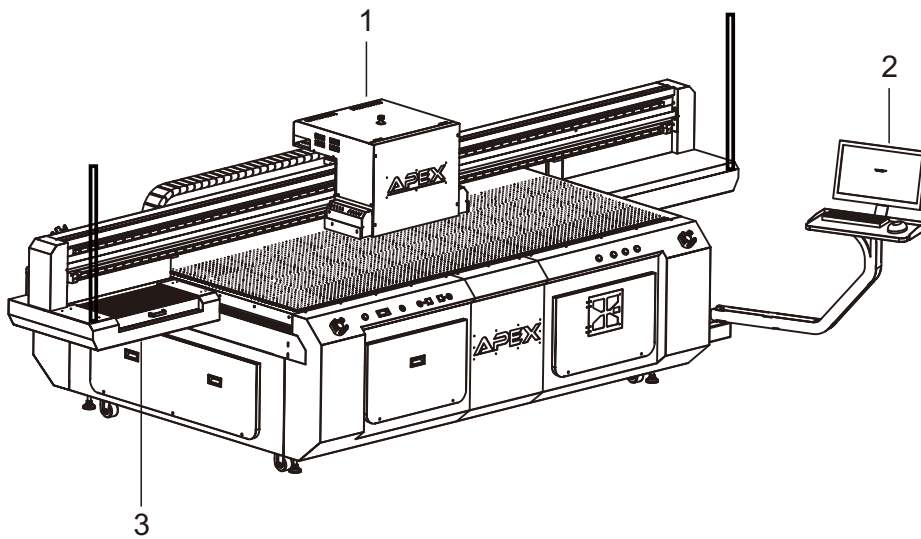
Before using the printer, please keep your vigilance and follow the below points:

1. Place the machine on a stable floor to avoid unevenness.
2. Avoid placing the machine where it can be easily shaken.
3. It is only suggested to be used in indoor environment. It is recommended to have air conditioning in the room to make the working temperature and humidity of the machine relatively stable. Do not use the machine in extremely hot (higher than 30 ° C) or extremely cold (less than 10 ° C).
4. It is forbidden to use the machine in an open fire, fragile and dusty environment.
5. Do not use the machine on wet or watery ground.
6. The machine cannot be used by children or people with disabilities. If you need to use it, please follow the supervision of the guardian.
7. Before using the machine, make sure that the printer head fixing parts on the rails have been removed.
8. Make sure that the power supply voltage matches the voltage indicated on the power cord and on the machine nameplate.
9. For problems that may occur during the use of the machine, it should be eliminated as early as possible, such as debris on the platform should be cleaned up.
10. It is forbidden to close to hair, clothes, fingers and other parts of the human body during printer working.
11. Before sending a print job, make sure that the print head does not collide with the printed object.
12. When using the machine to print, the staff should be equipped with anti-UV glasses.
13. Turn off the machine before cleaning and maintaining.
14. When carrying out maintenance on the machine, wear gloves to avoid allergic reactions to the ink. If you accidentally let the ink touch the skin, please wash it with soapy water immediately. If it splashes into your eyes, rinse it off with water immediately. If you feel unwell, please go to the hospital asap.
15. Please use the accessories and ink recommended or sold by manufacturer.
16. Do not use a damaged power cord. If the power cord is damaged, it must be replaced a new one offered by manufacturer to avoid danger.
17. In the event of an emergency, immediately press the emergency stop switch. After confirm no more questions, then powered up the printer.
18. Please dispose of used ink in accordance with local waste chemical disposal policies.
19. Please perform regular machine maintenance and maintenance as required by the instructions.
20. Please follow the instructions in the instructions to use the machine. Apex will not be responsible for any loss or damage caused by improper use.

**\* Please read the instructions carefully before installation and use, and keep the instructions in a safe place**

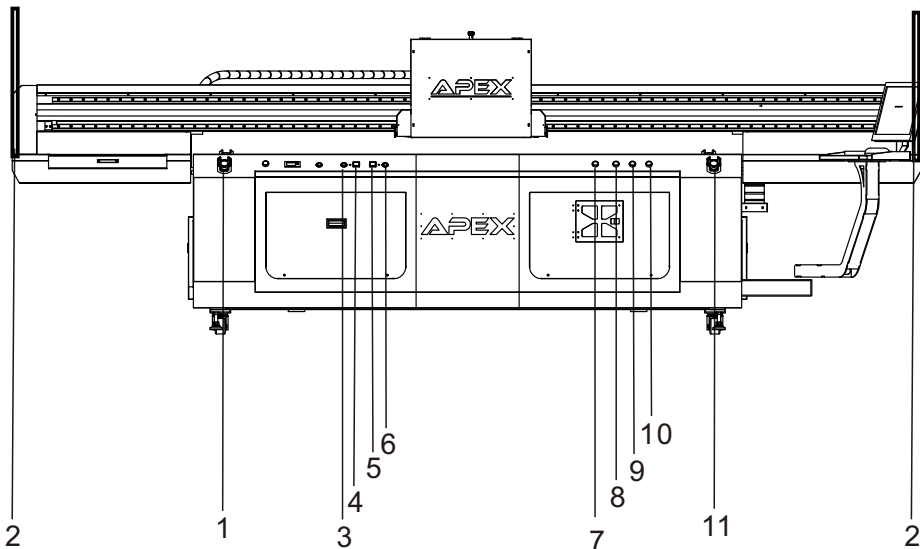
## 2.Instruction

### 2.1 Structure



- 1. Ink carriage
- 2. Computer
- 3. Waster ink bottle

### 2.2 Front View



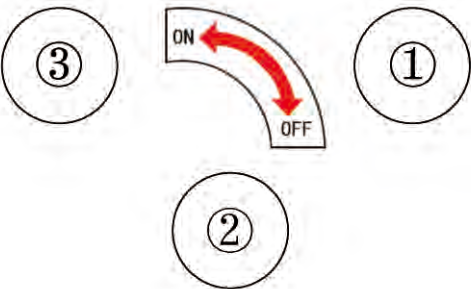
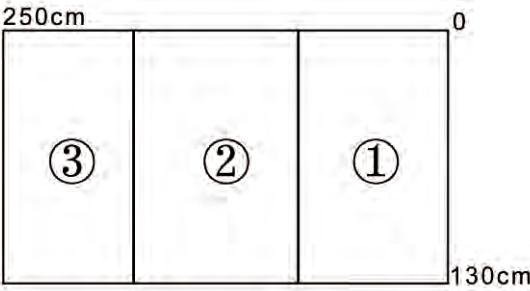
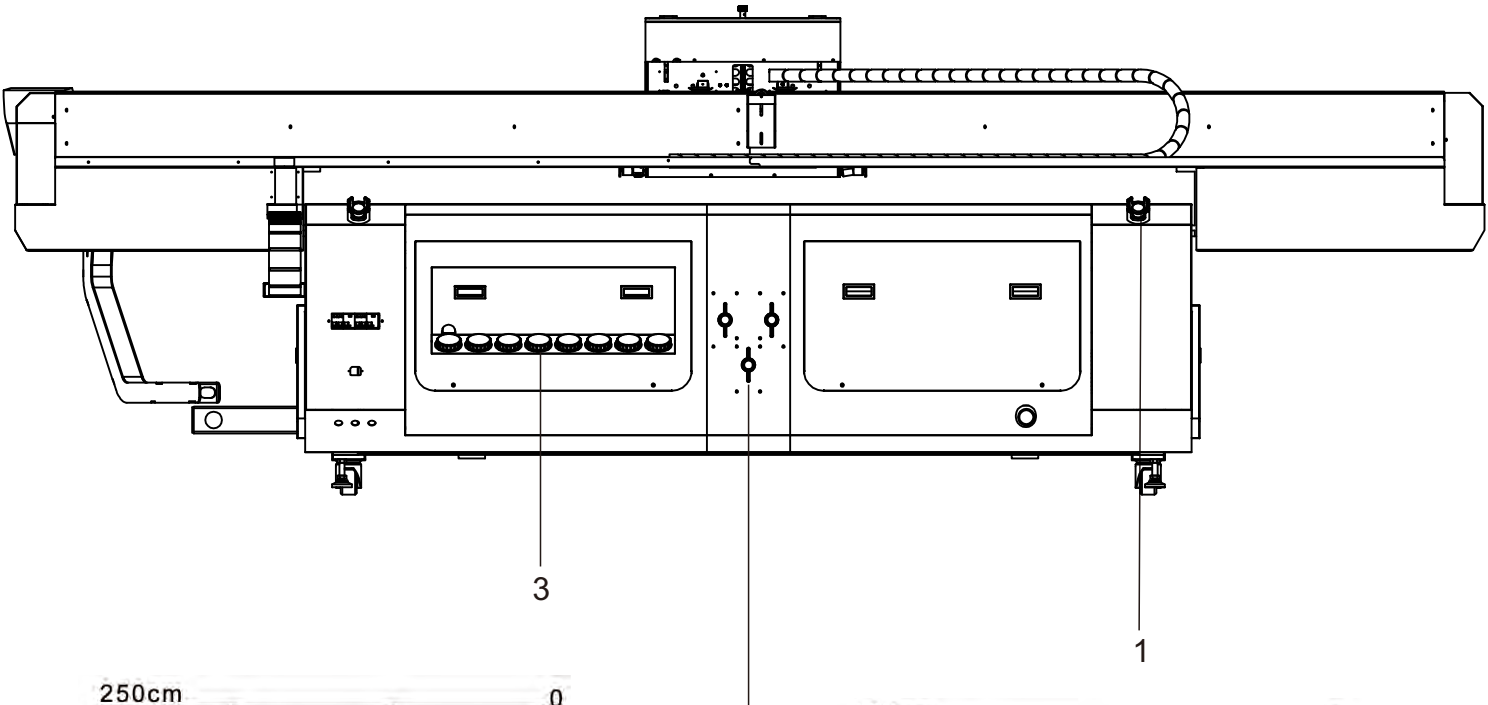
- 1.emergency stop button
- 2.anti-collision induction
- 3.color ink cleaning button
- 4.color ink negative pressure gauge
- 5.white ink negative pressure gauge
- 6.white ink cleaning button
- 7.Positioning bolt
- 8.Power switch
- 9.vacuum table switch
- 10.anti-collision switch
- 11.emergency stop button



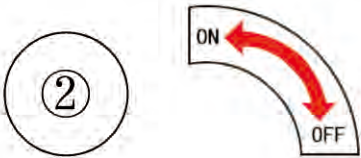
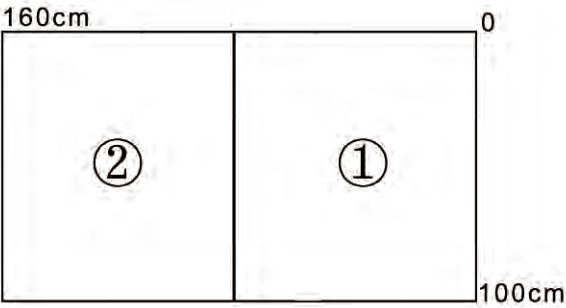
# 2.Instruction

## 2.3 Rear view

1. Emergency stop button
2. Vacuum table control
3. Ink box



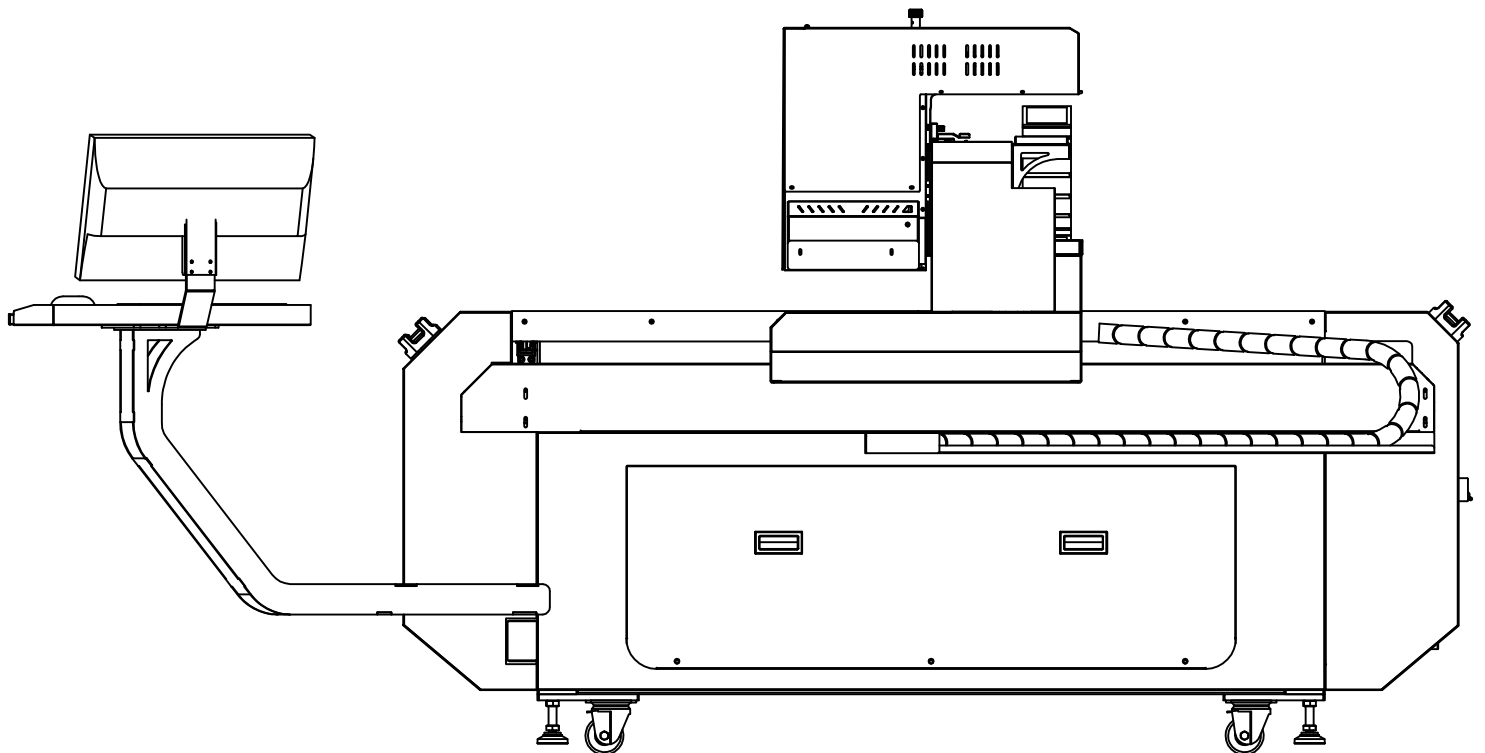
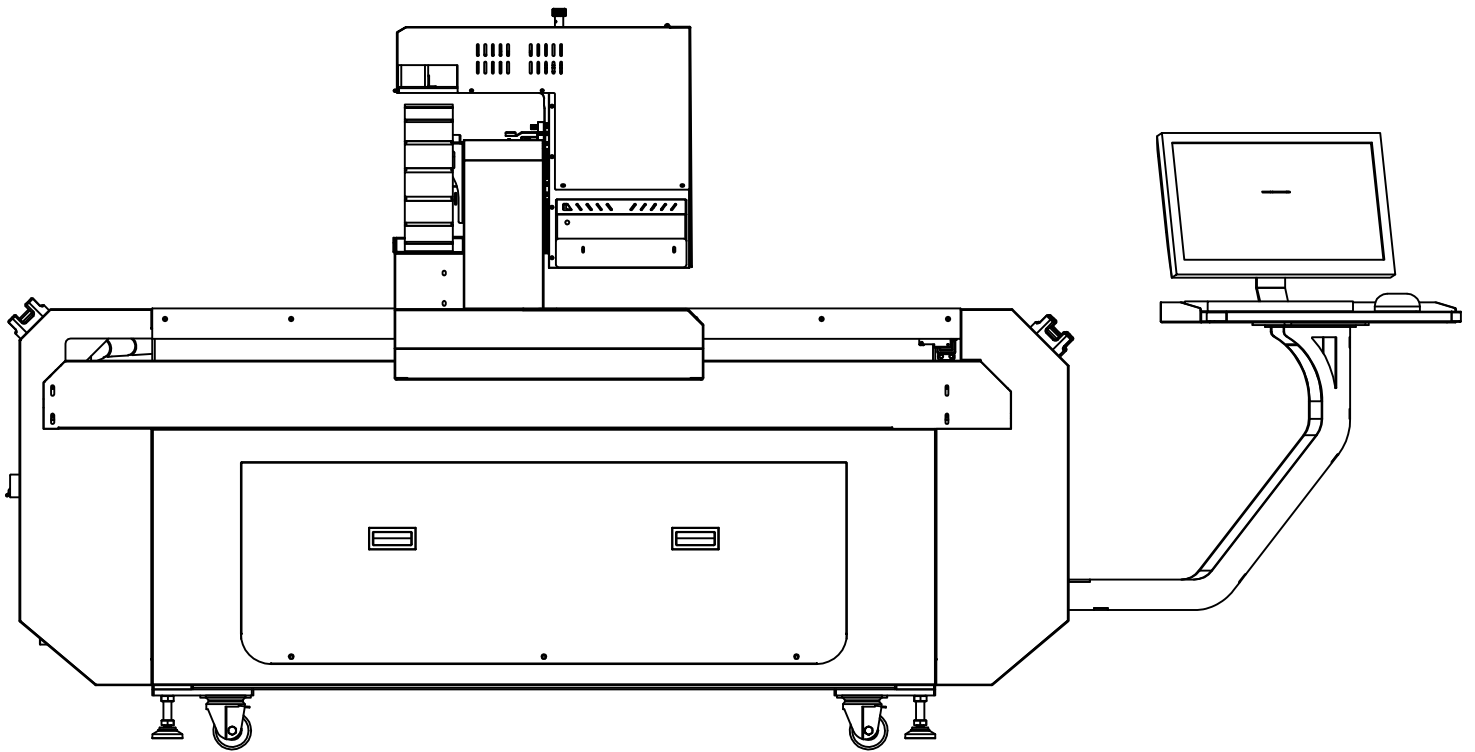
RH-2513



RH-1610

## 2.Instruction

### 2.4 Side view



## 2.Instruction

### 2.5 Product overview

#### 1. Application

RH1610/2513 large format flatbed uv printer can directly print on any materials,not only on pvc board, Light cloth, advertising board, etc, but also for customized material printing, like leather, ceramic tiles, glass, wall paper, wood, etc

#### 2. Machine Features

- ◆ Maximum printing height 100mm to any flat materials
- ◆ Automatic anti-collision system to avoid ink carriage collision damage nozzle
- ◆ Nozzle thermostatic system, ensure the stability of printing
- ◆ Easy to use printing software
- ◆ Industrial usage design suitable for long time production
- ◆ Available for batch printing and sample printing
- ◆ Anti-collision switch to protect safety of operators

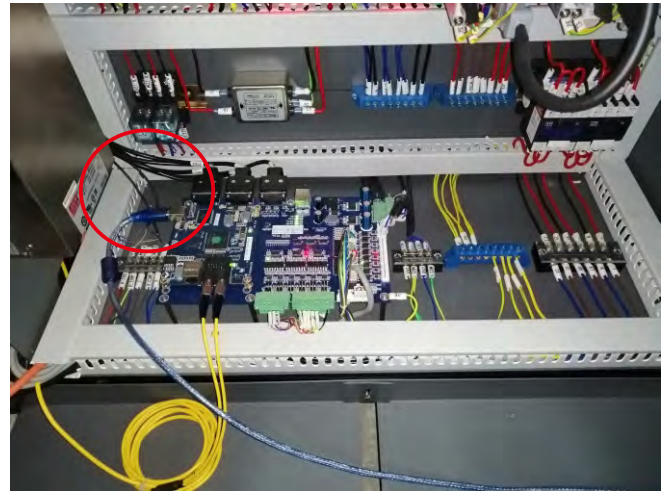
#### 3. Technical data

Model No	RH- 1610	RH-2513
Model	MT-G5- 1610	MT-G5-2513
Max print size	1600mmX1000mm	2500mmX1300mm
Printer head	Ricoh Gen5	
Printer head quantity	3-6	
Print color	KCMYWW or KCMYLcLmWW or KCMYWWV or KCMYLcLmWWV	
Max print height	100mm (3. 9")	
Curing system	UV LED Water Cooling System	
Print file	TIF,PSD.JPG,PDF,AI,EPS,etc	
Cleaning system	Positive pressure system	
Adapter connector	USB2. 0	
Computer system	Windows7/10 (64-bit)	
Power	220V (±10%) 50/60Hz 10A	
Working environment	60-82°F HR40-60%	
RIP software	Photo Print	
Machine weight	615KG(1356lb)	1015KG(2237lb)
Machine size	313cmX175cmX135cm(123"*69"*53")	442cm*189cm*150cm (174"*74.4"*59")

## 3. Installation and Operation

### 3.1 Preparation before installation

1. After removing the front cover, you can find plug and yellow ground cable.



2. Place the computer mainframe in the machine, install the computer monitor stand, connect the computer monitor cable from cable tray of computer stand to the inside of the machine, and connect the corresponding wires.



3. Lock the computer monitor in the correct position, make sure the bracket screws are locked, and the wireless keyboard and mouse can be used after plugging in the wireless receiver.

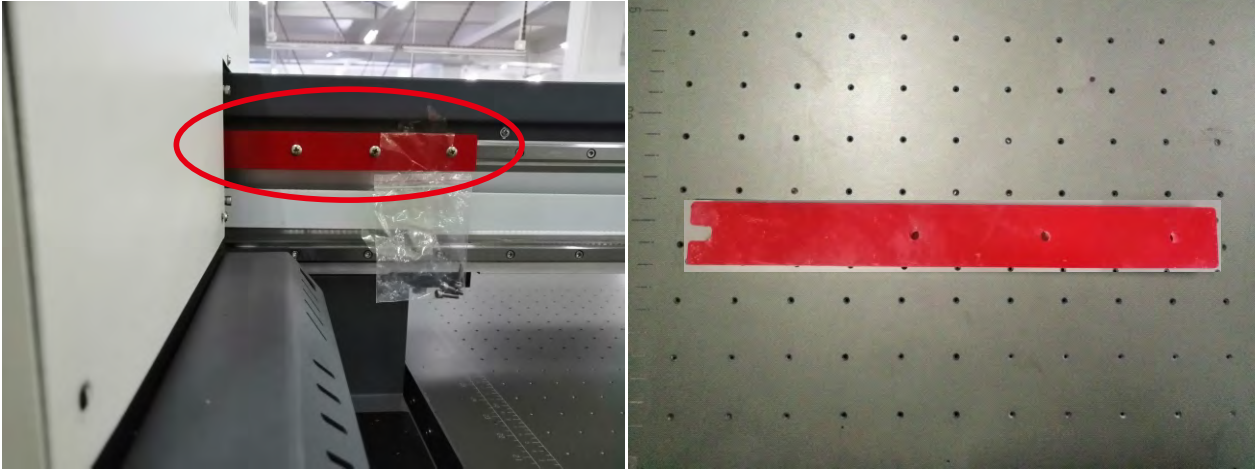




## 3. Installation and Operation

### 3.1 Preparation before installation

4. Before using the machine, remove the fixture on the right side of the ink cart (remove the three screws as shown below)



5. Fix the screws in the kit back onto the rails.



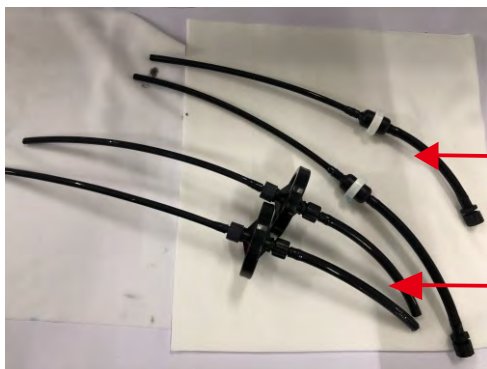
### 3.Installation and Operation

#### 3.2 Printer head installation

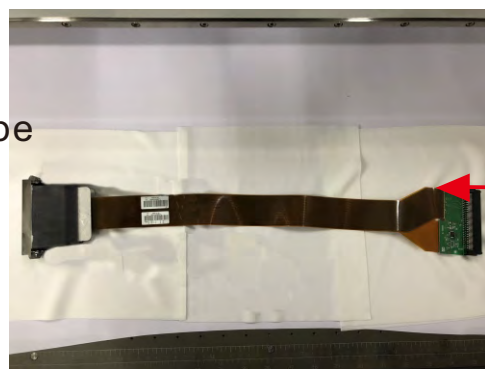
The printer heads have been installed before shipment, but it may need to adjust the installation position of the head properly during calibration, or when do machine maintenance, the nozzle may need to be disassembled and assembled. Therefore, the installation process of the printer head is introduced here. Pay attention to the following points when installing printer head:

1. When install the head, be careful the pin of the cable can not be lifted, do not touch the liquid, avoid the misalignment of the connecting skew pin or the liquid leading to the adjacent pin to cause permanent damage to the head;
2. When the head is connected to the ink tube and the exhaust tube, be careful to distinguish the position of the ink tube and the exhaust tube;
3. Prevent the nozzle surface from being exposed to water or antifreeze and other liquids causing the nozzle to block;
4. When the nozzle is installed on the ink cart, be careful to distinguish the direction of the conductive pin, after confirm the correct operation, then you can fill the inks.

#### (1)Schematic diagram of printer head installation sequence



Picture 1



Picture 2



Picture 3



Picture 4

Picture 1. The ink tubes are connected: 2 exhaust nozzle valves with one-way valve and 2 ink tubes with filter.

Picture 2. Take the printer head out of the box and put it on non-woven fabric.

Picture 3. Observe that the head has a positioning post, insert the exhaust pipe into the right end of the positioning post, and insert the ink tube into the opposite direction.

Picture 4. Schematic diagram of the printer head install with ink tube.

## 3. Installation and Operation

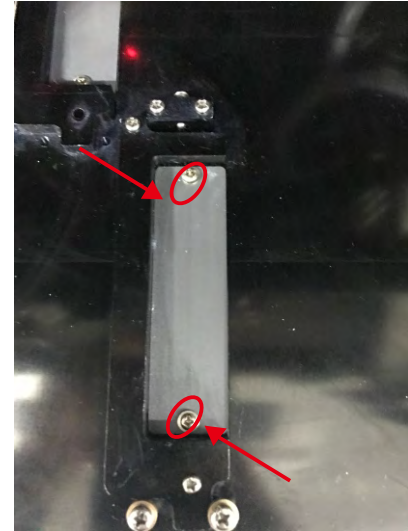
### 3.2 Printer head installation

**Please turn off the machine main power before installing the printer head.**

(2) Schematic diagram of installing ink cart



Picture 1



Picture 2



Picture 3



Picture 4

Picture1. Open the front cover of the ink cart first.

Picture2. Use a Phillips screwdriver to loosen the front and rear screws on the base of the head and remove the iron on the bottom plate.

Picture3. **Place the head in the printer head groove of the bottom plate. Be careful to the direction in which the head is placed. Two positioning posts can be observed at the bottom of the printer head, corresponding to the two small holes on the bottom plate of the head.**

Picture4. Use a Phillips screwdriver to tighten the front and rear fixing screws and connect the ink inlet tube to the secondary ink cartridge.



# 3.Installation and Operation

## 3.2 Printer head installation

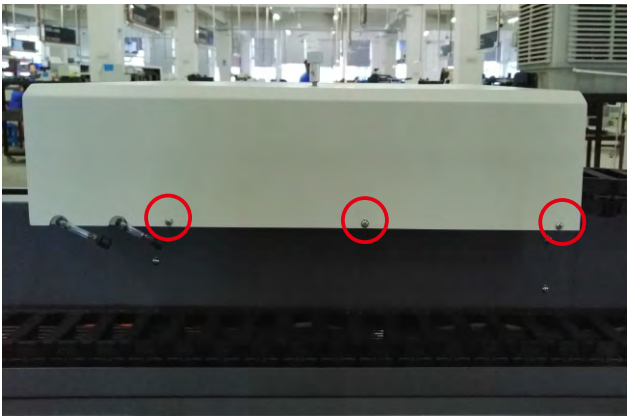
### (3)Schematic diagram of installing ink cart



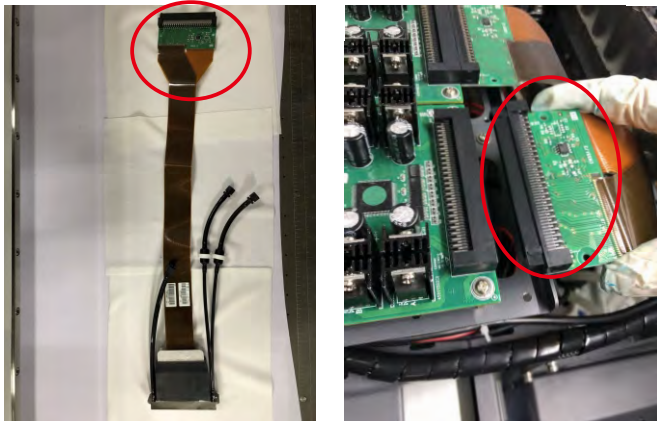
Picture 1



Picture 2



Picture 3



Picture 4

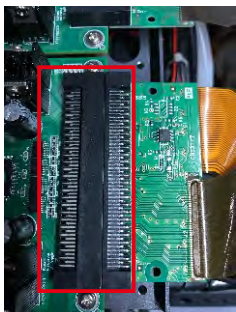
Picture1. Remove the 4 screws on the left side cover of the ink cart.

Picture2. Remove the 4 screws on the right side cover of the ink cart.

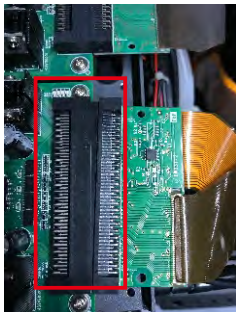
Picture3. Remove the 3 screws on the rear cover of the ink car and lift the ink cover up.

Picture4. Connect the end of the cable to the printer head plate, be careful to the front and back of the cable end.

**Note: Avoid installing the cable end to be skewed, resulting in damage the printer head.**



GOOD

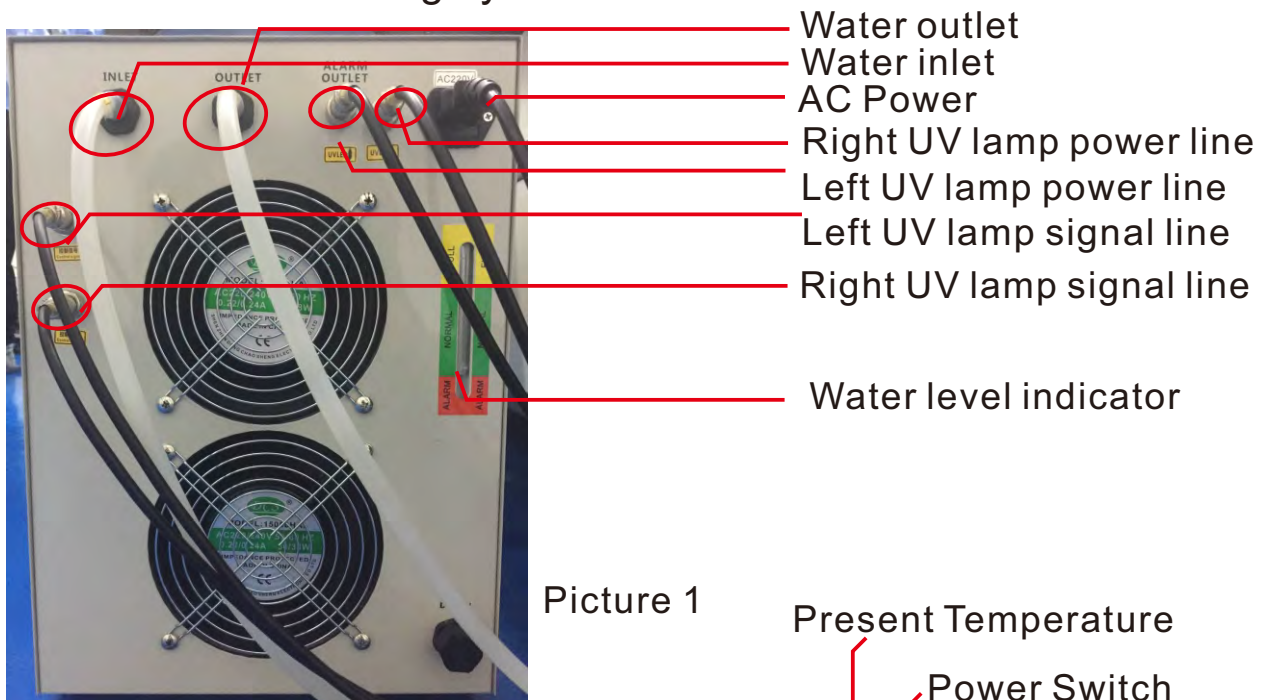


BAD

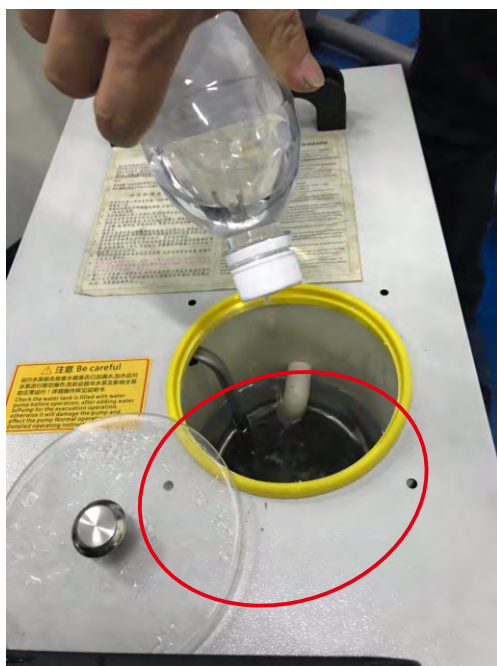


### 3.Installation and Operation

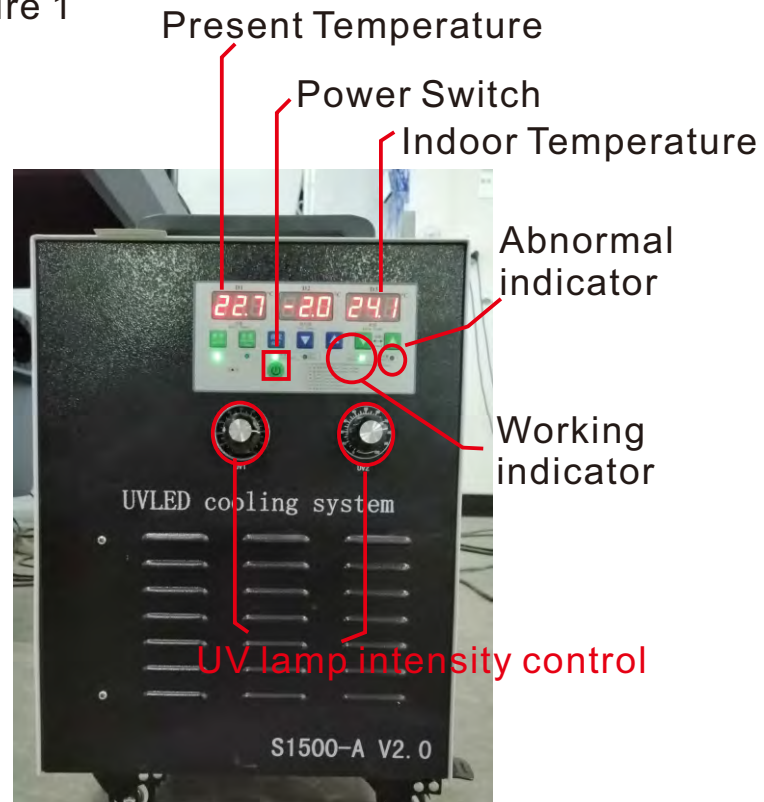
#### 3.3 UV LED Water cooling system installation



Picture 1



Picture 2



Picture 3

Picture 1. Connect the wires and water lines according to the mark on the wire and tank connections. There is no need to distinguish between inlet or outlet pipes.

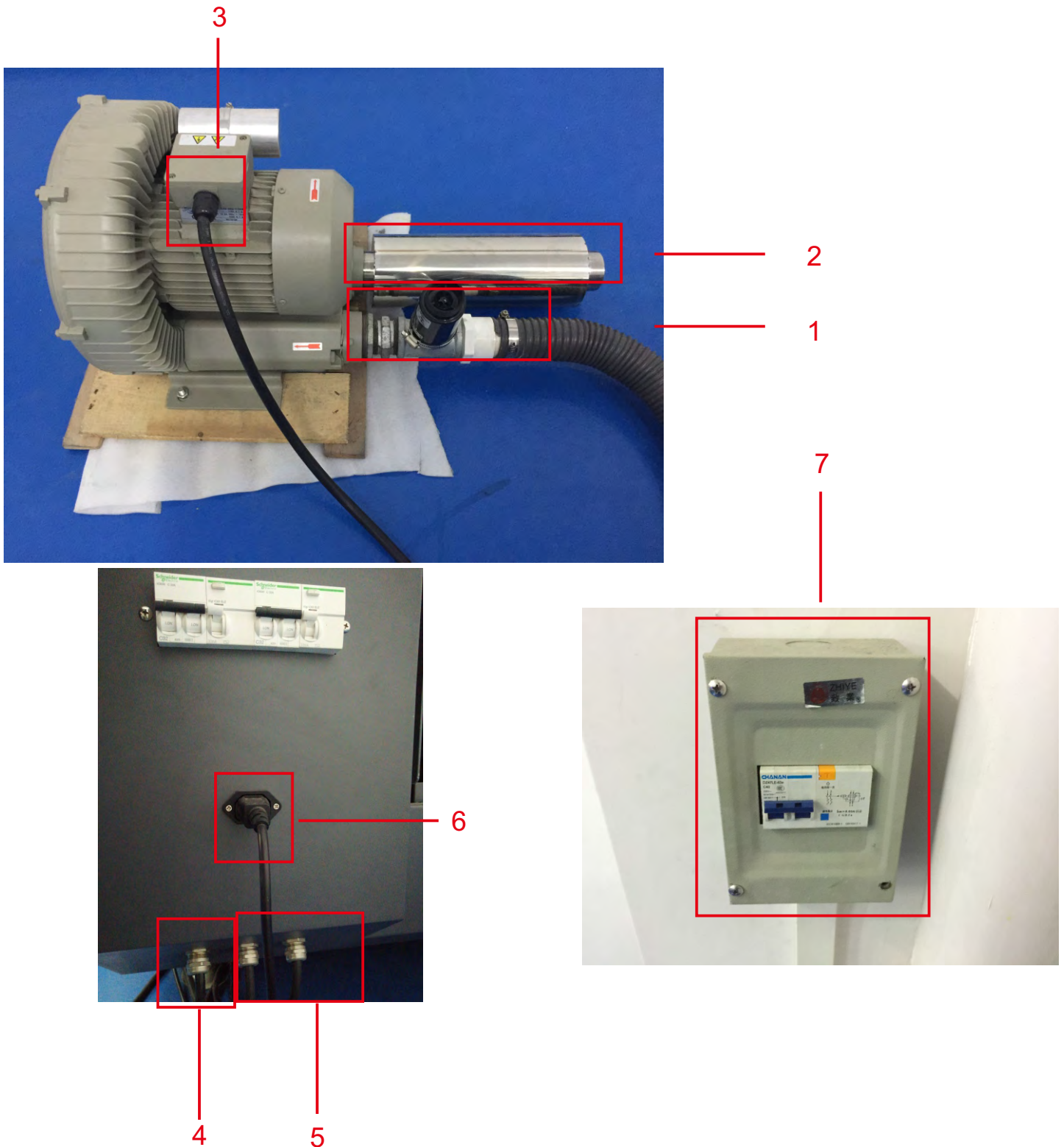
Picture 2. Add water to the tank to prevent water from flowing to the tank.

Picture 3. Open the water tank switch and check if the water temperature display panel, fan and pump are working properly. The added water fills all empty water pipes and then replenishes the water.

**Note: Antifreeze liquid must be used in cold weather and icy areas: 50% ethylene glycol + 50% pure water.**

### 3. Installation and Operation

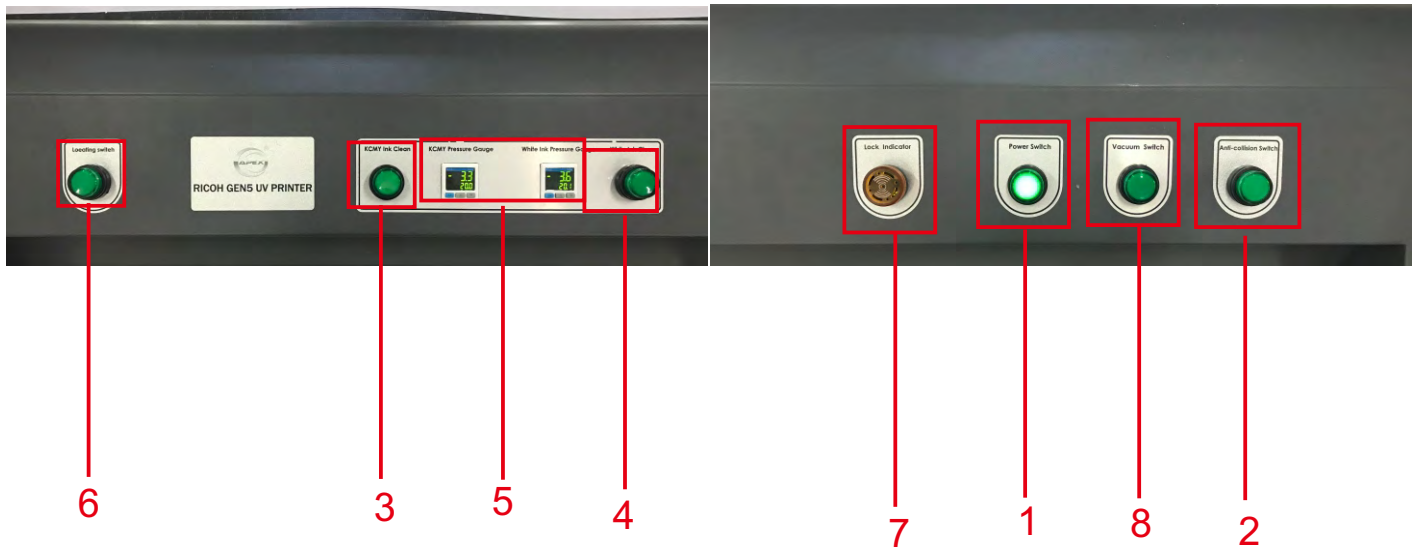
#### 3.4 Power-on test



1. Connect the air pipe, install the adapter and safety valve (RV-01)
2. Install the silencer
3. Connect the power line of the vacuum pump
4. Connect the power line interface of the vacuum pump
5. Universal power interface
6. Water tank interface
7. Install the main power switch

## 3. Installation and Operation

### 3.5 Control panel button function



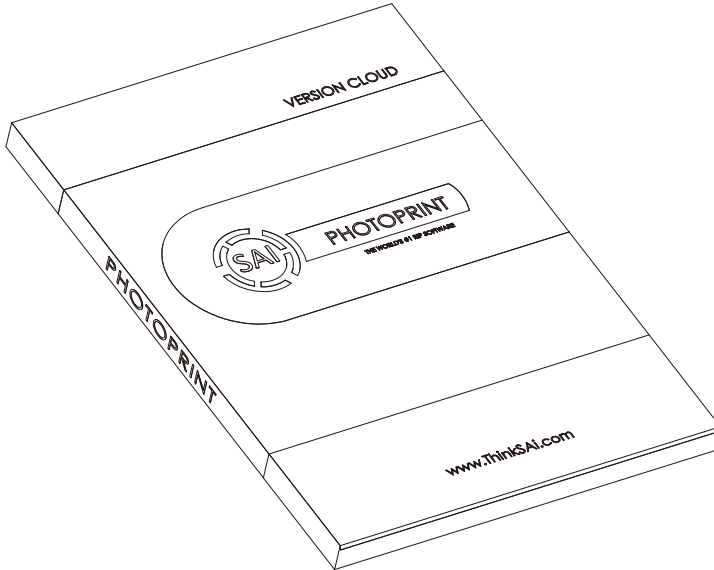
After the installation is complete, open the printer and test the following functions:

1. Machine power switch, press to see if it can be turned on normally.  
If it can't be powered, please check if the emergency switch is pressed.
2. Anti-collision sensor switch, if it is turned on, start the induction.
3. and 4 are the color and white negative pressure cleaning buttons.
5. Negative pressure value display panel, check if the negative pressure value is within the range of 2.6~4.0.
6. Positioning bolt switch.
7. Alarm switch for positioning bolt. Make sure the positioning bolt is closed during printing.
8. Vacuum switch

## 3.Installation and Operation

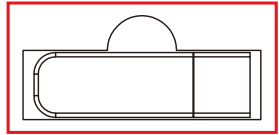
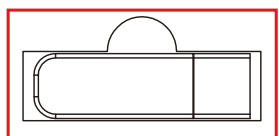
### 3.6 Software installation and operation

#### 1 Install software and activate



A.Take out the software box from accessories bag

#### Software Disk

<p>Your new product order has been processed</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Following password have been generated for User</p> <p>ID#: 123456 Key ID: 234567</p> <p>Product: PhotoPRINT DX Plus 11 ApexJet Cloud Edition</p> <p>Language: English,Portuguese,French,Italian,German, Spanish,Simplified Chinese,Polish,Hebrew/Traditional, Chinese,Japanese,Korean,Dutch,Danish,Finnish,Russian</p> <p><b>Password: JS154E54R1WE5R4W5SER</b></p> </div> <div style="border: 1px solid red; padding: 5px; margin: 10px 0;"> <p><b>Instructions:</b></p> <p><b>Activating Your Product</b></p> <ol style="list-style-type: none"> <li>1. Go to <a href="http://www.saicloud.com">www.saicloud.com</a> in your web browser</li> <li>2. Copy the Activation Code</li> <li>3. Paste the code in the Activation Code field in the SAI Cloud web site and click Activate.</li> <li>4. In the login section, choose whether you are new or returning to the SAI Cloud and follow the instructions.</li> </ol> <p>Note: For more information,please check installer DVD</p> </div> <p style="text-align: center;"><a href="http://www.ThinkSAI.com">www.ThinkSAI.com</a></p>	<div style="border: 1px solid red; padding: 5px; margin: 10px 0; text-align: center;">  </div> <div style="border: 1px solid red; padding: 5px; margin: 10px 0; text-align: center;">  </div> <p style="text-align: center; color: red; font-weight: bold;">Dongle key</p>
--	--

Activation code

Step

B.Before install, Activate the registration  
C code as above steps

- \* Before install Photoprint, donot insert dongle
- \* During activation, connect network



## 3. Installation and Operation

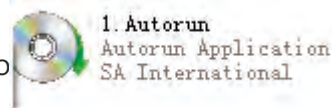
### 3.6 Software installation and operation

#### 2 Install

After activation, pls install software. Put into disk, open disk and then install software as registered steps

Installation instructions

1) Install Photoprint software, choose



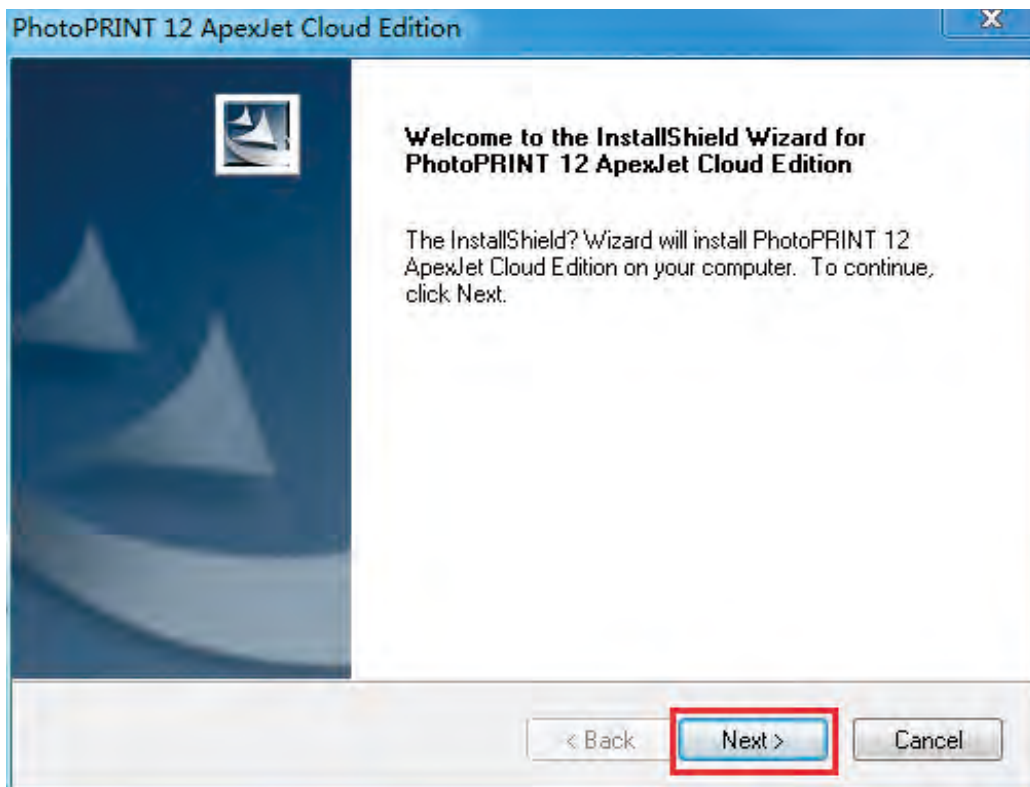
language types



Click and confirm language types

( support simple and complex font Chinese, english, korea, Germany, French, Dutch, Portuguese, Japanese, Spanish, Italy )

2) Choose “Next step:

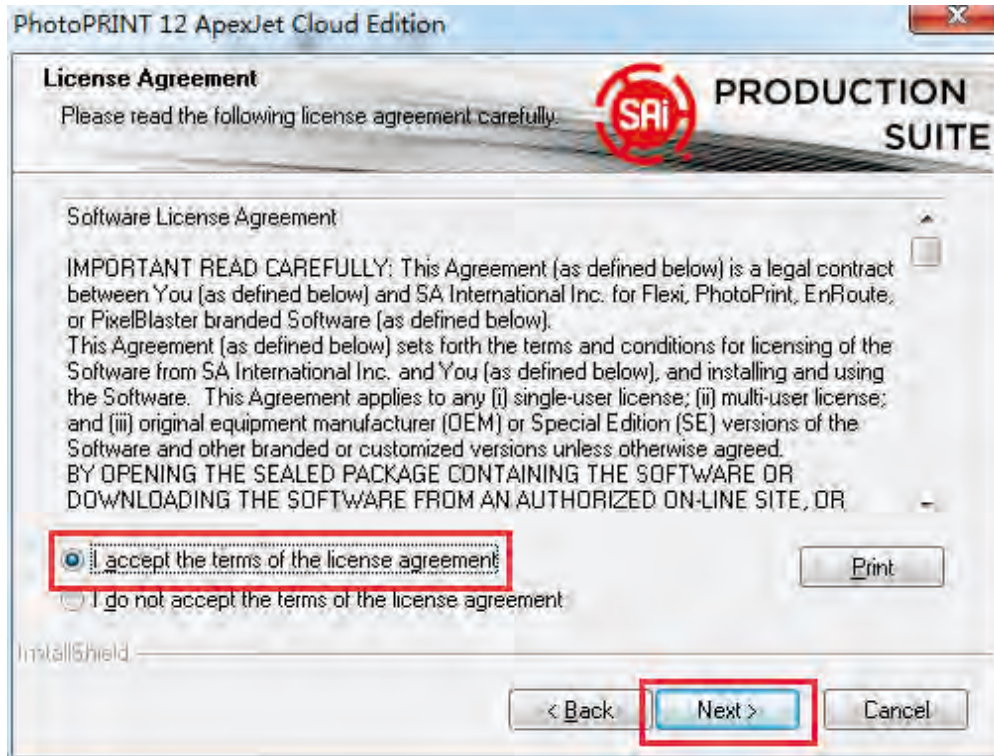


- \* Before install Photoprint, donot insert dongle
- \* During activation, connect network

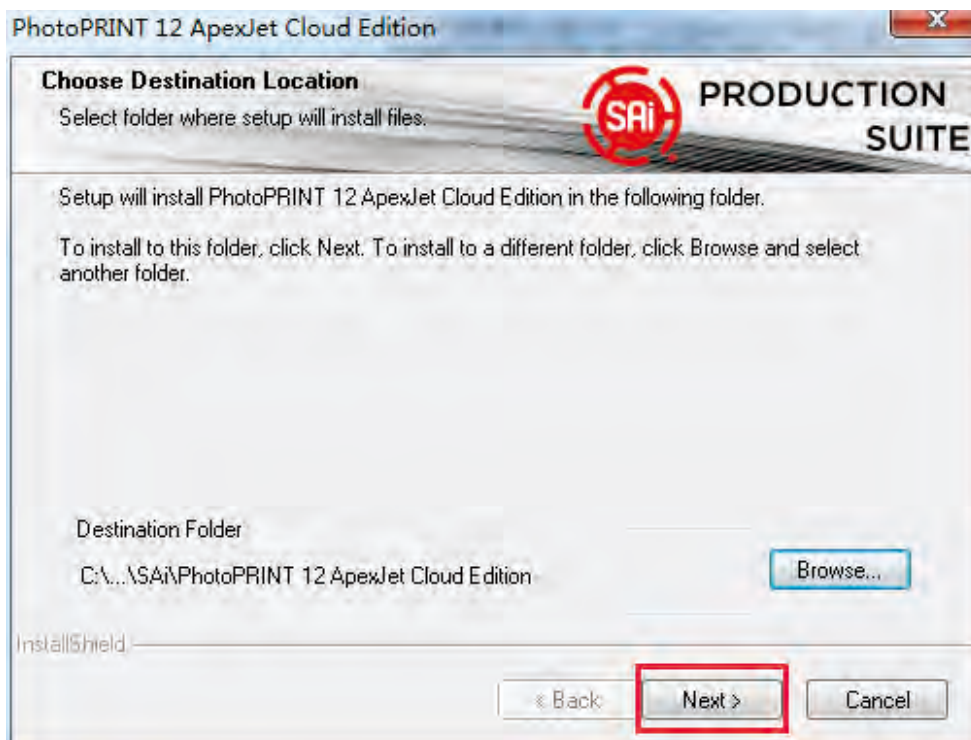
## 3. Installation and Operation

### 3.6 Software installation and operation

3). Choose "I accept the clause of license agreement" and choose "next step"



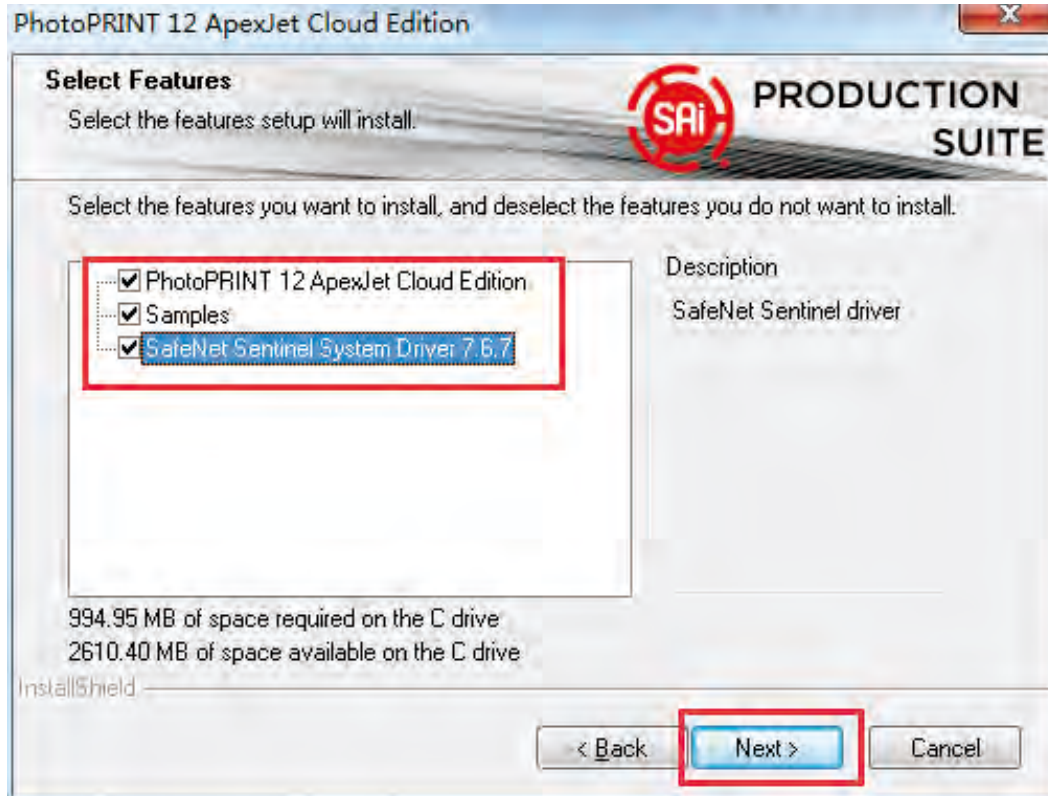
4). Find "choose destination" drop-down column, choose installation folder and then click "next step".



## 3.Installation and Operation

### 3.6 Software installation and operation

5).Choose “Safenet Sentinel System Driver ”, to install the dongle driver and click “next step” .



6).Pls enter or choose any folder name and then click “next step”.

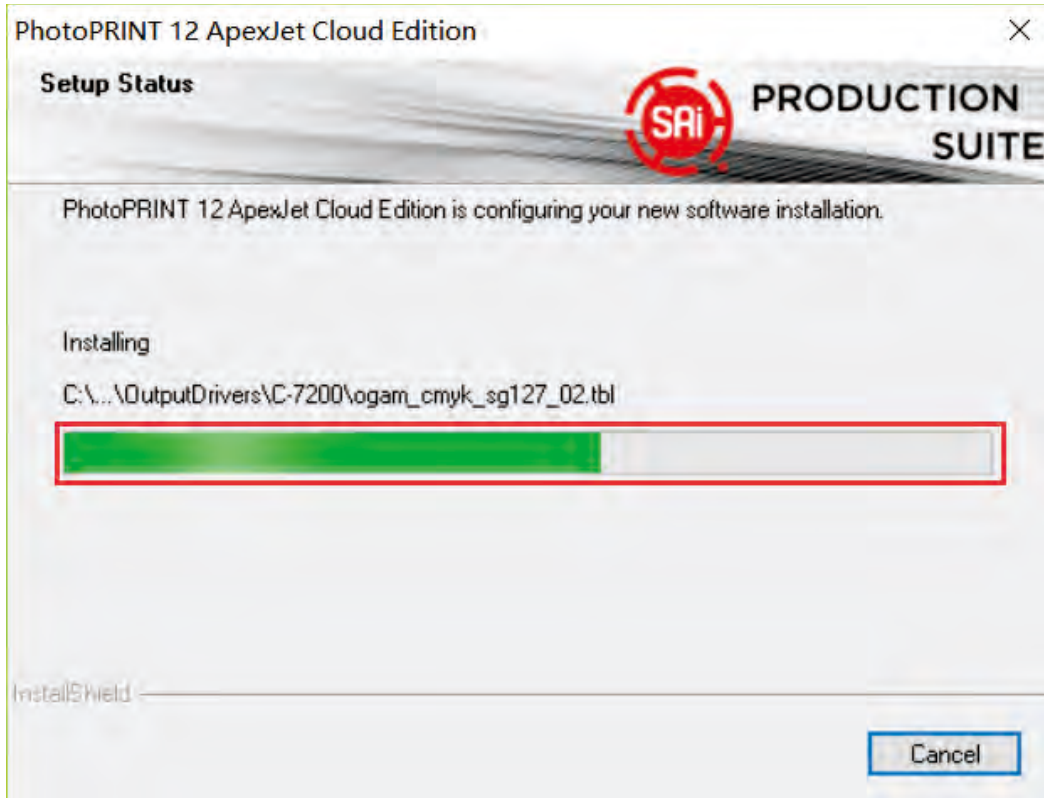




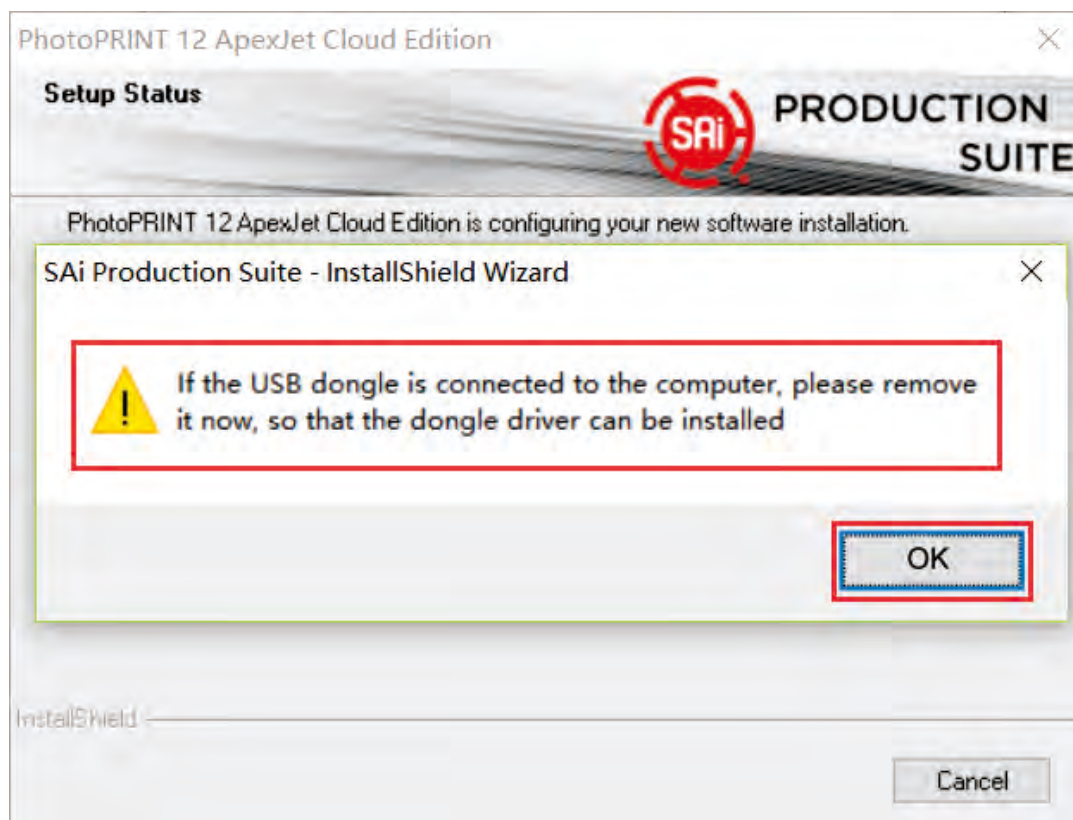
## 3.Installation and Operation

### 3.6 Software installtion and operation

7).Wait for finishing the software automatic installation progress bar



8).During installtion, donot insert dongle and click “confirm”.





## 3.Installation and Operation

### 3.6 Software installtion and operation

9).After finish installation, the below activation box will be popped out.



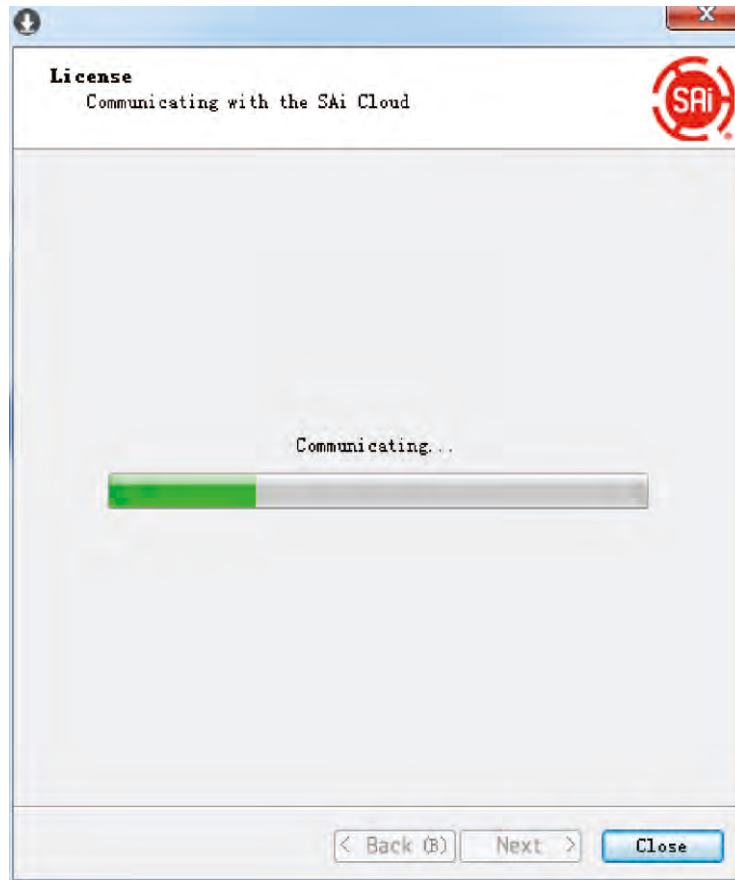
10).Enter the sequence code and then click “Next” .

The password on the package shell is the activation code



## 3.Installation and Operation

### 3.6 Software installtion and operation



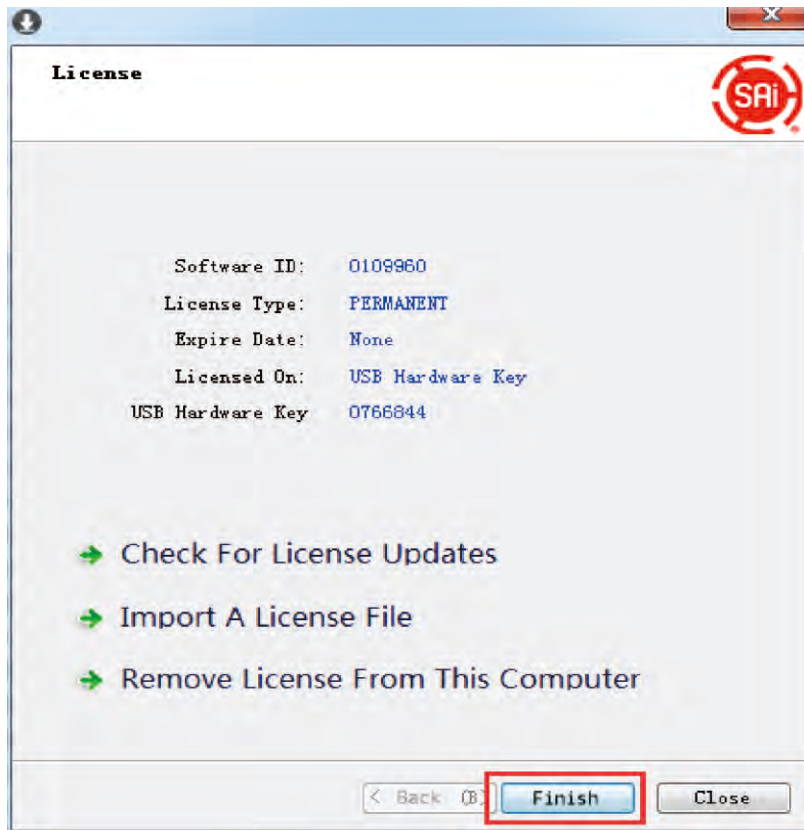
11).Enter activation code. After display “successful authorization”, click “finish”.



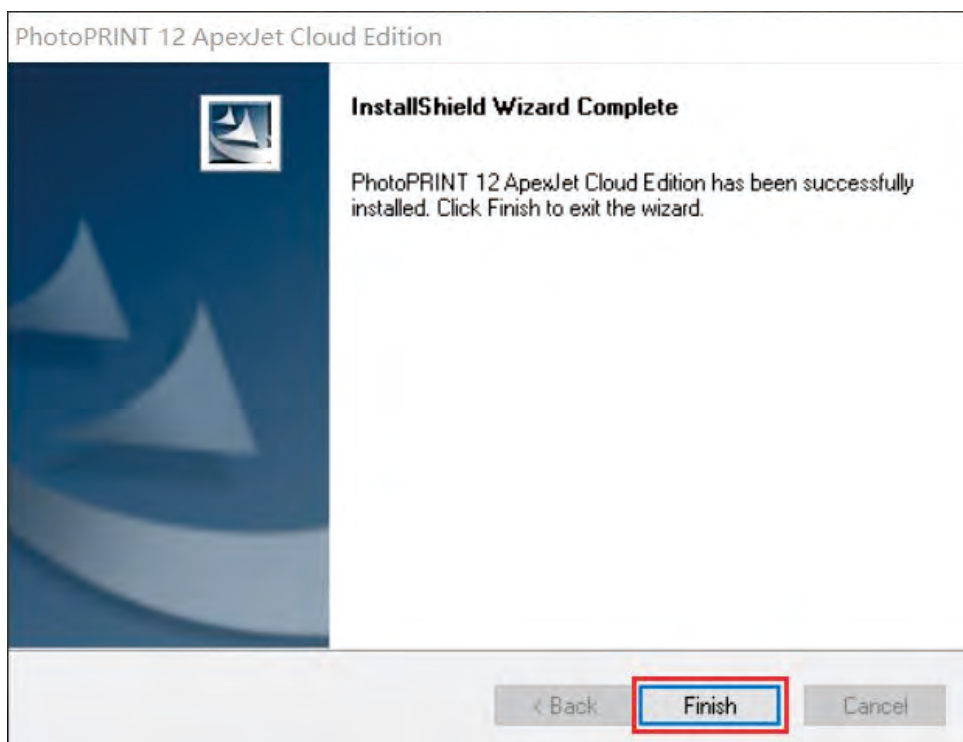
## 3.Installation and Operation

### 3.6 Software installation and operation

12).After activation, click “finish” .



13).After install software, the short-cut method will be automatically generated and pop up the below dialog box. Choose “finish” to finish software installation.

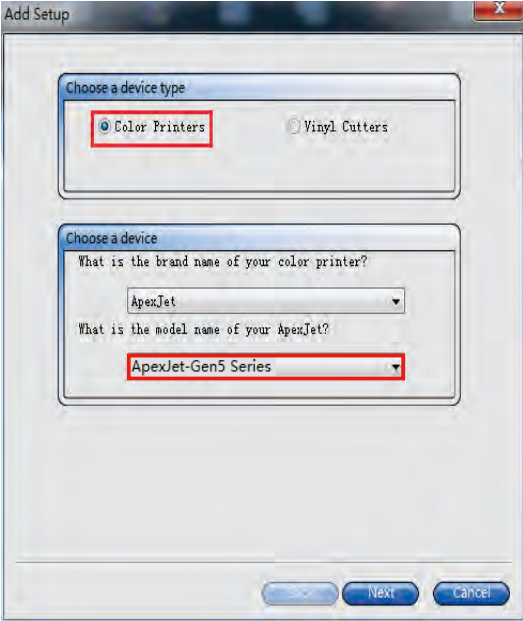
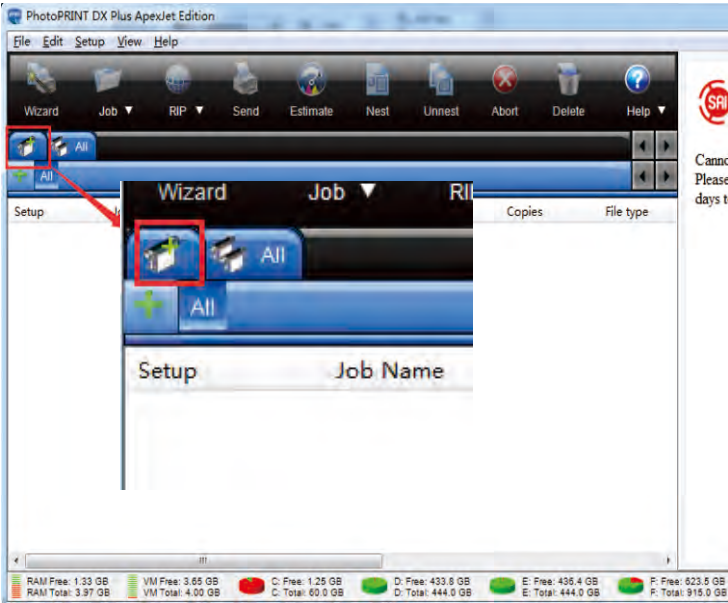


# 3.Installation and Operation

## 3.6 Software installtion and operation

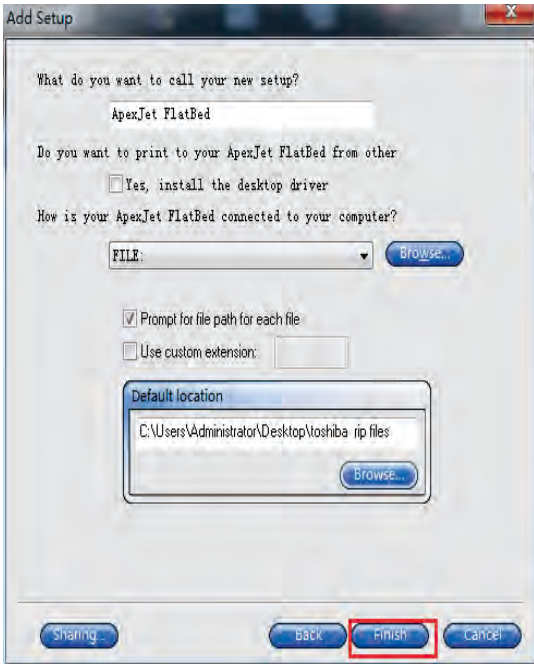
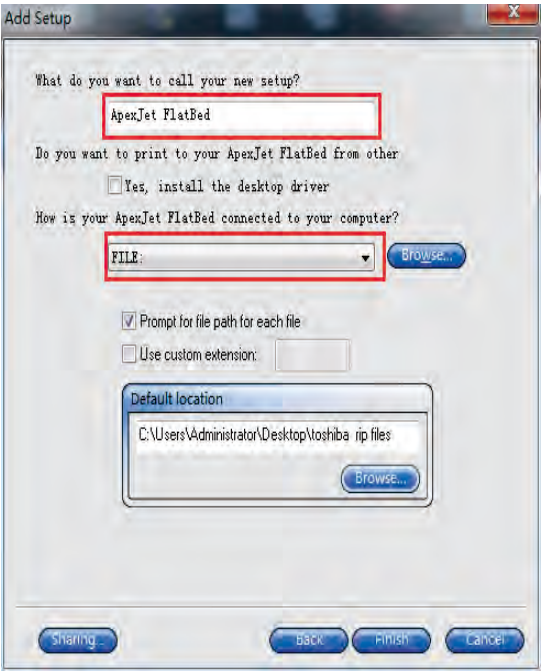
### 3 Printer and port setting

After installation, a shortcut will be generated onto desktop.  
Double-click photoprint to do some default settings.  
During usage, keep dongle plugged into computer.



A.If the banner does not pop up, please click the icon as the above picture, then follow all fellow steps .

B. Choose the same option as above pic.



C.Select FILE

D.Set up the Printer Finish.

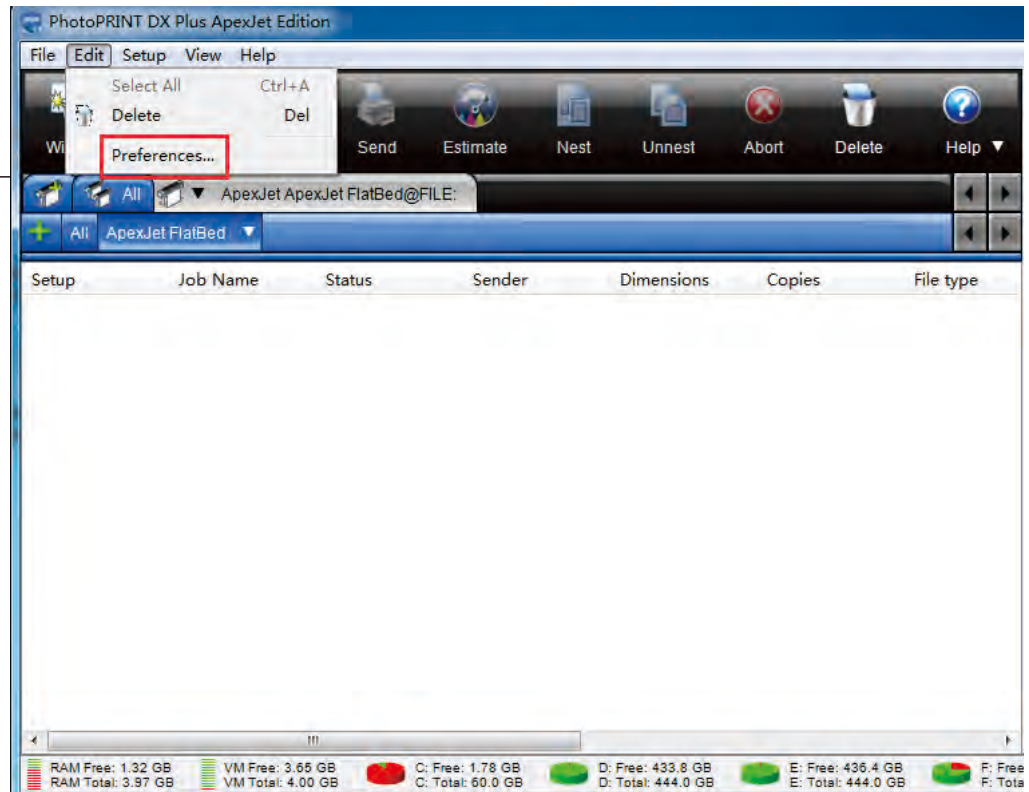


## 3.Installation and Operation

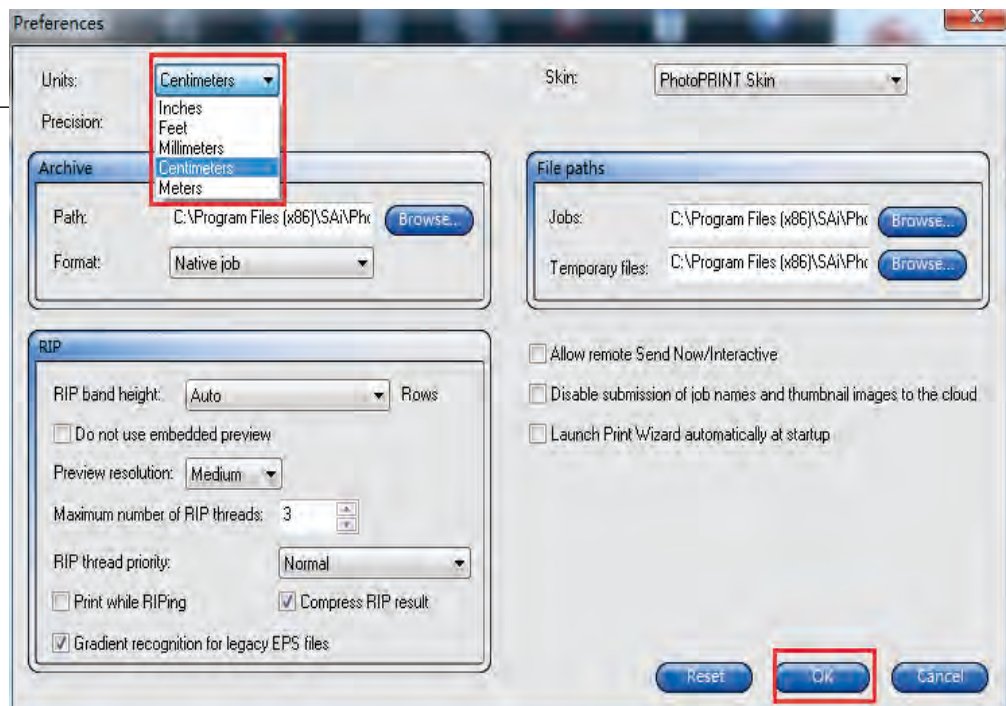
### 3.6 Software installation and operation

#### 4 Initial and Default Setting

Click Edit,then  
Preferences



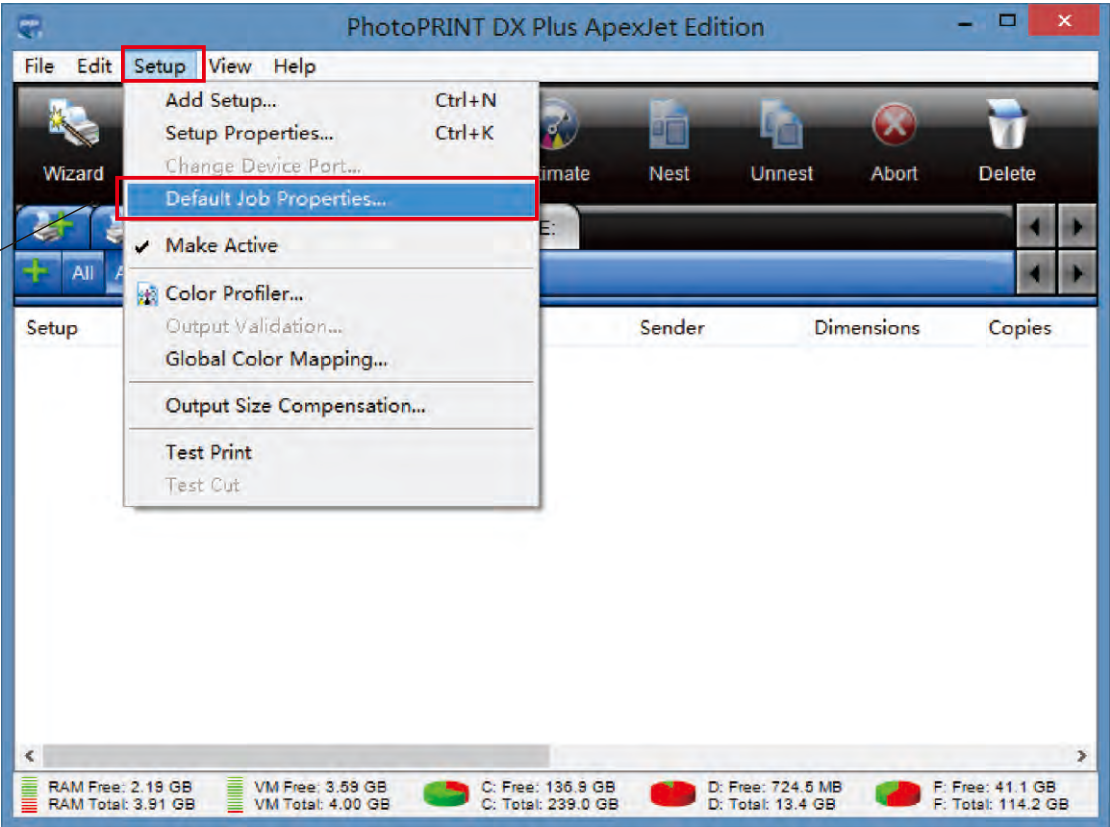
Change  
unit that  
user preffers  
in this option



# 3.Installation and Operation

## 3.6 Software installtion and operation

Click to enter  
default settings



## 1.Layout

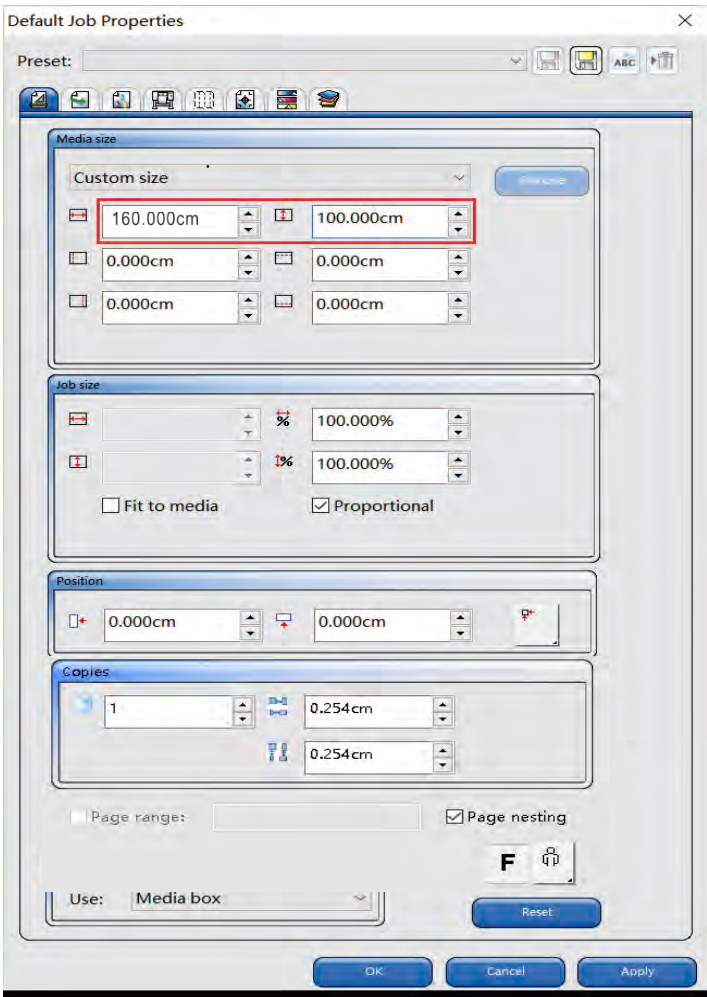
Size of platform

For UV1610:  
If user prefers  
inch,type in  
62.99" 39.37"

If user prefers cm,  
type in 160cm 100cm

For UV2513:  
If user prefers  
inch,type in  
98.42" 51.18"

If user prefers cm,  
type in 250cm 130cm

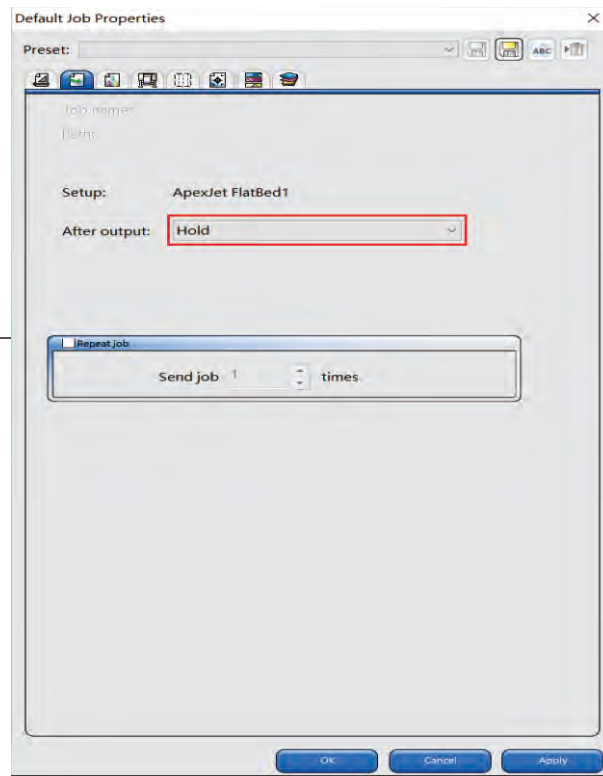


## 3.Installation and Operation

### 3.6 Software installtion and operation

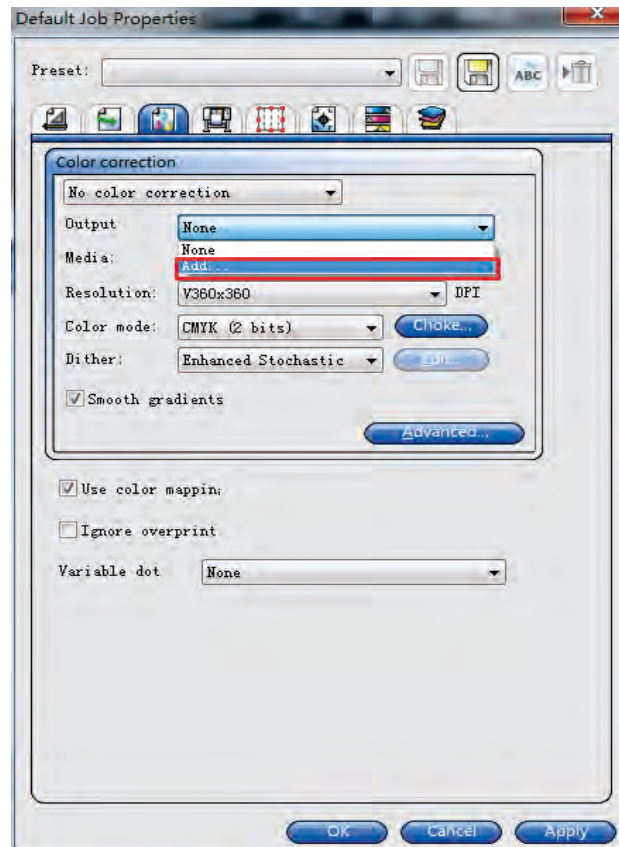
#### .2).Workflow

Generally if we choose “keep”, the task setting will be saved into task list



#### 3).Color management

Click output confirmation to choose add . . . .  
Add storage into the ICC profile folder into driver U disk.



## 3.Installation and Operation

### 3.6 Software installation and operation

1. printcontrol	2016/3/24 9:35
2. ICC profile	2016/3/24 9:35
3. user manual	2016/3/24 9:35

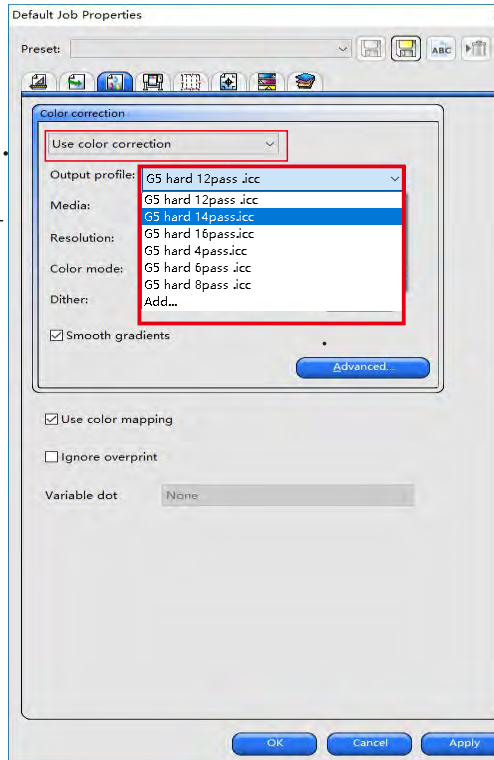
JHV05 3pass.icc
JHV05 4pass.icc
JHV05 6pass.icc
JHV05 8pass.icc
JHV05 12pass.icc
JHV05 16pass.icc

After add ICC file, you can choose “user color correction”

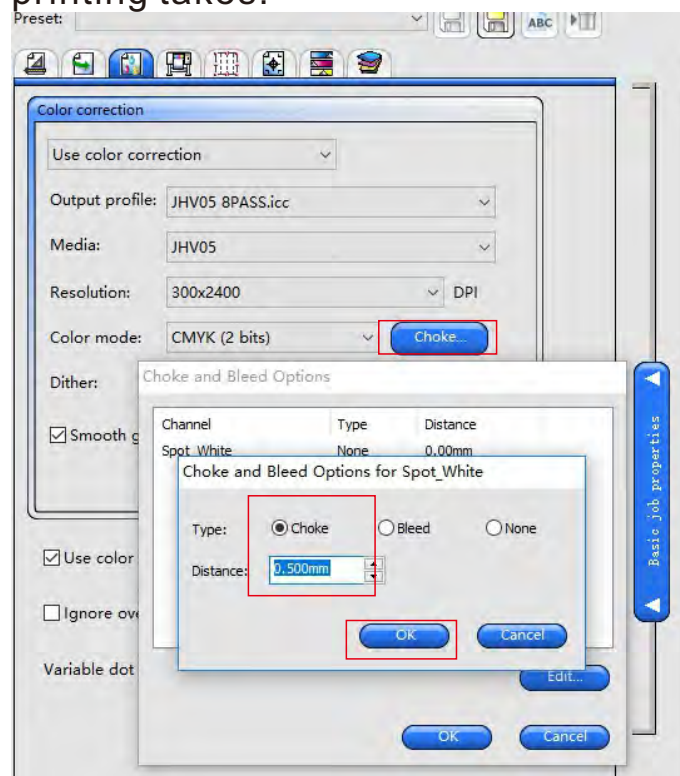
1.Use color correction

2.Choose resolution

720X600 4Pass  
720X900 6Pass  
720X1200 8Pass  
720X1800 12Pass  
720X2100 14Pass  
720X2400 16Pass



Usually we suggest to use 4Pass or 6Pass for printing. according to the usage time of printer head, if the printer head ages older, it is recommended to select a higher number of passes. The higher passes you use, the longer time the printing takes.



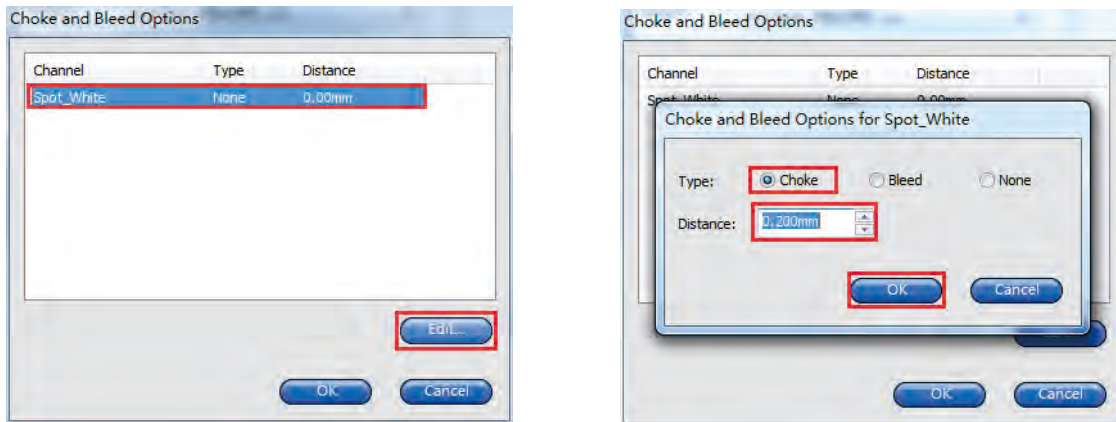
When print color and white ink at the same time, if the color inks could not fully cover white ink, use contract function to narrow down the white area. Finally click confirm.



## 3.Installation and Operation

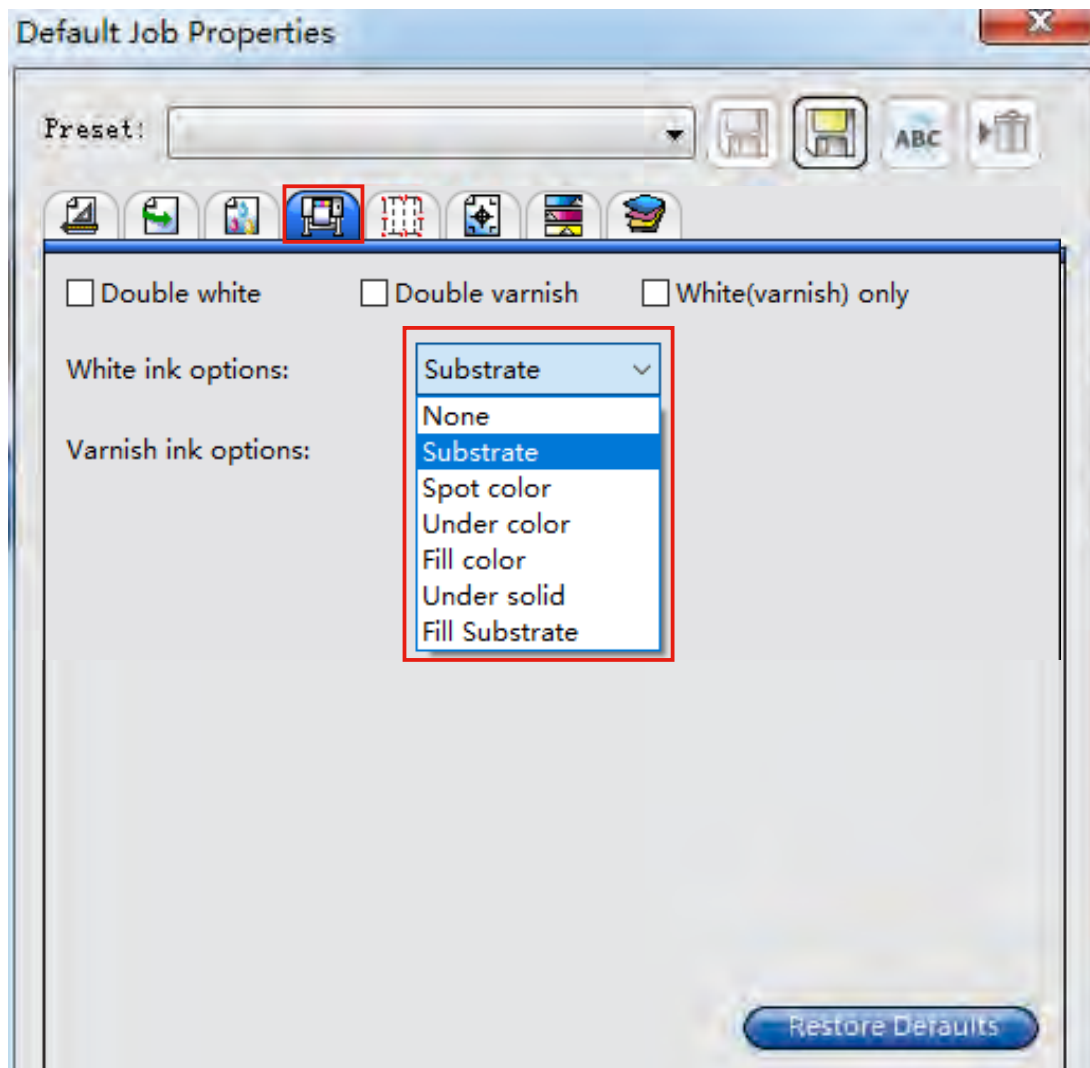
### 3.6 Software installtion and operation

3.Double click Spot white or click Edit, and then choose Choke, Enter the narrowed value. Confirm.



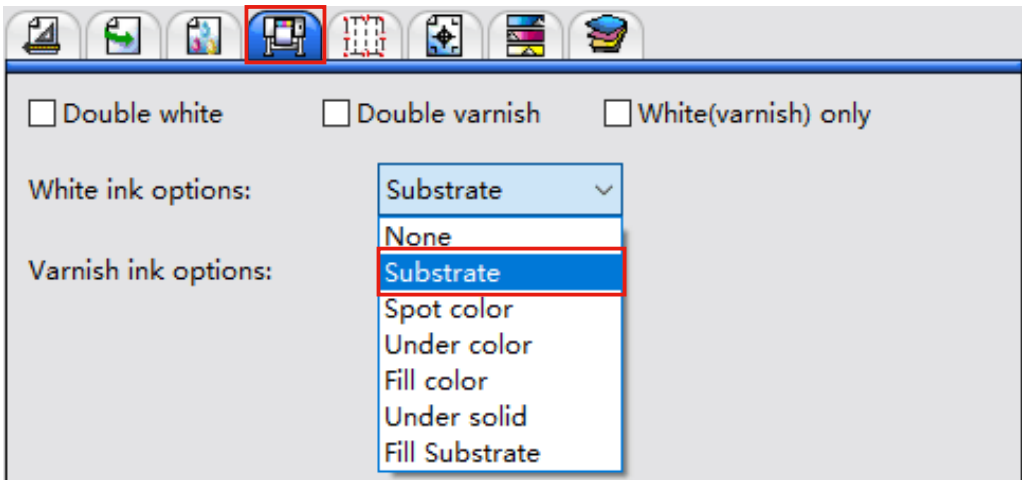
4.Printer option

According to different printing requirement and set different white ink printing option. Generally white inks has None, Substrate, Spot color and under color options.

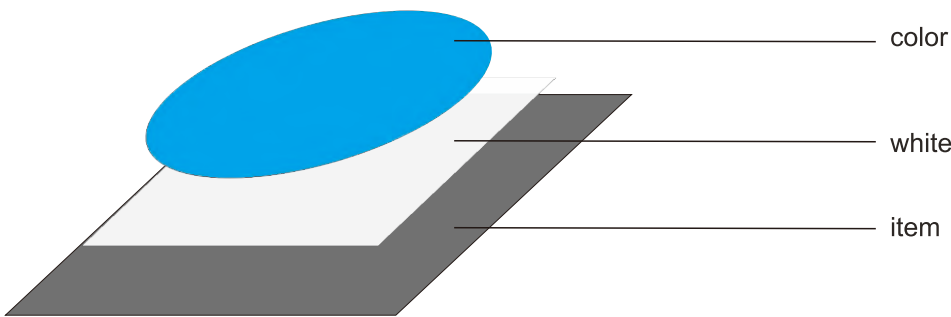


### 3.Installation and Operation

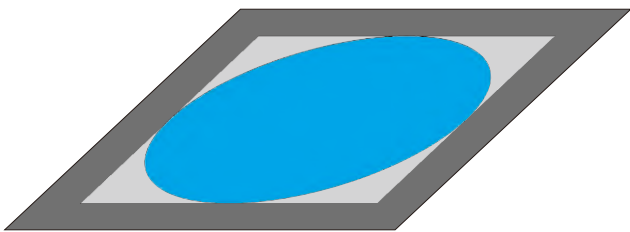
#### 3.6 Software installtion and operation



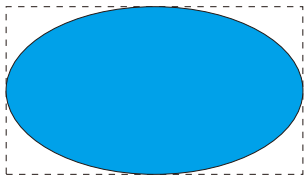
4.If the whole picture must be covered with white base,  
follow above picture to choose Substrate .



Spread the base



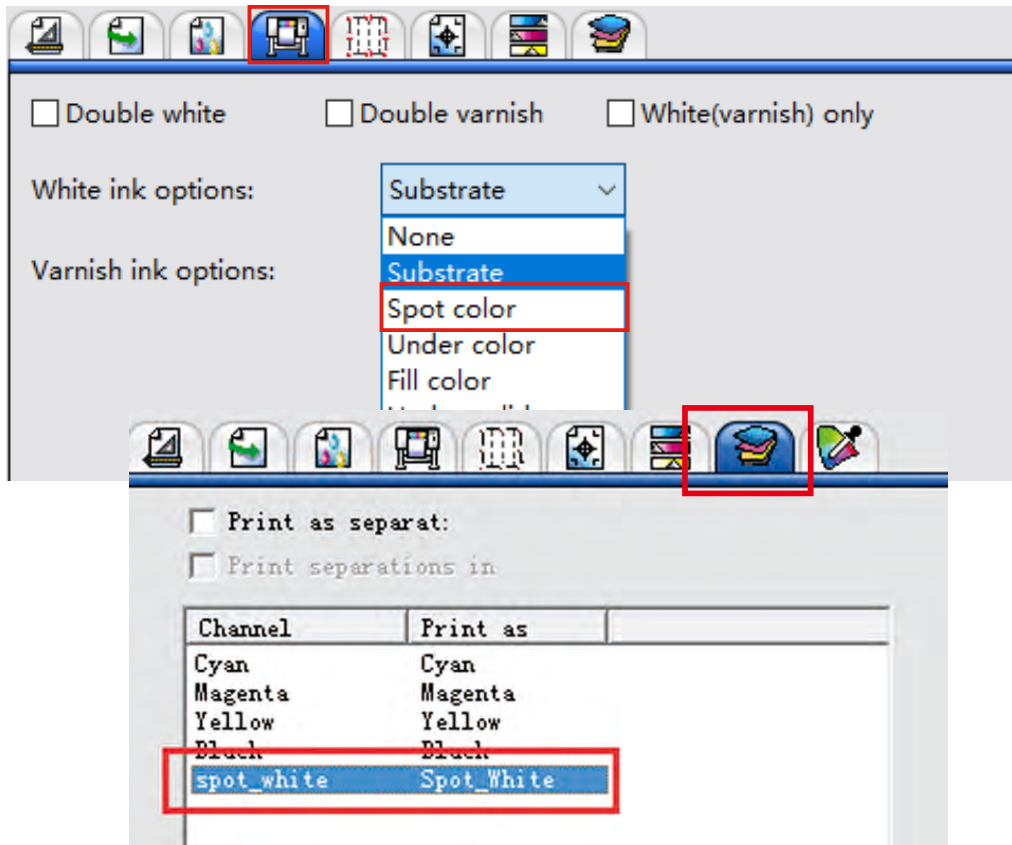
Print output



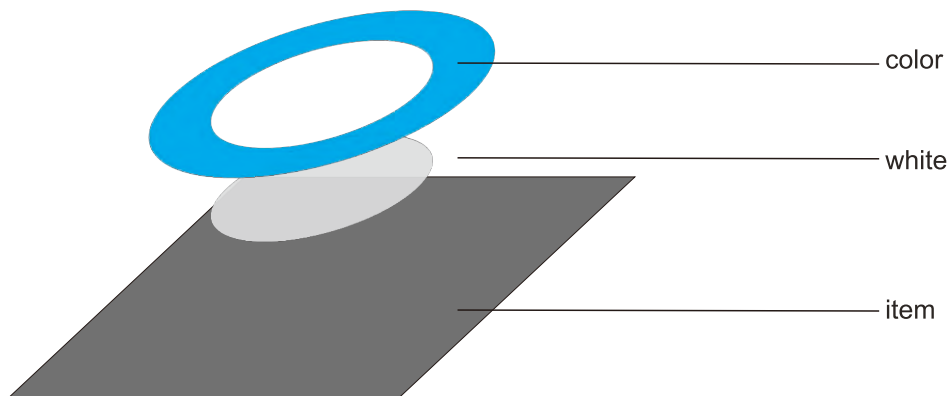
Original picture

## 3.Installation and Operation

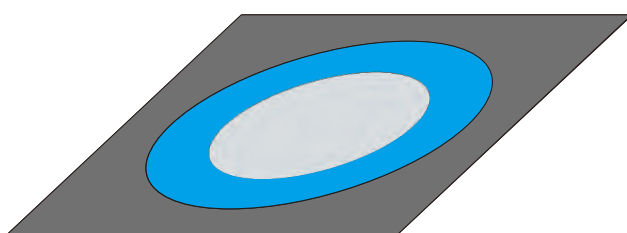
### 3.6 Software installtion and operation



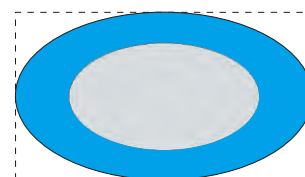
If white base is required in specific place(pls create spot color in photoshop firstly), follow the above picture to choose Spot color and Underneat and set the spot color name as Spot\_white.



Spread the base



Print output

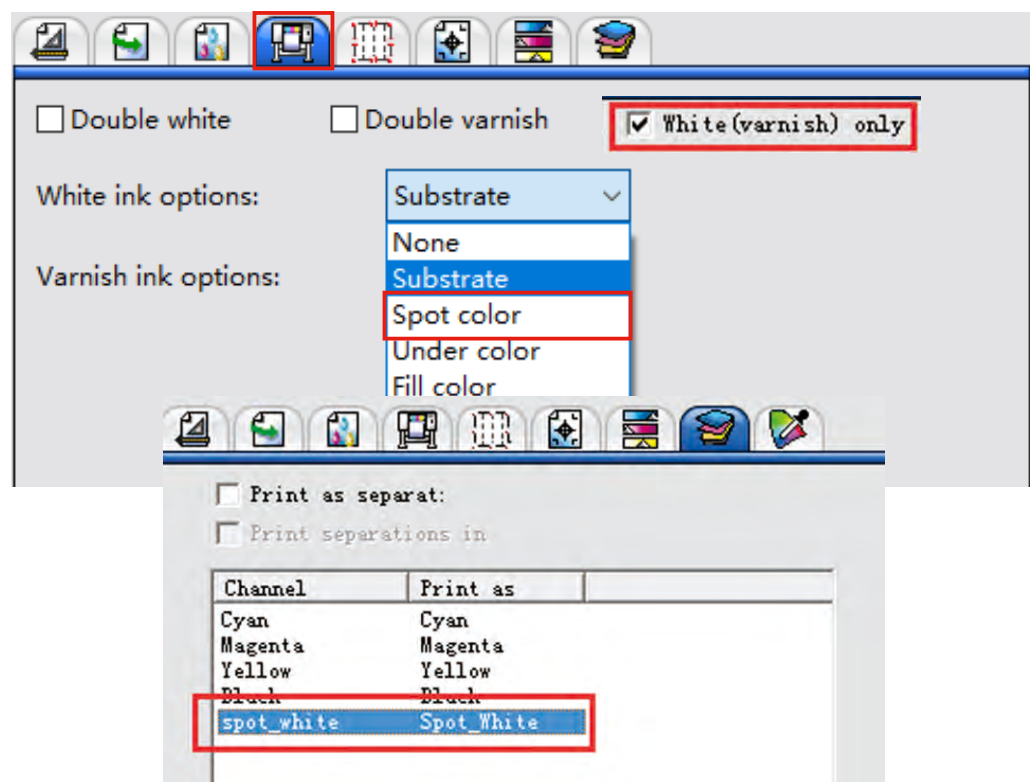


Original picture

# 3.Installation and Operation

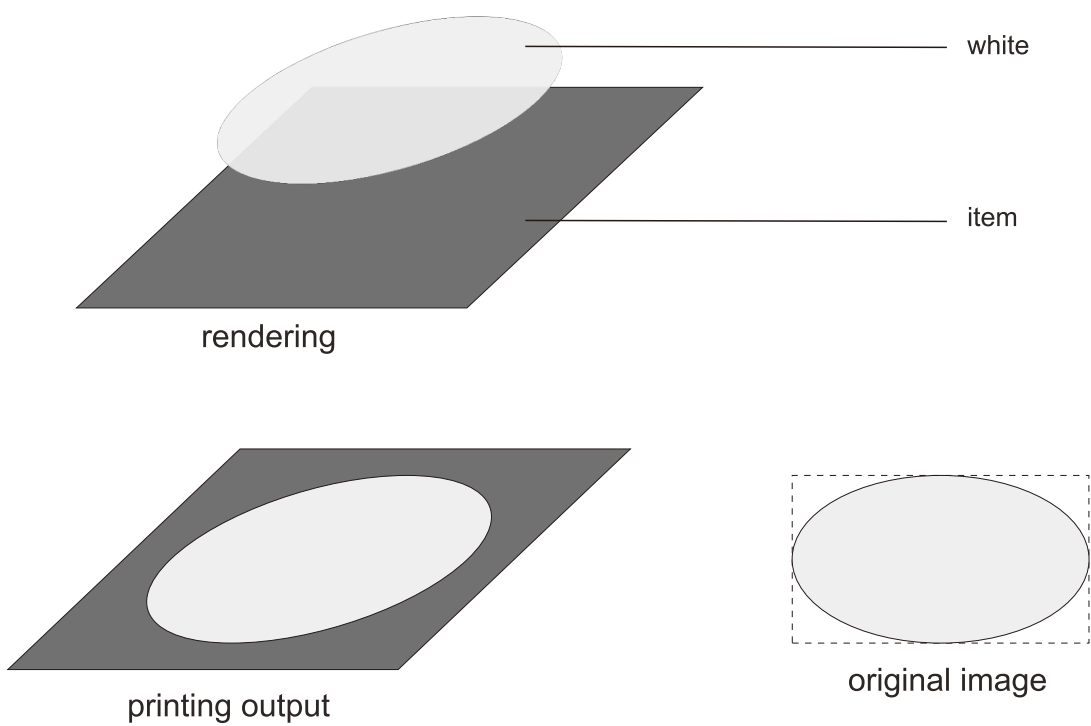
## 3.6 Software installtion and operation

### E: White only



For items that user wants to print white only.

Choose White(varnish) only as the picture above shows.

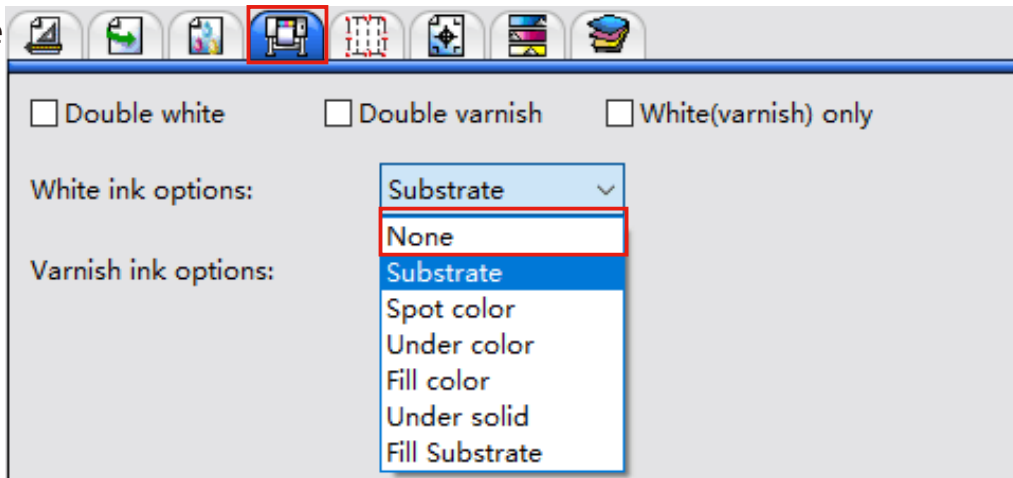




## 3.Installation and Operation

### 3.6 Software installtion and operation

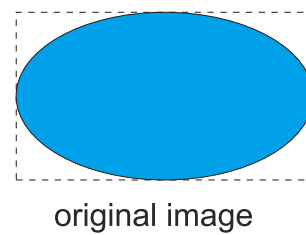
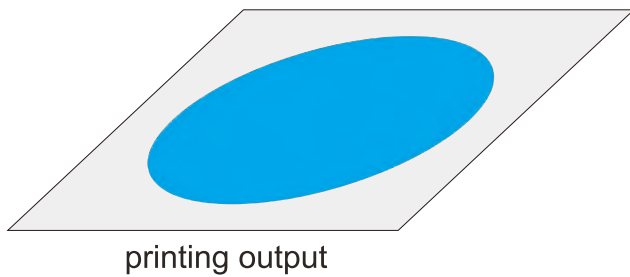
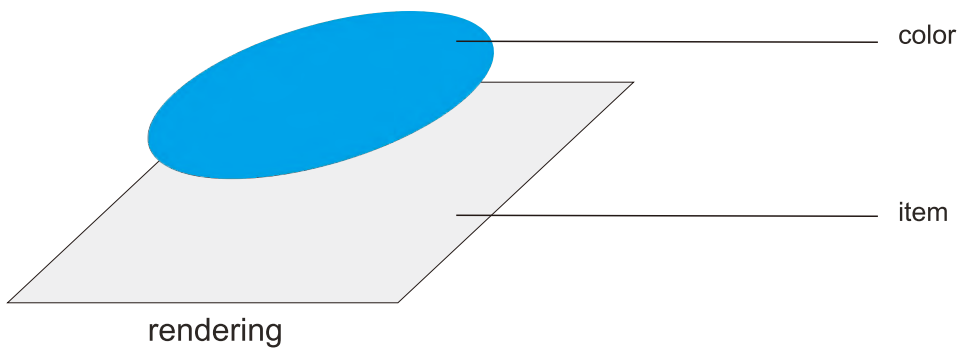
D: None



For items that user wants to print color only.

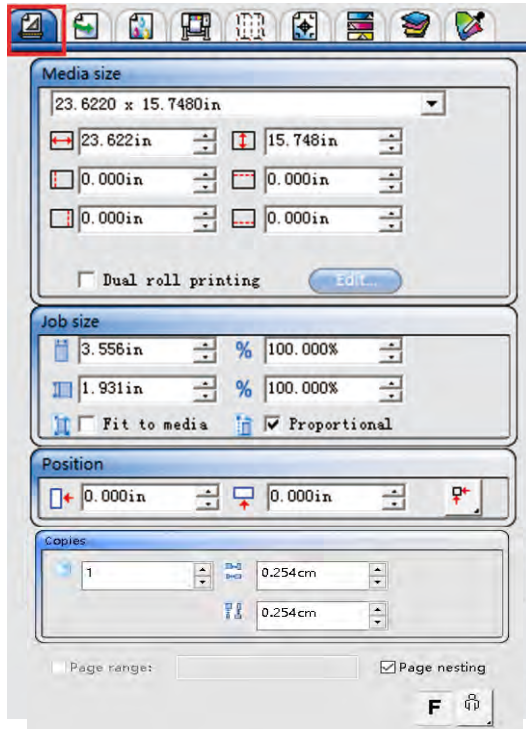
(For example items with white base)

Choose None and Underneath as the picture above shows.



## 3. Installation and Operation

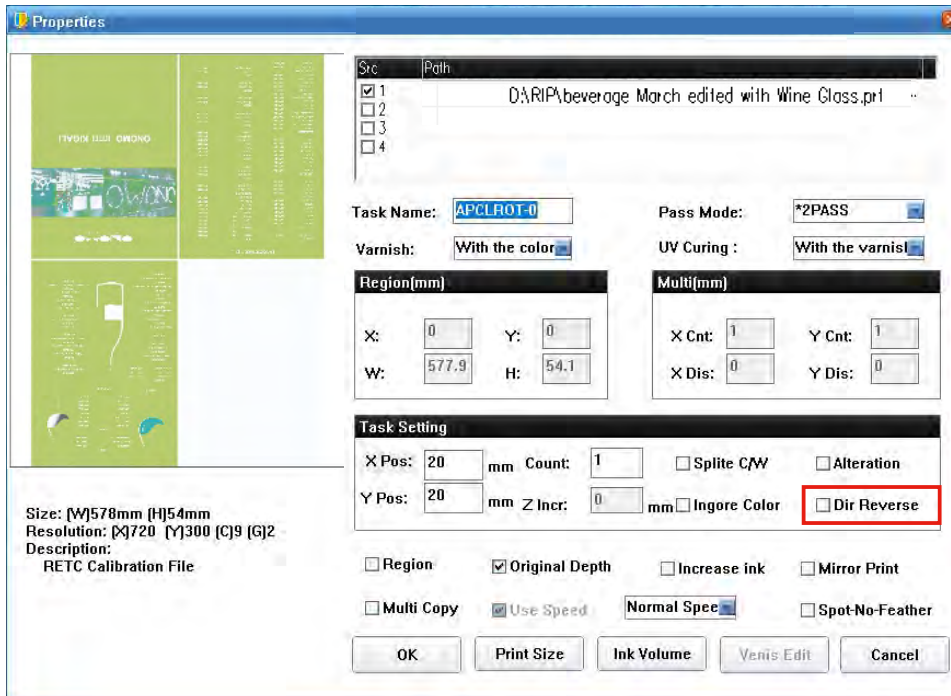
### 3.6 Software installation and operation



1. Click this to change the image direction.



#### 2. Select reverse direction printing in the driver

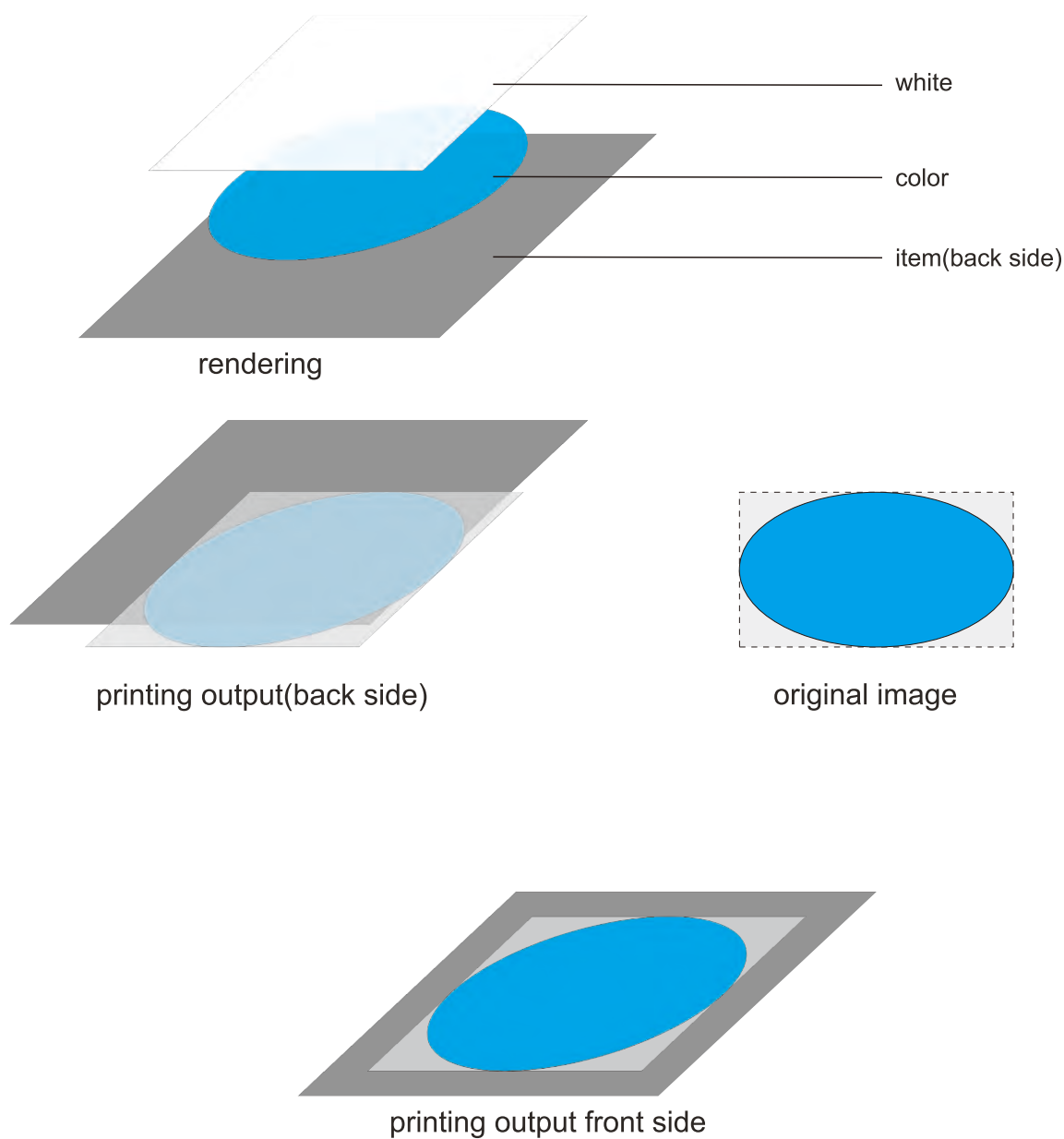


(For items like glass, crystal and transparent acrylic, if user want to print on the back side and see image from the front side. For better quality, we need to print it two steps-Color first & white cover)

Above are the 3 steps of settings to finish the printing.

## 3.Installation and Operation

### 3.6 Software installtion and operation



# 3.Installation and Operation

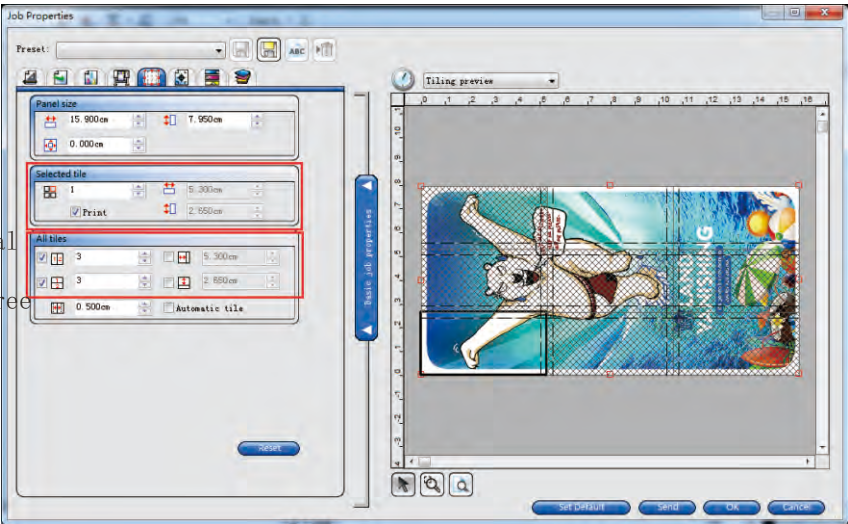
## 3.6 Software installtion and operation

### 5 Segmentation

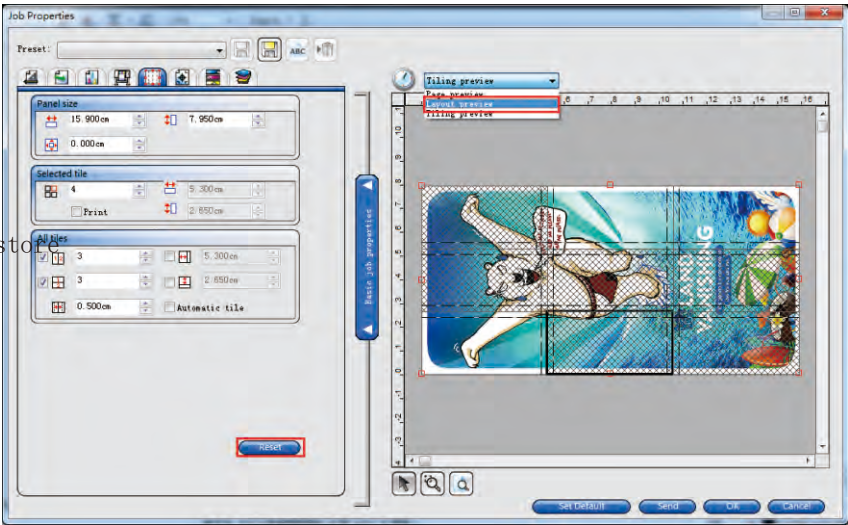
Manually cut the printing image, or make image printing partly, such as the application of large format in the printing of tile wall.

Choose the right part need to be print, such as click the part, or double-click the image to choose.

The mark for vertical and horizontal blocks, as shown in the figure, vertical direction divided into three part, horizontal direction divided into three part.

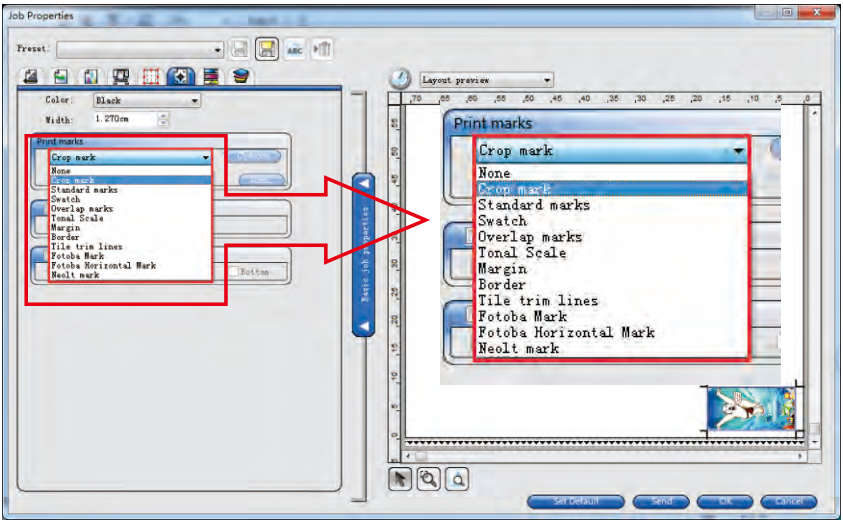


At the same time you can choose preview the printing image, if you want to cancel the segmentation task, please click “Reset” to restore the task.



### 6 Labels & Marks

You can choose various types of marks while printing, making it easier to locate the image on the desktop. Select "None" to cancel the marks printing.



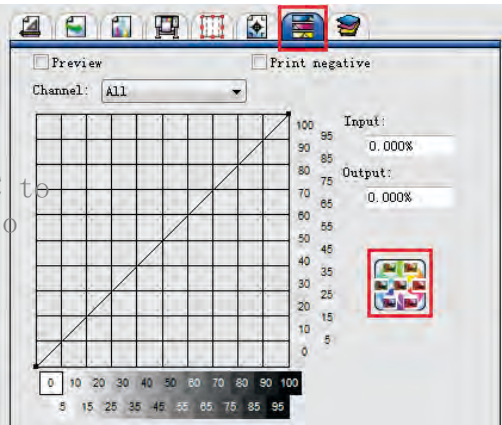


# 3.Installation and Operation

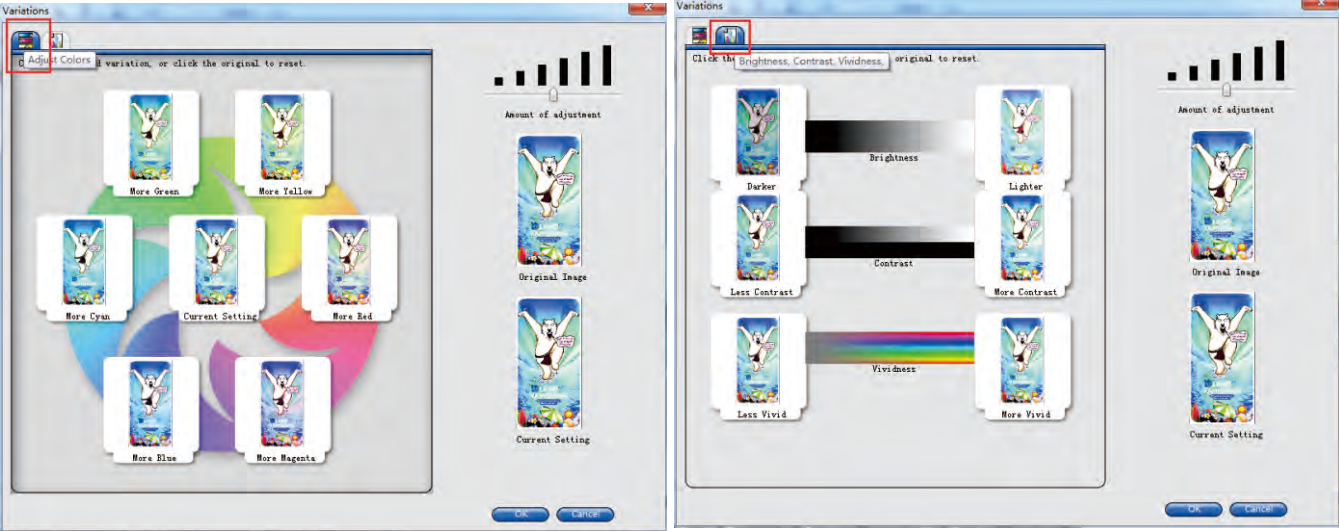
## 3.6 Software installtion and operation

### 7 Labels & Marks

When there is some difference between the file & printing job, in addition to use ICC to adjust, we can also use “Color adjustment” to correct the color.



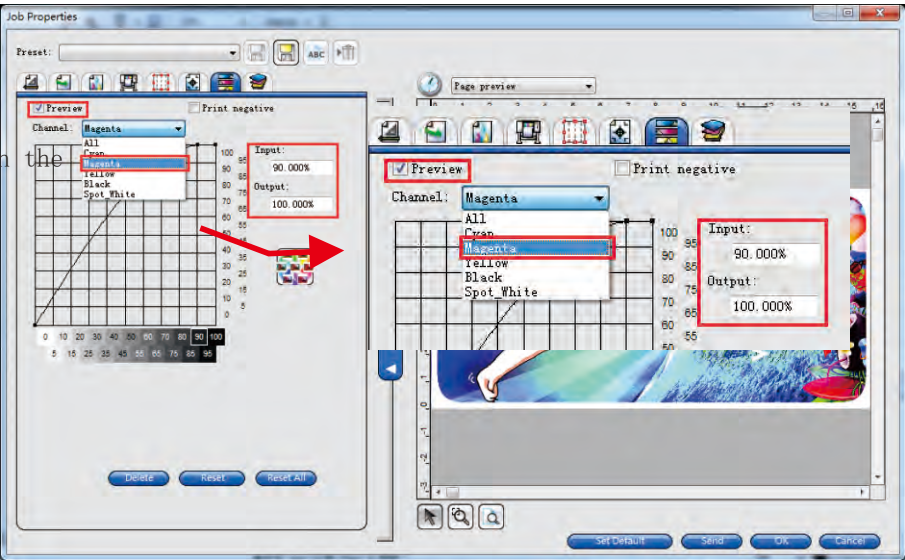
1.Click “Change” to enter the following interface



Click on picture of “adjust the color” and “brightness, contrast, sharpness” the left side , observe the color of right picture “current settings”, after confirm the color debugging program we can back to the main interface

2.For example, if we want printing results with more red, need to increase the contrast and sharpness.

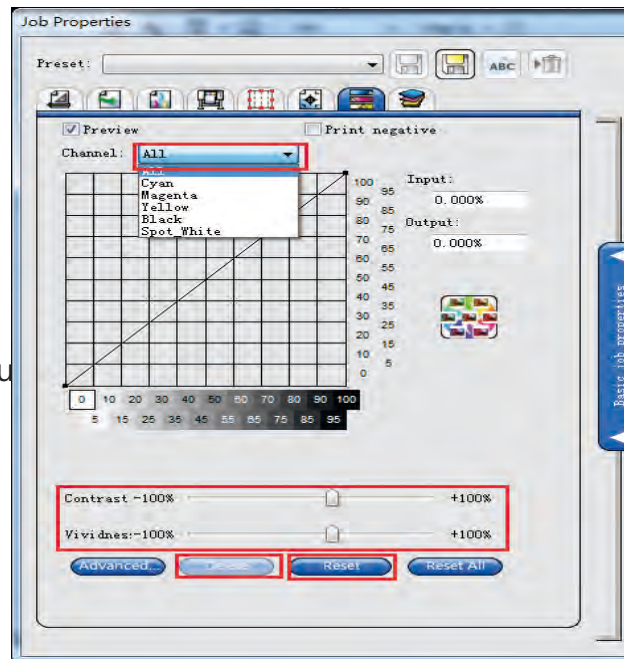
Select the color to be adjusted, fill in the input and output values, so that the output value is greater than the input value, that means to increase the amount of ink. Click to preview the image on the right to see the color adjustment.



## 3. Installation and Operation

### 3.6 Software installation and operation

Select all, adjust the contrast and sharpness, the adjustment of contrast and sharpness should be kept within 10%. You can use "Delete" to cancel the previous adjustment; or you can use "Reset" to restore all adjustments.



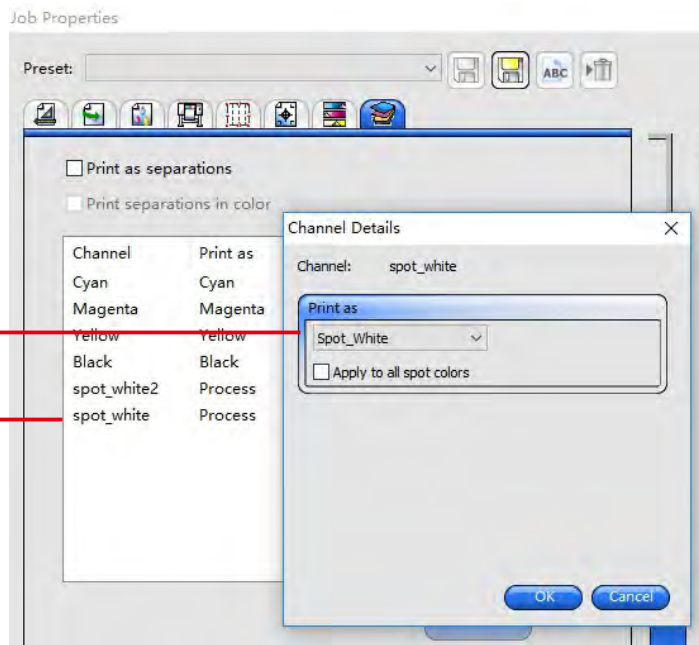
Note: If you need to do the same color adjustment for all pictures, please contact Apex to adjust the ICC file directly.

#### 8 Separate printing

When select spot color printing, you need to check whether the spot channel is open, beside spot channels are listed here. If you have multiple spot channels, you can select the print separately. Make sure you are using Photoshop of CS4 or earlier version.

(2) Click "Spot-White"

(1) Double-click  
Spot-color channels

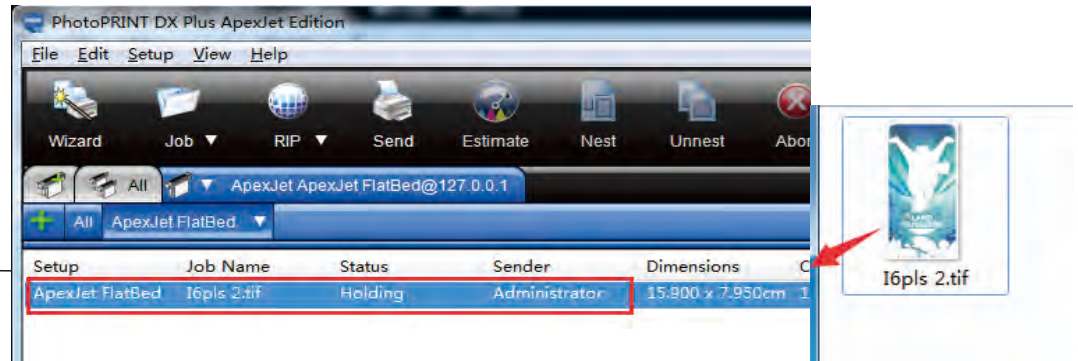


## 3.Installation and Operation

### 3.6 Software installtion and operation

#### 5 Instruction for Setting

For example, image path is in **C:\desktop**, you can open the folder and directly drag the image to this area.



pop up this page  
drag an image into  
this area, double click  
the job to proceed  
further setting.

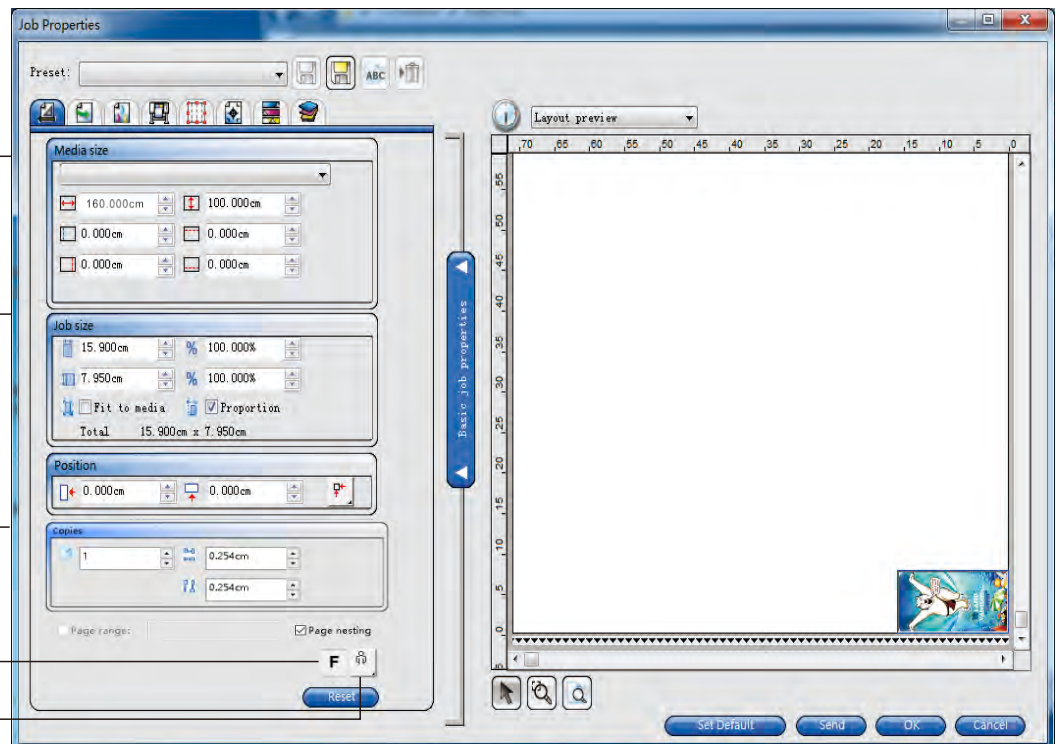
Platform size setting

Image size setting

Copy image number  
and interval setting

Mirror setting

Image rotary



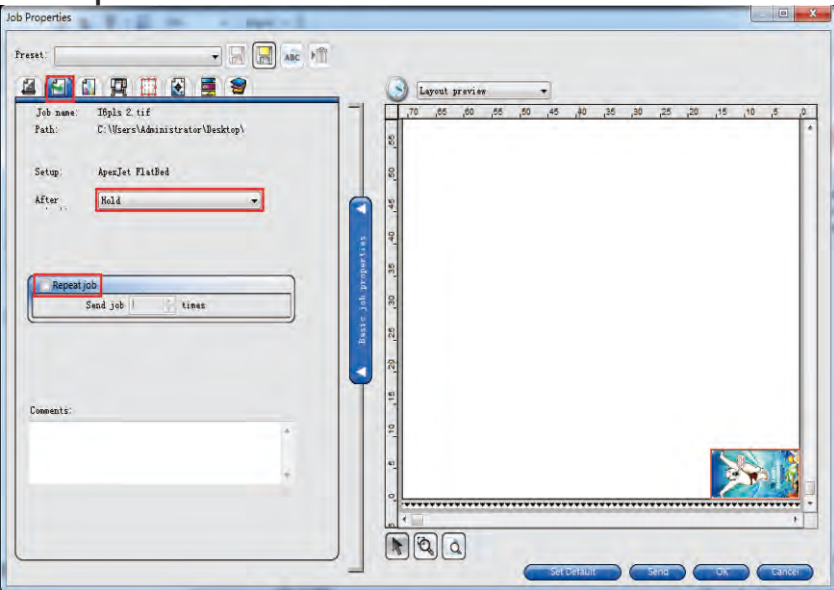


# 3.Installation and Operation

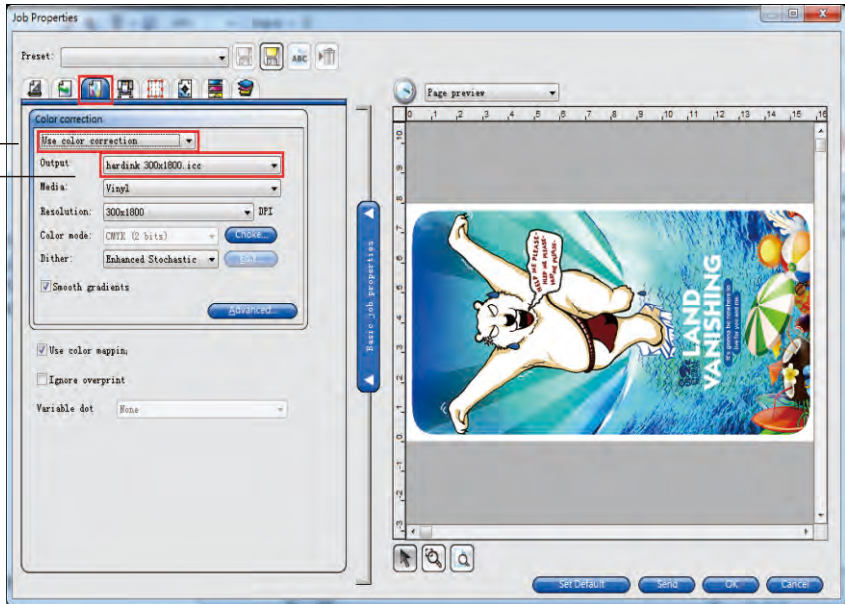
## 3.6 Software installtion and operation

Select hold to save image and settings; Select delete to delete image automatically.

Repeated printing



Use color correction  
Select resolution

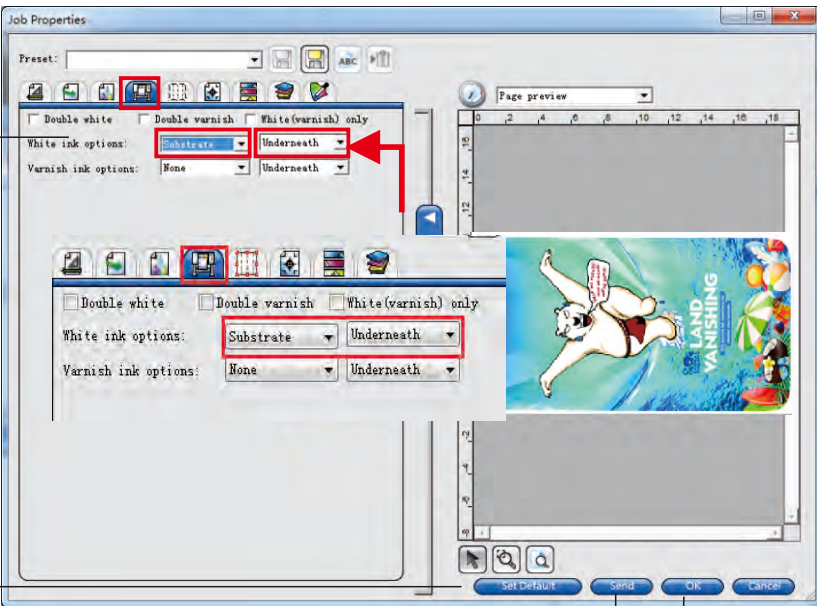


White ink option:

- A.substrat: e full white
- B.under color: white under colors
- C.none: No white
- D.spot color: only print white where you set spot channels previously in Photoshop.

- A.underneat: hWhite ink under color ink
- B.overlay White ink above color ink.

Click to Save default setting to make settings automatically used.



Printing start

Save settings



# 3.Installation and Operation

## 3.6 Software installation and operation

Click SEND and choose the image saving path, the software will save the “.prt” format file.



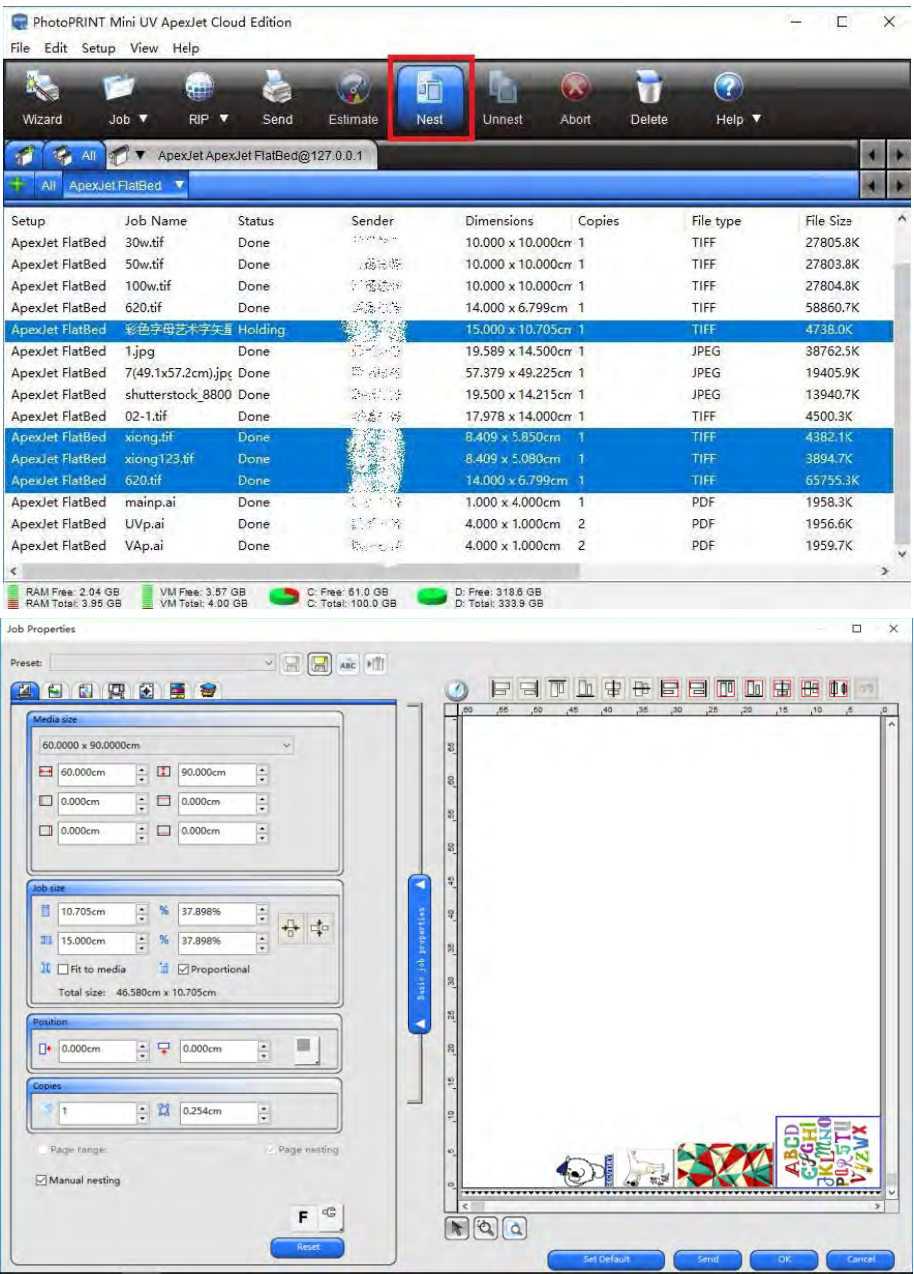
Set up multiple tasks in Photoprint

1.Print multiple copies of the same picture, use the copy function, and set the space.



2.Print a number of different pictures, you can use the bar code layout function, click to cancel the nest then disassemble this typesetting task.

Set the same color and ink options for the pictures you want to print together, then select them together, and click on the material layout to synthesize multiple tasks.



## 3.Installation and Operation

### 3.6 Software installation and operation

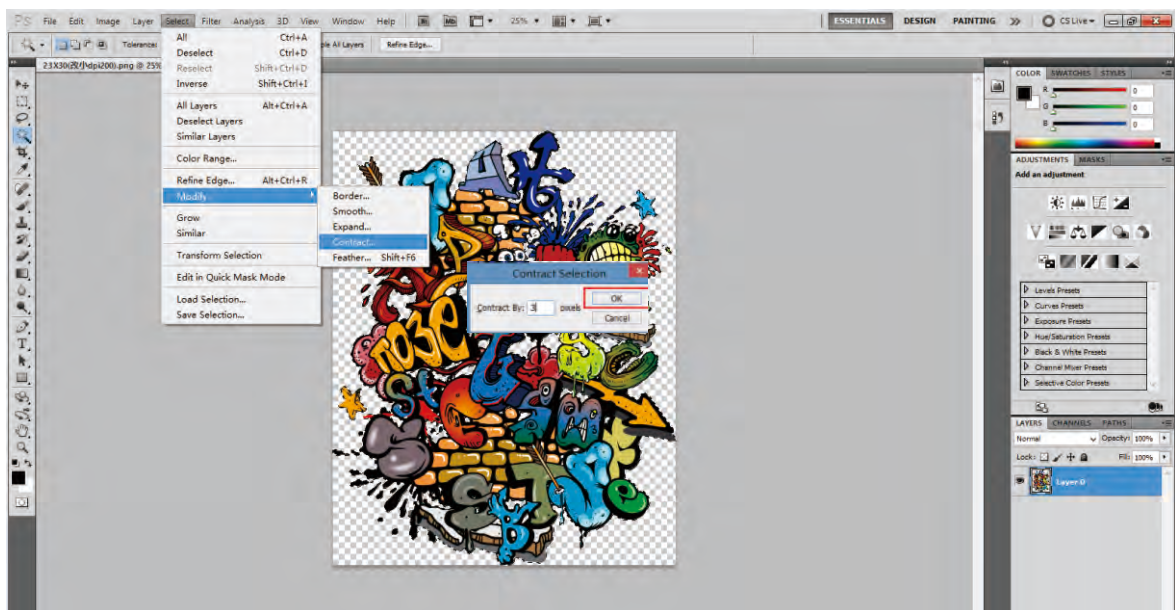
Design spot white in Photoshop:

(1) Add a picture into PhotoShop and change it into CMYK mode.



(2) Select an area you want to print white. Magic Wand Tool or Pen Tool may usually be needed in this step.

(3) Contract the area you selected, sometimes it just need contract 2-3 pixels. Then press "OK".

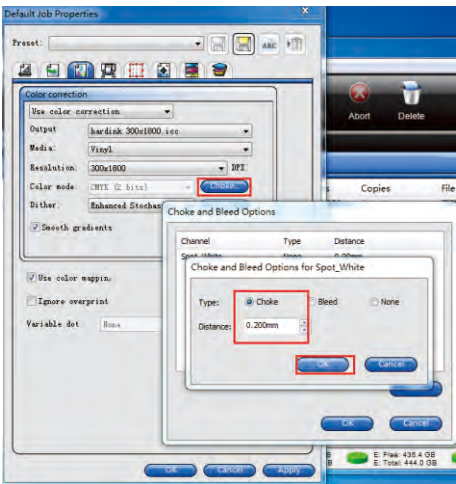




# 3.Installation and Operation

## 3.6 Software installation and operation

You can use the CHOKE function to adjust the spot-color channel (white layer smaller than color layer) in Photoprint software.



(4)Make new spot channel.The name should be “spot\_white”.The ink characteristics should be white.The solidity should be 0%.

If need to print varnish on spot color, please copy one more channel and named as "Spot Varnish"



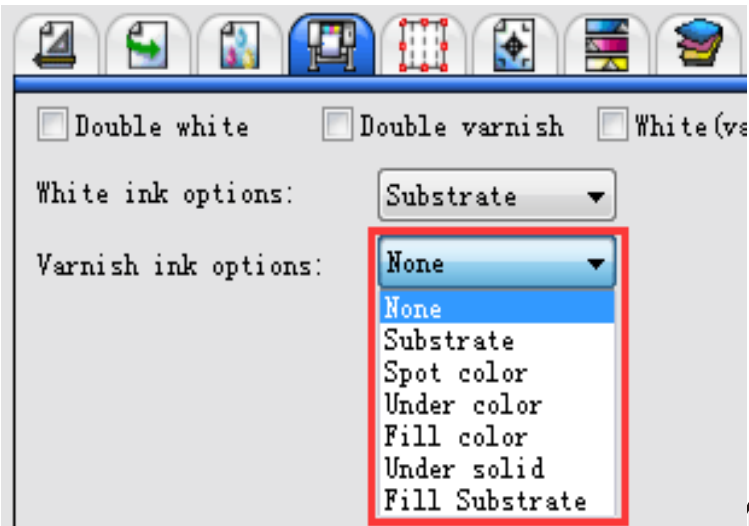
Varnish options:

A: Substrate: full size varnish

B: Under solid: varnish only  
above color place

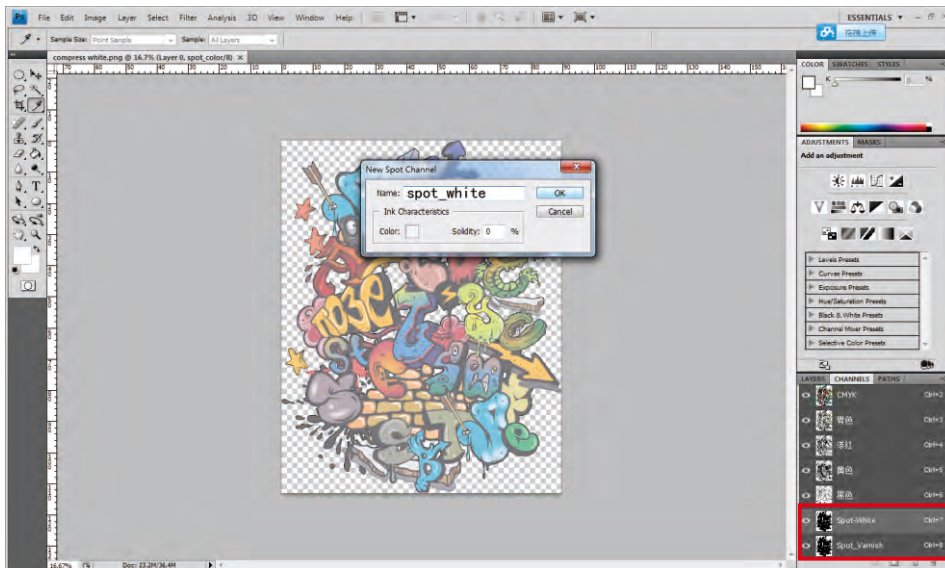
C: None: no varnish

D: Spot color: varnish only  
above the spot color area  
where you added spot color  
channel by Photoshop.

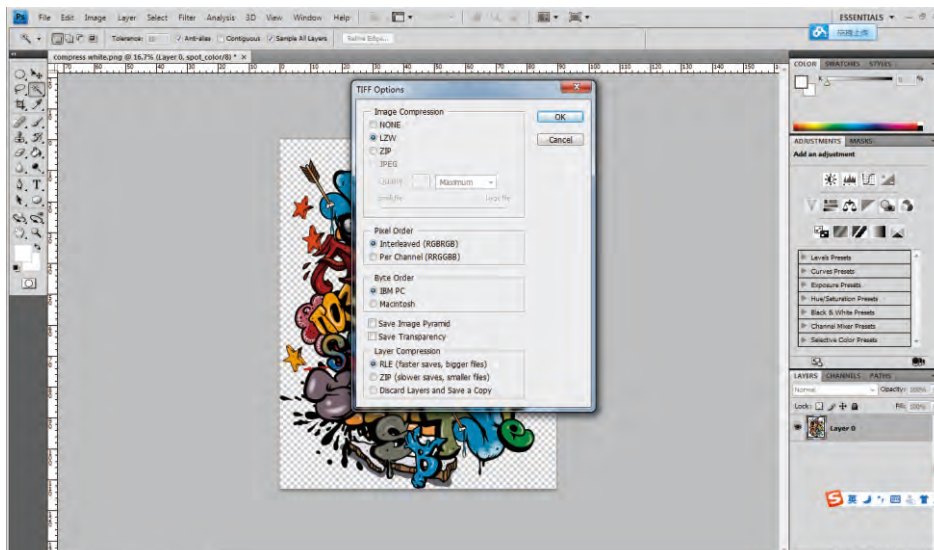
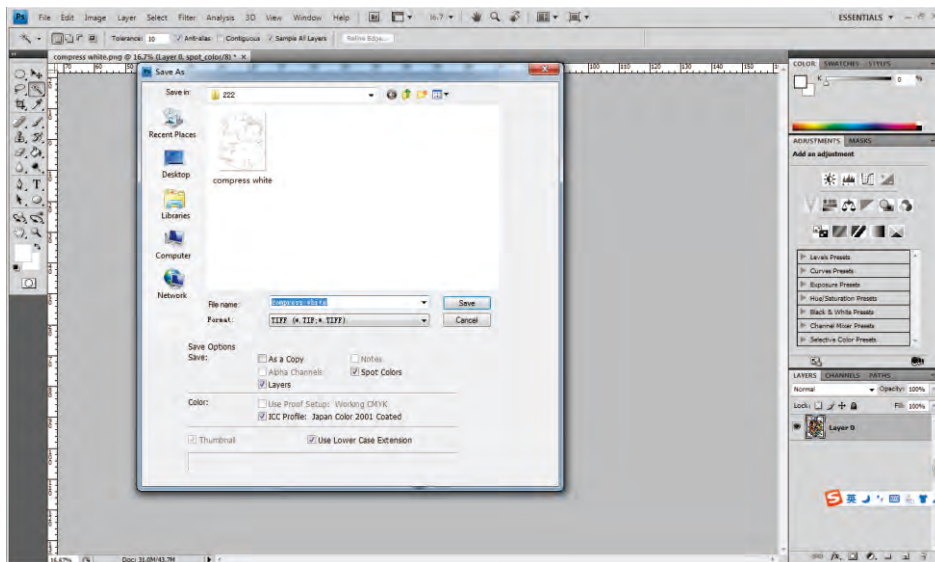


# 3.Installation and Operation

## 3.6 Software installtion and operation



(4)Save as TIFF format.Image compression is LZW.

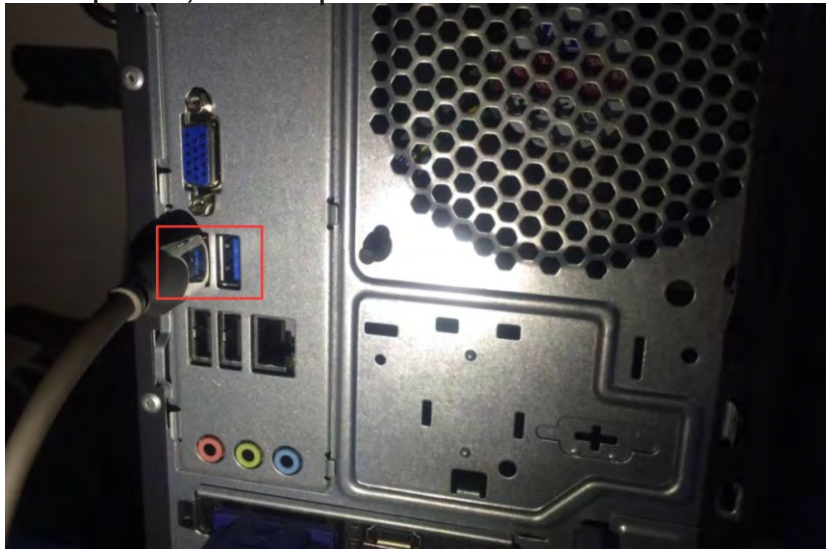




## 3. Installation and Operation

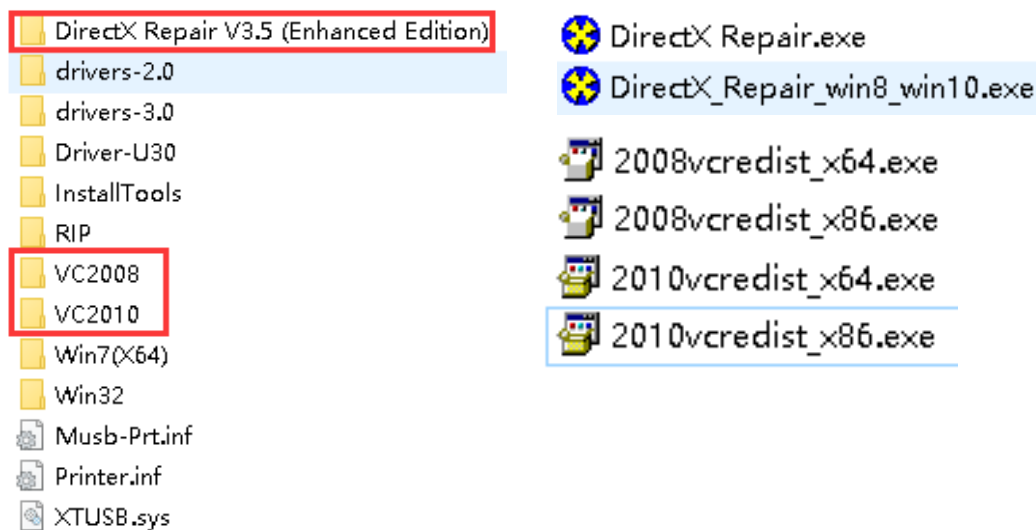
### 3.7 Driver installation and operation

- ❶ Delete or turn off the computer antivirus software, copy the driver File—Printmon from U-disk to the computer
- ❷ Connect the USB3.0 cable on the right side of the machine to the USB 3.0 jack on the computer, then open the boat switch on the side of the machine.



How to connect the USB cable of printer to the USB jack on the computer

- ❸ Select the corresponding driver according to the computer system, double-click to install USB driver.



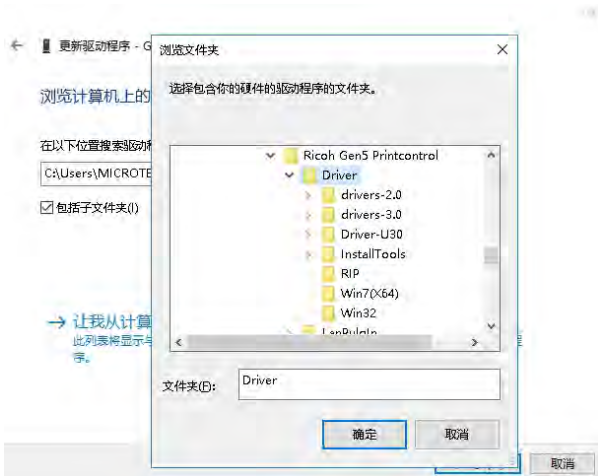
## 3.Installation and Operation

### 3.7 Driver installation and operation

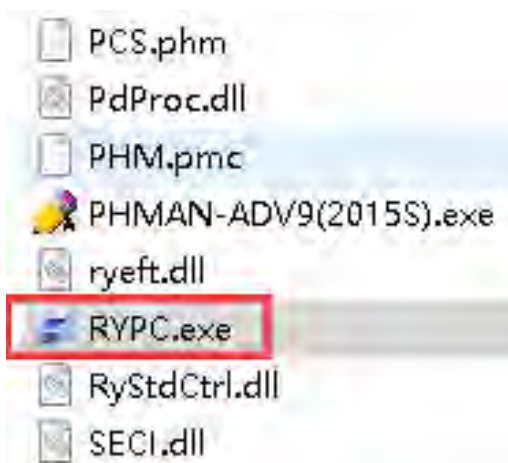
- 4** Open the Printmon folder, RETC device selection update driver appears.



- 5** Select the Driver folder in the driver directory to install




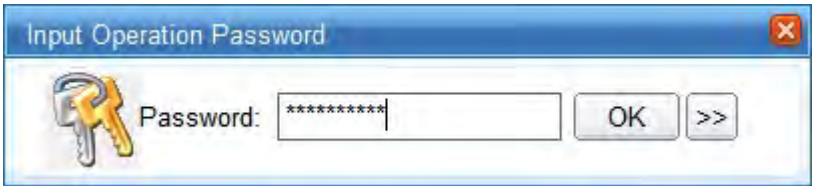
- 6** Run RYPC.exe from the driver directory.

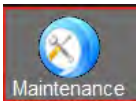


# 3.Installation and Operation

## 3.7 Driver installation and operation

- 7** First time you run the driver,you need to import the nozzle configuration file.  
click “  Password ”,input” retc\_000”



- 8** Click  ,select the nozzle voltage,nozzle configuration :**ricoh\_phcfg-SMM**,  
Click Load configuration and Apply.



- 9** Exit the driver



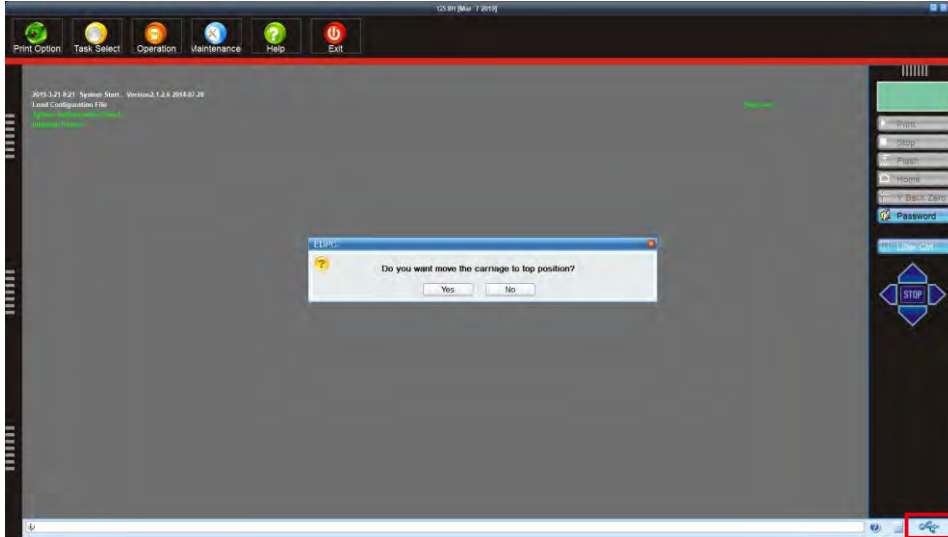
- 10** Run RYPC.exe from the driver directory.



## 3. Installation and Operation

### 3.7 Driver installation and operation

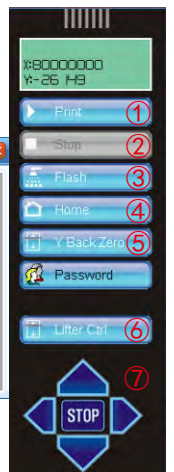
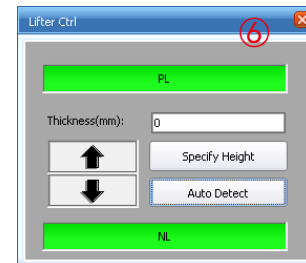
- After printer online, the pop-up prompt box clicks Yes.  
(If the lower right corner is displayed as " " the connection failed, please contact supplier)



Normal online action: the ink cart rises to the highest point --> ink cart moves to right --> ink cart moves to left back to the origin --> the Y axis returns to the origin --> the ink cart drops to the printing point.

#### 1 Software toolbar introduction

- start the print queue, pause/resume the print task
- Print stops or discontinue the print queue
- On/off nozzle flashing
- Ink cart back to zero position nozzle protection area
- beams return to the origin
- control ink cart print height
- control ink cart, beam moves back and forth



#### 2 Print Option introduction

##### Spot color process

Data source: Select white ink printing method (default)

White thickness: select the printing thickness of white ink layers

White pass volume: select the amount of ink on white (0-100%)

Varnish pass volume: select the amount of varnish (0-100%)

Varnish thickness: select the print thickness of the varnish layers

Varnish source: choose different printing methods for varnish

Lay mode: can choose to print color+ white or color + white + color

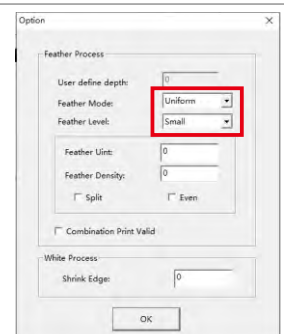
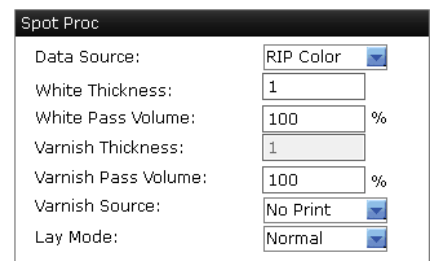
##### Pass Feather option

Generally, the printing color block adopts a gradient large eclosion, and the printed font can be selected to be feathered in the gradient.

Option level:

- |                 |   |
|-----------------|---|
| Uniform Large   | 6 |
| Uniform Normal  | 5 |
| Uniform Small   | 4 |
| Gradient Large  | 3 |
| Gradient Normal | 2 |
| Gradient Small  | 1 |

The higher the level, the better the printing effect Printing time will increase by 10% between each level

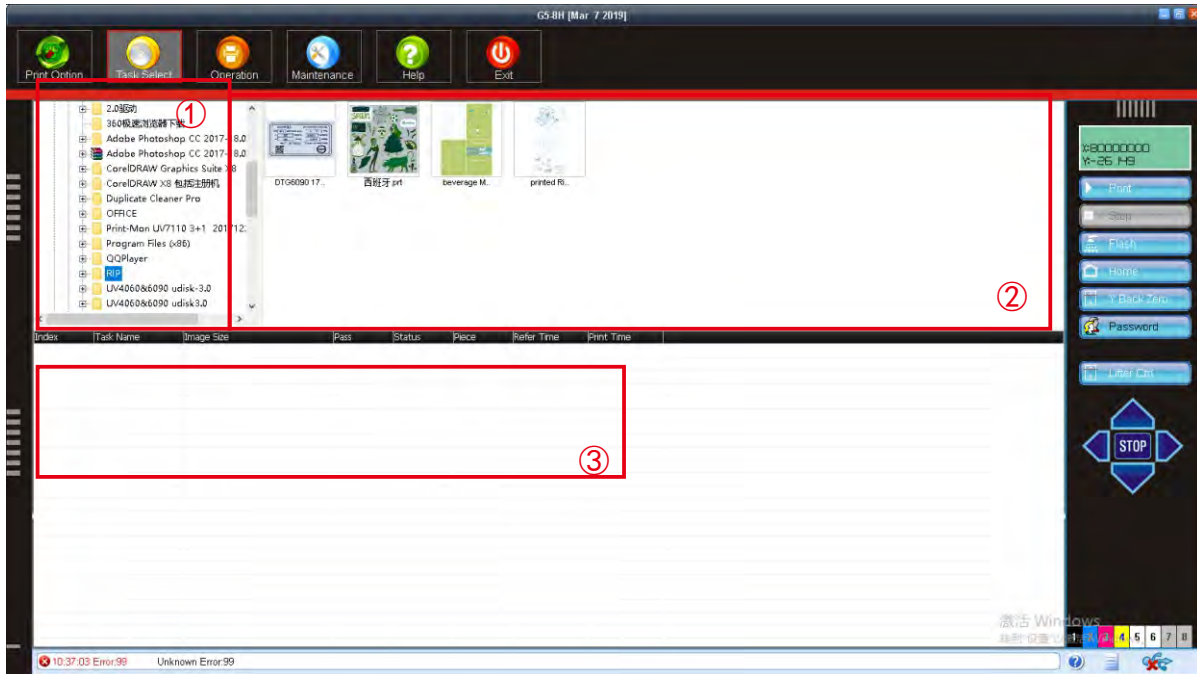




## 3. Installation and Operation

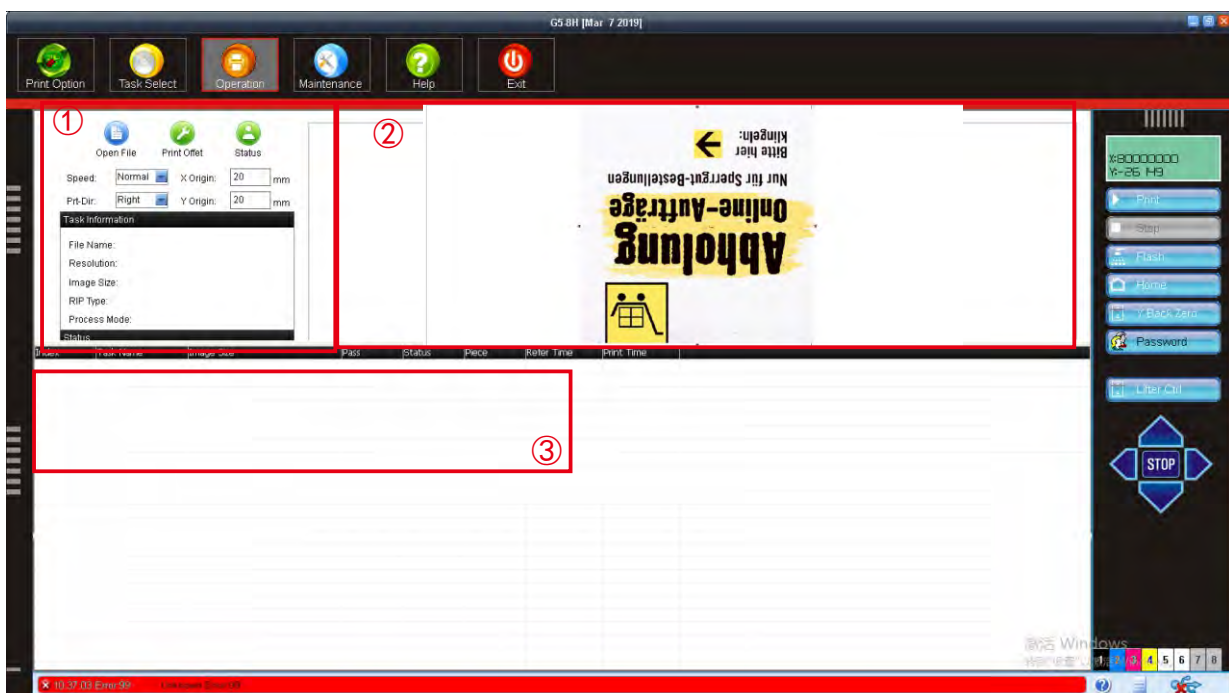
### 3.7 Driver installation and operation

#### 13 task select introduction



1. Select the folder where the RIP file is stored from the directory browsing. The RIP file preview will display all the RIP files that can be identified under the file.
2. RIP file preview area: In the preview area, you can directly add and delete files to the selected file.
3. Print queue area: check the file name, image size, number of passes, status, and print time.

#### 14 Operation introduction



### 3.7 Driver installation and operation

## 15 Operation introduction

- 

- 2.RIP preview area: preview the current task image
- 3.Print queue area: You can select the printed task to get the task information.

When the file is imported, the system will pop up the print job property setting confirmation box. You can reset the print PASS number, set the area print and multiple prints

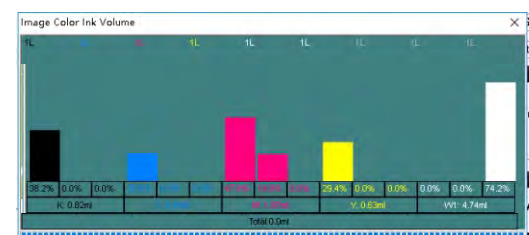
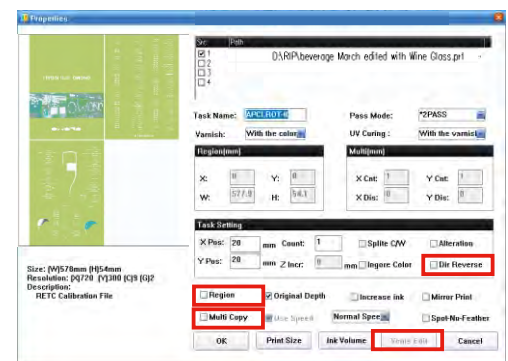
Pass mode: The default setting is the number of PASS required to complete the full ink volume printing. You can change the setting to achieve the purpose of changing the amount of ink on the screen.

Region: Settings for the start bit and size of the print for the picture area. You can also drag the area directly with the mouse.

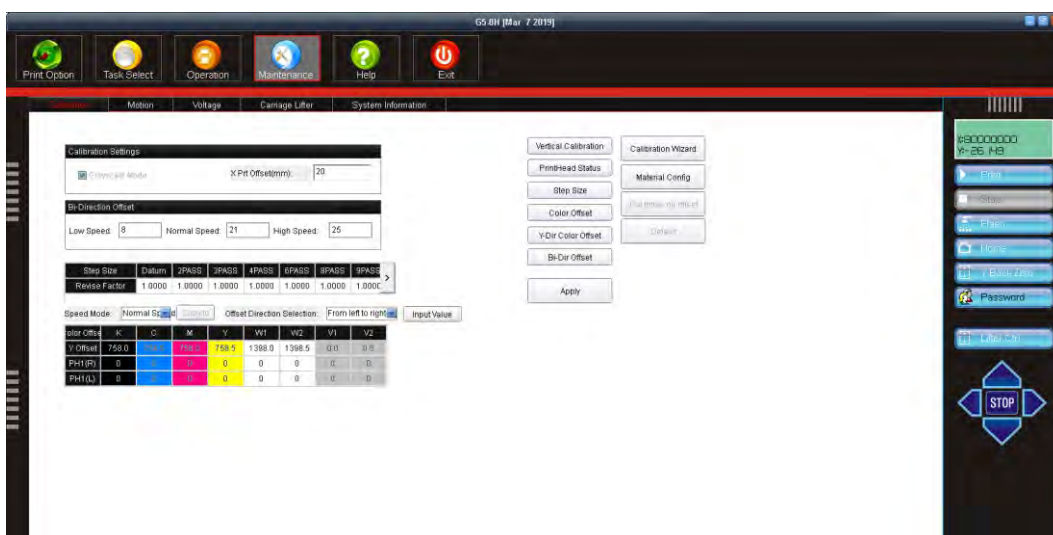
Multi: multiple layouts print the same picture, you can set multiple and spacing in the X, Y direction.

Mirror print: the printed image will be mirrored

Venis Edit: accurate statistics of the amount of ink used



## 16 Maintenance introduction

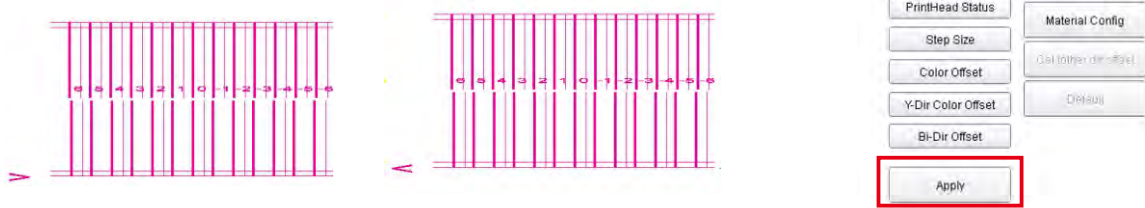


# 3.Installation and Operation

## 3.7 Driver installation and operation

### 17 Maintenance introduction

During printer use, in order to achieve high print quality, you need to adjust the following:  
Mechanical installation inspection of the nozzle (vertical calibration of the nozzle):

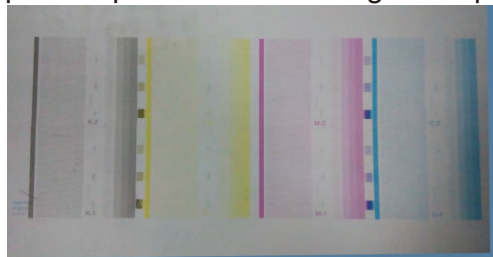


Click on the app each time you change the parameters.

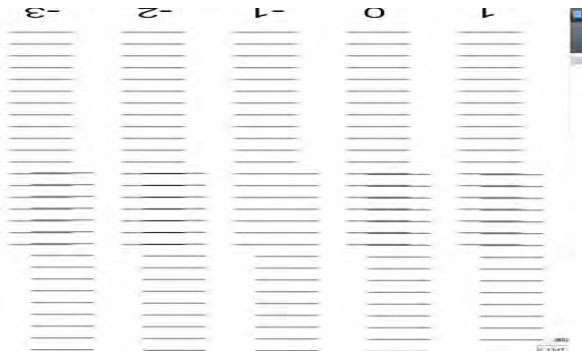
Click to print, as shown in the above picture to detect the vertical installation of the nozzle, (the picture has direction marking)  
When the unidirectional to the right is detected first, whether the upper and lower lines of the 0 mark overlap, if coincident, means the vertical installation of the nozzle is accurate. Otherwise, need to adjust the installation angle of the nozzle mechanically to correct the vertically, which shall be adjusted in the following two cases.  
When the negative (positive) and vertical lines are coincident



PrintHead Status: Check if the nozzle status is normal. If there is a disconnection, please press the cleaning head positively.



Step Size: Find the value corresponding to the line group which top and bottom lines are completely coincident from the calibration chart. If there is no line that is completely coincident, you can also estimate the decimal number according to the relationship between the best overlapping line group and the side line group. Click "Base step", a dialog box pops up, and fill in the read data into the "step deviation" and applying.



Step Size	Datum	2PASS	3PASS	4PASS	6PASS
Revise Factor	1.0000	1.0000	1.0000	1.0000	1.0000

## 3. Installation and Operation

### 3.7 Driver installation and operation

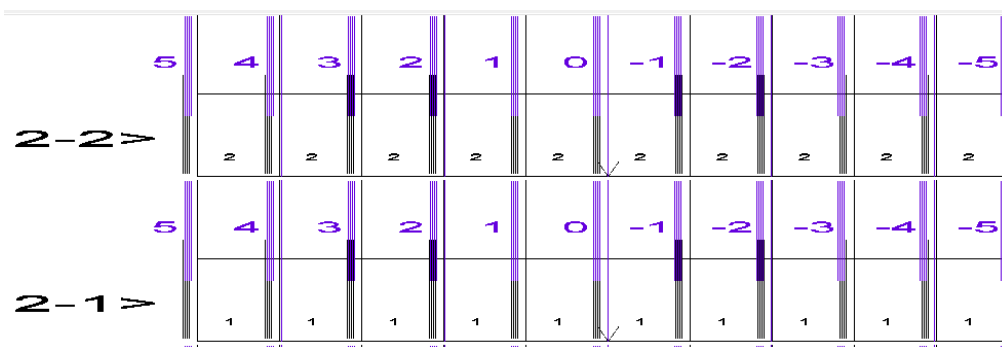
#### 1 Maintenance introduction

**Color Offset:** To print the contents of each nozzle together during printing, it is necessary to adjust the correction color value of each nozzle, which is often different by different printing directions and different head speeds. Users need to calibrate with low speed, normal speed, high speed separately, and calibrate the two directions separately

Speed Mode: Normal Speed Copy to Offset Direction Selection: From left to right Input Value

Color Offset	K	C	M	Y	W1	W2	V1	V2
Y Offset	758.0	758.5	758.0	758.5	1398.0	1398.5	0.0	0.5
PH1(R)	0	0	0	0	0	0	0	0
PH1(L)	0	0	0	0	0	0	0	0

The corresponding direction offset value of the nozzle is read from the correction unit in the printed image. By reading the value of the line, find the most coincides line or color data refer to color coincides with horizontal direction of the color to be corrected.



Fill in the "Color Offset" of each color value read and confirm. Repeat the printing of the color chart until it is aligned at the 0 scale position, indicating that the calibration is complete.

Input Relative Value

G1-2: G2-3: G3-4: G4-5: G5-6: G6-7: G7-8:

Color Offset	K	C	M	Y	W1	W2	V1	V2
2	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0

Ok

**Y-dire Color Offset:** Find the best line coincide of the calibration color and the reference color up and down, and add the corresponding value to the original Y-dire Color Offset value to get the new Y-dire Color Offset value.

Color Offset	K	C	M	Y	W1	W2	V1	V2
Y Offset	758.0	758.5	758.0	758.5	1398.0	1398.5	0.0	0.5
PH1(R)	0	0	0	0	0	0	0	0
PH1(L)	0	0	0	0	0	0	0	0

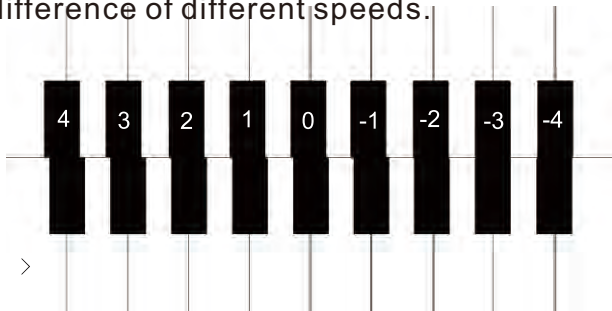


# 3.Installation and Operation

## 3.7 Driver installation and operation

### 11 Maintenance introduction

BI-dire Offset: Due to different printing speed, there is a certain position difference between the screens printed back and forth, so it is necessary to correct the round-trip difference of different speeds.



Bi-Dir Offset

Low Speed

Normal Speed

High Speed

Apply

For example, the above picture is aligned at -3 position, high speed printing, the original round-trip difference value is below: then the value filled in is  $-2+(-3)=-5$ , and is applied. Print the round-trip difference again, and finally keep the 0-scale position aligned, indicating that the calibration is complete.

Bi-Direction Offset

Low Speed: 0

Normal Speed: 0

High Speed: -2

Bi-Direction Offset

Low Speed: 0

Normal Speed: 0

High Speed: -5

Motion

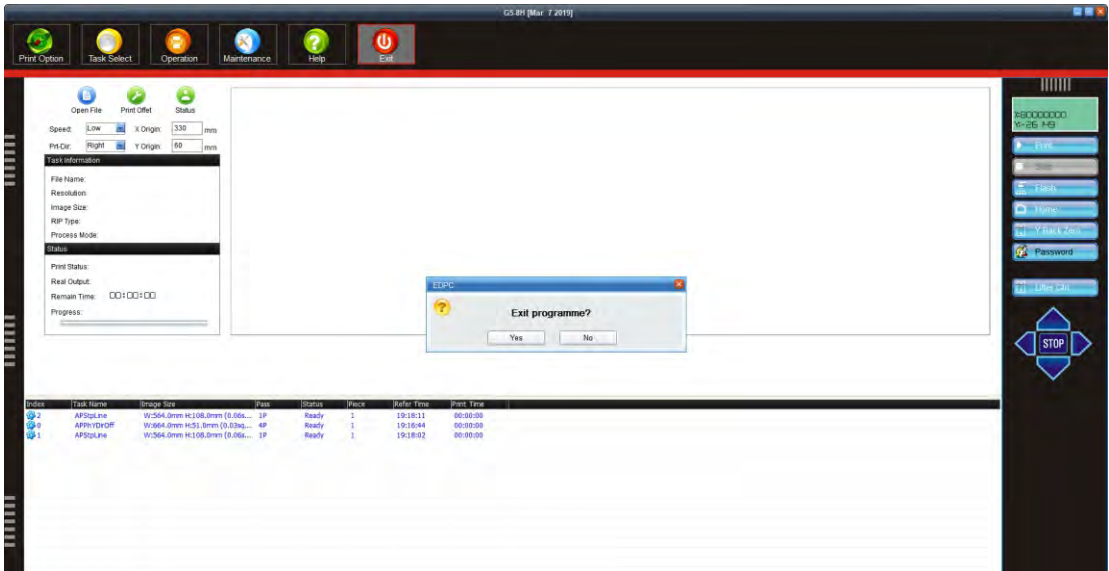
Voltage

Carriage Lifter

The motion and the voltage are Carriage Lifter and no need to be changed.

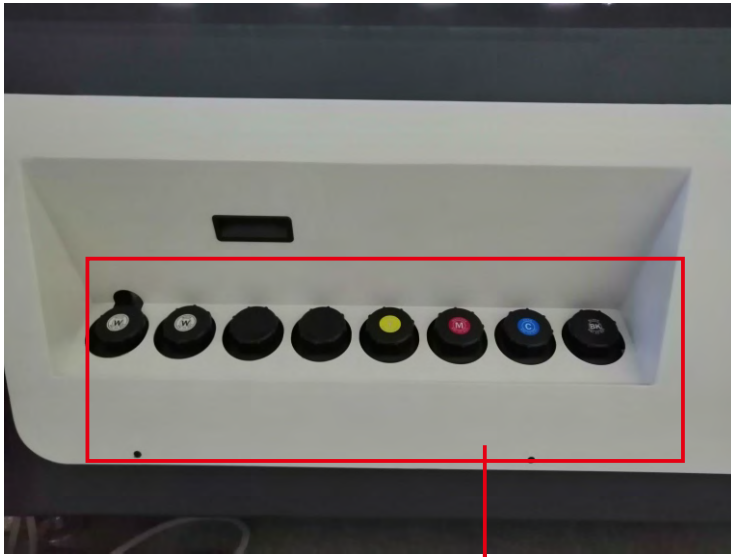
### 12 Exit

Click the Exit button, a pop-up prompt box click Yes, wait for the ink cart returning to the origin, then can turn off the power of the machine.



## 3. Installation and Operation

### 3.8 Fill Inks

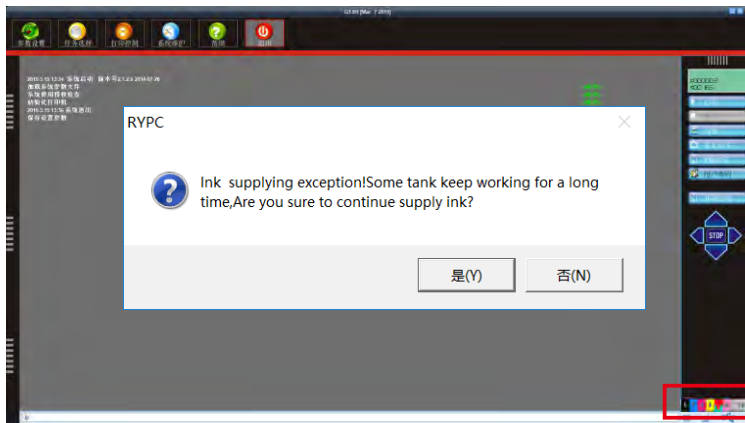


1

ink box



2



3



4

Secondary ink cartridge switch: on 

Secondary ink cartridge switch: off 

1. At the back of machine, you can see the ink bottles.
2. Before adding ink, shake the ink for around 2 or 3 minutes, then add the ink in order.
3. After the ink is added, turn on the machine. After the drive is successfully connected, the software will advise, pumping ink to the secondary cartridge.
4. Open all secondary ink valves, press the negative pressure button until the surface of the nozzle is evenly dripped, and then release the negative pressure button. The cleaning time is within 5 seconds to prevent too many pressure damaging nozzle. If the machine is powered off, turn off secondary ink valve switch to avoid dripping.

Note: 1. Please store the ink in a cool, ventilated environment protected from light. **avoid dust pollution after ink bottle opening.**

2. For ink droplets on the surface of the nozzle, please use a clean, **dust-free cloth to clean the surface of the nozzle and wipe it in one direction. Do not use dry or rough cloth to wipe the nozzle to prevent damage to the nozzle.**

3. When the ink is not enough, the driver will give an alarm (if there is audio, there will be an alarm), please refer to the problem processing B.

## 3. Installation and Operation

### 3.9 Nozzle exhaust

The ink is pumped only by the method of ink pressing, and air is left in the nozzle, causing the printed color disconnection. Therefore, after the nozzle is pressed through the ink, the nozzle needs to be exhausted. Since all the color channels share the same negative pressure pump, all the white channels share the same negative pressure pump, so the secondary ink valves of other unrelated channels should be closed when exhausting one by one to avoid wasting ink.

Schematic diagram of Nozzle exhaust sequence



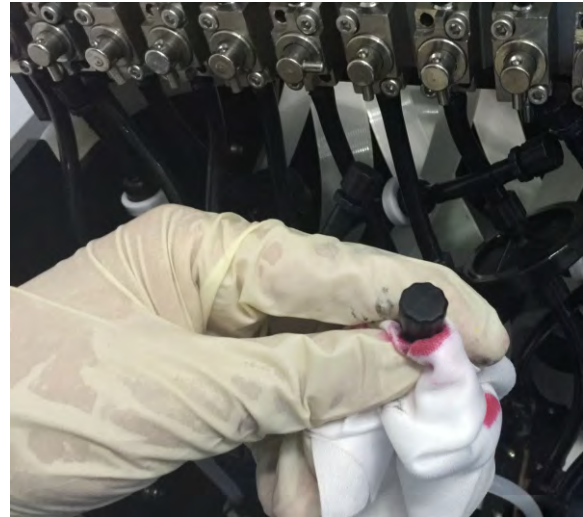
1



2



3



4

1. Close the secondary ink valve for all channels and open the secondary ink valve on the nozzle that requires venting.
2. Press the negative pressure button until the negative pressure gauge shows a positive value.
3. Open the knob on the exhaust pipe. During this time, do not release the negative pressure button. The ink will flow out of the exhaust pipe until the exhaust pipe flows out of the continuous strand of ink.
4. **Loosen the negative pressure button, wipe off the remaining ink on the pipe orifice, and finally tighten the exhaust pipe knob on the line.**



## 4. Daily maintenance and trouble shooting

### 4.1 Daily maintenance

In order to ensure printer can complete the printing task well, the equipment needs to be regularly cleaned and maintained.

#### ① Maintain equipment

Daily maintenance:

1. Check the negative pressure system value is normally at 2.6~4.0;
2. Check if the UV water cooling system is normal (refer to Figure 3.3, whether the warning light is always on);
3. Check if the status bar is complete;
4. Use a clean, dust-free cloth to gently wipe the ink droplets away of nozzle and the bottom of the nozzle, **make sure always in one direction**.
5. Clean the waste ink, clean the surface of UV lamp (using a dust-free cloth dampened with alcohol), and clean the dust-proof net of the fan inside the water cooling system;
6. Clean the X/Y/Z axis slides and apply grease every month.

#### ② Printer head maintenance

Prevent nozzle surface curing dry

1. If you are not printing CMYK full-color pictures, in order to prevent a channel from being inked for a long time or less ink, the nozzle surface is subject to UV curing.
2. During the printing process, check whether the test strip is normal every hour. If it is not normal, it needs to be cleaned. It must be positive pressure cleaned every 2 hours. **Ink droplets at nozzle surface must be wiped clean with a clean, dust-free cloth. Make sure always rubbing in one direction, it is forbidden to wipe the nozzle back and forth to prevent ink mixing and irreparable damage. Do not wipe the nozzle with dry or rough cloth at any time to prevent damage to the nozzle surface;**
3. After printer shutting down, please cover the ink cart with a black cover or cloth to avoid the light.

Downtime maintenance

Daily shutdown (1-7 days): Turn off all power and UV water cooling system, lock the secondary ink valve switch, and protect from light;

Medium-term shutdown (1-3 weeks): Turn off all power and UV water cooling system, lock the secondary ink valve switch, and clean the surface of the nozzle with a dust-free cloth with cleaning liquid, and protect from light;

Long-term shutdown (>1 month): Rinse the entire ink path with the cleaning solution, turn off all power and UV water cooling system, and then moisturize according to the medium and long-term shutdown mode, and protect from light.

#### ③ Disassemble printer head maintenance:

1. Rinse nozzle with the cleaning solution before removing it, and fill with cleaning solution inside of nozzle;
2. Block 4 ink path ports and protect the nozzle line ports;
3. Use a dust-free cloth dampened with cleaning solution to keep the surface of the nozzle moisturized, and wrap the surface of the nozzle with plastic wrap (do not wrap the wrap around the entire nozzle to prevent the cleaning solution from corroding other parts).



# 4.Daily maintenance and trouble shooting

## 4.2 Trouble shooting

### A. The ink cart cannot move left and right

If the ink cart cannot move to the left or right, it will not be able to connect online. When the machine is connected to the computer, the normal online process is that the X axis returns to the origin after the Z axis rises, the Z axis drops, and finally the Y axis returns to the origin. The reason for this is likely to be that the acrylic plates on either side of the ink cart are concave or convex.

The solution is as follows: Please turn off the power, check if the anti-collision switches on both sides are not in the vertical direction, restore the acrylic position, and then turn it back on.



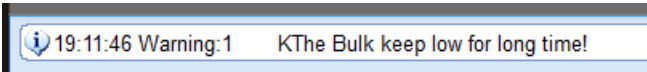
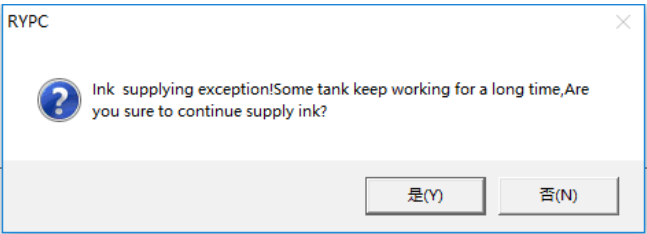
Anti-collision acrylic plates

### B. The machine prompts that the ink is insufficient.

When the color light flashes in the lower right corner of the software screen.

The solution is as follows:

1. The corresponding ink is missing from the currently flashing secondary ink cartridge, and the machine will automatically deliver ink.
2. If the drive pops up to continue the ink delivery prompt, check if the ink in the corresponding ink bottle is sufficient, if not enough to add the corresponding ink;
3. If the alarm still occurs, check if the corresponding ink pump is working. If the ink pump is not working, check if the signal line of the ink pump power line and the nozzle board is plugged in well.



When hearing the drive alarm and there is an error in the lower left corner, this because the negative pressure safety bottle inhales the ink.

Solution:

1. Check if the negative pressure safe bottle inhaled the ink. If there is ink inhalation, please shut it off from the tube connected to the negative pressure cylinder. Also check whether the negative pressure value of the negative pressure gauge on the front panel is too large. If it is too large, please turn down the negative pressure (see the problem handling C for the negative pressure adjustment method).



## 4. Daily maintenance and trouble shooting

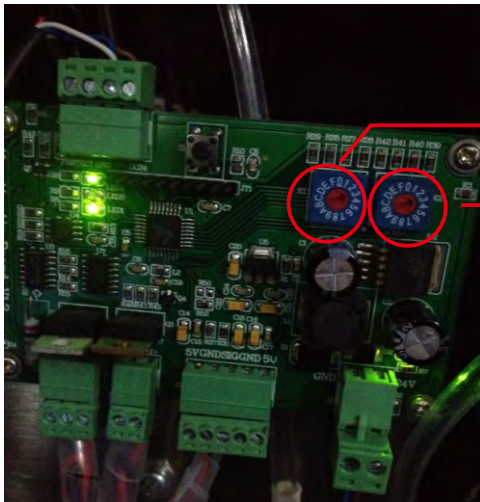
### 4.2 Trouble shooting

#### C. Ink Drop

It is found that the nozzle drops ink during the use of the machine, which may be caused by the negative pressure being too small. If ink drops are found during printing, immediately terminate the print job and turn off the secondary ink valve.

The solution is:

Increase the negative pressure value on the negative pressure cylinder, use the dust-free cloth to absorb the ink droplets remaining on the surface of the nozzle, open the secondary ink valve, and check whether the ink is still dripping. Adjust from the decimal place until the nozzle does not drop ink, check the test strip and repeat until color lines are okay. The normal negative pressure range is from 2.6 to 4.0. The figure below is the negative pressure adjustment panel.



Single digit on the left

Single digit on the right

#### D. Test strip broken lines

When checking the status bar, if the status bar is found to be broken, it may be caused by the evaporation of the ink on the surface of the nozzle hole after the machine has been placed for a long time; or nozzle clogged

The solution is:

1. According to the test strip condition, manually close the secondary ink valve of the other color intact channel, then press the negative pressure button, wipe the surface of the nozzle with a dust-free cloth, suck the ink droplets on the surface of the nozzle, and reprint the status bar.

2. The status bar printed after pressing the ink is not broken at the same place. Please perform air exhaust on the nozzle. Close all the secondary ink valves, find the exhaust pipe on the corresponding channel nozzle, loosen the knob, press the negative pressure button and then open the corresponding channel ink valve until the exhaust pipe flows out of the ink and pinch the exhaust pipe. First close the ink valve, then release the negative pressure button and tighten the exhaust pipe knob.

The multiple status bars printed after pressing the ink are disconnected in the same place, most likely the nozzle hole is clogged.

Use the syringe to suck the cleaning fluid and inject through the nozzle vent hole into the nozzle to clean the nozzle hole. Check whether all the nozzle holes have the cleaning fluid flowing out. If there is any obstruction, the nozzle hole should be cleaned regularly. Remove the nozzle if necessary, and immerse it in the cleaning solution for 8 hours before checking again.

# 4. Daily maintenance and trouble shooting

## 4.2 Trouble shooting

### E. Test strip has no colors for all channels

There is nothing in the print status bar. The solution is:

1. Check if there is ink drop by pressing negative pressure;
2. Check if there is ink ejected from the flashing spray;
3. Contact APEX for help

### F. Driver Error Code Guide

Error code	Description	Solution	Error code	Description	Solution
1	Currently printing	The last print is not finished, please wait a little. Otherwise, please force the program to close and restart.	23	The length of the movement when the task is printed will exceed the total length of the machine platform. System refuses to print	1. change the motion buffer parameters 2. system configuration is damaged, after backing up the parameters, reinstall the software
2	The starting PASS of the print request is bigger than the total number of PASSs for this task.	Restoring printed parameters is wrong, changing print settings	24	The print start position is at the negative position of zero, and printing cannot be performed.	Check if the material position parameters, white edge parameters, motion buffer parameters are correct, the motion buffer length must be less than the sum of the material position parameters and the white edge parameters.
3	Unauthorized system cannot print	Contact system supplier	30	Error message failed to load	
4	Improper system hardware configuration can not print	Contact system supplier	31	Parameter loading failed	
5	Abnormal nozzle voltage	Do not connect the nozzle to the corresponding channel.	32	Machine configuration failed to load	
6	Failed to generate step correction chart	Please confirm if the software installation disk has enough space	33	RIP information database failed	
9	The system is busy with other transactions	Please try again later	34	Temperature and voltage parameters failed to load	
10	The processing of the last print job did not end	The last print is not finished, please wait a little retry. Otherwise, please force the program to close and restart.	35	Ink parameter loading failed	
11	The specified RIP data source does not exist.	1. specified RIP file does not exist, is deleted or disk 2. The network data connection has been disconnected.	50	The ink cart can't return to zero	1. The motor system does not work, please check if the electrical work is working. 2. The encoder at ink cart does not work, please check the connection and if the device damaged
12	The number of colors of RIP files that need to be printed is not supported.	The number of colors in this file exceeds the system support ability	61	No material found	Check if the ink cart front edge finder is working properly
14	The DPI of the RIP file that needs to be printed is not supported.	The horizontal DPI of the file exceeds the system support capability	62	Edge finding error	Only hit some materials, please check the edge finder sensitivity
15	Nozzle channel parameter error	The system configuration is incorrect. The configuration file may be damaged. Please backup the current printing parameters and reinstall the software.	79	Adding a print job failed.	1. print file is being used 2. File format is incorrect
16	Channel number parameter error	The system configuration is incorrect. The configuration file may be damaged. Please backup the current printing parameters and reinstall the software.	80	The specified RIP driver processing failed.	Reset default RIP support
17	Channel parameter error	The system configuration is incorrect. The configuration file may be damaged. Please backup the current printing parameters and reinstall the software.	100	Updating the current print speed failed.	The horizontal DPI of the current print job does not support the printing of the head speed
18	Channel parameter error	The system configuration is incorrect. The configuration file may be damaged. Please backup the current printing parameters and reinstall the software.	111	System control card is not driven	1. Reinstall the USB control card 2. The control card is damaged, Please install a new board.
19	Insufficient memory, unable to meet the needs of image processing	Please turn off the process that the system currently occupies a large amount of memory to meet the memory requirements of the software.	112	The hardware program of the system control card cannot be loaded.	The control card may be damaged, Please install a new main control card.
21	The specified print PASS number system is not supported	Try to change the print PASS setting, restart it	113	System control card motion program cannot be loaded	The control card may be damaged, Please install a new main control card.
22	The material currently used is smaller than the screen width and cannot meet the printing needs.	1. Confirm if the width of the printed material is correct 2. replace the wider material 3. use area printing	114	Initialization of the front card failed	The front card is faulty and needs to be repaired.

# 4. Daily maintenance and trouble shooting

## 4.2 Trouble shooting

Error code	Description	Solution
116	Loading ink voltage curve failed	Restart the software. If the fault persists, it indicates that the spray plate is faulty and needs to be repaired.
118	Establishing fiber communication failure	1. Check if the front card is working properly
		2. Check if the fiber is reversed
119	Failed to establish channel mapping	Check if the version of the headboard matches the control software
120	The reset action has been canceled by the user. The positioning system is not working normally. Please do not perform the movement of the front.	The normal making software is, do not press the keyboard ESC key when the system performs the reset action.
121	The mechanical reset does not detect the limit signal, and the reset fails. The positioning system is not working normally. Please do not perform the movement of the front.	Please check if the circuit connection of limit switch and the limit switch are working properly.
122	When the reset is executed, the headless position coded signal is detected, and the reset function cannot be performed normally.	1. Check if the front moving motor works properly.
		2. Check the connection of the front position encoder and check if it work normally
123	When the reset is executed, the position signal of the front position is detected as the opposite. The positioning system cannot be positioned normally.	Reverse the AB phase signal of the front position encoder
124	The limit switches at both ends of the vehicle are valid.	1. Check if the servo board is working properly.
		2. Detect the left and right strokes to the servo board connection line
125	It is detected that the emergency stop switch has been pressed	Restart the software after opening the emergency stop
126	Both ends of the Y-axis limit switch are valid	1. Check if the servo board is working properly.
		2. Detection limit to servo board connection line
127	When the reset is executed, no Y-axis position code signal is detected, and the reset function cannot be performed normally.	1. Check if the front moving motor works properly.
		2. Check the connection of the front position encoder and work normally
128	When the reset is executed, the Y-axis position coded signal bit is detected to be opposite. The positioning system could not be positioned properly.	Reverse the AB phase signal of the Y-axis position encoder
131	The run-coded device operation was not detected.	Please confirm the connection between the transport encoder and the main control card.
132	Detected the material encoding device signal AB phase inverse	Reverse the encoder signal AB.
133	The control card does not receive the blank coded signal	The control card may be damaged. Please install a new main control card.
135	Detecting the paper encoder timeout	There may be installation problems with the paper encoder
140	Software detected does not apply to current board	Please replace it with the correct board
141	The authorization information data is incorrect and the system will not work properly.	Please contact supplier APEX
142	Failed to obtain authorization information, the system will not work properly.	Please contact supplier APEX

Error code	Description	Solution
143	It is detected that the USB motherboard does not match the front card	Please contact supplier APEX
144	Failed to get the front card information, the system is not working properly.	Please contact supplier APEX
145	The current version is a restricted version, and the system time is detected incorrectly.	Please confirm that the current system time is correct.
147	The current version is limited to use, has expired! The system can no longer be used	Please contact supplier APEX
148	The current version is the limited usage version, has expired! The system can no longer be used	Please contact supplier APEX
151	The board has been authorized to control, but no dongle has been detected.	1. Check if the dongle is installed
		2. Reinstall the dongle driver
		3. If it is confirmed to be installed, please contact the system supplier
152	Invalid dongle detected	The dongle and the board are bundled and cannot be mixed. Please check if the dongle matches the board.
153	Dongle data verification error	Please contact supplier APEX
154	Dongle time error	Please contact supplier APEX
155	The dongle time has expired	Please contact supplier APEX
156	The dongle has been used times limited	Please contact supplier APEX
157	The dongle installment password has expired	Please contact supplier APEX to obtain the authorization password for the new period
159	Dongle time error	Please contact supplier APEX
160	The language of the detection software is unlicensed	Please contact supplier APEX
161	The installment authorization is not activated. You need to enter the activation password to restart the software.	Please contact supplier APEX for the activation password.
168	Final password error	
260	Automatic correction of the head movement system failed.	1. Check if the front moving motor is working properly
		2. Check if the front position encoder is working properly
261	Automatic correction of the blanking system parameters failed.	1. Check if the moving motor is working properly
		2. Check if the stock position encoder is working properly
301	Print data source has been disconnected	Please check if the data source is normal. After solving the problem, use recovery printing to continue the current printing task.
310	The movement specified during printing exceeds the maximum length of the machine or the front of the car cannot move to the specified position.	1. Check if the front moving motor is working properly
		2. Check if the front position encoder is working properly
351	The total length control error is too large and the function is cancelled.	
401	Parameter backup failed	The target file to be backed up by the user is not writable
403	The imported parameter file format is illegal and the operation is canceled.	Please make sure that the parameter file to be imported is a backup file of the system parameter or the file is damaged.
410	USB motherboard configuration does not match application software	



## 4. Daily maintenance and trouble shooting

### 4.3 Calibration Skills

Offset Direction Selection: From right to left

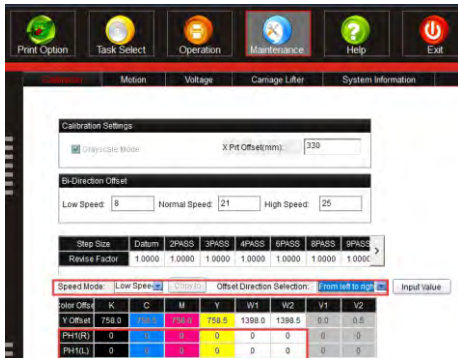
Horizontal calibration

1. Printing direction: one-way to the left

Adjust the horizontal value from right to left of each color

If left color leaking, decrease the color value.

If right color leaking, increase the color value.



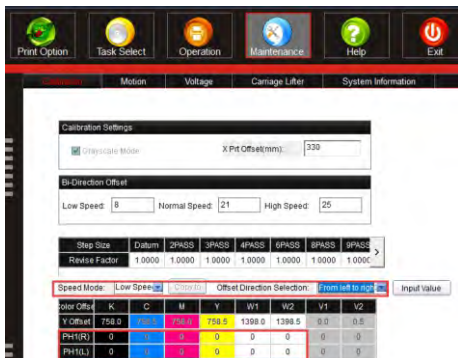
Offset Direction Selection: From left to right

2. Printing direction: one way to the right

Adjust the horizontal value from left to right of each color

If left color leaking, increase the color value.

If right color leaking, decrease the color value.



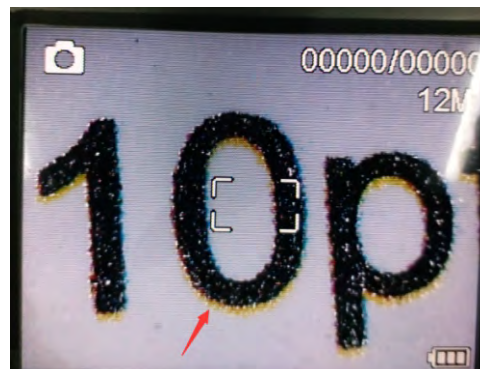
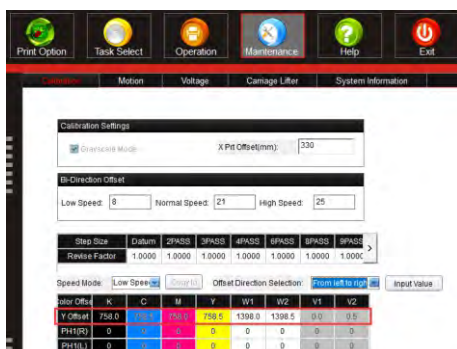
To sum up:

1. One-way to the left, adjust the horizontal value from right to left: left leak color, decrease each color: right leak color, increase color:
2. One-way to the right: adjust the horizontal value from left to right: left leak color, increase color; right leak color, decrease color:

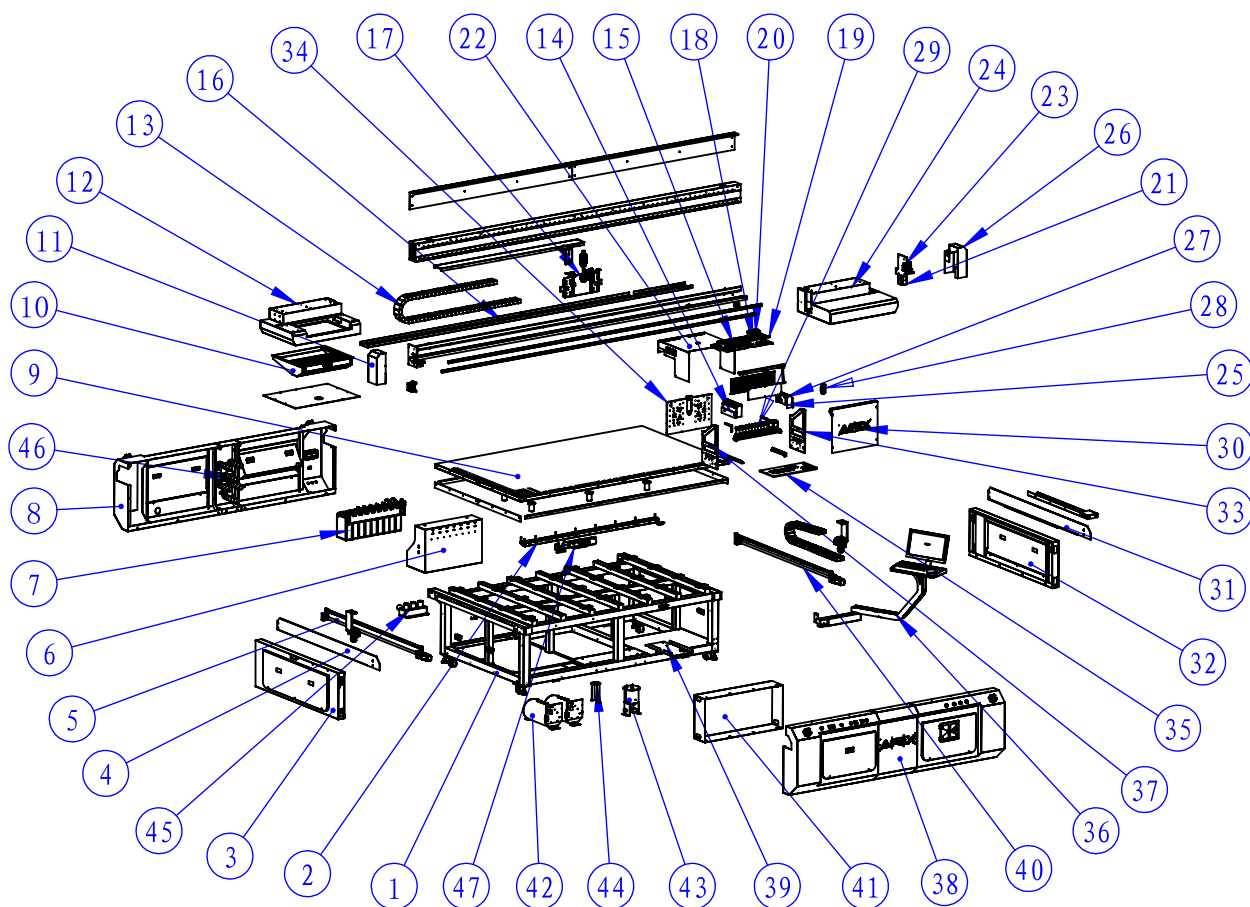
Vertical calibration

If it is the color leakage below, reduce the vertical color value

vertical color leakage: reduce the color below, add various colors above



## 5.Exploded view



Code	name	number
1	machine body	1
2	positioning bolt box	1
3	left cover	1
4	fibre bar bezel - left	1
5	Y-axis screw set - left	1
6	ink box	1
7	ink bottle	1
8	back cover	1
9	vacuum table	1
10	waset ink box	1
11	beam cover - left	1
12	hanging box - left	1
13	beam drag chain	1
14	bumper - left	1
15	Lift stepper drive	1
16	Drag chain plate	1
17	XZ pallet set	1
18	print data converter	1
19	inkjet board set	1
20	negative pressure cylinder	2
21	beam servo motor	1
22	ink carriage top cover	1
23	synchronous wheel set	1
24	hanging box - right	1

Code	name	number
25	UV light	2
26	Beam cover - right	1
27	bumper - right	1
28	height finder	1
29	secondary cartridge components	1
30	ink carriage cover	1
31	fibre bar bezel - right	1
32	right cover	1
33	ink carriage side plate - right	1
34	ink carriage basal plate	1
35	Inkjet back plate	1
36	display bracket	1
37	ink carriage side plate - left	1
38	front cover	1
39	computer mainframe	1
40	Y-axis screw set -right	1
41	electrical installation box	1
42	negative pressure device	2
43	circulating water heating bucket	1
44	water tank	1
45	suction collecting box	1
46	wind switch	1
47	electric putter	1