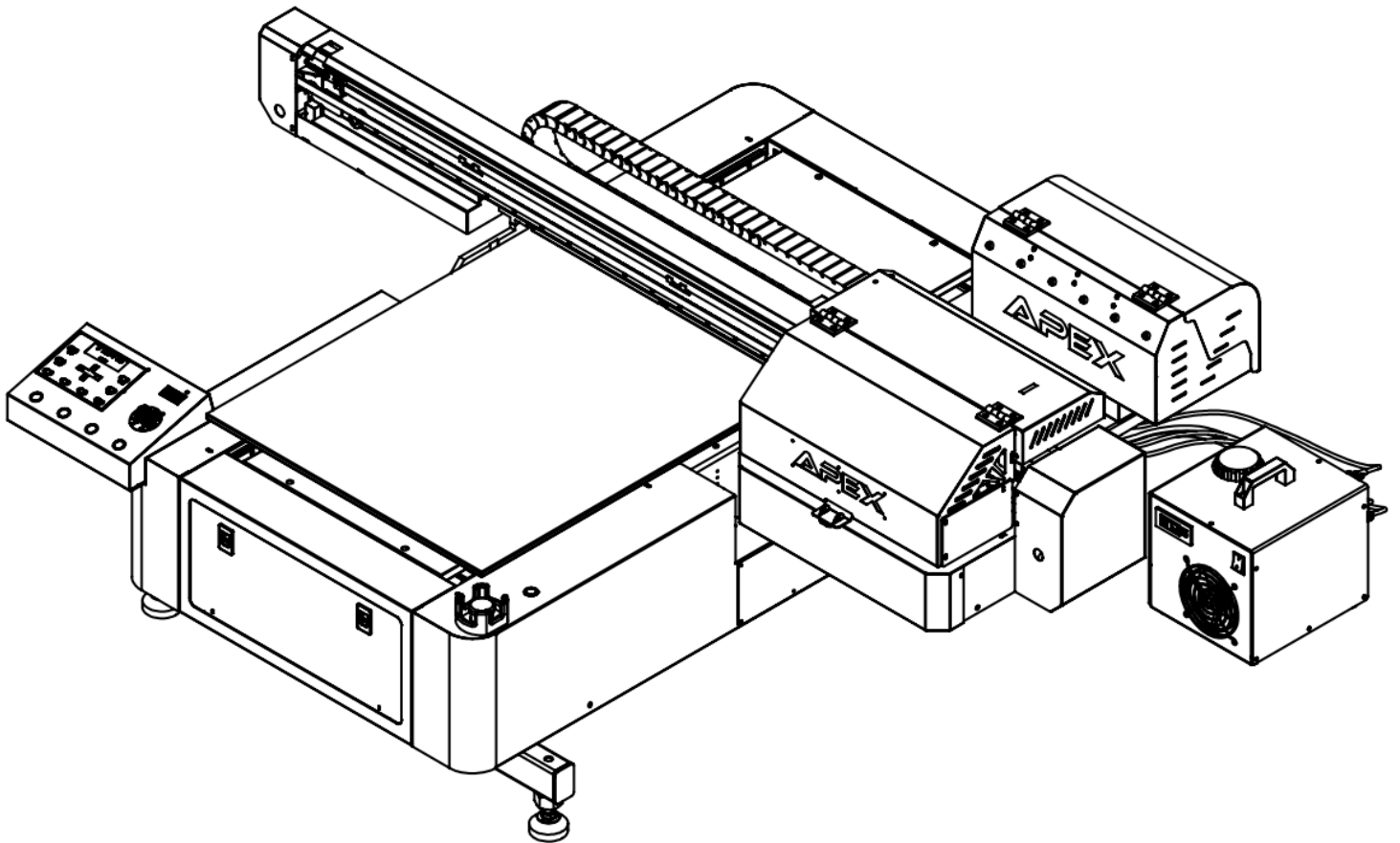




# UV6090B USER MANUAL



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



[www.apexprinter.com](http://www.apexprinter.com)

# CONTENT

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# 1.Warning

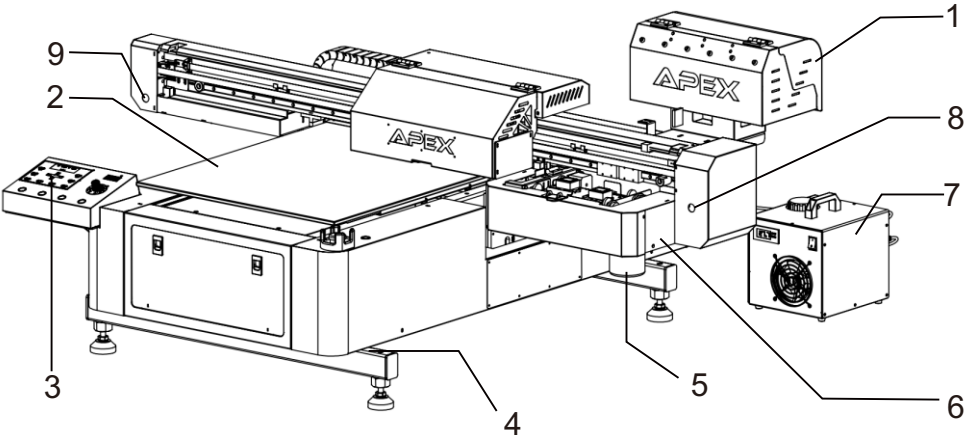
---

1. The machine can not be used by children or handicapped people. If must use it, please use it under supervision.
2. Please try to fix the problems when operate this machine.
3. Please follow the instructions to use the machine. Use the accessories and inks from the original manufacturer.
4. Ensure the power voltage matches the power cord and the machine nameplate voltage.
5. Only indoor using, recommended setting an air conditioning in the room, in order to get a steady working temperature and humidity.
6. Make sure the red fixture member for transportation has been removed before using the machine.
7. Never to use the machine under flames, friable material and dust environment.
8. No sundries around this printer.
9. Never use this printer in wet environment.
10. Never use the machine under extremely hot (above 40 °C) or cold (below 10 °C) environment.
11. If the cables are damaged, please stop using this printer and contact APEX for support.
12. Never using any damaged cables.
13. Please power off before cleaning or maintaining.
14. Use this machine under local law policy.
15. Before sending printing task, make sure printer head not touch any objects. The automatic height detection is not suitable for transparent materials.
16. When the printer is printing, please close the machine cover or equipped with anti-UV glasses.
17. To move the machine only with handle by at least four people, and never move it with other machine part.
18. When adjust the ink dampers, nozzles, ink tubes, ink bottles, cap top and other components may come into contact with the ink, please wear the protective gloves.
19. The machine should be placed on good table which is with 2cm or more thickness.
20. Do not recommend to use this UV LED all the time with high load printing. And it is recommended to use 30%-40% for hard material printing, while 20-30% for soft material. Please follow the maintenance form to use this machine.
21. If your ink is not from Apex, no warranty for the printer any more.
22. If the printer is not in using, you can turn off the power on front switch, but do not power off the rear switch. Leave the rear switch on to make the stirring system working all the time.

\*Please read the user manual carefully before using, and always keep the user manual.

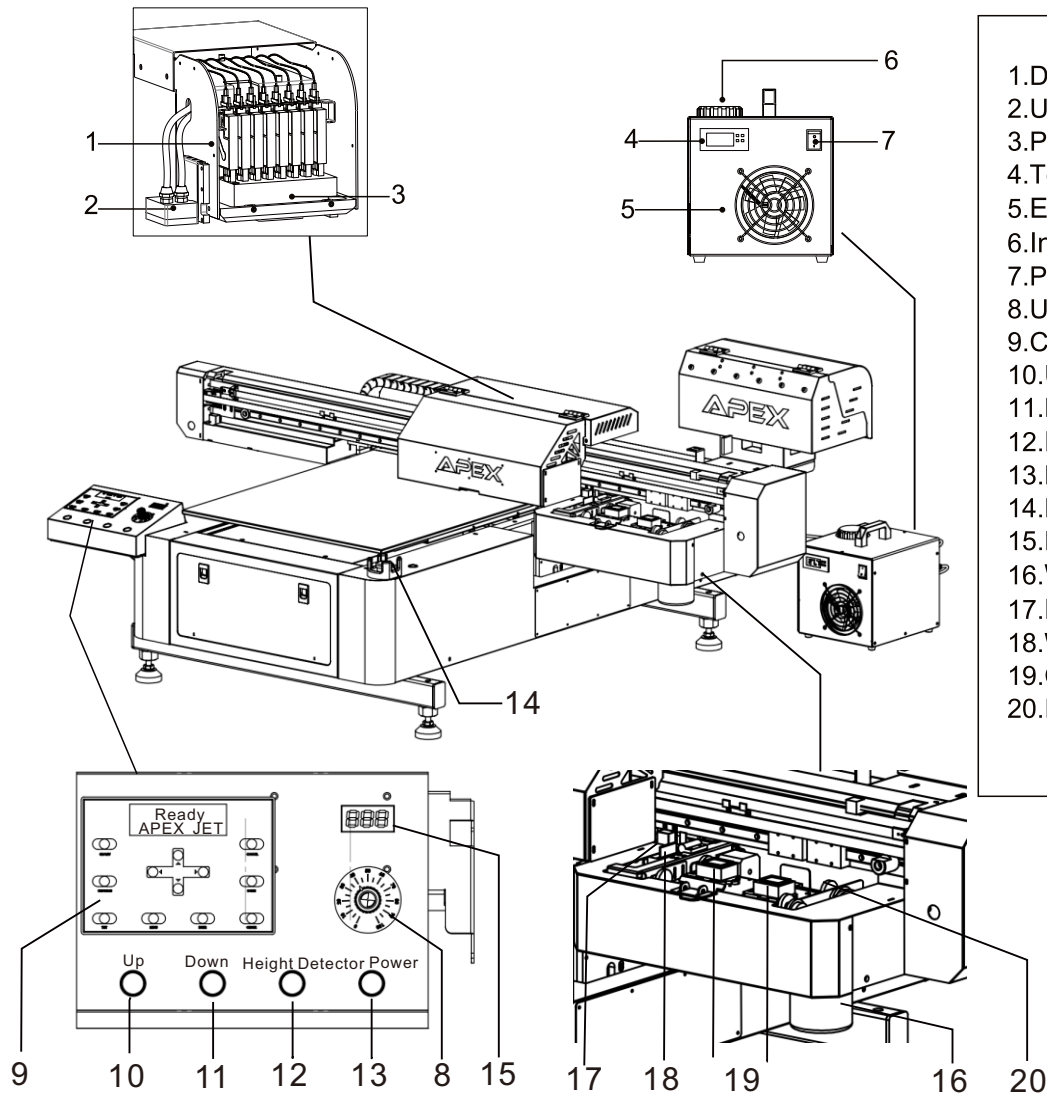
# 2.Instruction

## 2.1 Structure and Function



- 1.Ink Tank
- 2.Glass Platform
- 3.Control panel
- 4.Handle
- 5.Waste Ink Bottle
- 6.Printer Head Cleaning System
- 7.Control Box for UV LED
- 8.Manual Cleaning Button
- 9.Fan Power

## 2.2 Front Structure Figure

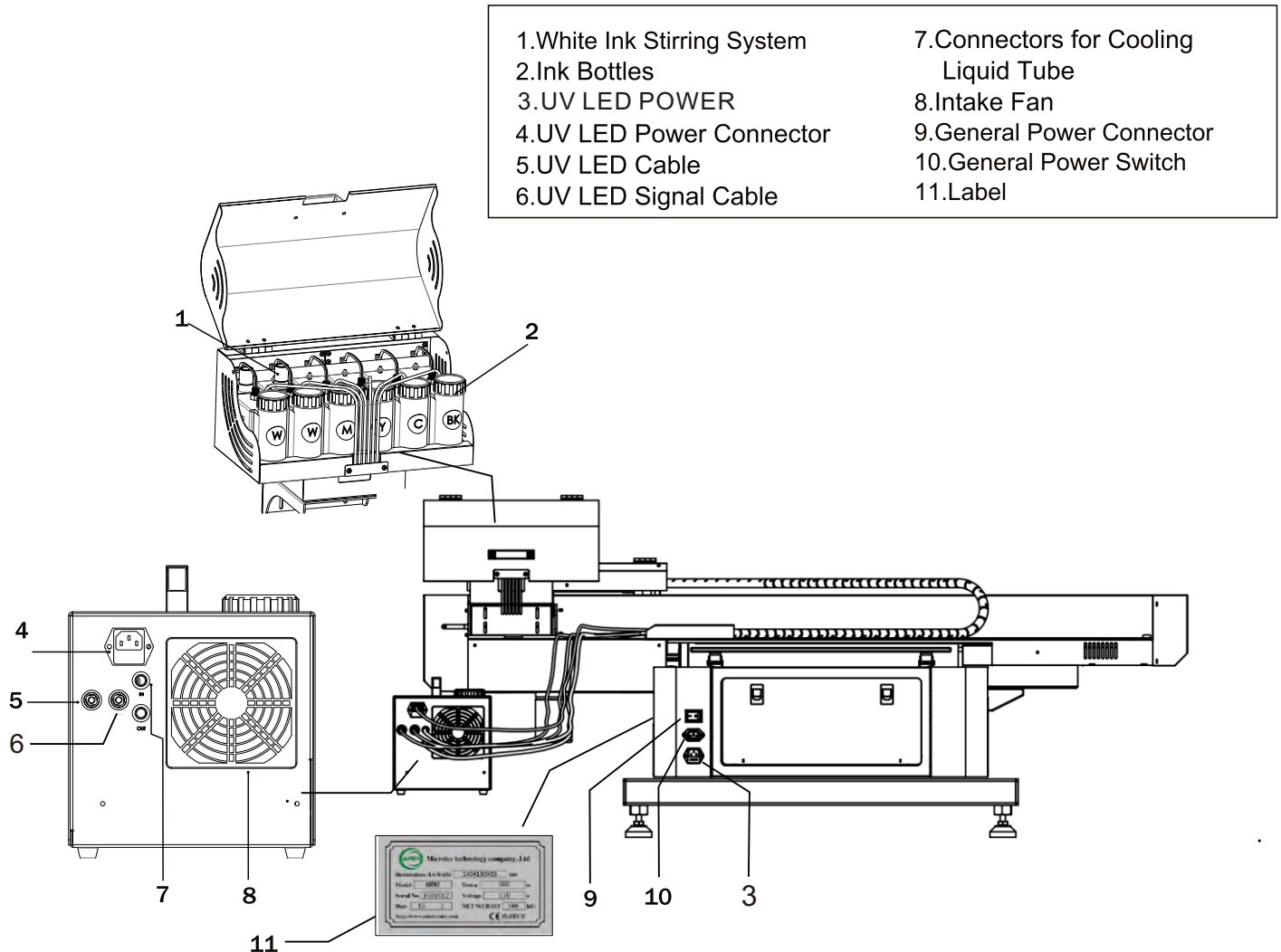


- 1.Dampers
- 2.UV Led
- 3.Printer Head
- 4.Temperature Display
- 5.Exhausting Fan
- 6.Inlet for Water Case
- 7.Power Switch
- 8.UV LED Adjusting Knob
- 9.Control Panel
- 10.Up
- 11.Down
- 12.Height Detector
- 13.Power
- 14.Emergency Stop
- 15.Height Display
- 16.Waste ink Box
- 17.Height Sensor
- 18.Wiper
- 19.Cap Top
- 20.Ink Pump



## 2.Instruction

### 2.3 Back Structure

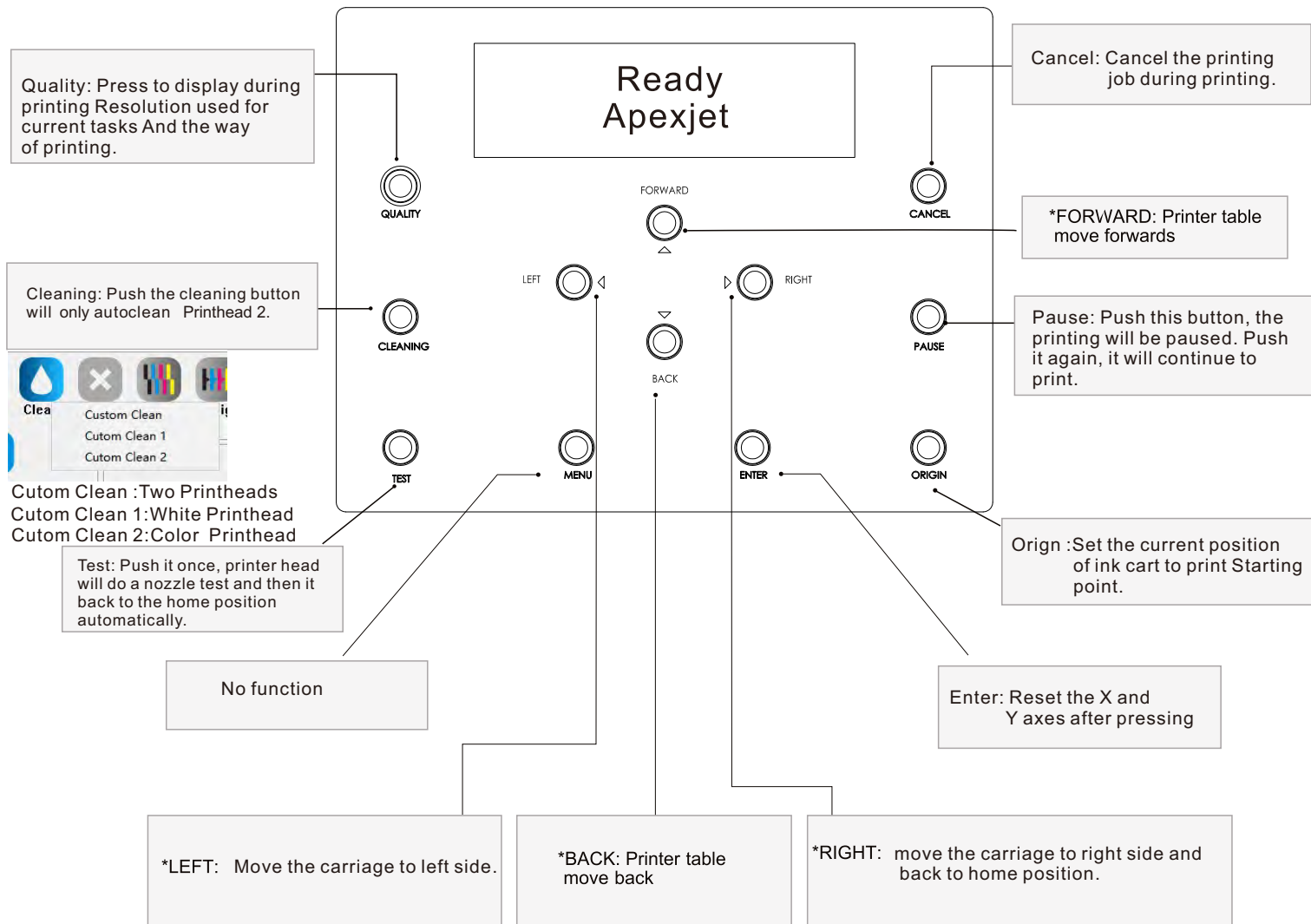


### 2.4 Technical Data

<b>Model</b>	UV6090B
Printing Size:	23.6"x35.4"(60x90cm)
Curing System:	UV LED Water cooling system
Max. Height:	5.5" (14cm)
Power:	50/60HZ 220V(±10%)<2A 110V(±10%)<4A
Environment Requirement:	20-28°C (68- 82°F) HR40-60%
Printer Head:	2Pcs Epson DX5 (Nozzles 180x8)
X/Y/Z-Axis Motor:	X/Y/Z-Stepping motor
RIP:	Photo Print RIP
Computer Sys.:	Windows7/8/10 Only for 64Bit
Ink Color:	K K C C M M Y Y W W W W W W W W / K K C C M M Y Y W W W W W W V V
Joint:	USB3.0
N.W:	175Kg(385.8lb)
Machine Size:	69.3"x55.5"x33.5"(176x141x85cm)

## 2.Instruction

### 2.5 Use the Control Panel



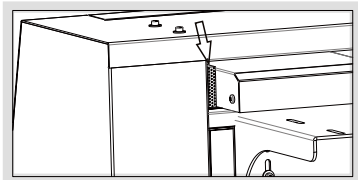
\*Control panel is working when printer is online.

\*Above are the basic operation, and more information please contact with Apex.

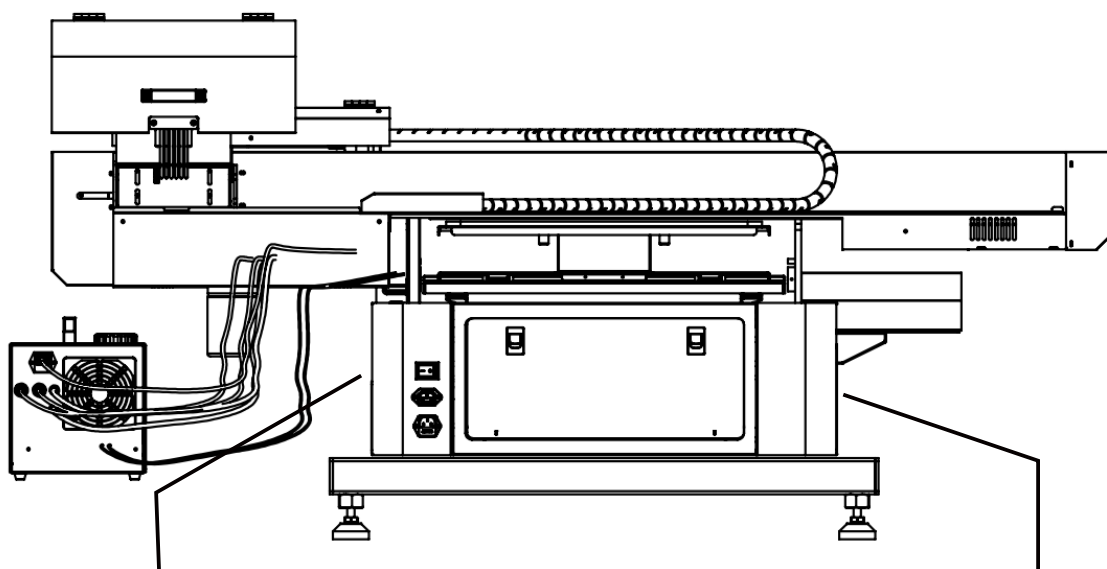
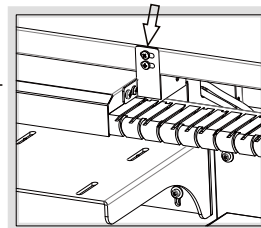
## 3.INSTALLATION AND OPERATION

### 3.1 Before Installation

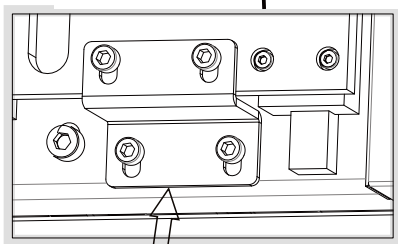
#### 1 Remove White Foam



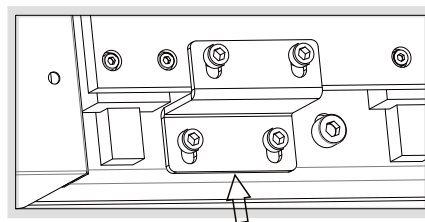
#### 2 Remove the Red Metal Fixture



#### 3 Remove the Left Metal Fixture



#### 4 Remove the Right Metal Fixture

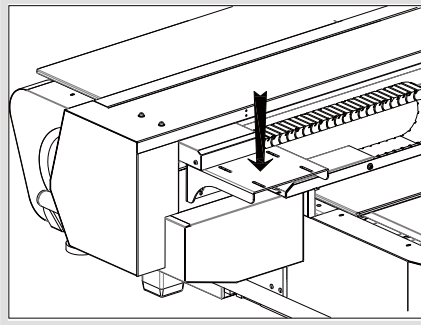


- \*Put the machine on the table which is at least 2cm thickness and good stability.  
(Desktop instability will cause poor print quality.
- \*Clean up the platform to make the surface clean.
- \*Remove the corresponding fixed component following the diagram.
- \*Printer shall be removed with Handles by 4-5 people.

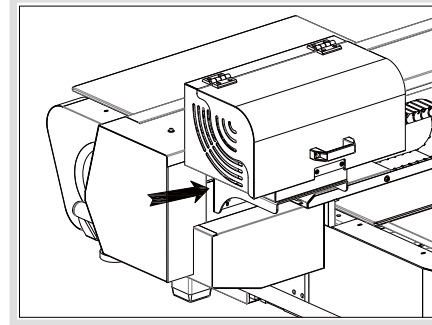
## 3.INSTALLATION AND OPERATION

### 3.2 Install the Ink System

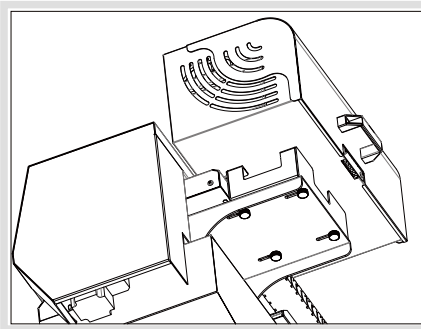
#### 1 Install the Ink Case



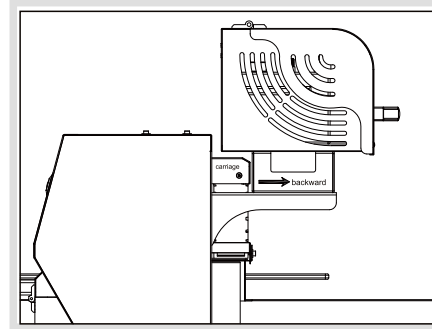
A. Unwrap the cables, and get the screws



B. Place the ink case here

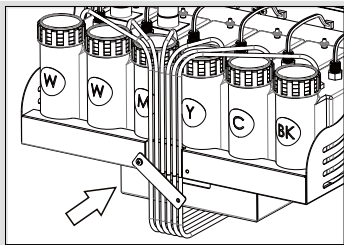


C. Fix the screws of the ink case, please move the case as far as possible from the carriage

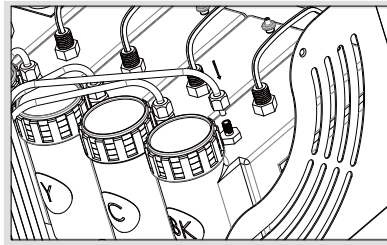


D. Check from side panel, and make sure the case will not block the carriage

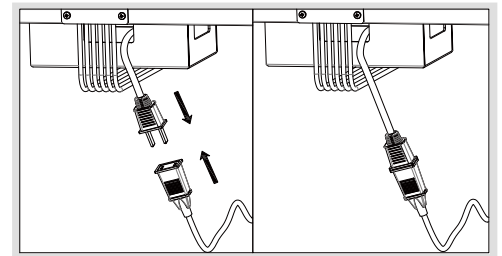
#### 2 Connect the Power Cable



A Fix the cables here

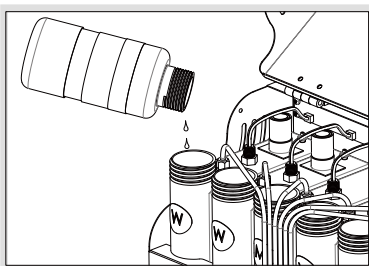


B. Screw up the tube to the ink bottle

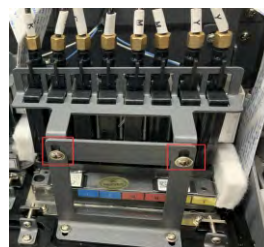


C. Connect the power cable of white ink stirring system

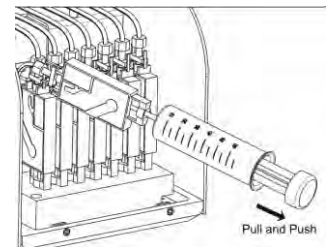
#### 3 Refill the Ink to the Ink Bottle, and Lead it to Dampers:



A. Refill the ink



B. Take off the damper cover

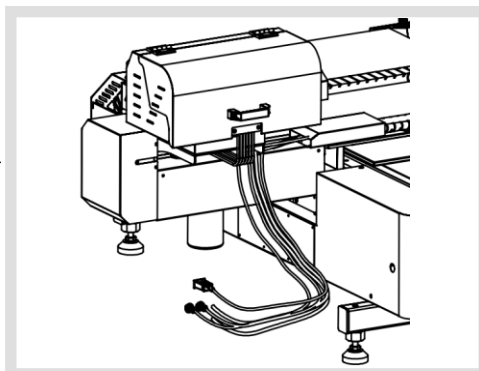


C. Use the syringe to vacuum the ink out from the dampers

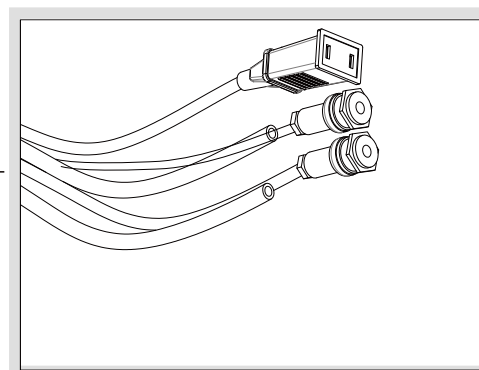
## 3.INSTALLATION AND OPERATION

### 3.3 Install the Water Cooling System

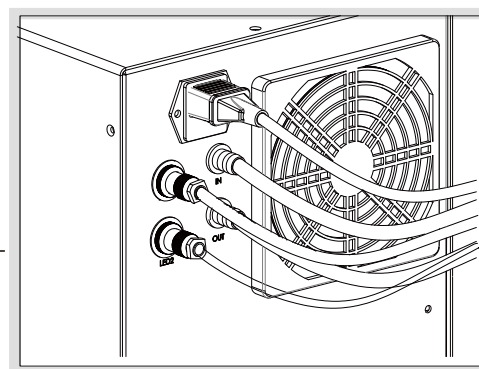
- 1** Unwrap the Cables



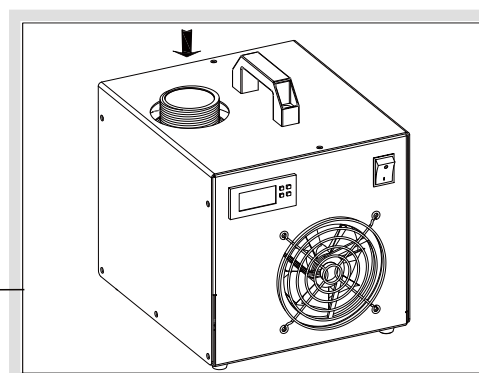
- 2** Prepare All the Tubes



- 3** Connect the tubes



- 4** Open the Cover, and Refill with Water or Cooling Liquid 900ml



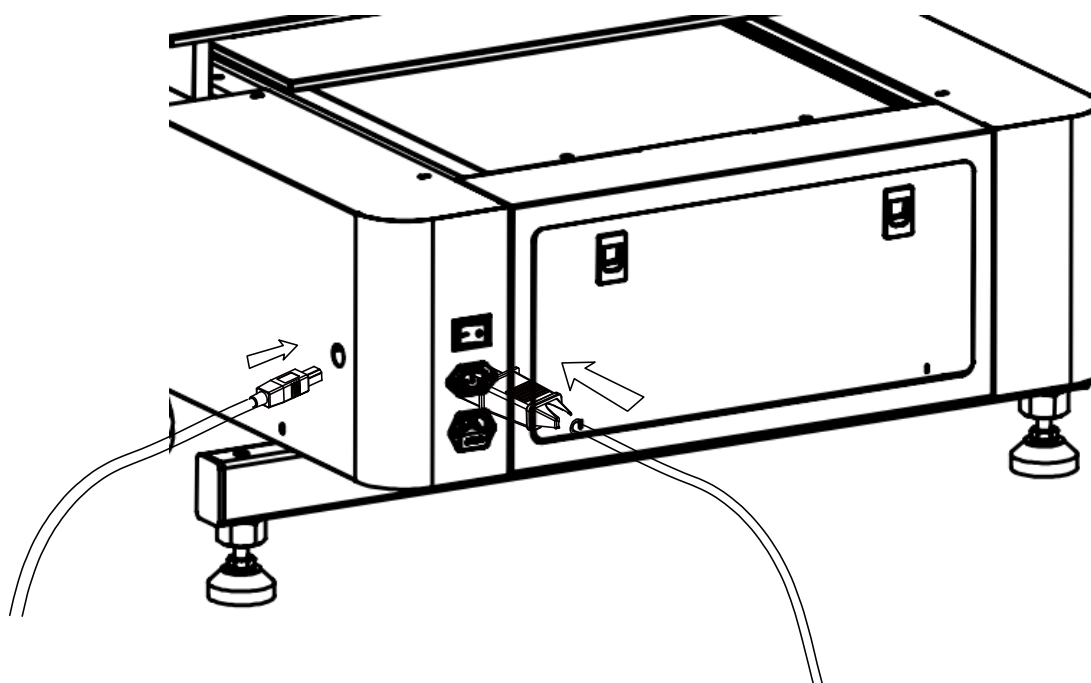
## 3.INSTALLATION AND OPERATION

### 3.4 Install and Description the Driver

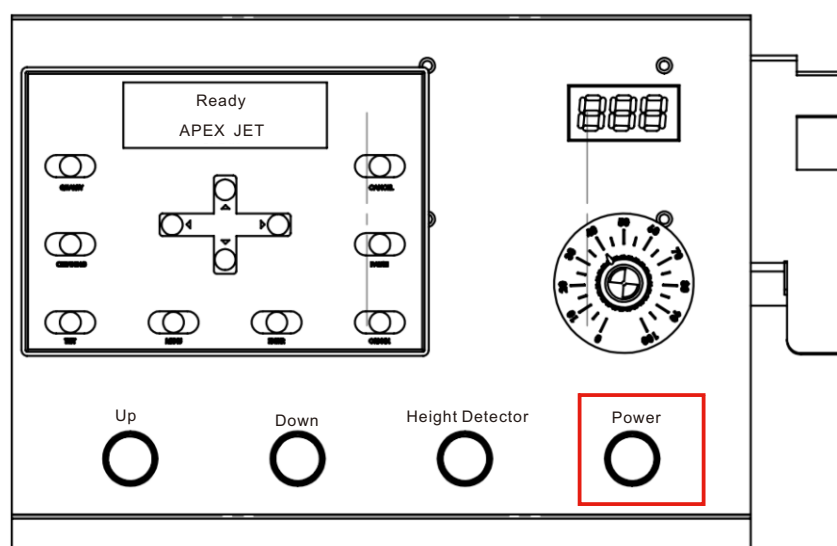
#### \*Before Installation

Notes: Please closed or shut down all the anti-virus software and firewall.  
Before installation of the driver, copy UV-4060 or UV-6090udisk files to computer.

Plug the USB cable and general power cable  
power on printer, connect the USB cable, please kindly follow the below steps:



General power cable and USB cable



Power on the machine



# 3.INSTALLATION AND OPERATION


## 3.4 Install and Description the Driver

### \*Before Installation

Notes: Please closed or shut down all the anti-virus software.  
 Before installation of the driver. Then copy UV-4060 or UV-6090udisk files to computer.  
 Power on printer, connect the USB cable, please kindly follow the below steps:

### 1 How to Install it

This driver is only applied to 64Bit computer system.



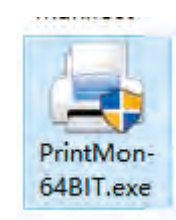
printcontrol  
64BIT

Open



USB3.0-WI  
N7-64bit.e  
xe

Double Click to Install

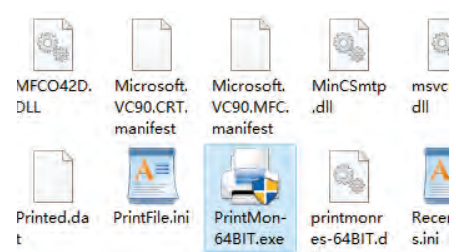


PrintMon-  
64BIT.exe

Double Click

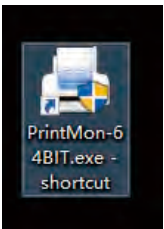
### 2 Finished Installation

\* When finished installation, there will be a driver icon in the right bottom of PC. Right click on the icon, it will pop up a window to show the status: online or offline. When shows online, the printer is connected with computer, and ready for printing. When the icon is gone, please find the installation file, and right click to send the icon shortcut to desktop.



MFCO42D.DLL   Microsoft.VC90.CRT.manifest   Microsoft.VC90.MFC.manifest   MinCSmtp.dll   msvc.dll  
 Printed.dat   PrintFile.ini   **PrintMon-64BIT.exe**   printmonres-64BIT.dll   Receiv...

Right Click, Send



PrintMon-64BIT.exe - shortcut

Short Cut

# 3.INSTALLATION AND OPERATION

## 3.4 Install and Description the Driver

### 3.4.1 Software Description(PrintMon)

#### 1 Menu column description

- (1). Open: Select a RIP file to add into the PrintMon
- (2). Reset: printer head carriage and working table reset
- (3). Print: Start printing the selected job file
- (4). Stop: During printing, you can stop the current job, and the car returns to the origin.
- (5). Pause: Pause the current job while printing, the car returns to the origin, and the unfinished job can be resumed to print
- (6). Resume: Resume a paused job after pressing Pause
- (7). Delete: Delete the selected job in the job bar.



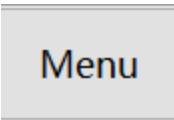
:Control the platform to move back and forth.



:Control the ink cart to move left and right.

#### 2 Printer parameter setting

- (1). Horz Begin: X-axis starting point for task printing
- (2). Vert Begin: Y-axis starting point for task printing
- (3). X Speed: Default selected as fast;  
Y Speed: Default selected as fast
- (4). Select Bidirectional or Single Leave Scan, Eclosion Type (bidirectional printing effect is slightly worse than Single Leave Scan, speed is doubled); default eclosion type is heavy.
- (5). After the printing is completed, the platform can be moved forward or backward, and the distance moved; default setting is "when print end: stay at current position"
- (6). Color bar: Whether to add a color bar, default is OFF
- (7). Static flash&Hz: This option is the default setting and does not need to be modified.
- (8). You can select the channel to be turned on, off, and in sequence. For the white channel, select four W1 to correctly print the four channels of white ink.



#### 3 Menu

- (1). Setting: It is mainly set for the parameters of network printing. You can set the port, buffer path, ink magnification, and so on. If "Check ink volume or print area before printing" is checked, the task sent directly from PrintMon will pop up a dialog box to select the print area.

Setting	1
PassWord	2
UV Lamp Setting	3
Spot Colors Setting	4
Ink Fill(I)	5
Auto Clean Stack Setting	6
Clean Ink Stack	
Custom Clean Param Setting	7
Feed Adjust Test	8
White ink cycle stir	
About(A)	
Language	9
UsbTest	
Config manager	10

## 3.INSTALLATION AND OPERATION

### 3.4 Install and Description the Driver

- (2). Password :This parameter setting is suitable for distributors to manage the clients of the installment payment.  
Please provide this serial number to APEX to obtain a expiration date password,and enter the password into this space, then we can control the machine using date, The machine can not print any ink beyond the date.

- (3). UV lamp setting : Used to set the UV lighting position.  
(this setting is the default parameter, please do not modify)

- (4). Spot Colors Srtting:  
The user can select the white ink print mode, the number of white ink channels.

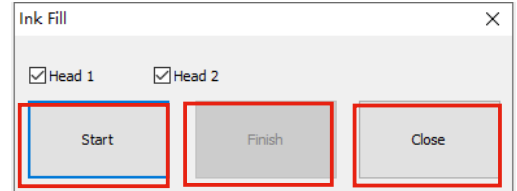
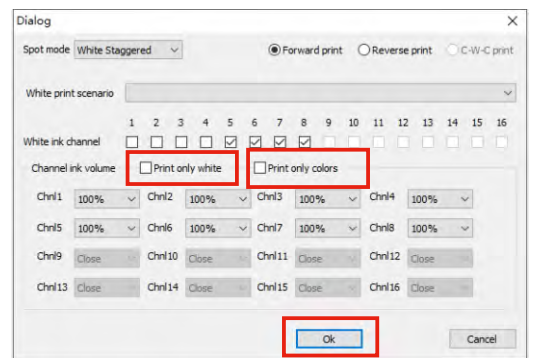
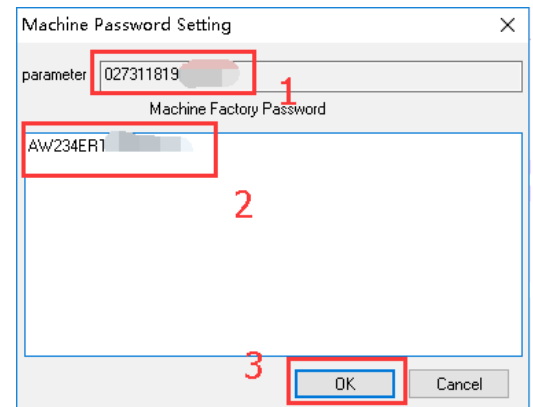
1>Spot mode:

- ①white ink base: white is under the color  
② white ink overlay: white is upon the color

2> White ink channel: the channel 5, 6, 7 and 8 where the white ink is currently located;

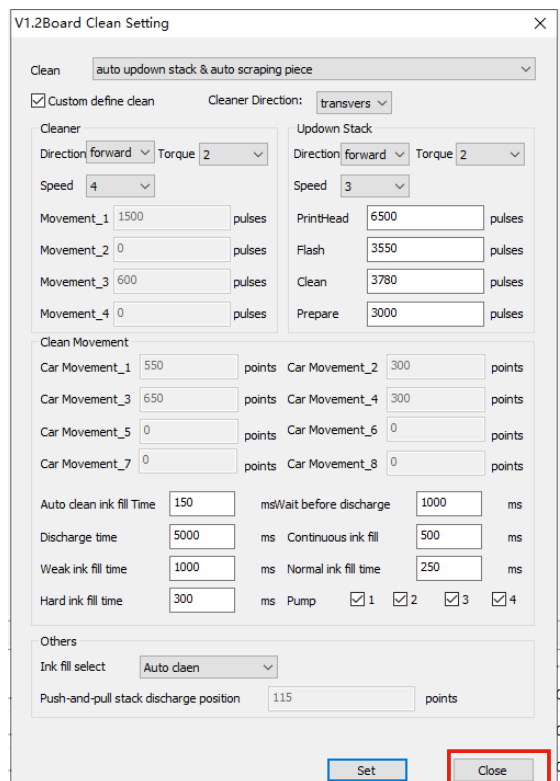
3> Channel ink volume:

- ① Print only white: only white ink print, no colors;  
②Print only colors: no white, only color  
③ Chnl: If closed, this channel is closed, if you select 200% printing,the channel is printed in double ink (channel 5678 is a white ink channel).



- (5). Ink Fill: ink extraction  
(same function as manual cleaning button)  
Select the printer head that requires ink fill.  
Start: press to start ink extraction;  
Finish: press to finish ink extraction;  
Close: Press to close this interface.

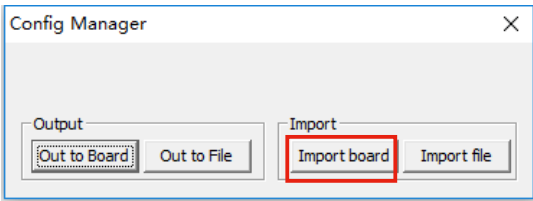
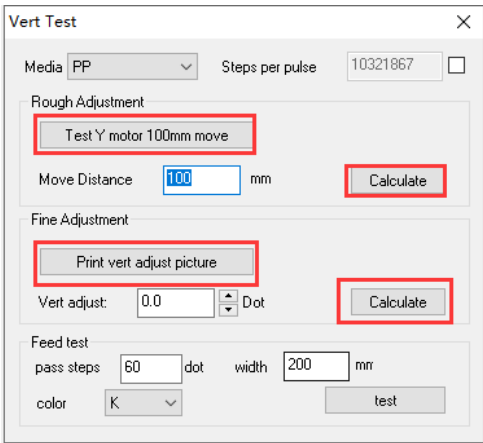
- (6). Auto Clean Stack Setting:  
1> Clean: The cleaning mode of each machine is selected according to the cleaning structure of the corresponding model and cannot be modified. This machine selects "auto updown stack and auto scraping piece";  
2>The setting of the scraper motor and cleaning action is the default setting as shown on the right. **Do not modify it please.**



# 3.INSTALLATION AND OPERATION

## 3.4 Install and Description the Driver

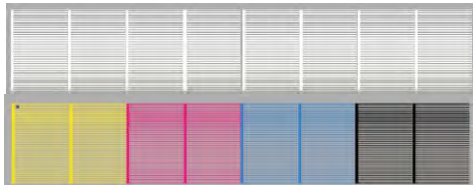
- (7). Custom Clean Param Setting: Please fill in the data according to the paper came with machine.
- (8). Feed direction gear ratio test: The right figure is the stepping motor test setting interface, Click “test Y motor 100mm move”, then measure whether the actual distance is accurate. If it is not accurate, modify “Move Distance” and recalculate the gear ratio.  
Fine Adjustment: Click “Print vert adjust picture”. If the 0 value is not aligned, modify the value of “Vert Adjust” and recalculate the gear ratio.
- (9). Language : Switch between Chinese and English.
- (10). Config Manager: You can choose to import or export data to the board.



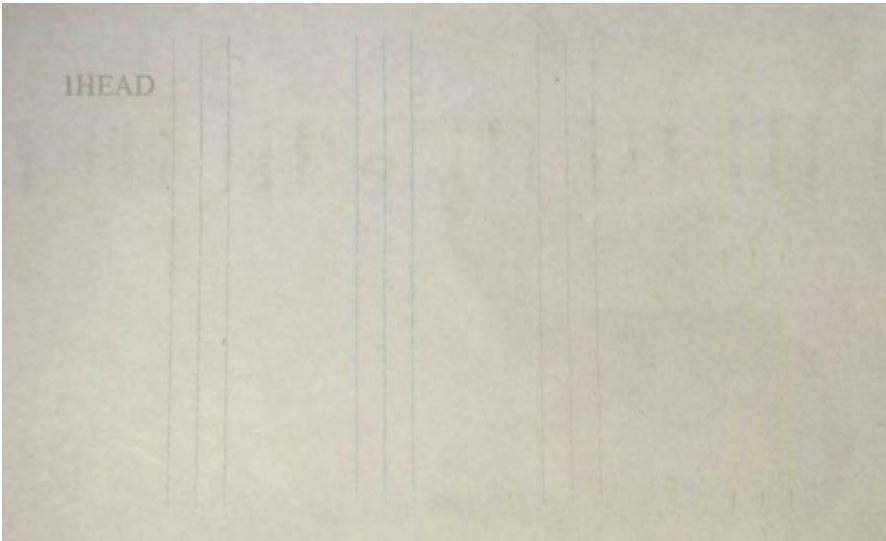
### 3.4.2 Introduction to Calibration Function



Test: Print the test strip. If there is any broken line, we should do some adjustment accordingly;



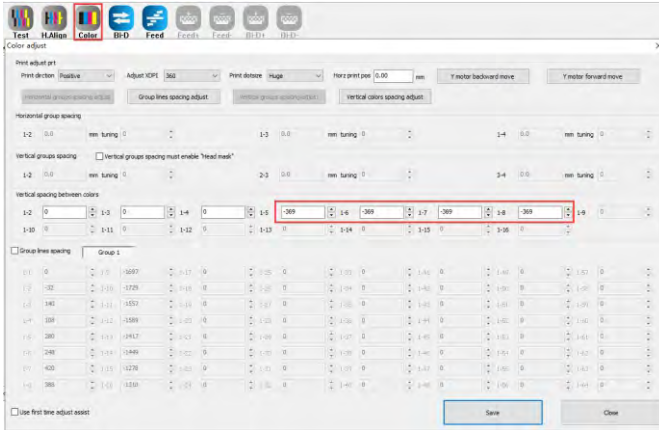
H.Align: Print the printer head vertical calibration chart, if the lines do not overlap vertically, you need to adjust the vertical position of the printerhead;



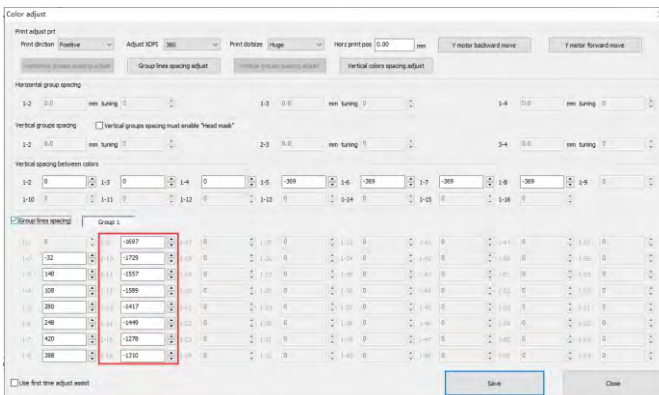
## 3.INSTALLATION AND OPERATION

### 3.4 Install and Description the Driver

Color: If the white color leaks down from the pattern, add 1-5, 1-6, 1-7, 1-8 the value  $-379+10=-369$   
If it leaks above from, the value is  $-379-10=-389$  (1-2 to 1-4 remains 0)

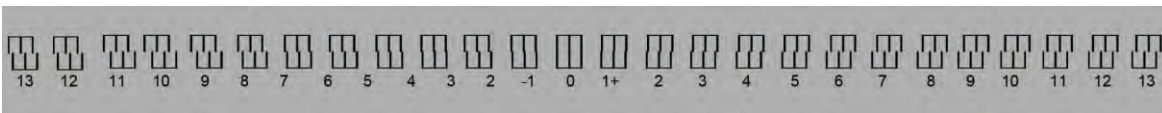


If the white color leaks on the left side of the pattern, then decrease the value of 1-9 to 1-16 (1-1 to 1-8 cannot be changed):  $-1692-5=-1697$   
If the right side leaks out, add a value such as:  $-1692+5=-1687$



Please fill in the data according to the paper came with machine

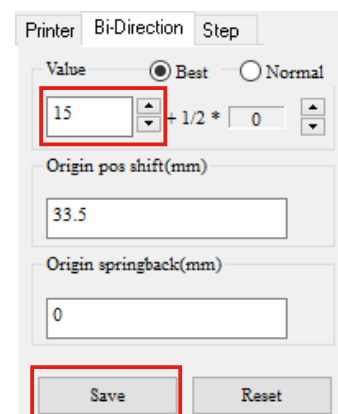
Bi-D: Print a bidirectional calibration chart to calibrate the distance of the Bi-direction printing coincidence;



Feed: Print the vert motor step calibration chart to calibrate the vertical step printing coincidence.

Feed+, Feed-: Real-time step calibration, the machine is calibrated to the best step value, please do not change it.

Bi-D+, Bi-D-: Real-time bidirectional calibration.





### 3.INSTALLATION AND OPERATION

#### 3.4 Install and Description the Driver

##### 3.4.2 Software Display

(1)Menu: The status menu is located below the main software window, send pulse number, feedback pulse number, the scan speed, and the inkjet frequency.

Menu

Normal Scan speed:0.00 m/s  
 Send Pulse: 0 Feedback Pulse: 0

Jet freq:0.00 KHz

(2). Job column: including files name, status, printing speed(size),copies,Pass number and remaining time.

File Name	Status	Print(Area)	Copies	Pass	Remai...	Delete after finish
D:\RIP file\1600_100 8pass.prt	Ready			13	00:00:00	Keep the task after printing

Finish File Name	Print Time	Finish Time	Number	Print Total Time
D:\spool\20161122194705\201...	20161122, 19:47:...	20161122, 19:47:59	1	0:0:53
D:\spool\20161122195000\201...	20161122, 19:50:...	20161122, 19:51:44	2	0:1:44

(3). Preview  
 Print task display, preview figure, printing task size and printing precision and task preview.

Preview



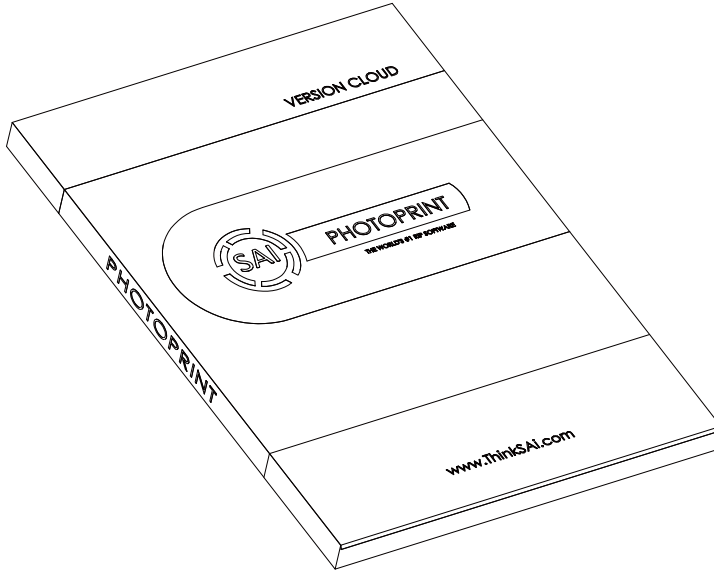
FileName:KCMY-0.prt  
 File Size:48.02 MB  
 Job Width:300 mm  
 Job Height:240 mm  
 Area:0.1  
 Color Num:5  
 FileCode:#2.5.0.10.300  
 YDPI:1200  
 DotMode:Variable Dot



## 3.INSTALLATION AND OPERATION

### 3.5 Install and Operate the Software

#### 1 Get the Software Package and Activate the Software

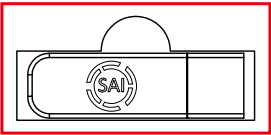
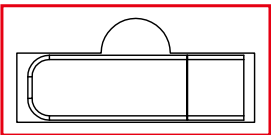


A. Get the software package from the accessory bag

### Software Disk

Code

Steps

<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: JS154E54R1WESR4WSSER</b></p> </div> <div style="border: 1px solid red; padding: 10px; 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;">  </div> <div style="border: 1px solid red; padding: 5px; margin: 10px 0;">  </div> <p style="text-align: center; font-size: 1.2em;">Dongle</p>
--	---

B. Before installation, follow these steps to activate the license of the software.

\*Do not plug the dongle in before finishing installing the Photoprint software.

\*In the precess of activation, PC need to connect to the Internet.

### 3.INSTALLATION AND OPERATION

#### 3.5 Install and Operate the Software

##### 2 Installation

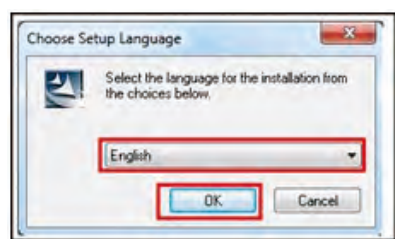
After activate the software, please install the software. Insert installation disk. Open the disk. Then install software step by step by following the wizard.

Installation instructions

1).Install photoprint software, open

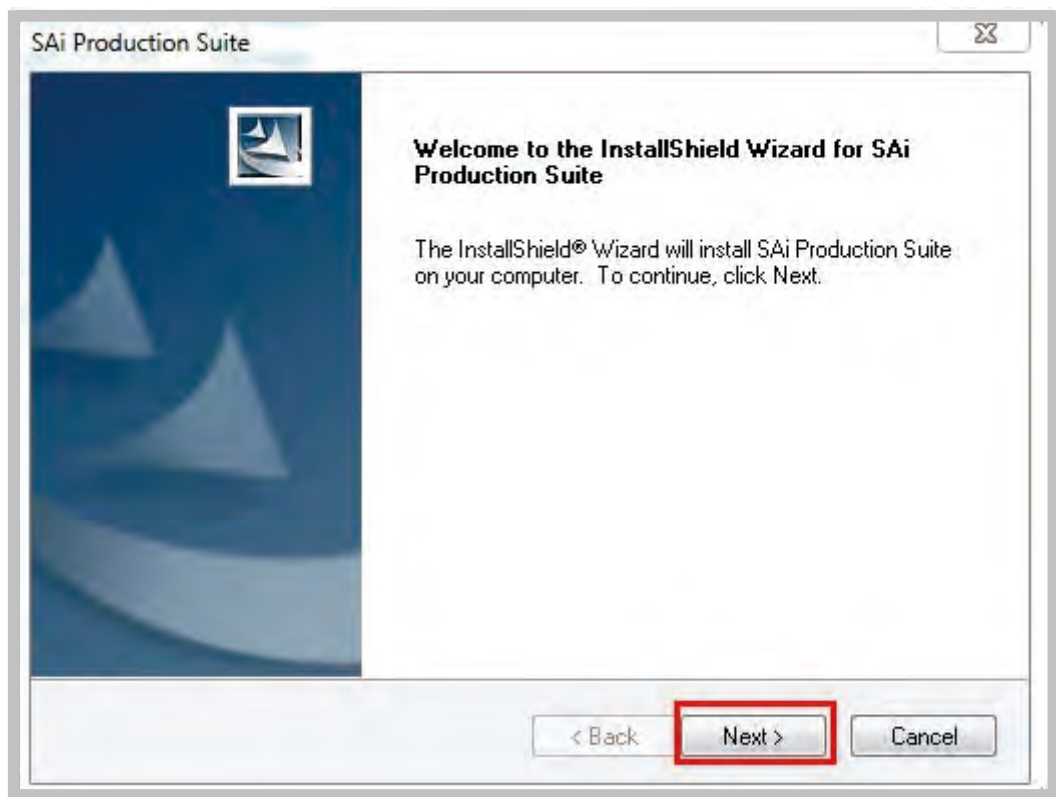


choose language



Click OK to choose language

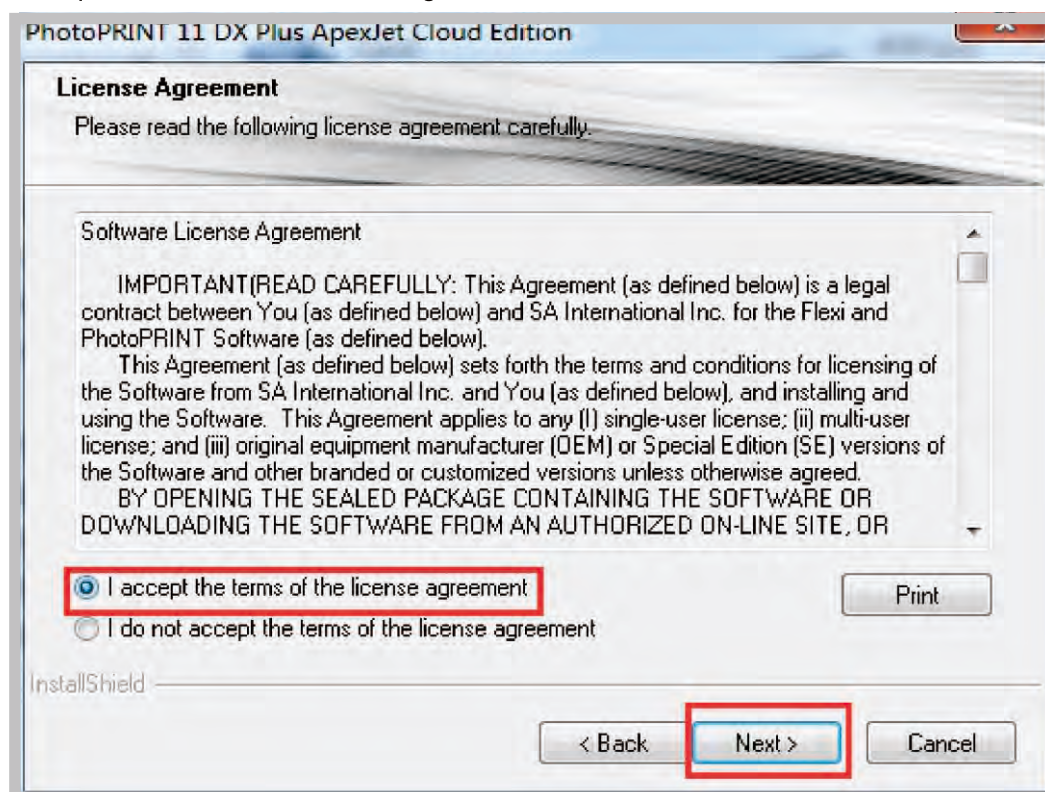
2).Then, choose next:



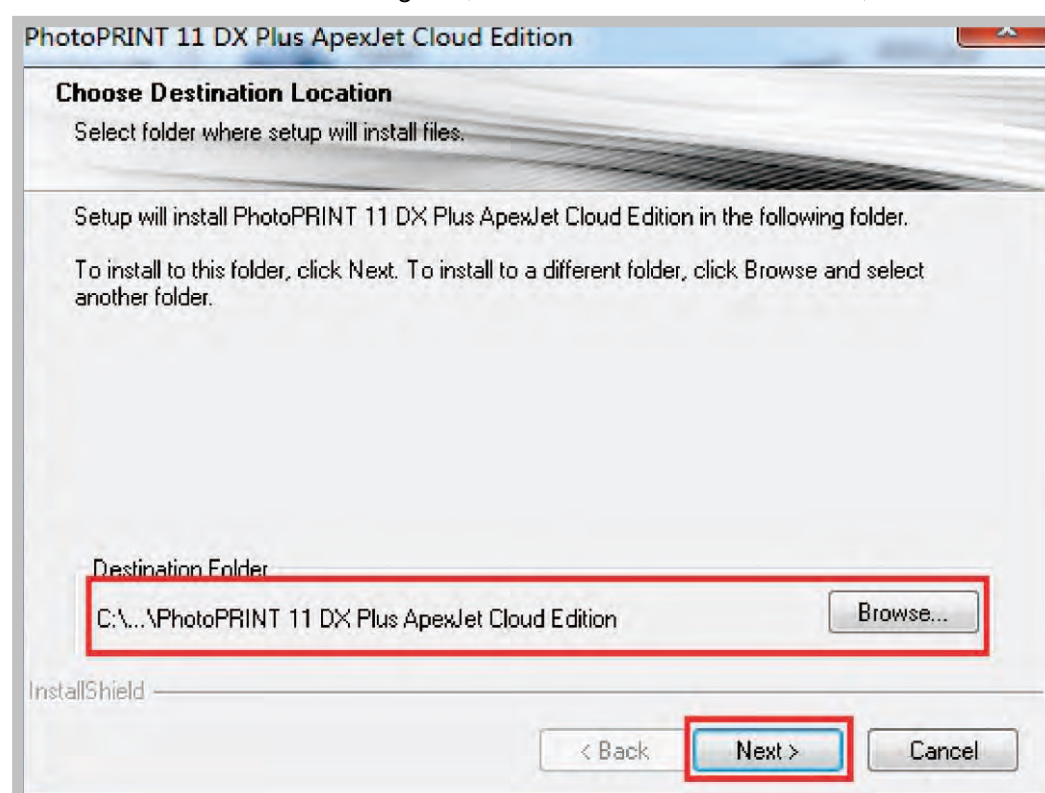
## 3.INSTALLATION AND OPERATION

### 3.5 Install and Operate the Software

3).Choose “I accept the terms of the license agreement” and then choose “Next”



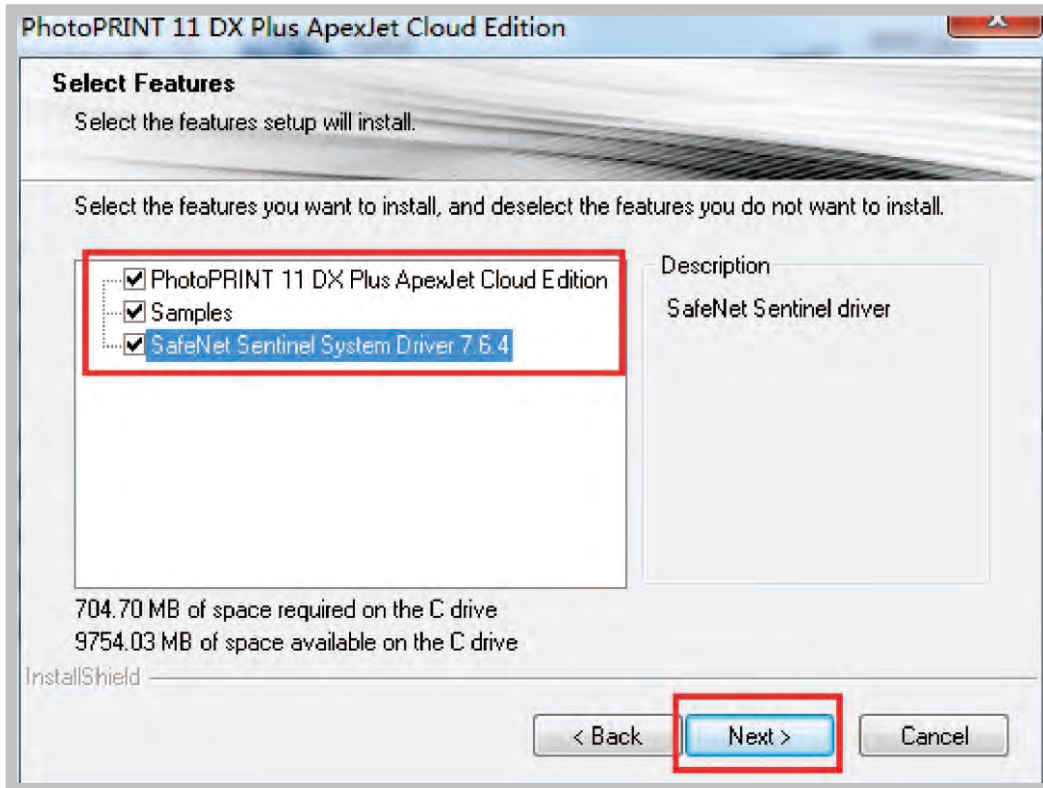
4).Find “Choose Destination Location” dialog box, and choose Destination Folder, then click “Next”



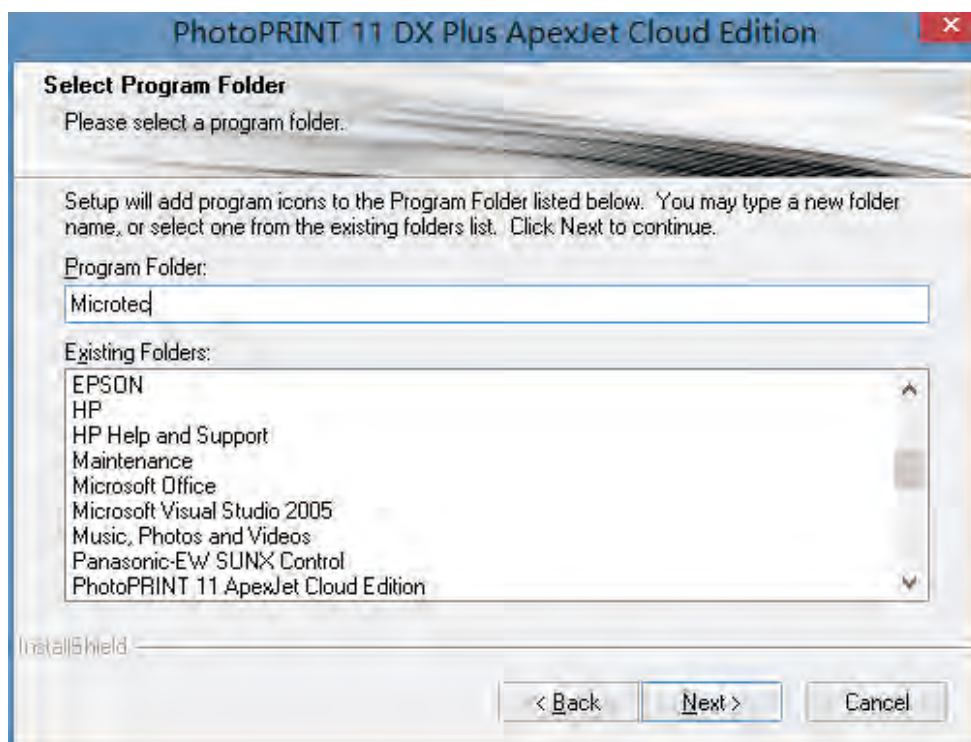
## 3.INSTALLATION AND OPERATION

### 3.5 Install and Operate the Software

- 5). All following options are required. Other options should be chosen also under different requirement. And then click "Next"



- 6).Type a new folder name,or select one from the existing folders list.For example,you can type any words like"Microtec",or select anyone in the list.Then press "Next".

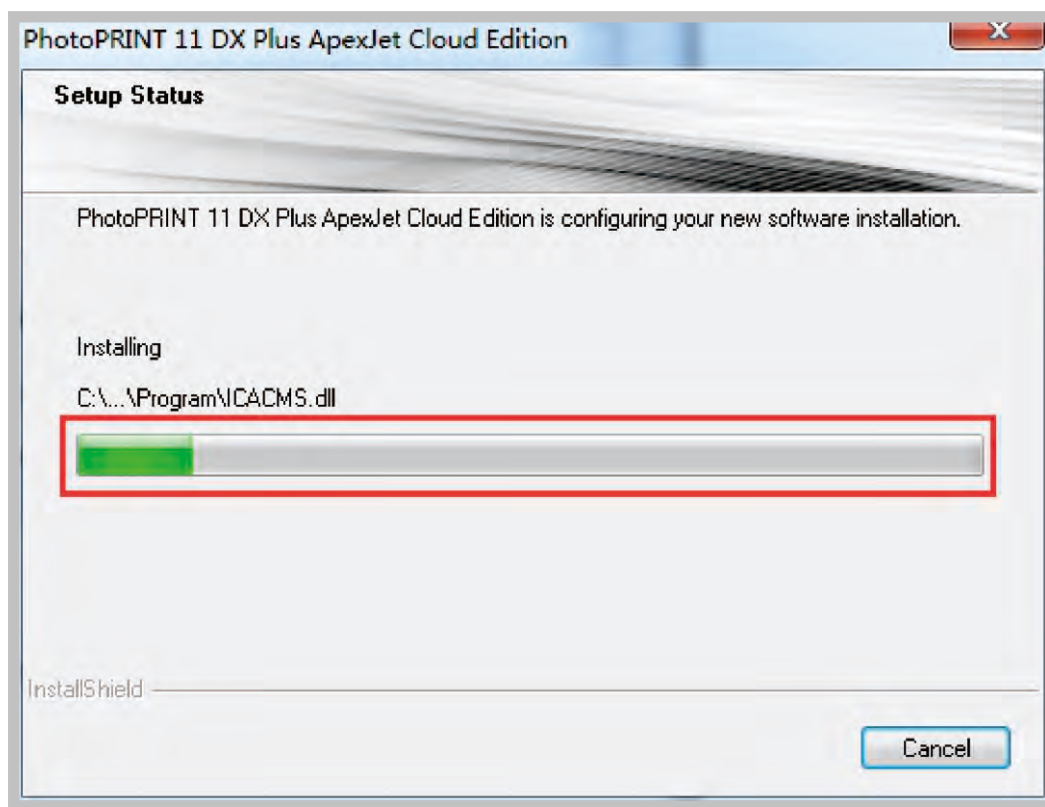




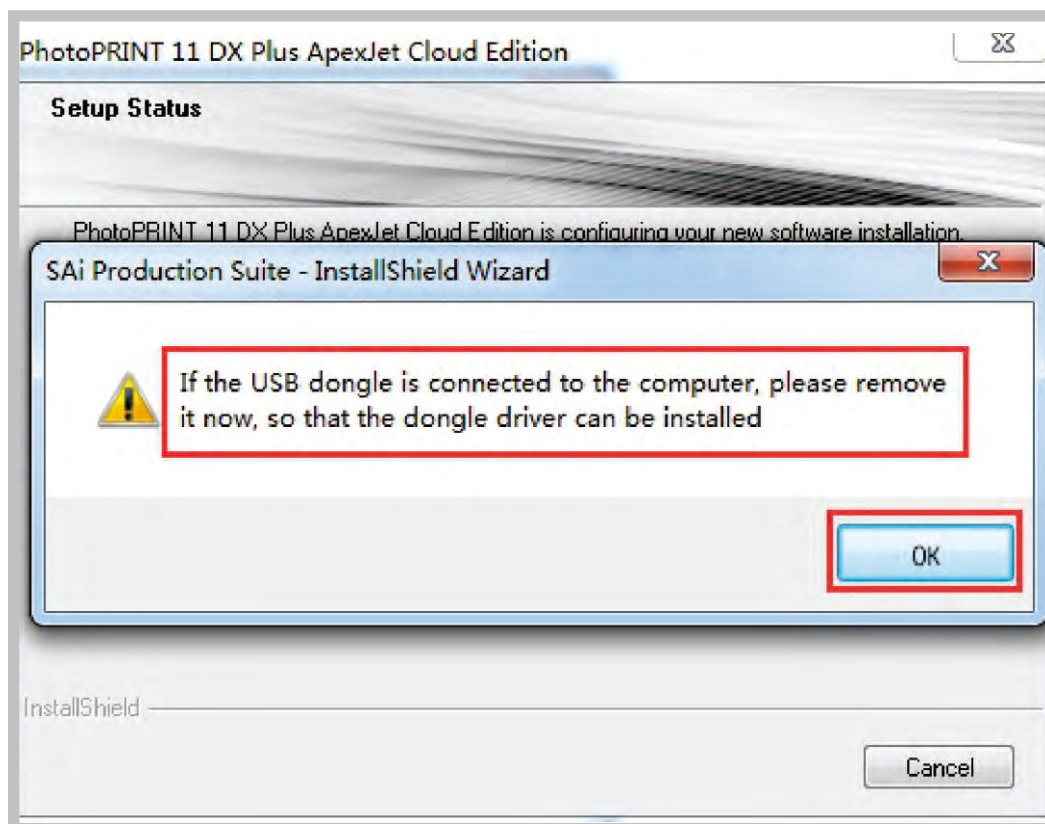
## 3.INSTALLATION AND OPERATION

### 3.5 Install and Operate the Software

7).When the program installation is finished, following progress is shown as below



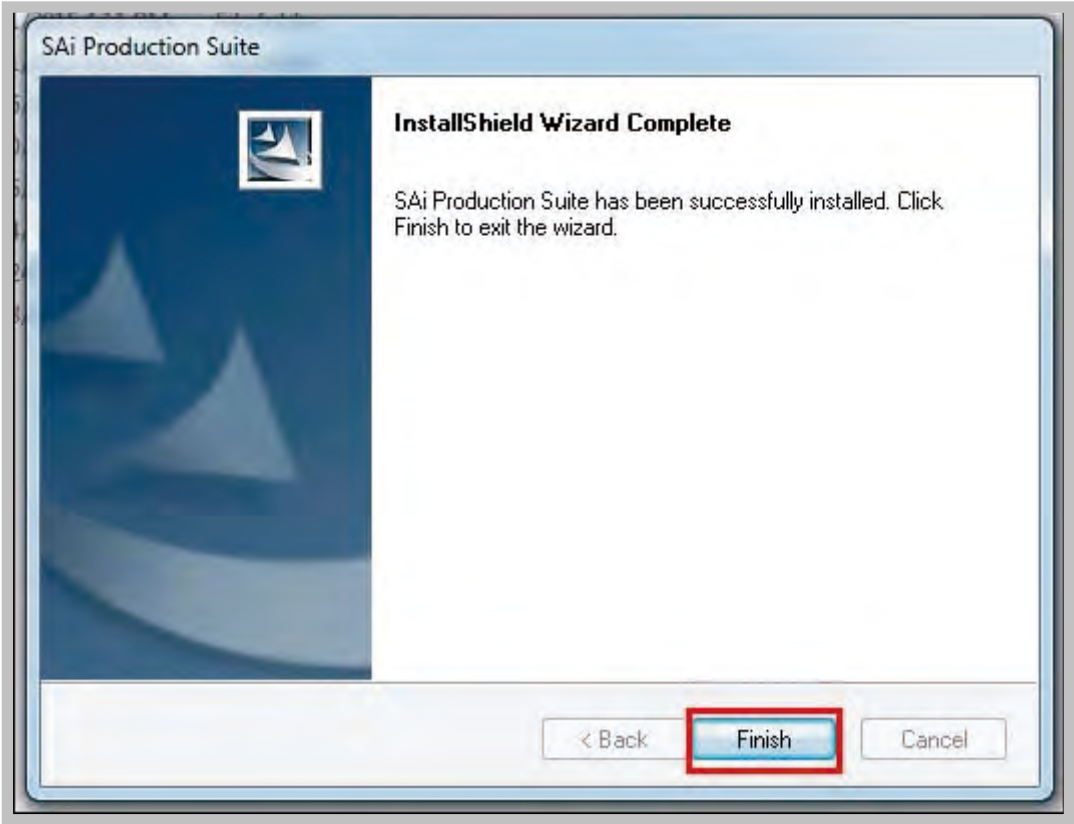
8).In the installation process, confirm that the dongle is not connected and click OK.



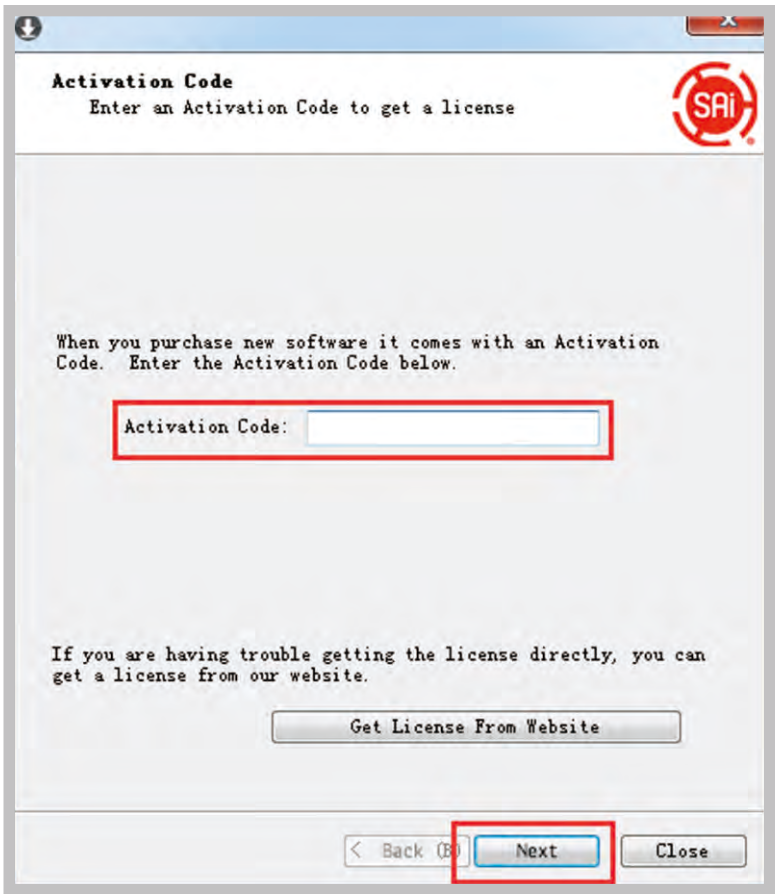
### 3.INSTALLATION AND OPERATION

#### 3.5 Install and Operate the Software

9). Click “Finish” as shown in the next dialog box:



10). After Finish, it will pop up as the picture below shows.



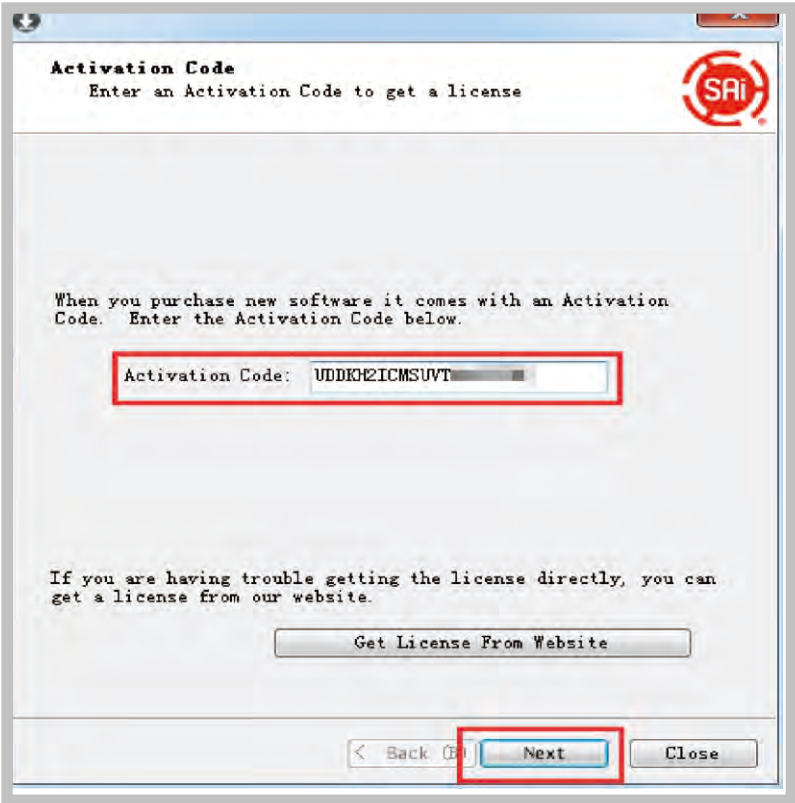


### 3.INSTALLATION AND OPERATION

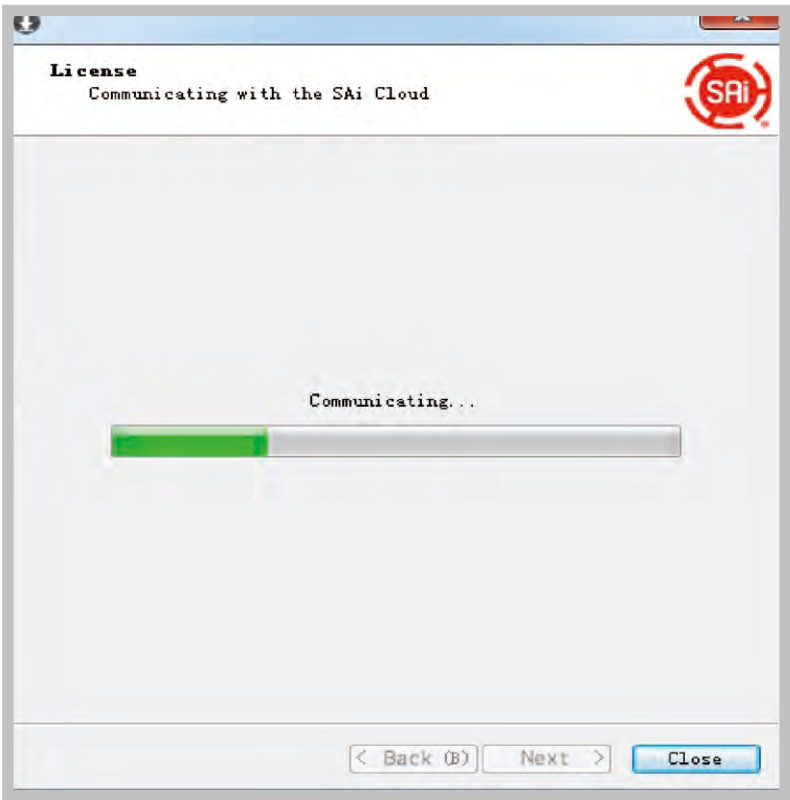
#### 3.5 Install and Operate the Software

11). Type in the password, then click Next.

Activation Code  
is the password  
on the package.  
**(Please follow  
the web page  
to register)**



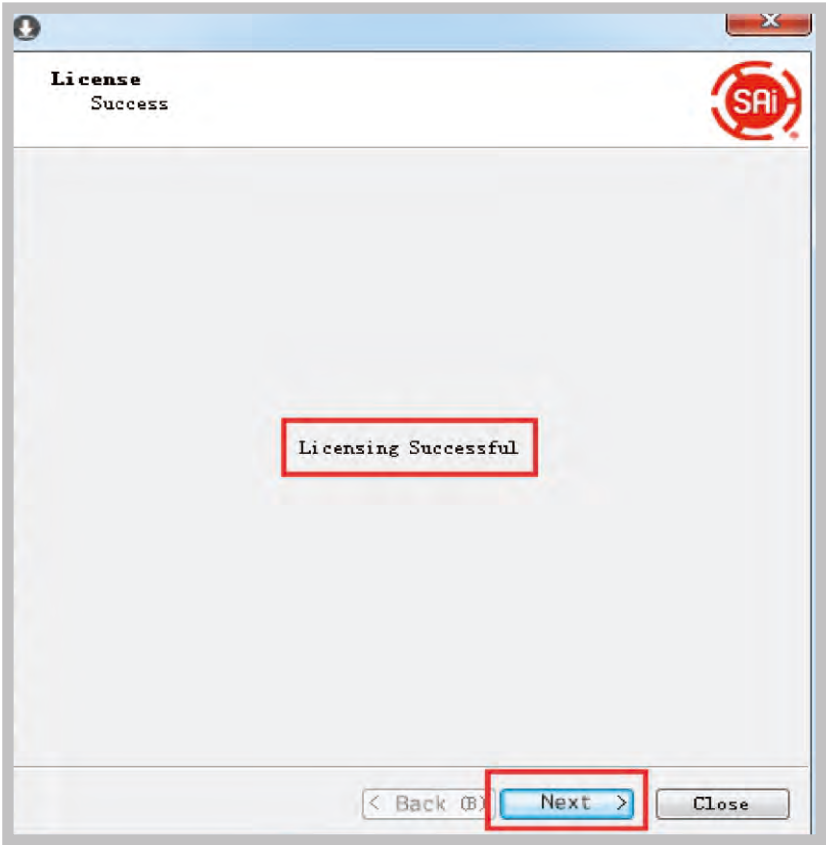
Please follow the file *Installation\_Activation Guide* to activate the code. You can find the file in the software Disk.



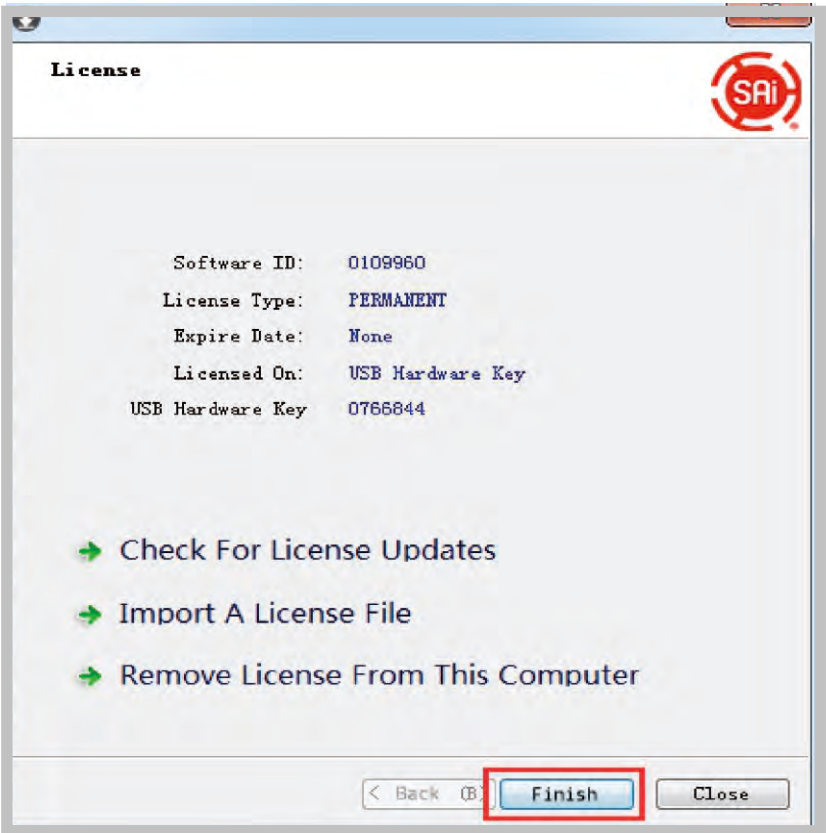
### 3.INSTALLATION AND OPERATION

#### 3.5 Install and Operate the Software

12).When licensing successful is shown, click next



13).Software is activated, click finish

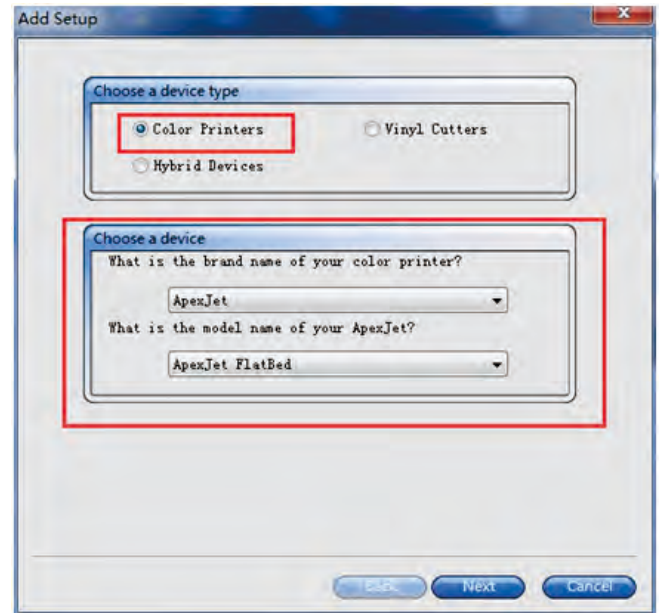
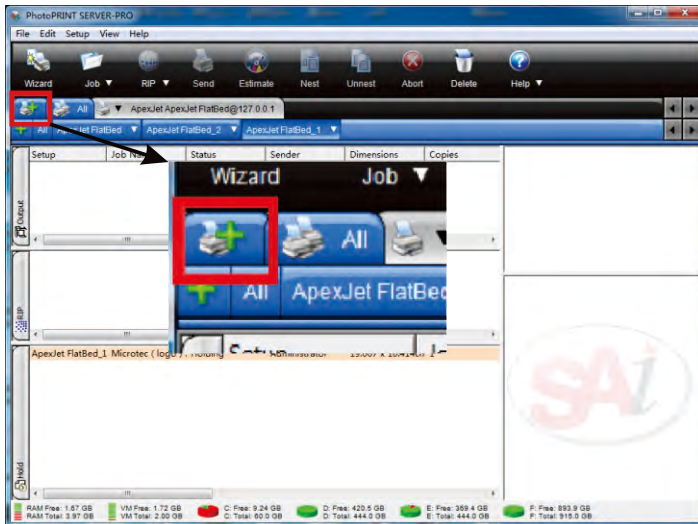


## 3.INSTALLATION AND OPERATION

### 3.5 Install and Operate the Software

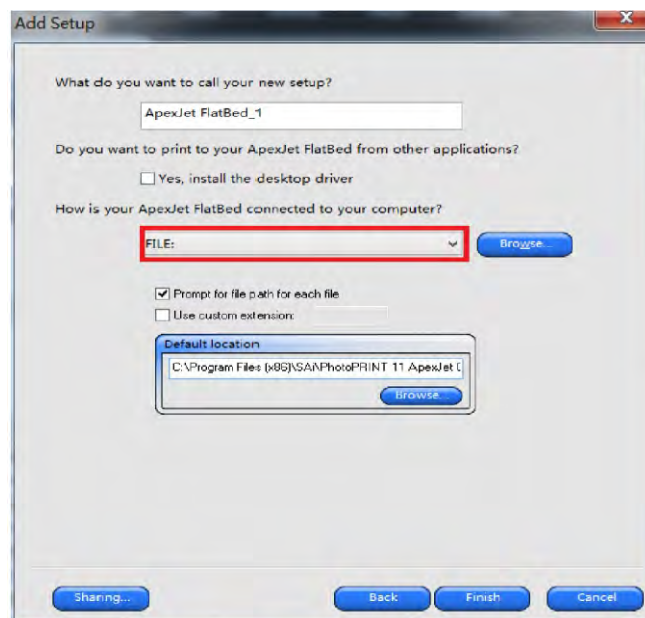
#### 3 Printer and port setting

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 follow steps .

B. Choose the same option as above pic.



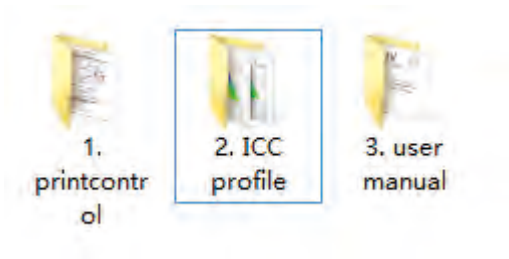
C.Select FILE

### 3.INSTALLATION AND OPERATION

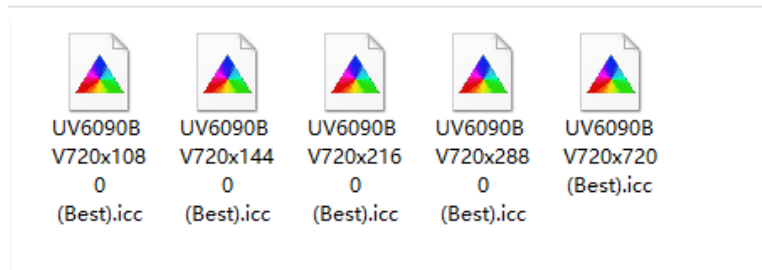
#### 3.5 Install and Operate the Software

##### Install ICC profiles

1.In the card U disk drive that contains the software and instructions to copy the folder on your computer where to find the ICCfolder shown:



2.Double-click to open the ICC folder shown:



3.Finally copy the necessary ICC profiles into the folder”Apexjet”.

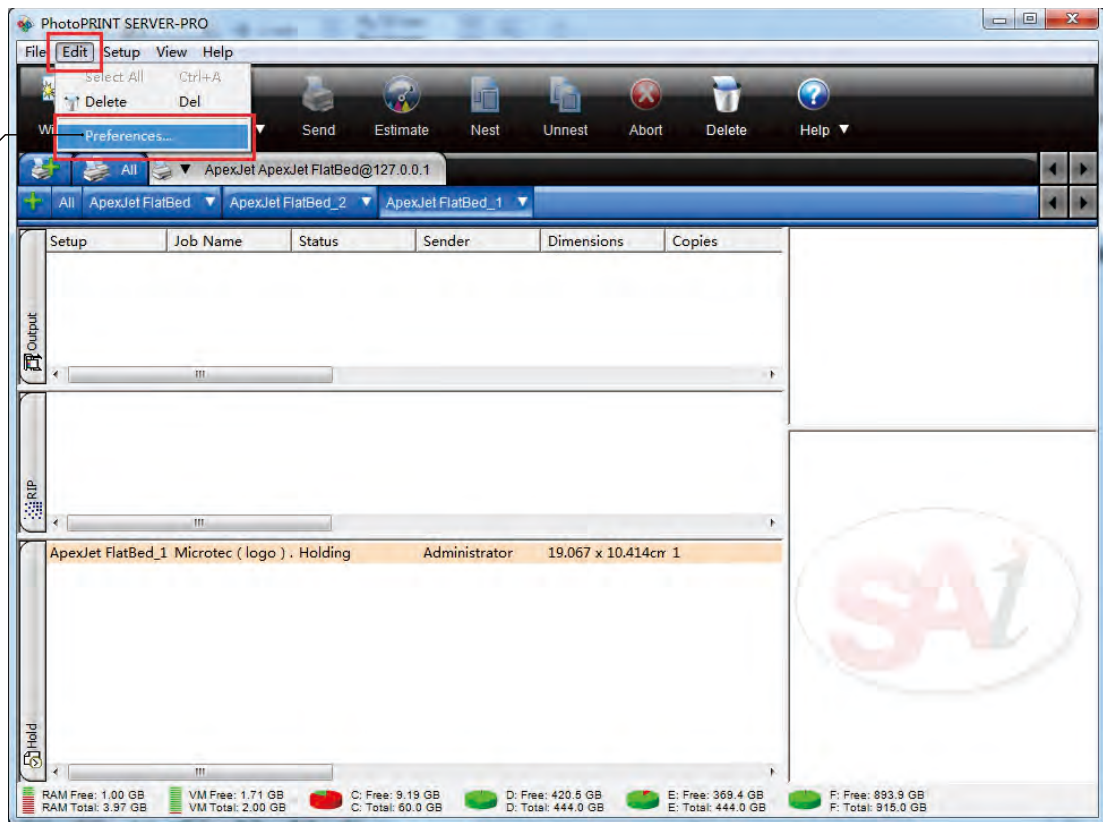
<div> <div> <div></div> <div>此电脑</div> </div> <div> <div></div> <div>系统 (C:)</div> </div> <div> <div></div> <div>Program Files (x86)</div> </div> <div> <div></div> <div>SAI</div> </div> <div> <div></div> <div>PhotoPRINT 12 ApexJet Cloud Edition</div> </div> <div> <div></div> <div>ICCProfile</div> </div> <div> <div></div> <div>ApexJet</div> </div> </div>					
	名称	修改日期	类型	大小	
✦	 UV6090B V720x1080 (Best).icc	2019/7/12 10:35	ICC 配置文件	17,143 KB	
✦	 UV6090B V720x1440 (Best).icc	2019/7/12 11:02	ICC 配置文件	17,143 KB	
✦	 UV6090B V720x2160 (Best).icc	2019/7/17 10:42	ICC 配置文件	17,143 KB	
✦	 UV6090B V720x2880 (Best).icc	2019/7/17 11:19	ICC 配置文件	17,143 KB	
	 UV6090B V720x720 (Best).icc	2019/7/12 10:02	ICC 配置文件	17,143 KB	

## 3.INSTALLATION AND OPERATION

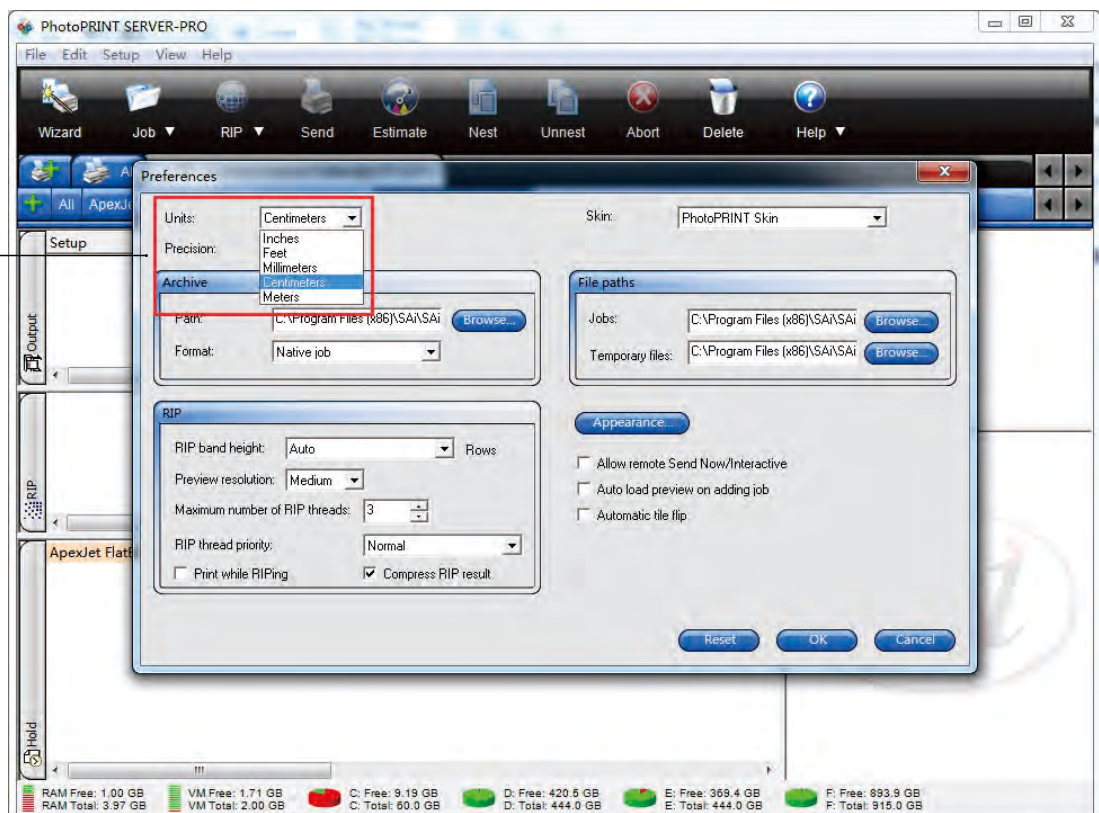
### 3.5 Install and Operate the Software

#### 4 Initial and Default Setting

Click Edit, then  
Preferences



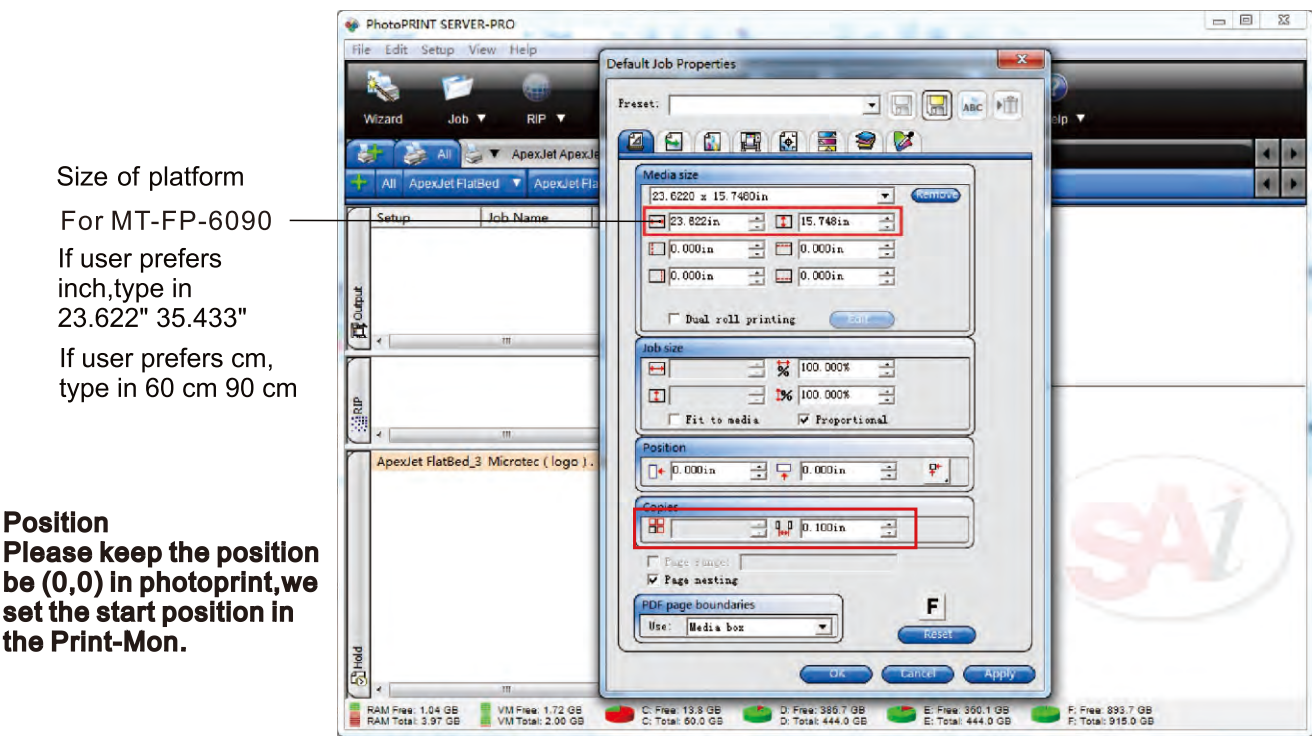
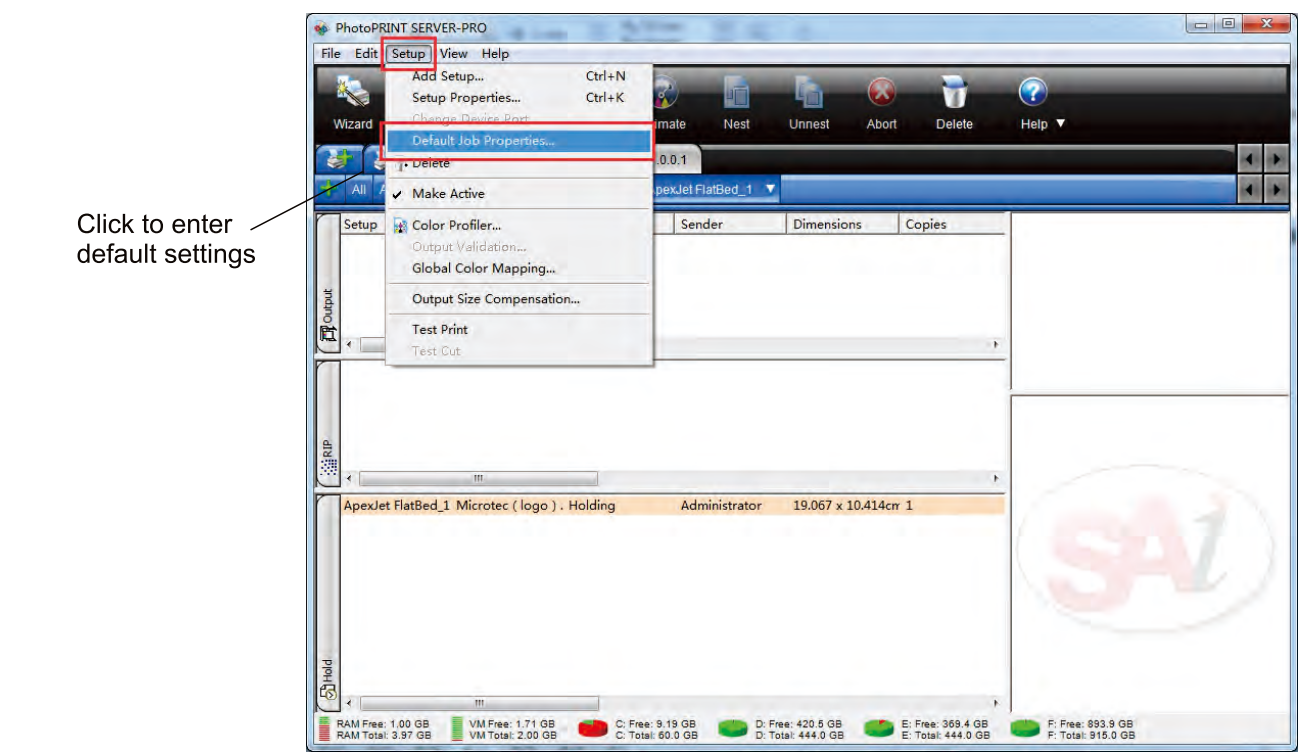
Change unit that  
user preffers  
in this option





# 3.INSTALLATION AND OPERATION

## 3.5 Install and Operate the Software



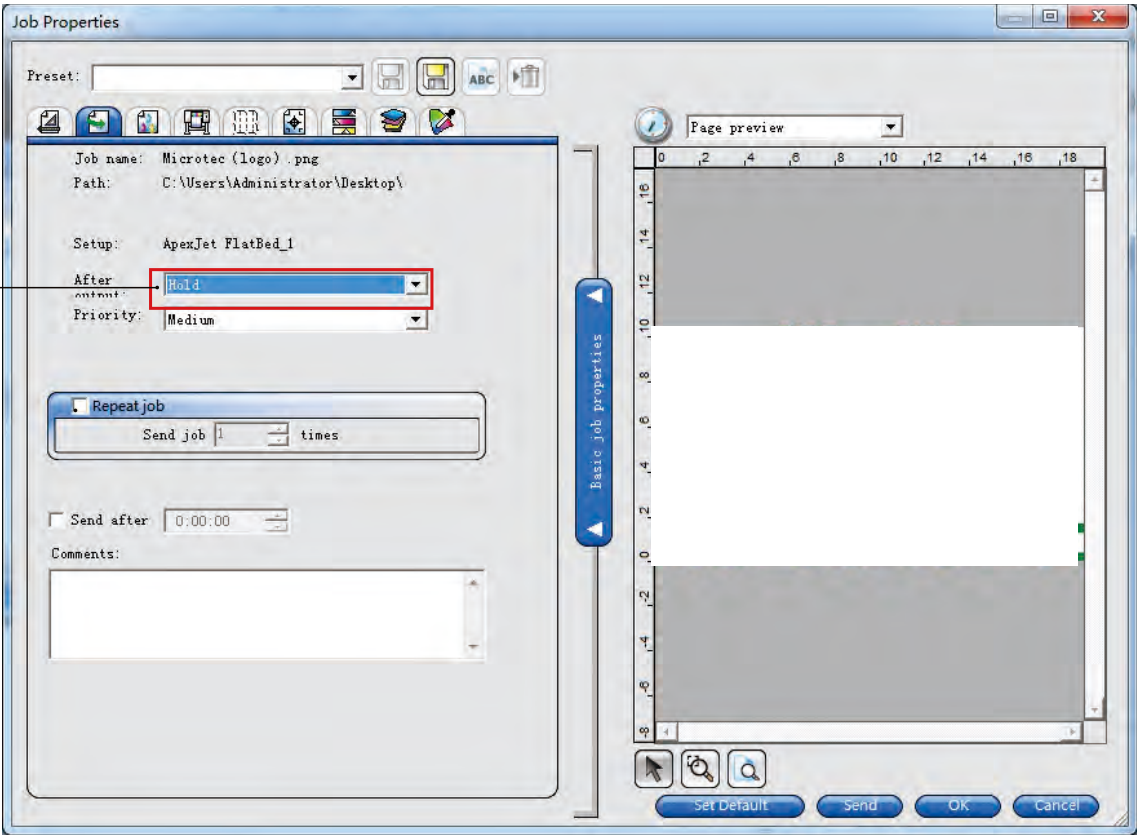
Printer	Heads Alignment	Bi-Direction	Step
Horz Begin	0.00 X mm	Vert begin	Setting Pos 0.00 Y mm



# 3.INSTALLATION AND OPERATION

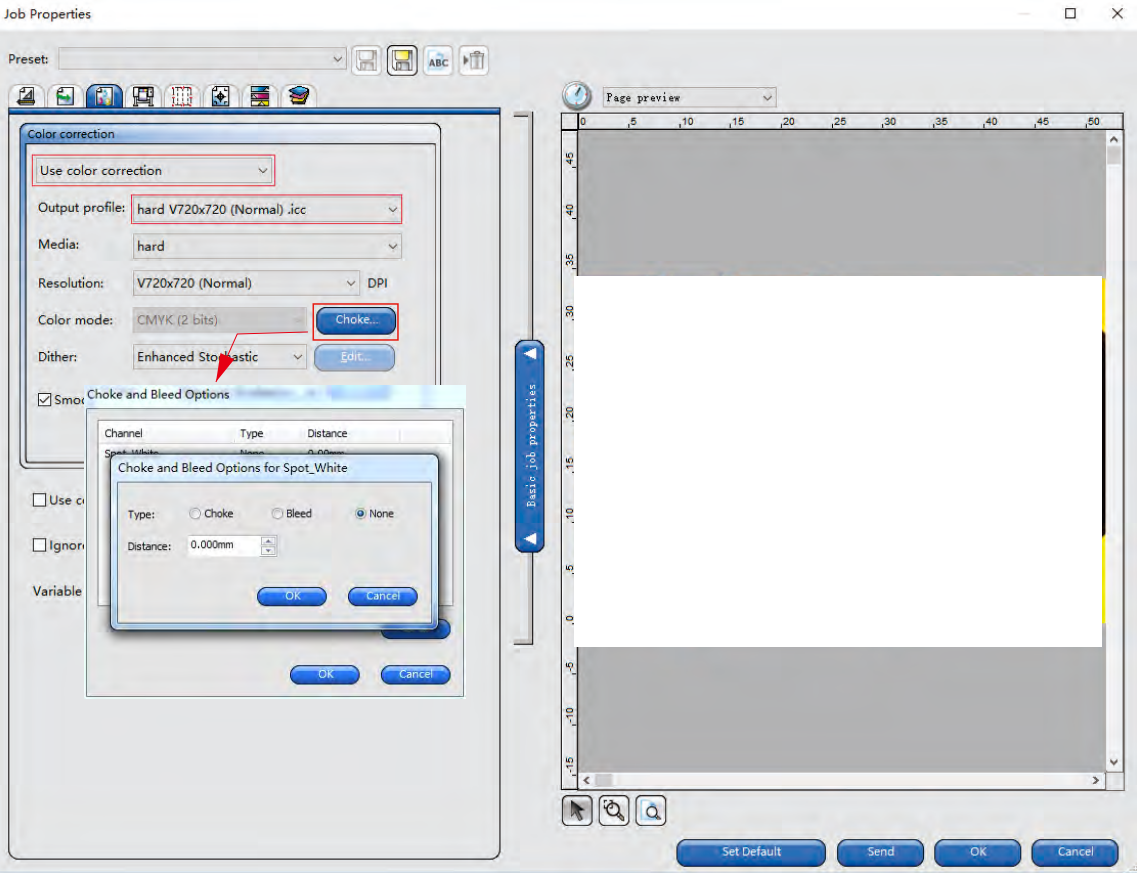
## 3.5 Install and Operate the Software

Normally choose hold. After printing, job settings will stay in job list.



Use color correction  
Select resolution.  
720x720 is recommended

Choke: Set inner shrink to allow white to shrink the inner wall of the picture.

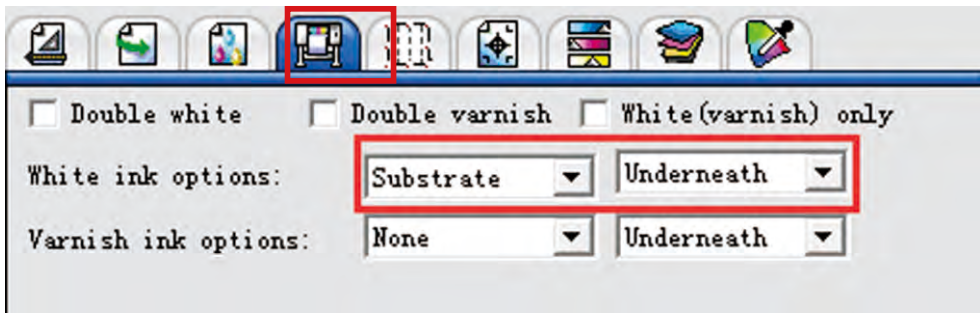


# 3.INSTALLATION AND OPERATION

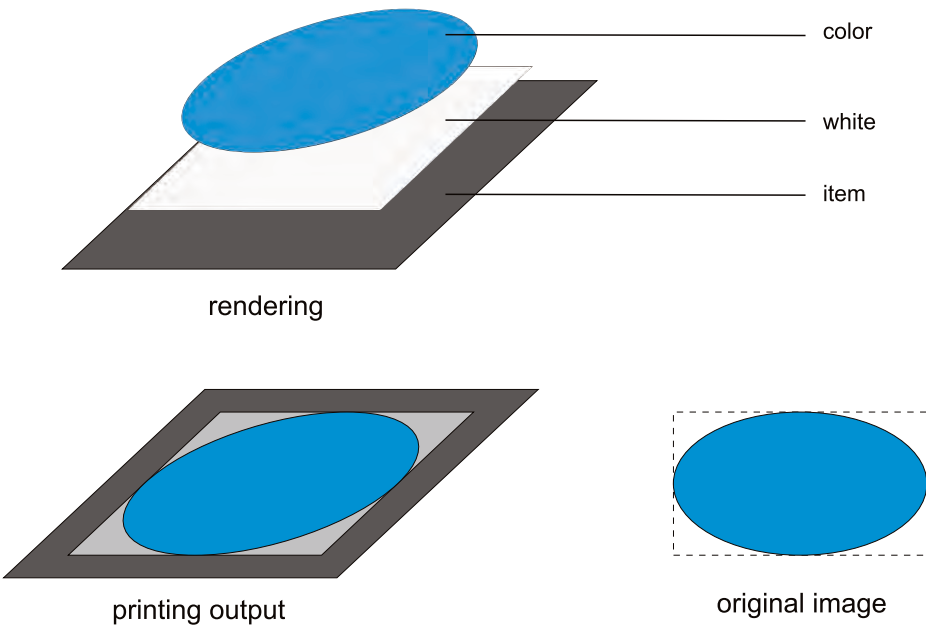
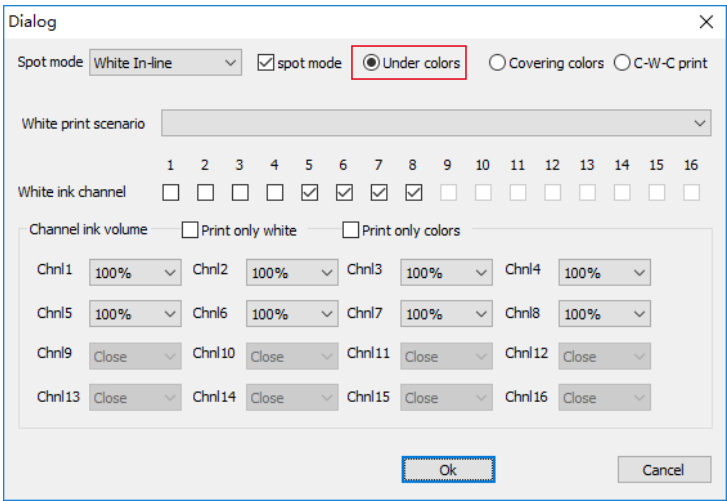
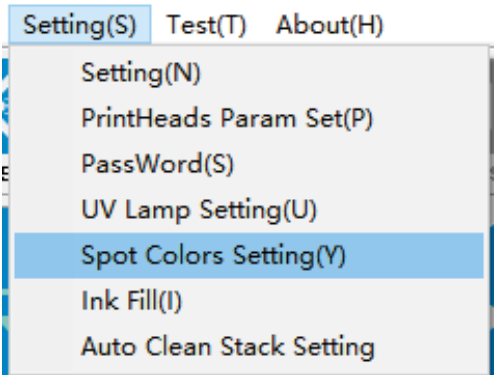
## 3.5 Install and Operate the Software

We select the white ink options in the Photoprint, but control the white channels in Print-Mon. So before the printing, We need confirm the options.

### A: Substrate and Underneath



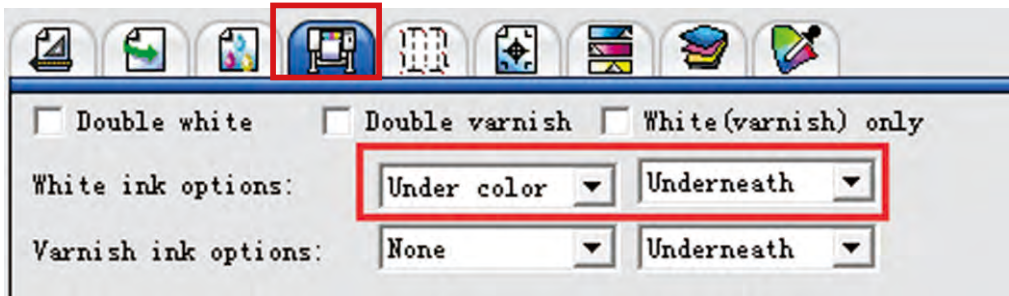
For items that users want to cover the surface by the printing with full job size white base. Choose Substrate and Underneath as the picture above shows. Then in the Print-Mon, please select Under color in the Spot Color Select.



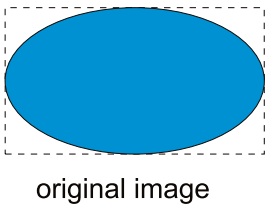
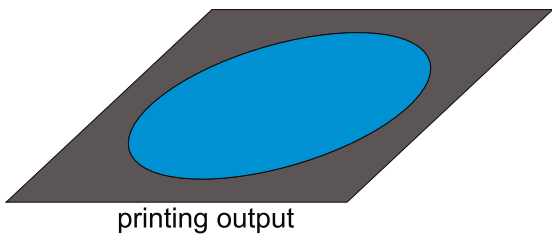
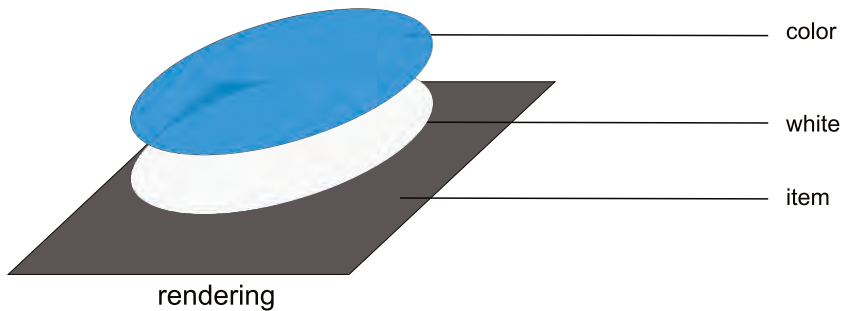
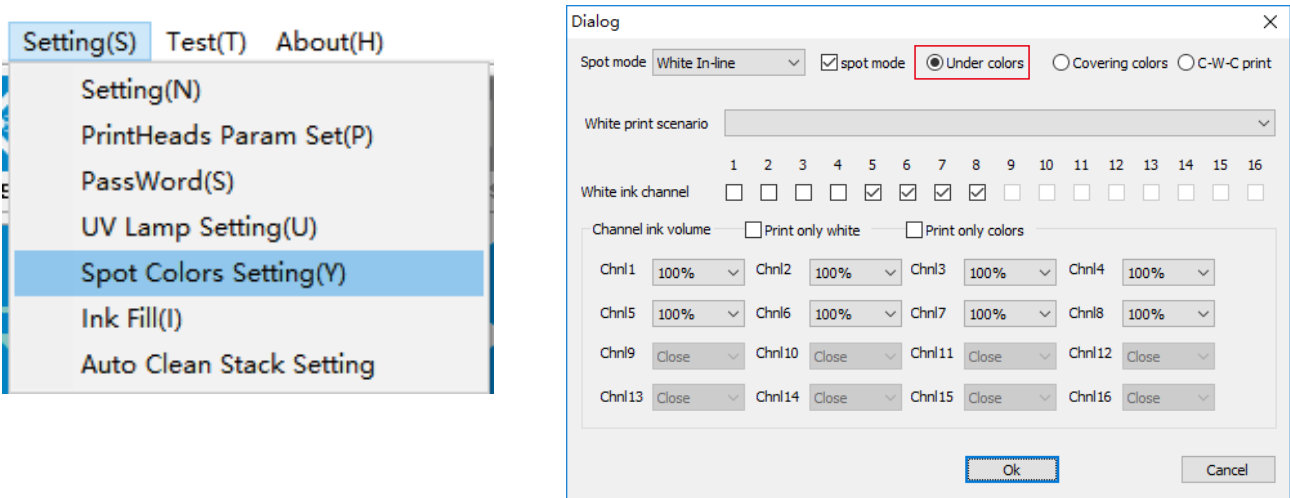
### 3.INSTALLATION AND OPERATION

#### 3.5 Install and Operate the Software

##### B: Under color and Underneath



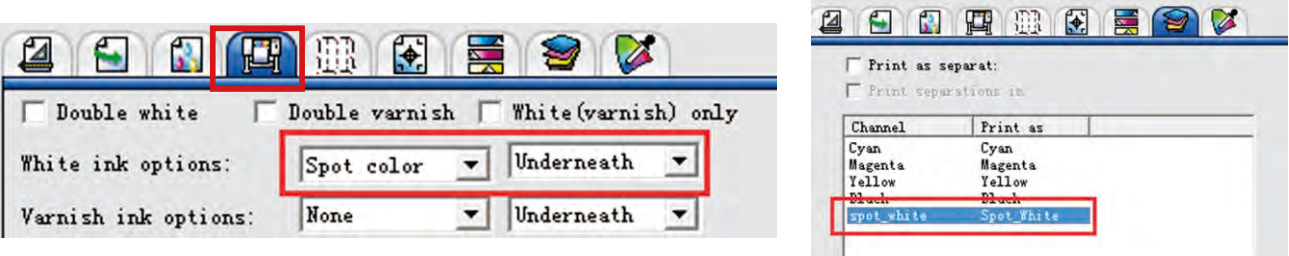
For items that users want to print white base only under CMYK area.  
 Choose Under color and Underneath as the picture above shows.  
 Then in the Print-Mon, please select Under color in the Spot Color Select.



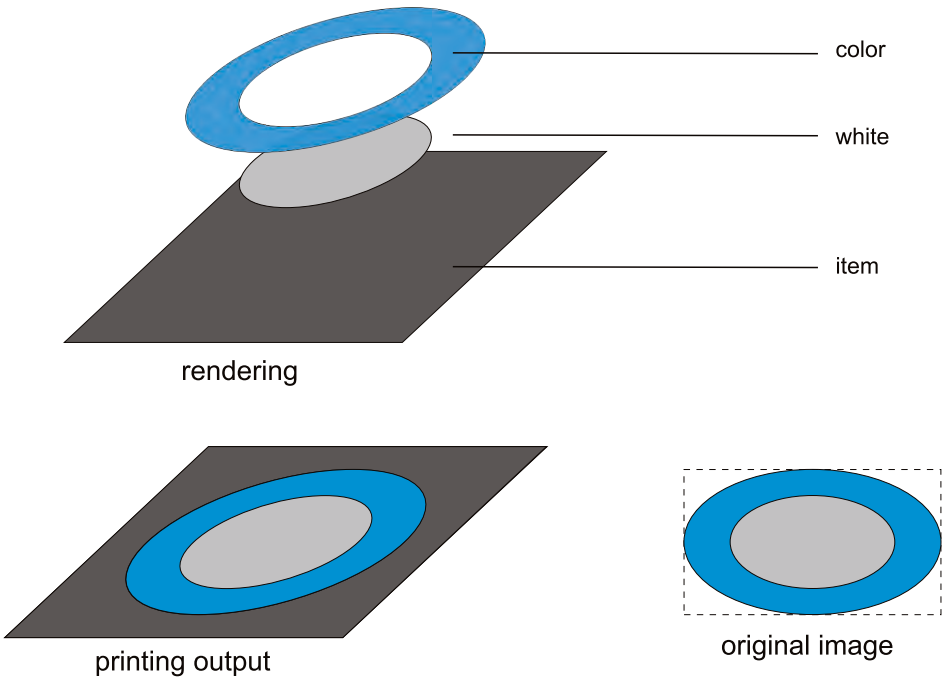
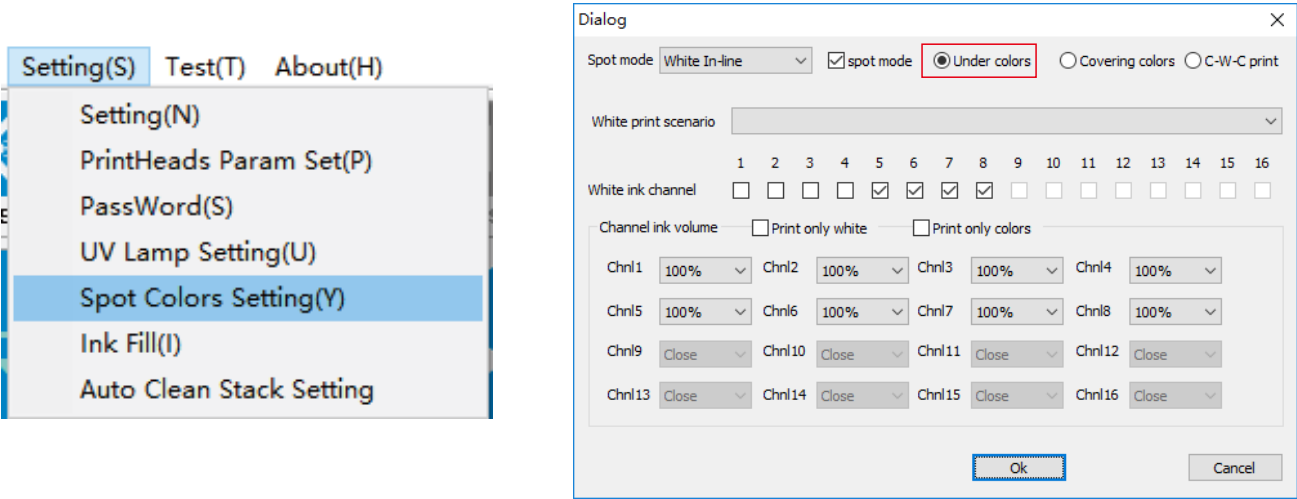
### 3.INSTALLATION AND OPERATION

#### 3.5 Install and Operate the Software

##### C: Spot color and Underneath



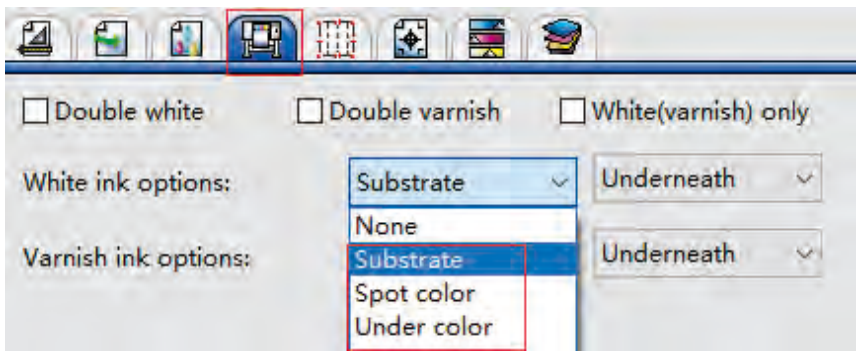
For items that users want to print white only in specific area.  
**(Theat specific area should be create as spot\_white channel previously in Photoshop.)**  
 Choose Spot color and Underneath as the picture above shows.  
 Then in the Print-Mon,please select Under color in the Spot Color Select.



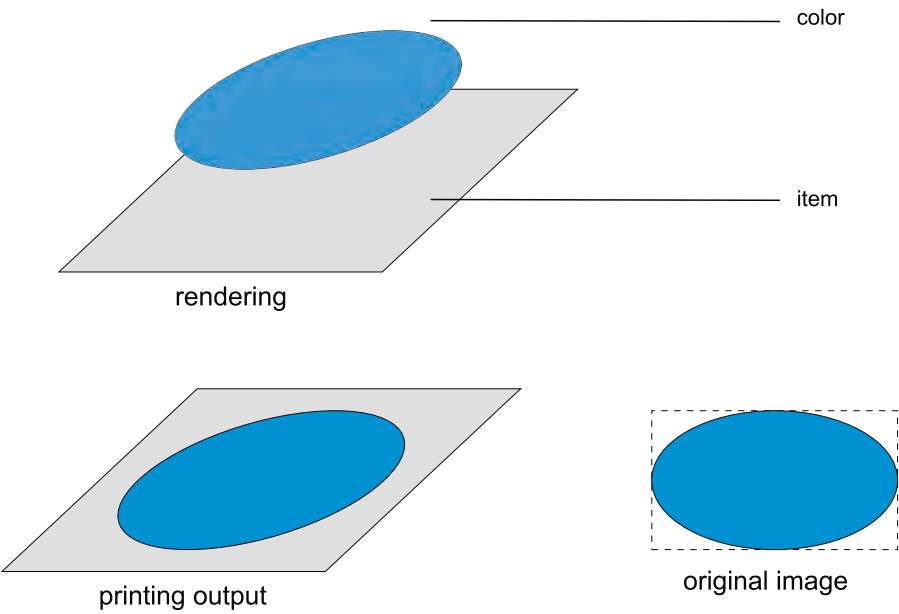
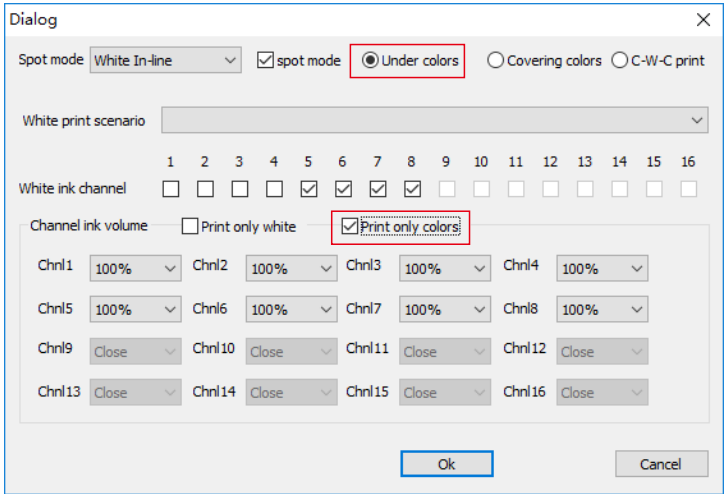
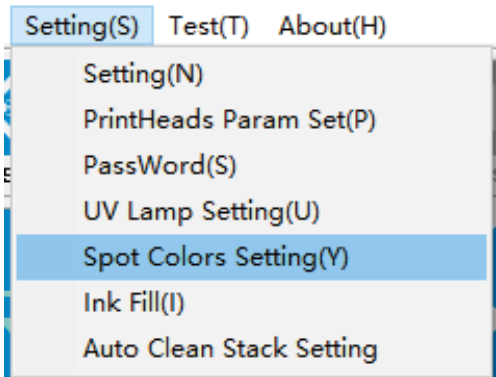
### 3.INSTALLATION AND OPERATION

#### 3.5 Install and Operate the Software

D: None



For items that users want to print white only .(For example items with white base)  
Please don't choose None in Photoprint, Choose Substrate or Under color in Photoprint, then select none in Print-Mon.

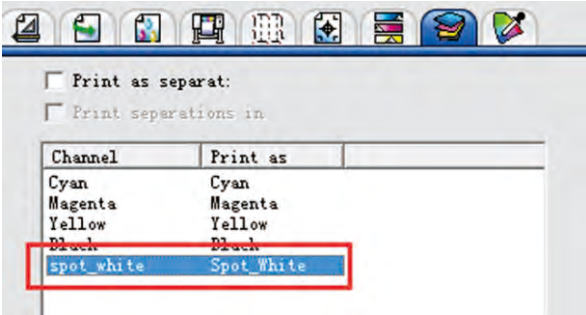
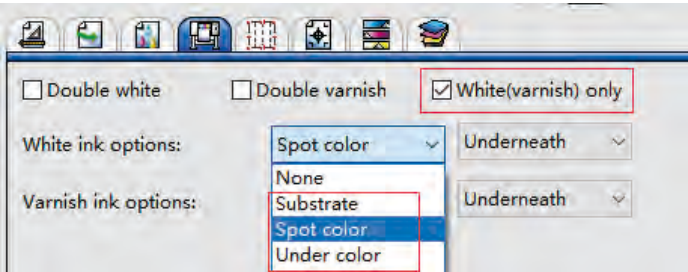




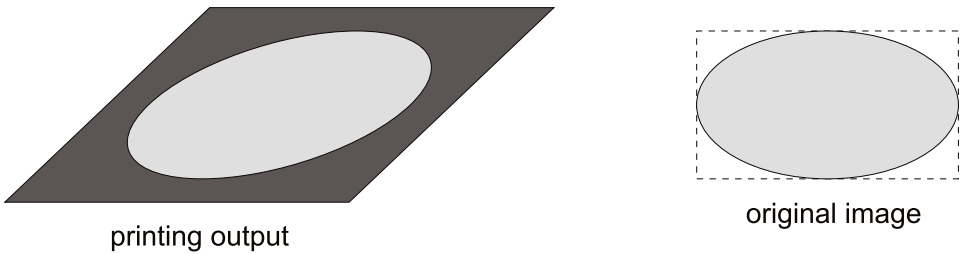
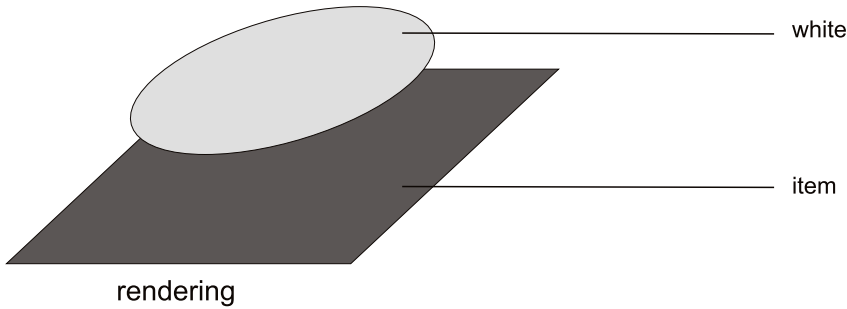
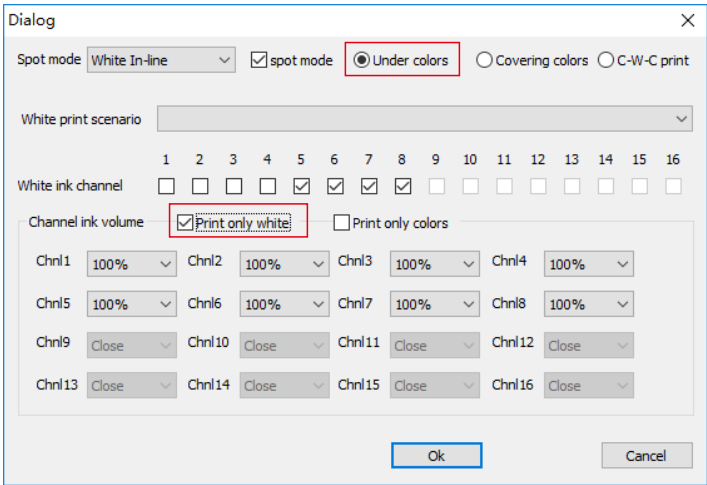
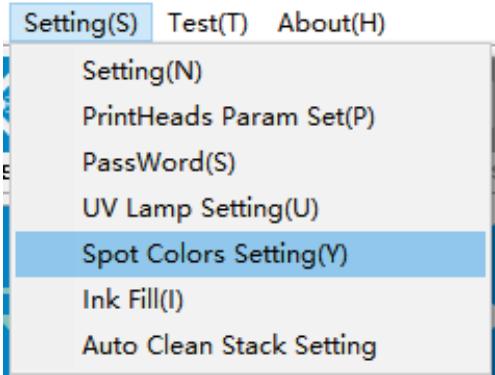
### 3.INSTALLATION AND OPERATION

#### 3.5 Install and Operate the Software

##### *E: White only*



For items that users want to print white only  
Choose Substrate, Spot color or Under color in Photoprint(If you choose Spot color, please also select spot color in Print-Mon),Then select Under color and white only in Print-Mon.



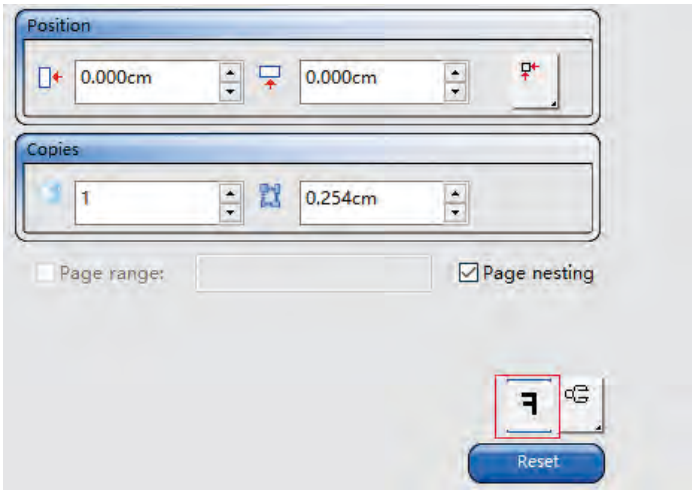
### 3.INSTALLATION AND OPERATION

#### 3.5 Install and Operate the Software

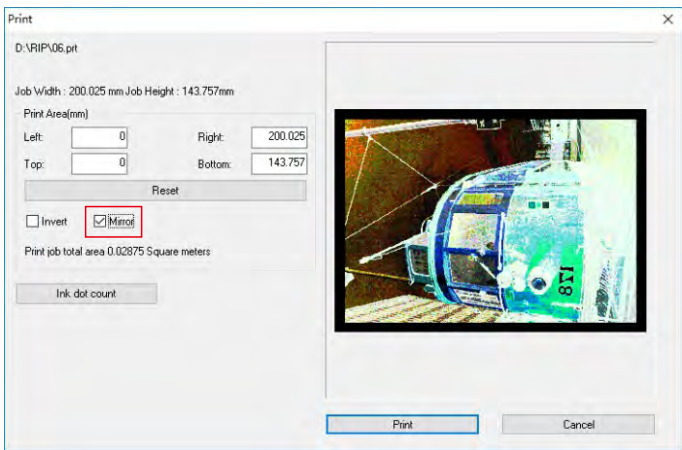
##### *F: Mirror mode*

For items like glass, crystal and transparent acrylic, if user wants to print on the backside and see from the front side, we need use mirror mode. For better quality, we need to print it two times:1>Only color:2>Only white

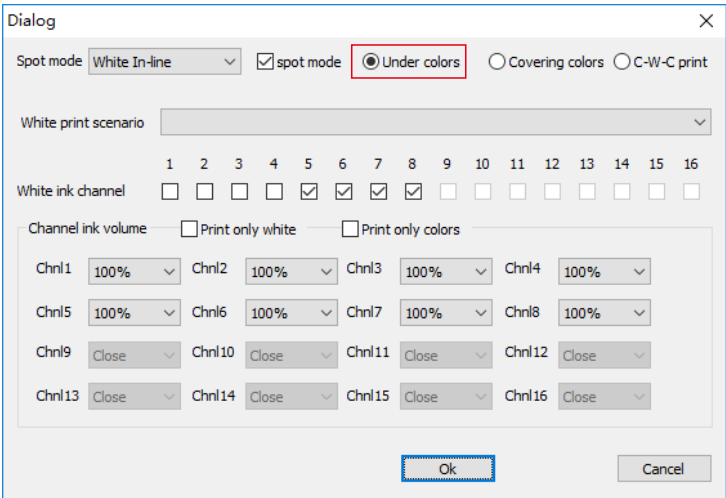
1.If you send the job by Photoprint.  
you can click here to use mirror Mode.



If you send the job by Print-Mon.  
you can choose Mirror before the printing.



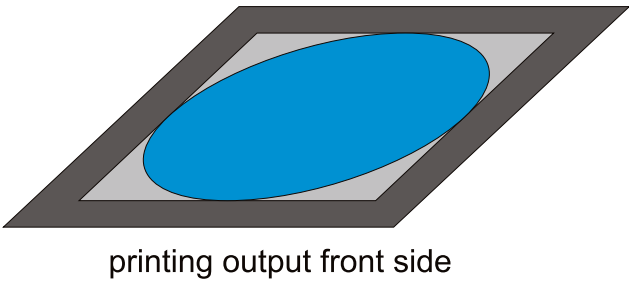
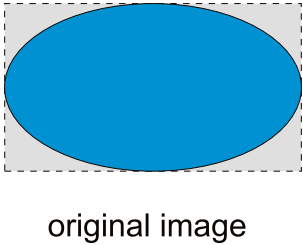
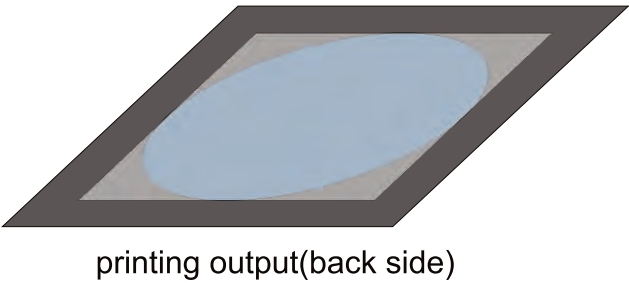
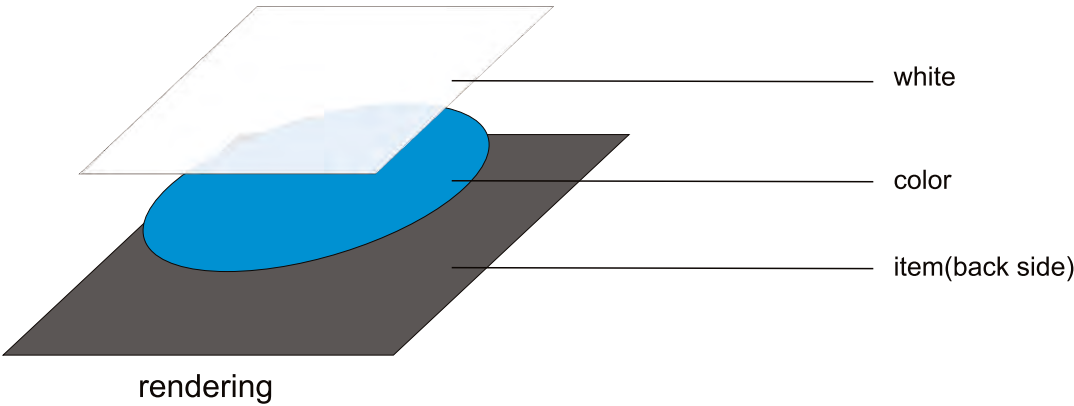
2.Select Under colors in Print-Mon.  
then send the job, it will print mirror image.





### 3.INSTALLATION AND OPERATION

#### 3.5 Install and Operate the Software



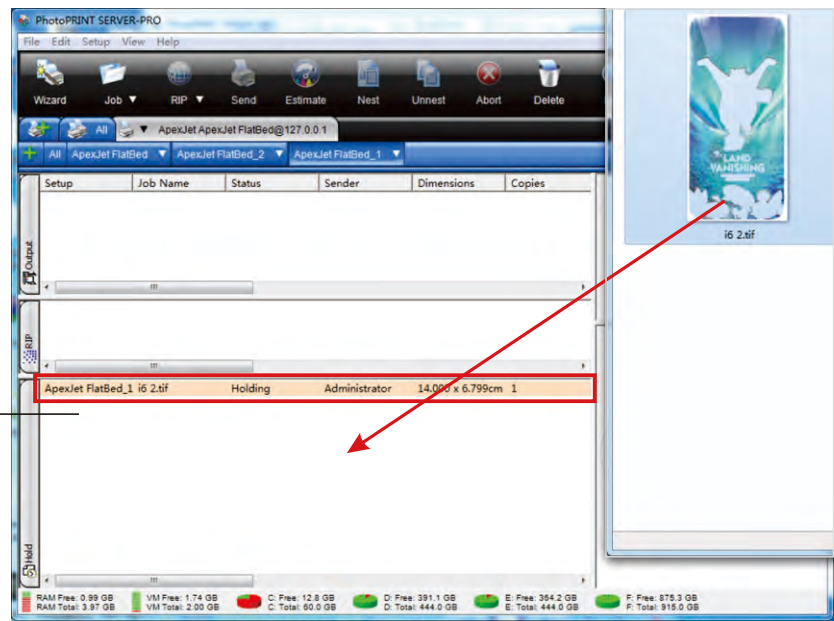
# 3.INSTALLATION AND OPERATION

## 3.5 Install and Operate the Software

### 5 Instruction for Setting

For example, image path is in *E:\usb-disk*, you can open the folder and directly drag the image to this area.

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

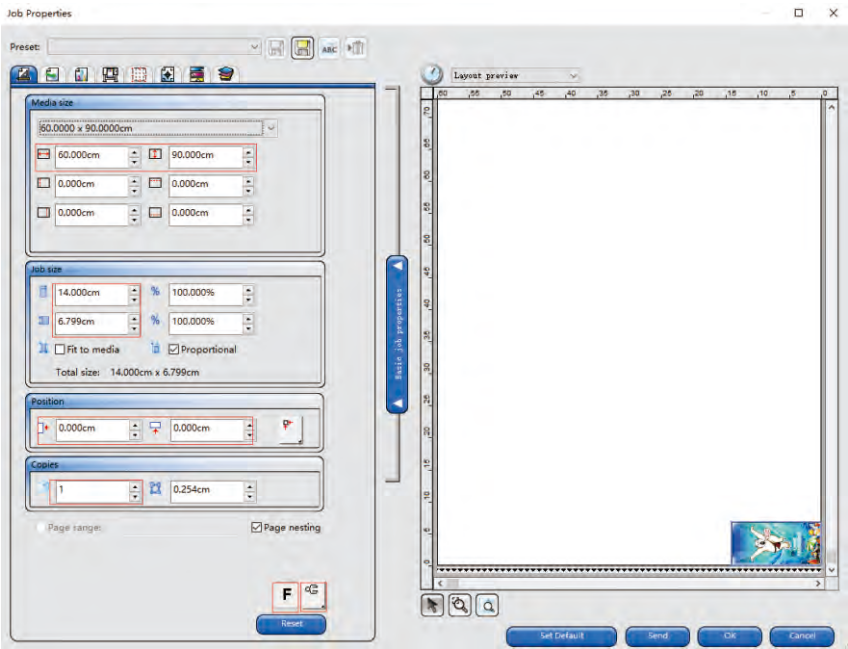


Platform size setting

Image size setting

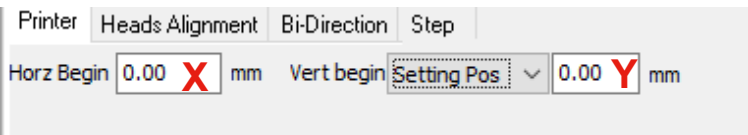
The starting position setting :it should be (0,0).

Copy image number and interval setting



Mirror setting    Image rotary

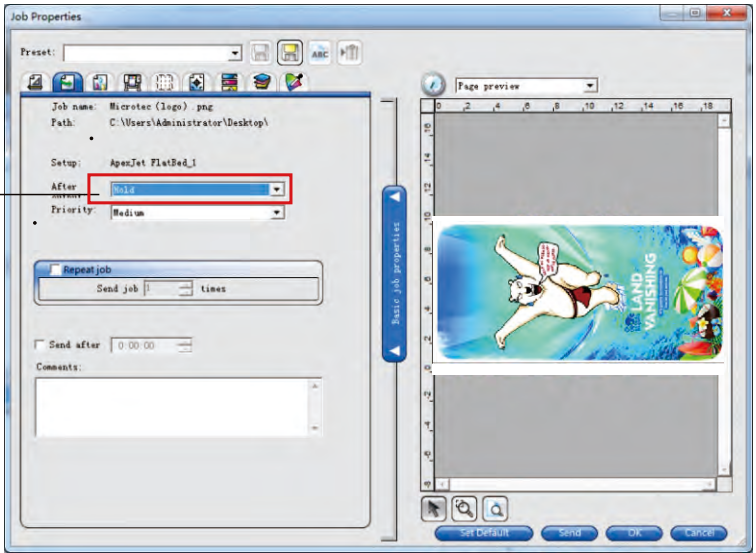
Set the start position in Print-Mon



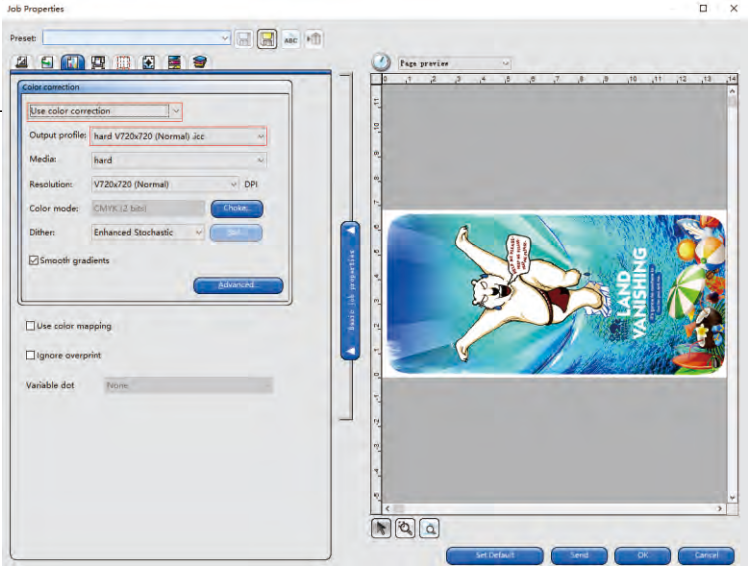
# 3.INSTALLATION AND OPERATION

## 3.5 Install and Operate the Software

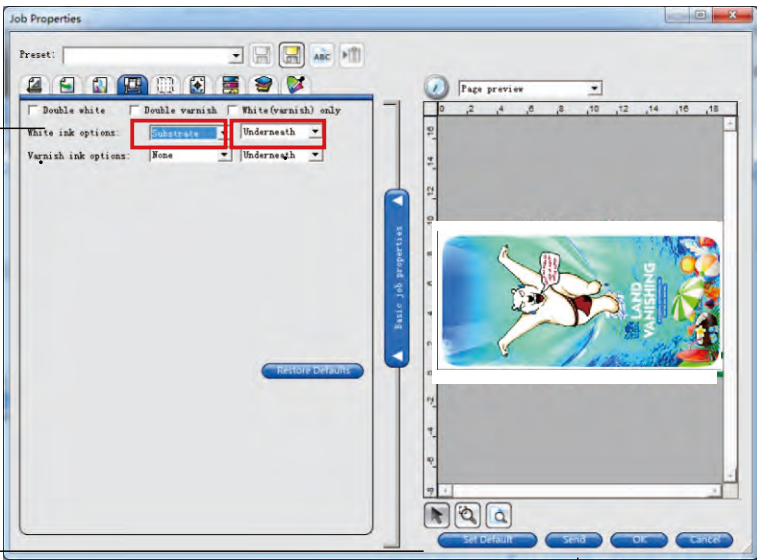
Select hold to save image and settings; Select delete to delete image automatically.



Use color correction  
Select resolution. Higher resolution with slower speed 720x720 is recommended.



White ink option:



Click to Save default setting to make settings automatically used.

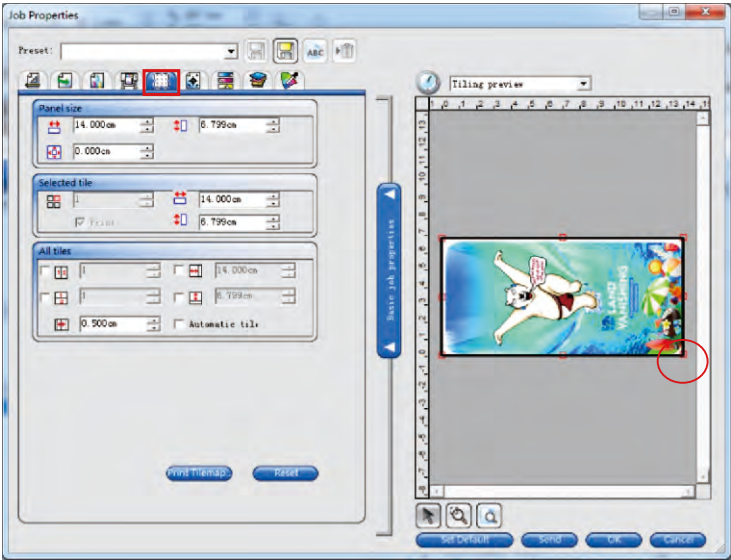
Printing start

Save settings

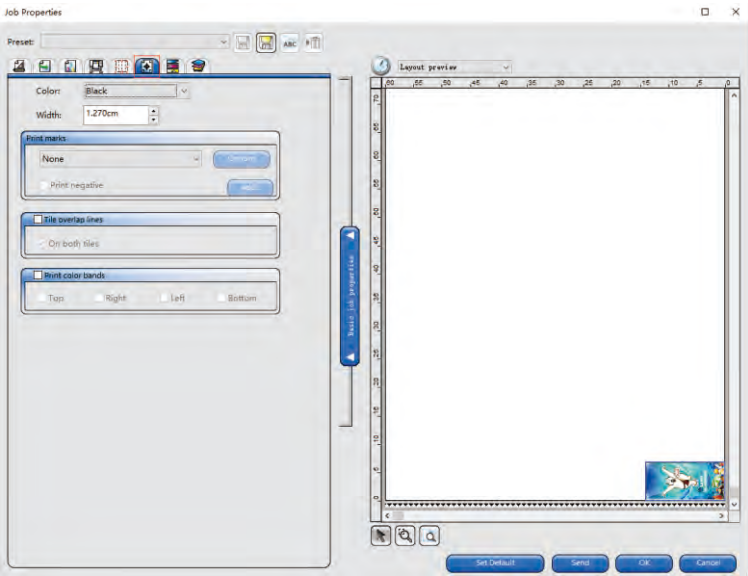
### 3.INSTALLATION AND OPERATION

#### 3.5 Install and Operate the Software

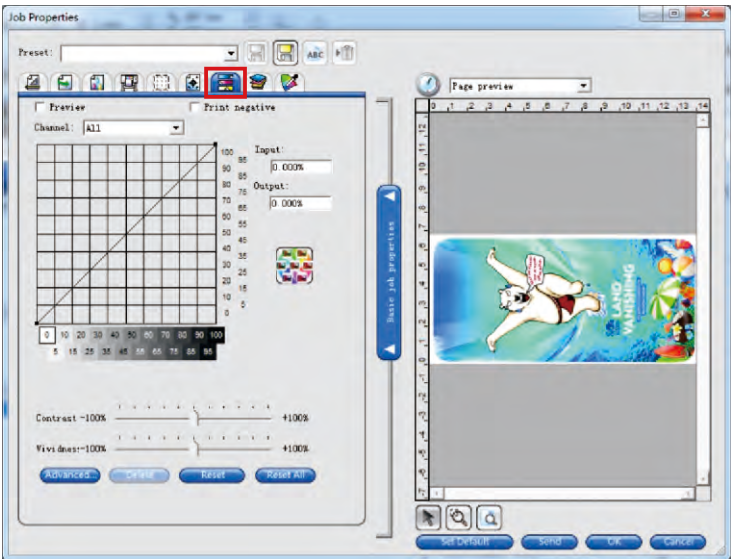
In this page, you can simply cut the image.



In this page, you can print marks of the job if needed.



In this page, you can adjust the contrast, vividness or color if needed.





## 4.SAMPLE PRINTING

### 4.1 Pre-requisite

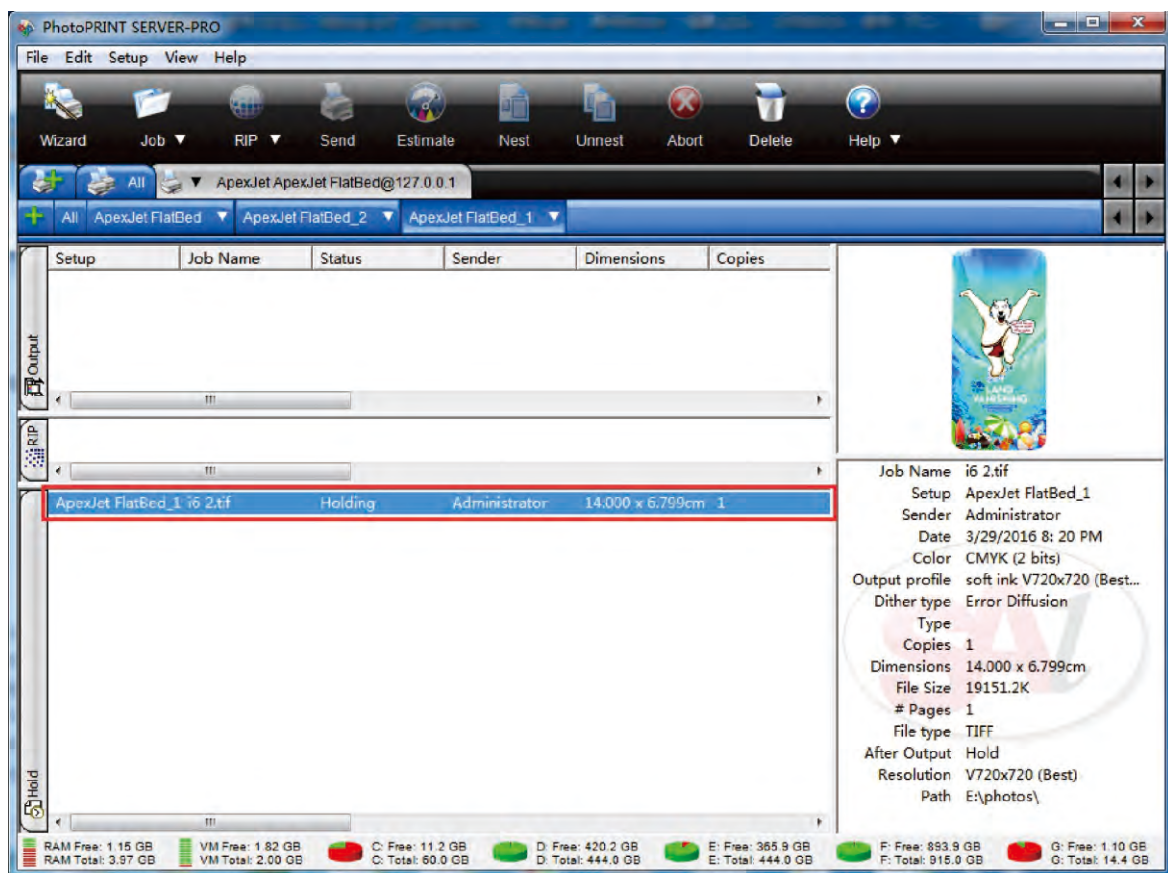
The printer is installed as previous description,  
press test button to print the completed nozzle checking picture.  
You can also do this in the Print-Mon by the button Test.



As shown on left  
it's a perfect test.  
If there is little  
tiny missing  
of the test  
it's acceptable.

### 4.2 Printing process (For example: Print on cellphone case)

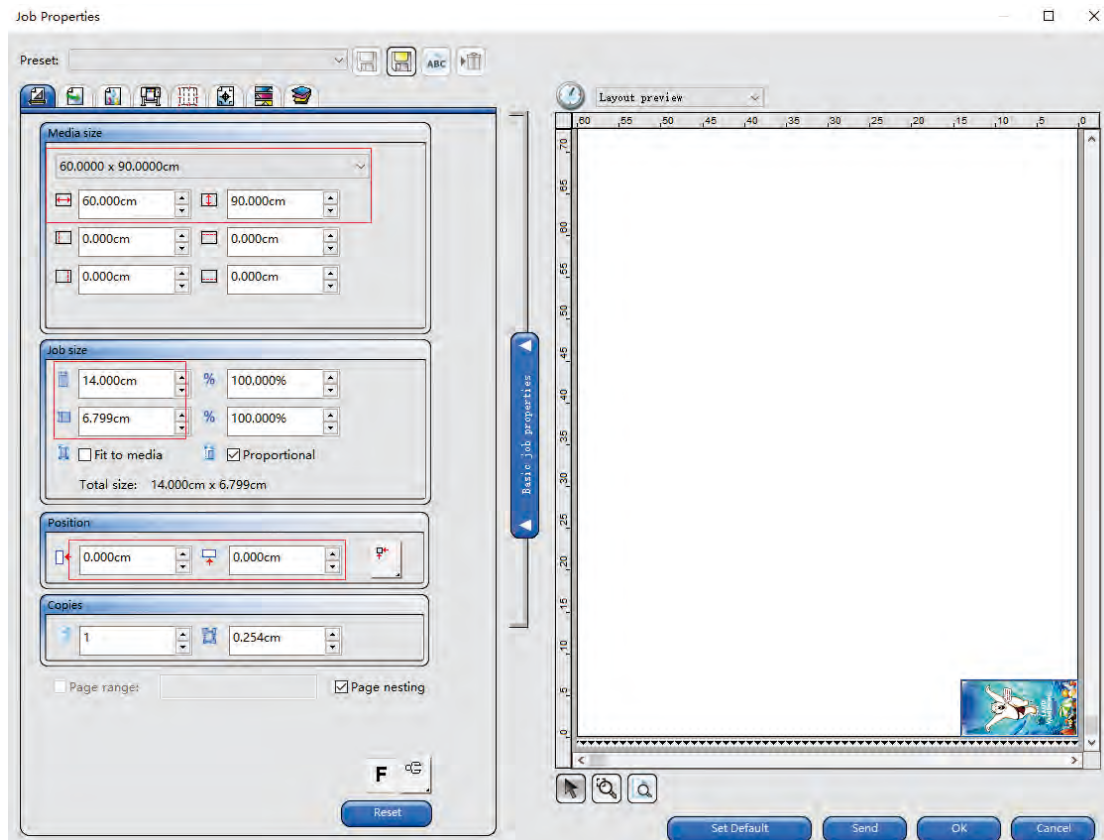
All software and driver installed. Open software and the machine is in online status.



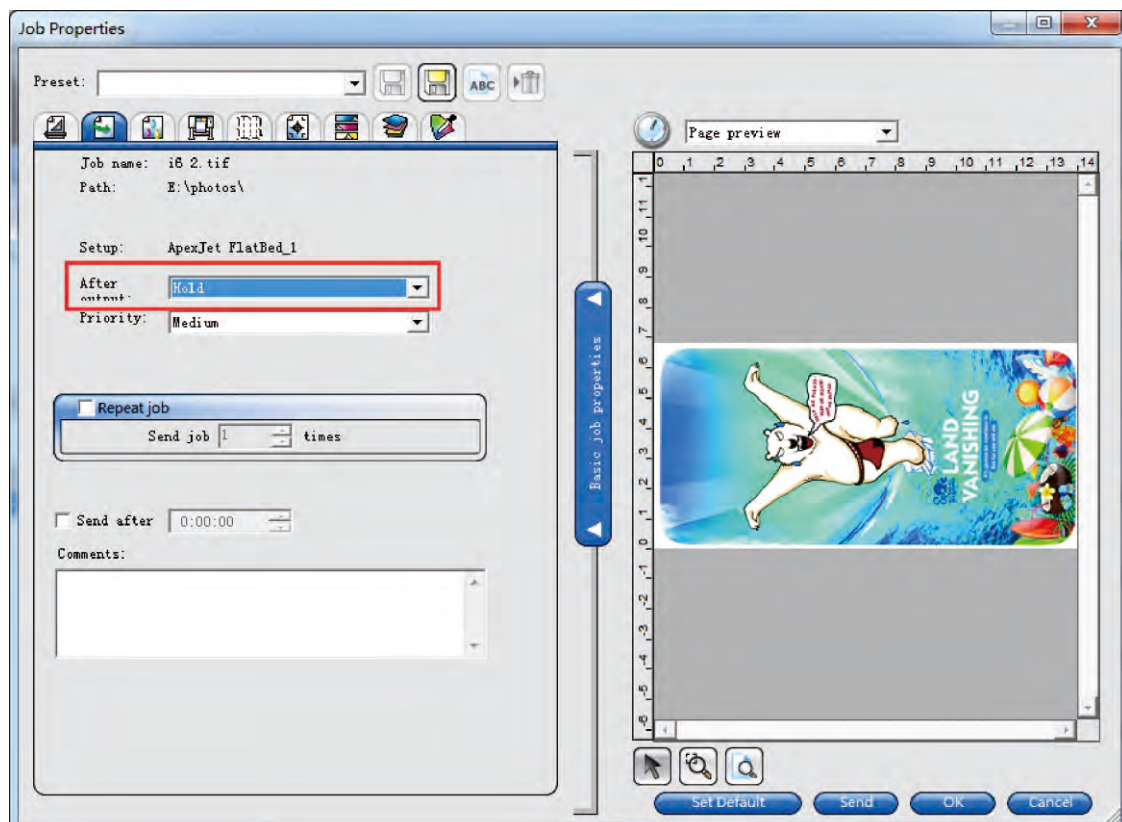
Copy the image **i6 2.tif** to your pc from the usb-disk,  
drag it directly to the job list of the software.

## 4.SAMPLE PRINTING

### 4.2 Printing process (For example: Print on cellphone case)



Media size, job size and position settings are shown as above.

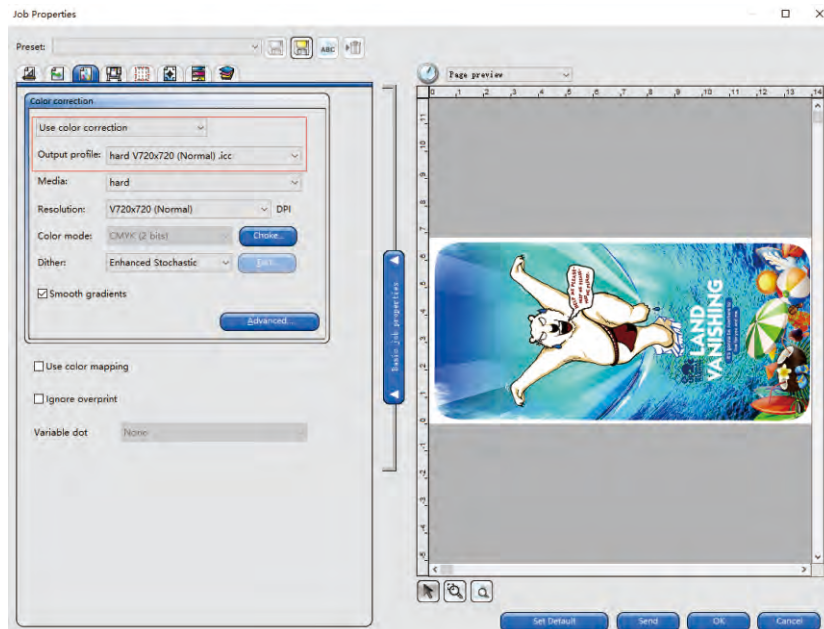


Choose whether to hold the job and settings after printing

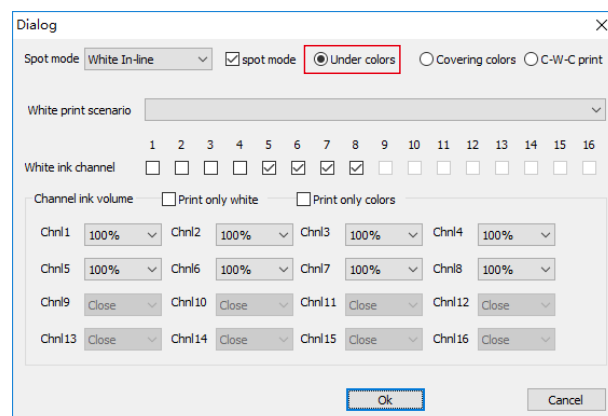
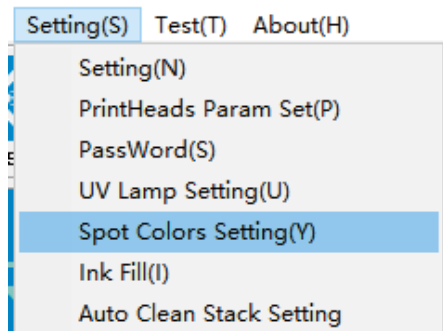
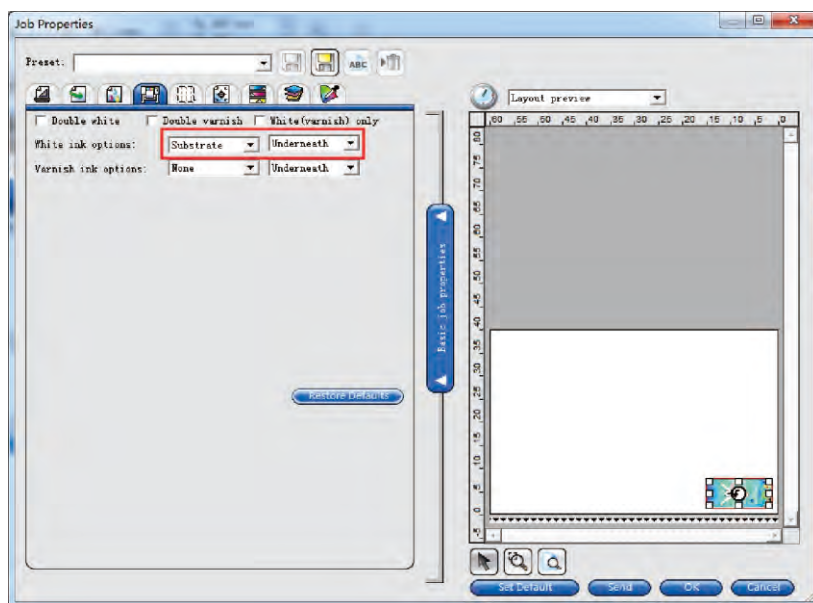


## 4.SAMPLE PRINTING

### 4.2 Printing process (For example: Print on cellphone case)



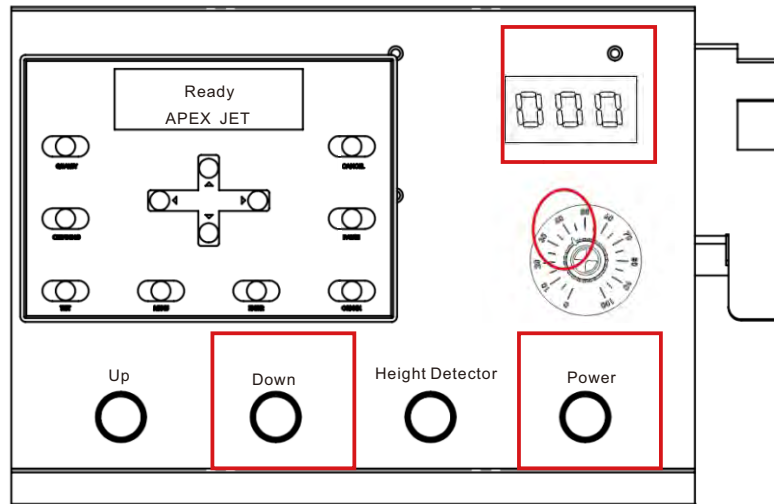
Icc settings are shown as above.



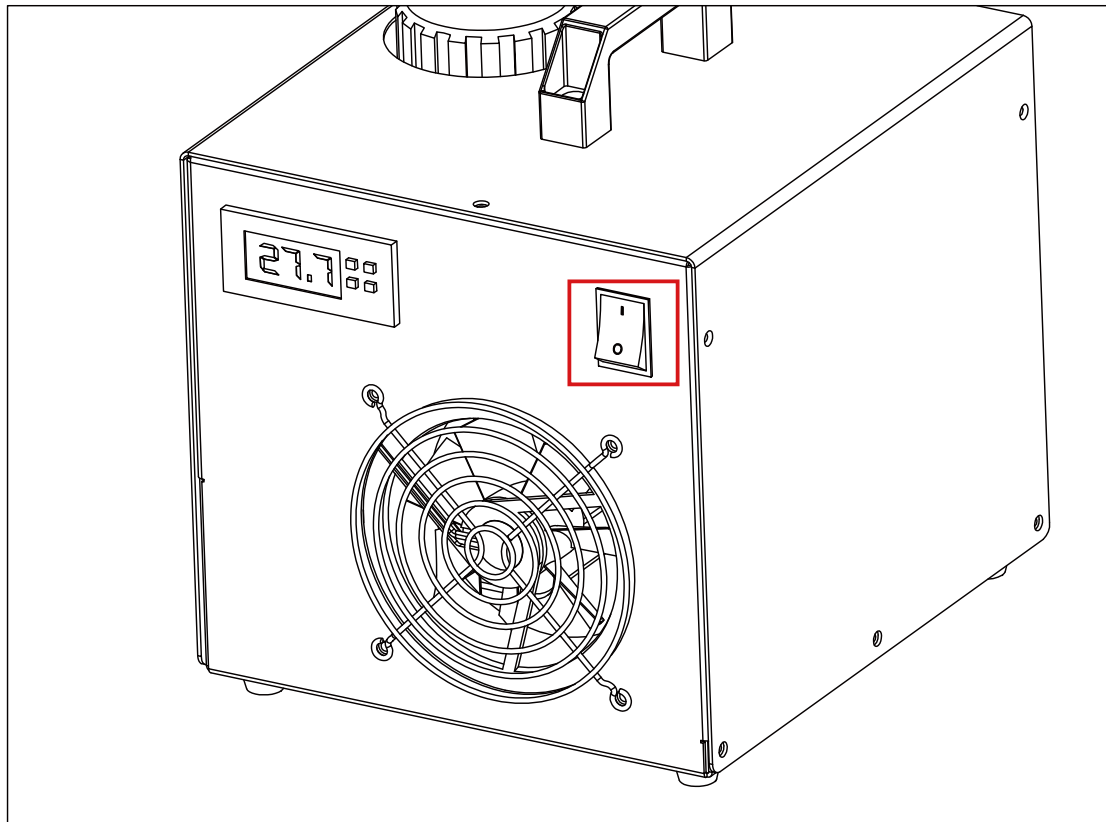
White ink option settings

## 4.SAMPLE PRINTING

### 4.2 Printing process (For example: Print on cellphone case)



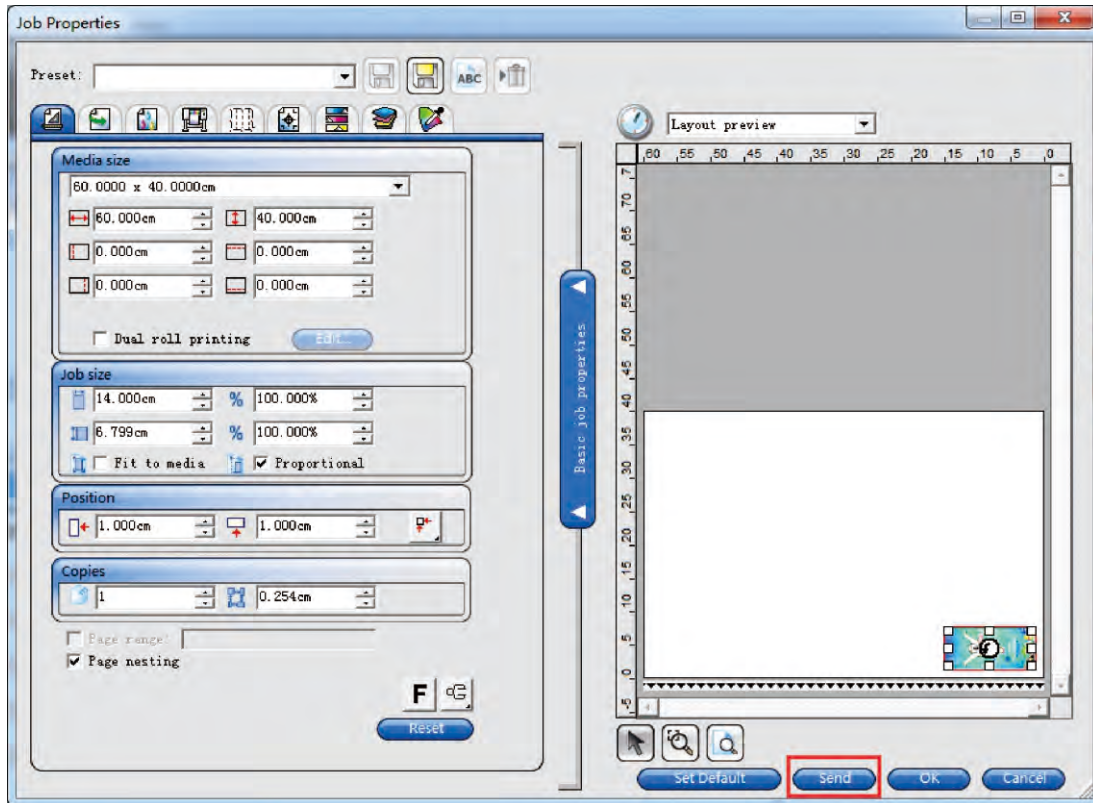
Power on the machine  
press down to adjust the height to 000  
and adjust the UV brightness to 40%



Turn on the uv power switch

## 4.SAMPLE PRINTING

### 4.2 Printing process (For example: Print on cellphone case)



click Send and the job will be printed  
OK button is to save the settings.

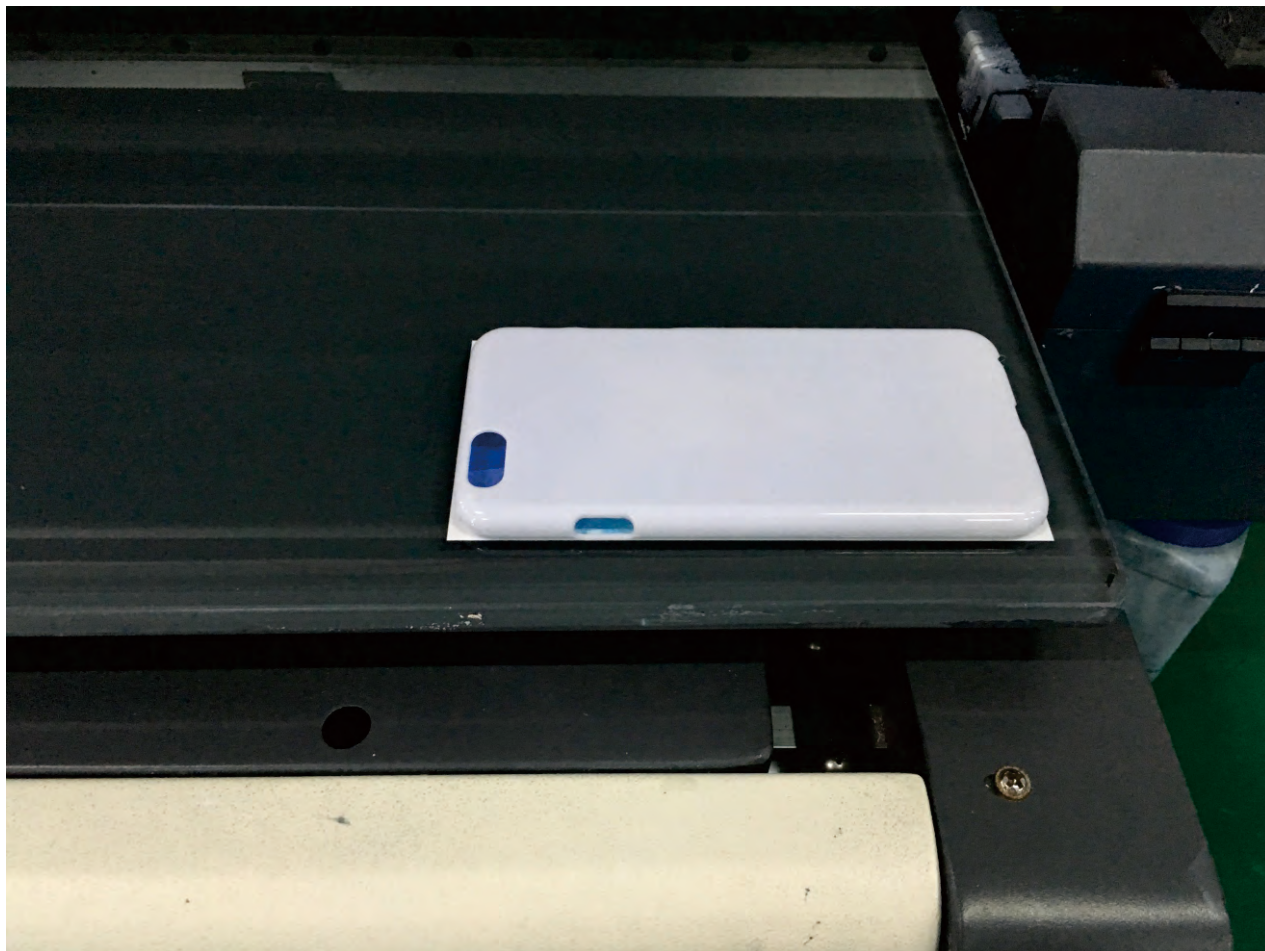


finish printing on the platform

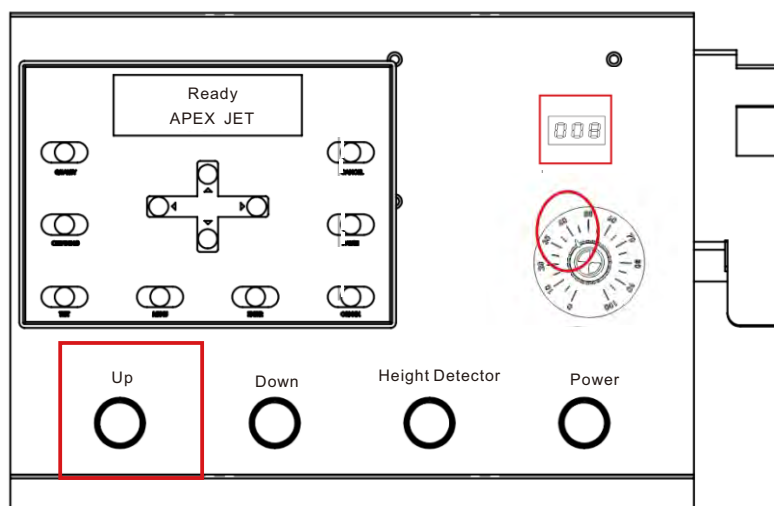


## 4.SAMPLE PRINTING

### 4.2 Printing process (For example: Print on cellphone case)



take out the phone case from the package,  
then place it on the position of printing

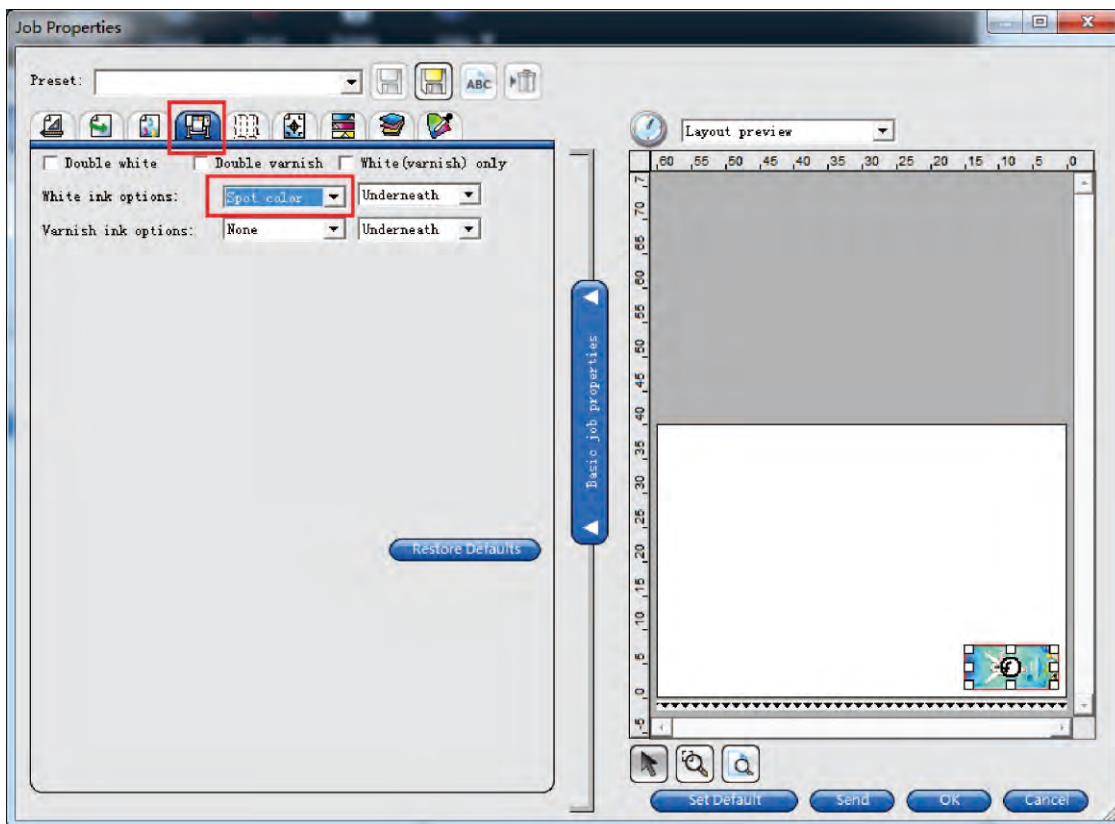


press up till the height is adjusted to “008”

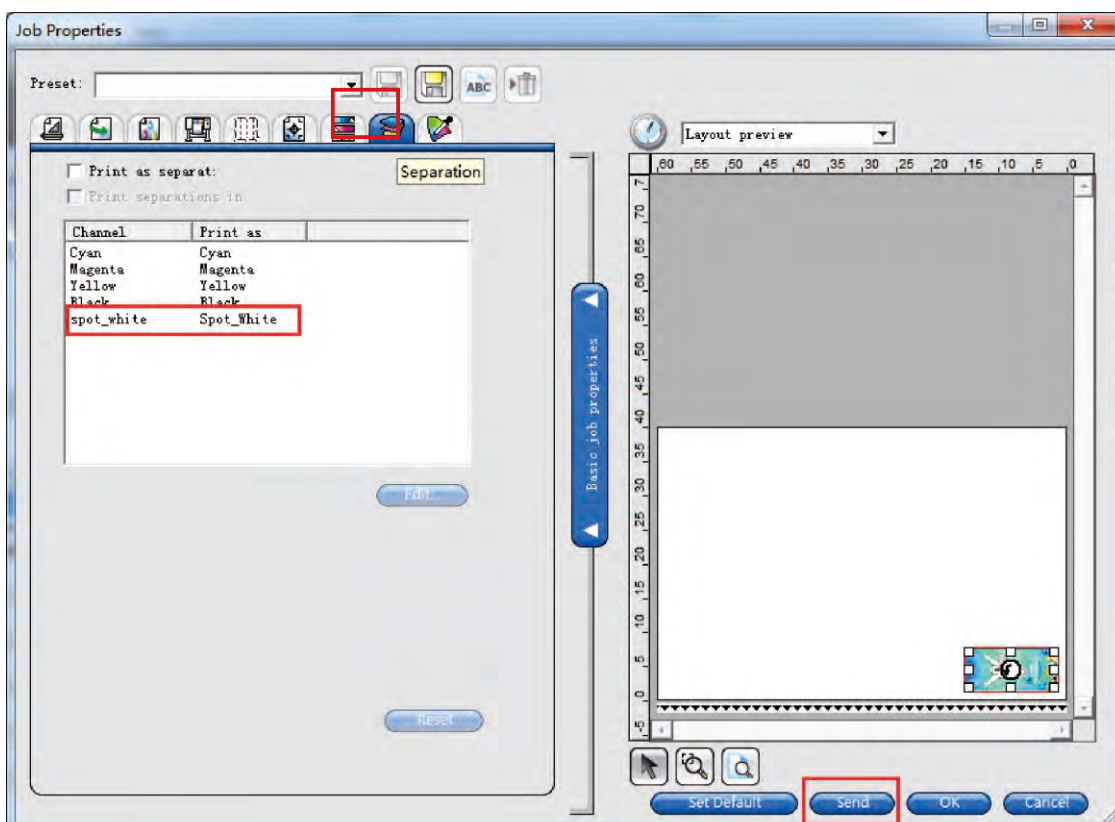
## 4.SAMPLE PRINTING

### 4.2 Printing process (For example: Print on cellphone case)

\*If your software is DX PLUS version, follow the steps in this page.



choose spot color in Printers Options



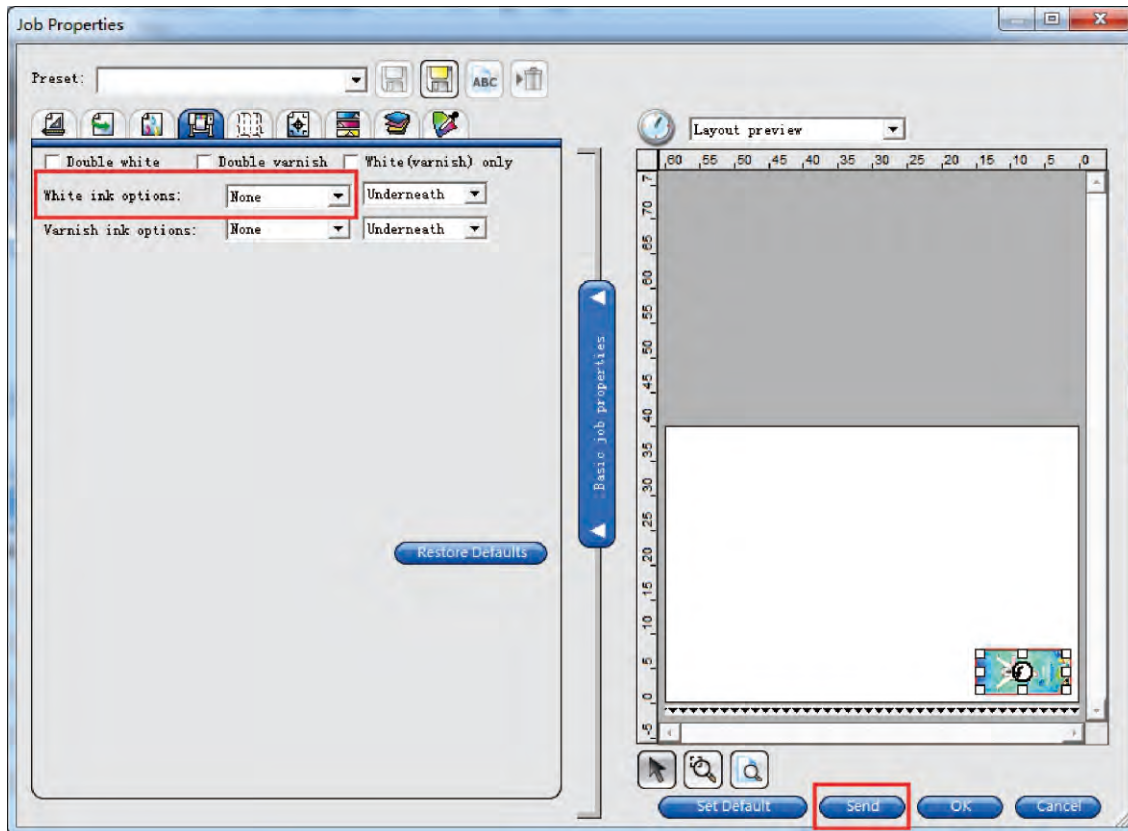
choose spot\_white in Separation then click Send to print the job



## 4.SAMPLE PRINTING

### 4.2 Printing process (For example: Print on cellphone case)

\*If your software is DX version, follow the steps in this page.\*



choose none in Printer Options then click Send to print the job



phone case printing finished



## 4.SAMPLE PRINTING

### 4.3 Precautions

Pre-cautious Preparing	Pre-cautious Image Choosing
<ol style="list-style-type: none"> <li>1. The sample surface should be cleaned</li> <li>2. Use pre-treatment solution oil on glass or some metals before printing.</li> <li>3. Use bi-direction printing for flat surface Use uni-direction for curved surface</li> <li>4. Flat bottom sample can be directly placed on the platform and easily moveable should be fixed by tape or moulds. The leather or plastic film should use vacuum table.</li> <li>5. Check UV brightness according to sample distortion. Generally set at 30-40. Easily heated and distorted set at 20-30. In the real operation, use the lowest brightness at curing. Low brightness can prolong the UV Lamp lifetime.</li> </ol>	<ol style="list-style-type: none"> <li>1. HD image can improve the printing quality.</li> <li>2. Adjust the image size and share to fit the sample</li> <li>3. Add image brightness and contrast ratio in Photoshop for better quality.</li> <li>4. If print spot color, build spot color channel in Photoshop in advance.</li> </ol>
Cautions Software Settings	Cautions of Machine Parts
<p>Cautions Software Settings</p> <ol style="list-style-type: none"> <li>1. The pic size and position setting, and direction.</li> <li>2. Select whether to use Mirror Printing.</li> <li>3. Select whether to save after printing.</li> <li>4. Select ICC file and resolution, generally choose 720*720 resolution.</li> <li>5. Select the use of white ink;</li> <li>6. Select the Underneath or Overlay .</li> </ol>	<p>Machine Parts:</p> <ol style="list-style-type: none"> <li>1. Adjust the distance between the printhead and the printing surface: general is 1-2mm, when printing plane thermal deformation, should elevate moderately in advance. Generally printing height can be adjusted by the height switch, transparent &amp; hollow samples should be adjusted manually.</li> <li>2. Select the Uni-direction or Bi-direction according to the sample flatness.</li> <li>3. Adjust the brightness of UV light according to the samples degree of deformation and ink amount.</li> </ol>

Reference video: [https://www.youtube.com/watch?v=YS2b98zFB\\_E](https://www.youtube.com/watch?v=YS2b98zFB_E)

## 4.SAMPLE PRINTING

### 4.4 To Print Spot White

When you want to print white ink at the area where you design them, you need this spot white function. You can design the area in a picture where you want to print white in PhotoShop first. Then output the picture and print it with PhotoPrint DX Plus version RIP.

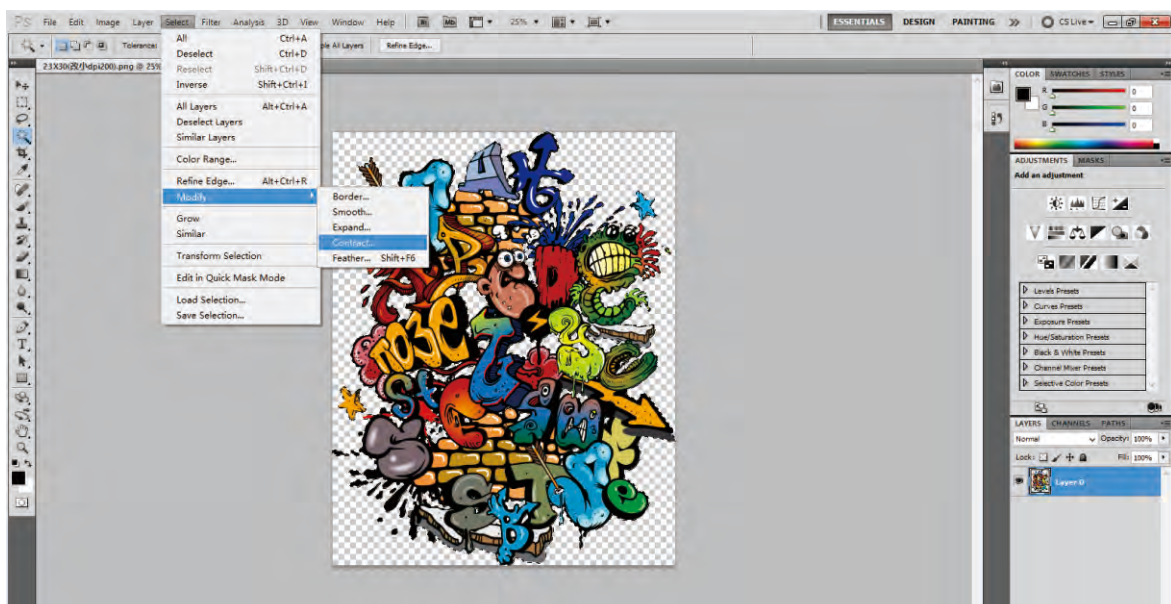
#### 4.4.1 How to design spot white in PhotoShop.

(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.

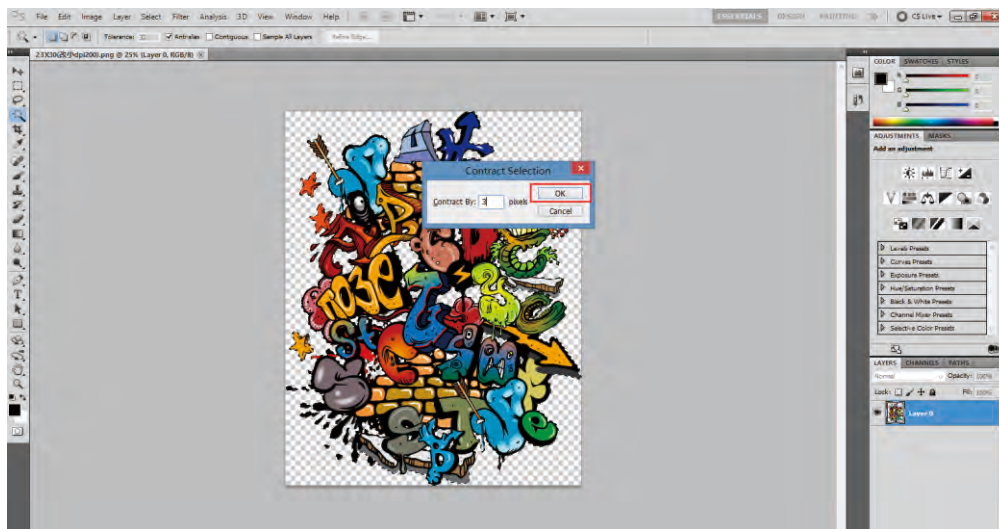
(3) Contract the area you selected, sometimes it just need contract 2-3 pixels. Then press "OK".



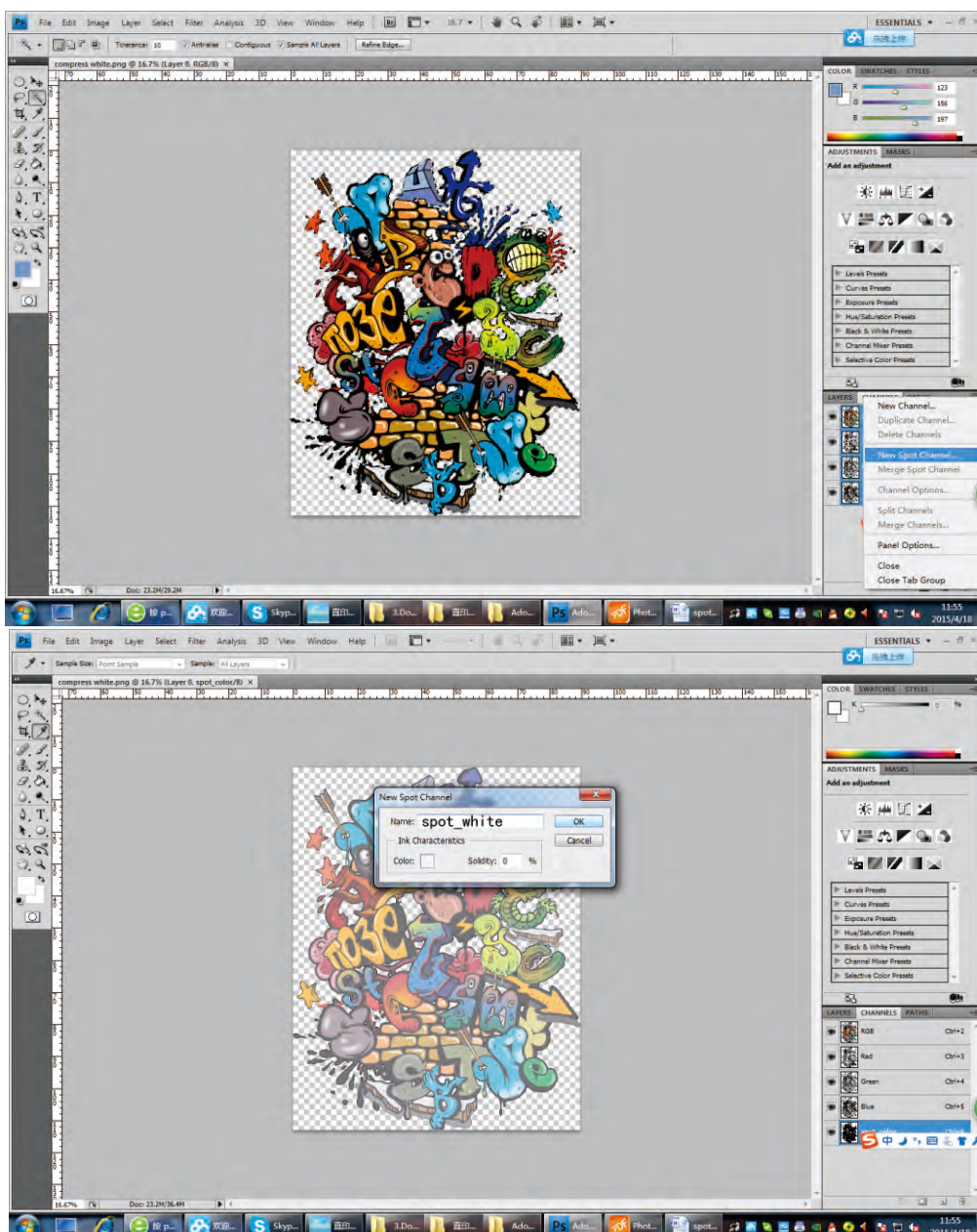


## 4.SAMPLE PRINTING

### 4.4 To Print Spot White



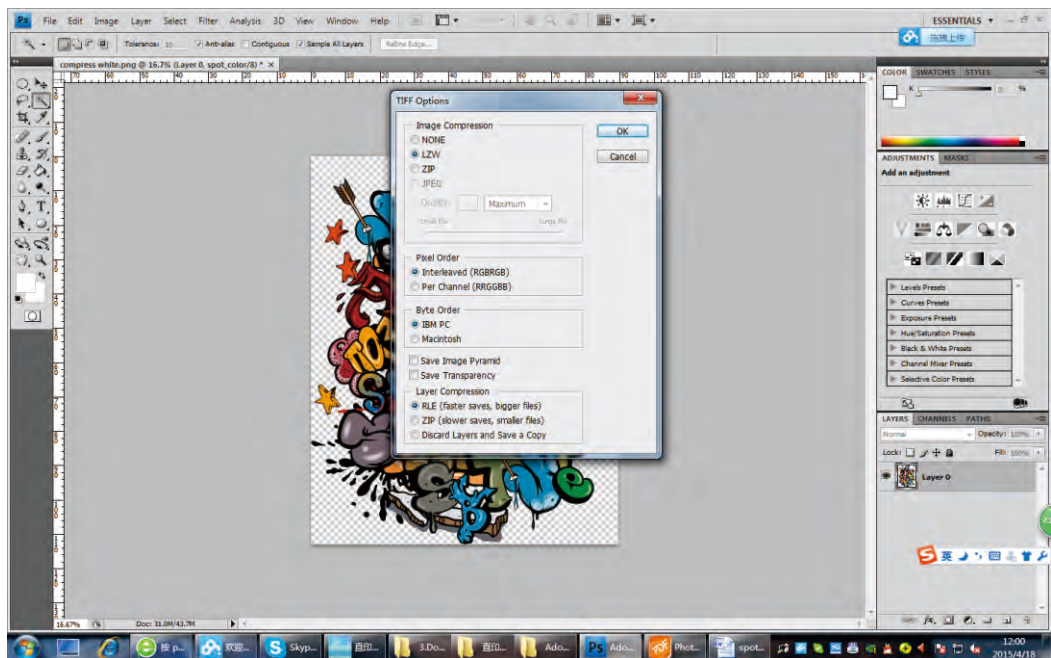
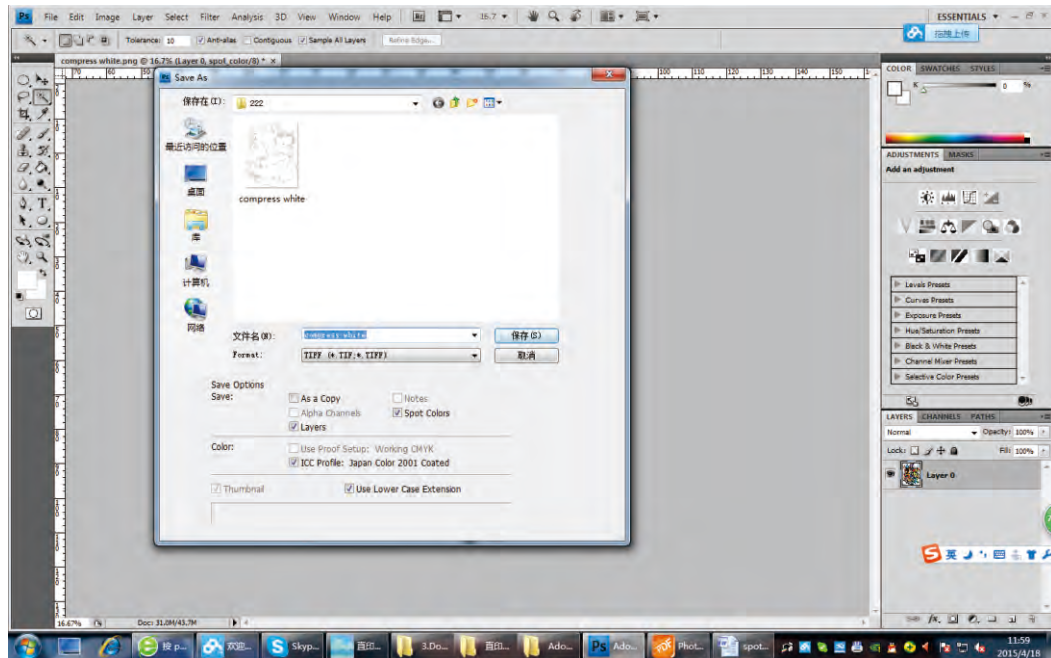
- (4) Make new spot channel. The name should be "spot\_white". The ink characteristics should be white. The solidity should be 0%.



## 4.SAMPLE PRINTING

### 4.4 To Print Spot White

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

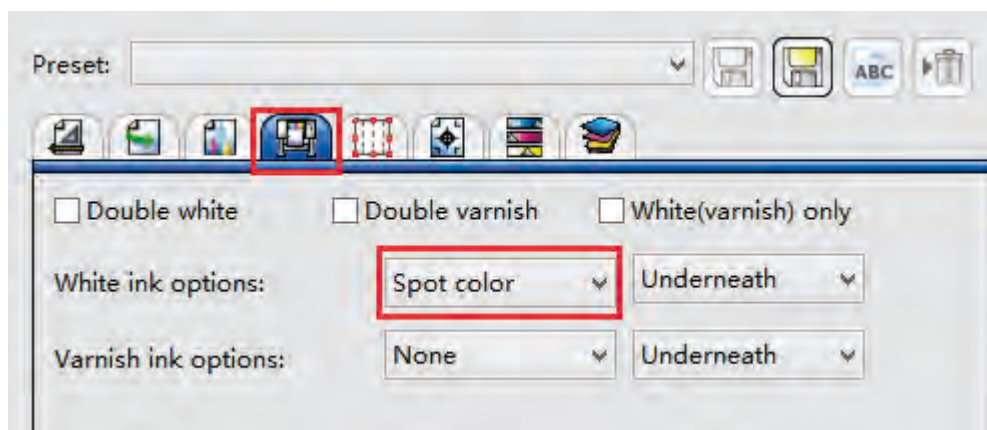


## 4.SAMPLE PRINTING

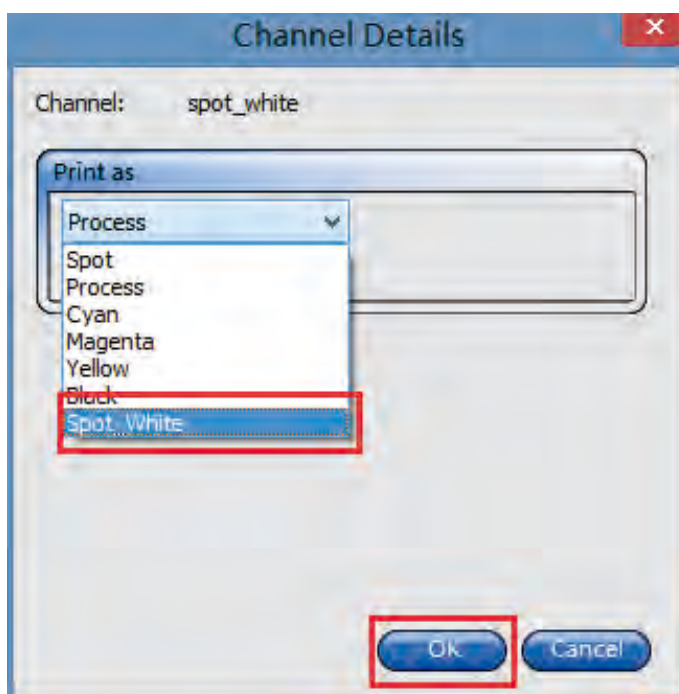
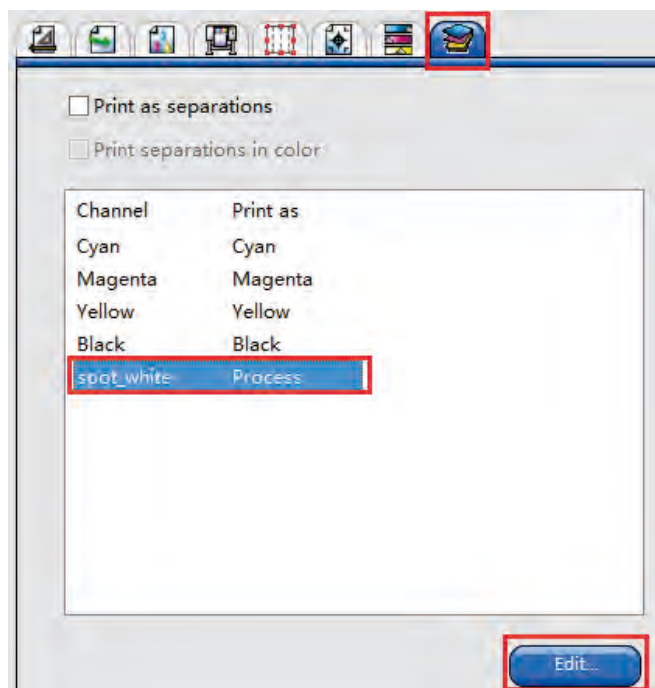
### 4.4 To Print Spot White

#### 4.4.2 How to print spot white with Photoprint.

(1) Choose “spot color” in “white ink options”.



(2) If channel name is “spot\_white”, “Print as” will be “Spot\_White” automatically. Or “Print as” is “process”, then you need to double-click or press “Edit” to choose “Spot\_white”. Please also choose spot color in Print-Mon





## 4.SAMPLE PRINTING

### 4.4 To Print Spot White

Dialog

Spot mode: White In-line

☒ spot mode ☒ Under colors ☐ Covering colors ☐ C-W-C print

White print scenario: White In-line

White ink channel: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Channel ink volume: ☒ Print only white ☐ Print only colors

Chnl1	100%	Chnl2	100%	Chnl3	100%	Chnl4	100%
Chnl5	100%	Chnl6	100%	Chnl7	100%	Chnl8	100%
Chnl9	Close	Chnl10	Close	Chnl11	Close	Chnl12	Close
Chnl13	Close	Chnl14	Close	Chnl15	Close	Chnl16	Close

Ok Cancel

(3)Then you can hit “send”to print with spot white.After printing ,if you need more embossment, you can only print white 2-3 times,then print color.

Dialog

Spot mode: White In-line

☒ spot mode ☒ Under colors ☐ Covering colors ☐ C-W-C print

White print scenario: White In-line

White ink channel: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Channel ink volume: ☐ Print only white ☐ Print only colors

Chnl1	100%	Chnl2	100%	Chnl3	100%	Chnl4	100%
Chnl5	200%	Chnl6	200%	Chnl7	200%	Chnl8	200%
Chnl9	Close	Chnl10	Close	Chnl11	Close	Chnl12	Close
Chnl13	Close	Chnl14	Close	Chnl15	Close	Chnl16	Close

Ok Cancel

## 5.MAINTENANCE AND TROUBLE SHOOTING

### 5.1 Maintenance

#### 1 Continuous use and maintenance requirements

Daily Task	1.Do a cleaning, check the nozzles. 2 Clean up wiper and rubber parts of Cap Top.	<a href="https://www.youtube.com/watch?v=59vLBetVMLY">https://www.youtube.com/watch?v=59vLBetVMLY</a>  <a href="https://www.youtube.com/watch?v=AVzehgadhKI">https://www.youtube.com/watch?v=AVzehgadhKI</a>
Weekly Task	1.Clean encoder strip. 2.Clean the surface of UV light.	<a href="https://www.youtube.com/watch?v=O7yFdrJotFo">https://www.youtube.com/watch?v=O7yFdrJotFo</a>
Monthly Task	1.Add lubricating oil to rails and wheel(X/Y/Z).	<a href="https://www.youtube.com/watch?v=21nWwTcggCY">https://www.youtube.com/watch?v=21nWwTcggCY</a>
Seasonly Task	1.Replace the Cap Top. 2.Replace the wiper. 3.Replace the damper. 4.Clean the UV light.	<a href="https://www.youtube.com/watch?v=_wGiUOp5g2s">https://www.youtube.com/watch?v=_wGiUOp5g2s</a>  <a href="https://www.youtube.com/watch?v=nc6BBUzSQFA">https://www.youtube.com/watch?v=nc6BBUzSQFA</a>  <a href="https://www.youtube.com/watch?v=VaEOob7rPSO">https://www.youtube.com/watch?v=VaEOob7rPSO</a>  <a href="https://www.youtube.com/watch?v=OBaa5rW209c">https://www.youtube.com/watch?v=OBaa5rW209c</a>
Year Task	1.Replace the carriage	<a href="https://www.youtube.com/watch?v=p3rMhb8IQul">https://www.youtube.com/watch?v=p3rMhb8IQul</a>

#### 2 Discontinuous use and maintenance requirements

Without use in three days	1.Please do cleaning three times every three days and make nozzles test	<a href="https://www.youtube.com/watch?v=59vLBetVMLY">https://www.youtube.com/watch?v=59vLBetVMLY</a>
Without use in a week	1. Spray anti-rust oil to rails and wheel(X/Y/Z).	<a href="https://www.youtube.com/watch?v=sjSIPT1raqC">https://www.youtube.com/watch?v=sjSIPT1raqC</a>
Without use in two weeks	1.Clean up ink tubes. 2.Remove printhead wipe it with clean cloth and keep in dark place.	<a href="https://www.youtube.com/watch?v=OBaa5rW209c">https://www.youtube.com/watch?v=OBaa5rW209c</a>  <a href="https://www.youtube.com/watch?v=URml5hua-34">https://www.youtube.com/watch?v=URml5hua-34</a>



#### 3 Consumable parts checking period

NO.	Parts	SN.on sale	When	Checking Period
1	Damper	30160026	Broken	3 months
2	Cap Top	80030065	Broken	3 months
3	Wiper	30160023	Too Much Dirty	3 months
4	Waste Ink Pump	10080011	Not Working	6 months

# 5.MAINTENANCE AND TROUBLE SHOOTING

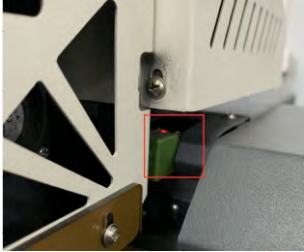
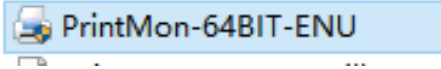
## 5.2 Trouble shooting

**Q1: Printer can not be power on**

<p>Step1: Check whether the switch in the back of machine is on and the indicator is lighted</p>	
<p>Step 2: Check whether the red scram button on the front board is open. If there is any problem, please contact us</p>	

**Q2: Printer is offline**



<p>Step 1: When the carriage is on the right side, check whether the right side lamp is on. If not, please contact us.</p>	
<p>Step 2: Restart the computer, pull off and insert in the USB, change the USB port, restart the driver.</p>	
<p>Step 3: After step 2, if the statu of the printer is still offline, please reinstall the driver or contact us.</p>	<p><b>Extract the original driver files,then run the PrintMon</b></p>

## 5.MAINTENANCE AND TROUBLE SHOOTING

### 5.2 Trouble shooting

**Q3: The checklist for nozzles when test strip not complete**



<p>Step 1: Do a small cleaning, press TEST to check the nozzles. If there is more than 10% break line of a certain color, follow Step 2.</p>	<p><a href="https://www.youtube.com/watch?v=59vLBetVMLY">https://www.youtube.com/watch?v=59vLBetVMLY</a></p>
<p>Step 2: Replace the corresponding damper of the break line color. Do small cleaning, press TEST to print a test strip. If still exist the problem, follow Step 3.</p>	<p><a href="https://www.youtube.com/watch?v=VaEOob7rPS0">https://www.youtube.com/watch?v=VaEOob7rPS0</a> <a href="https://www.youtube.com/watch?v=59vLBetVMLY">https://www.youtube.com/watch?v=59vLBetVMLY</a></p>
<p>Step 3: Replace Cap Top. Do small cleaning and press TEST to check nozzles. If still exist a problem, contact us.</p>	<p><a href="https://www.youtube.com/watch?v=_wGiUOp5g2s">https://www.youtube.com/watch?v=_wGiUOp5g2s</a> <a href="https://www.youtube.com/watch?v=59vLBetVMLY">https://www.youtube.com/watch?v=59vLBetVMLY</a></p>

**Q4: Bad printing quality caused by bad test strip**

(All videos on our website: [http://www.apexprinter.com/help/online-support\\_h0036.html](http://www.apexprinter.com/help/online-support_h0036.html) )

When your printing quality is bad, make a cleaning and print a test strip by pressing test button on control panel.

(Video: How to clean print head and print test strip )A complete test strip should be like this.



## 5.MAINTENANCE AND TROUBLE SHOOTING

### 5.2 Trouble shooting

if some lines are missing ( less than 10% are acceptable ), we need to fix the problem. The problem can come from dampers, print head or cap top.

Bad test strip type	Most possible problem parts	Possibility
one color bad	bad damper	50%
several colors bad	cap top need adjusting	90%
one color missing	print head is clogged	50%
no ink at all	cap top need adjusting	70%

Dampers: 1.1 Video:How to make sure whether dampers are good or not.

1.2 Video: How to change dampers.

Print head: 2.1 Video: How to make sure whether print head is clogged or not and how to clean print head.

Cap top: 3.1 Video: How to make sure whether cap top is good or not.

3.2 Video: How to Change cap top.

3.3 Video: How to adjust the position of cap top to fully cover the print head.

You can figure out the problem comes from dampers, print head or cap top by following videos.



## 5.MAINTENANCE AND TROUBLE SHOOTING

### 5.2 Trouble shooting

#### Q6: Bad bi-direction printing quality

1. How to make sure that it is a Bi-direction problem.

When your printing happen to be with a double shadow like this:



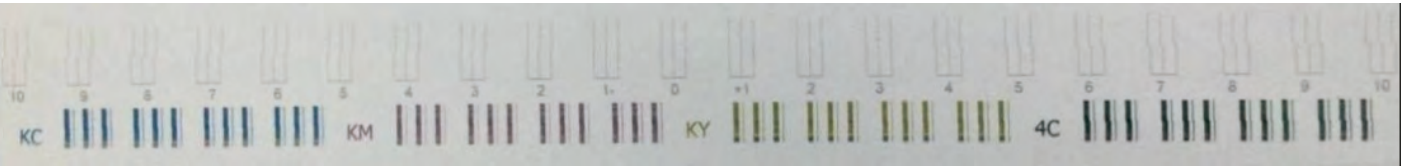
You can change the mode to Uni-direction. If the problem is gone and the printing is like the following picture, then we are sure it is a bi-direction problem.



# 5.MAINTENANCE AND TROUBLE SHOOTING

## 5.2 Trouble shooting

Print bi-direction calibration diagram. Choose calibration precision and change its value until the bi-direction calibration diagram is aligned at 0.



Printer
Heads Alignment
Bi-Direction
Step

Value
☐ Best
☒ Normal

+ 1/2 \*

Origin pos shift(mm)

The way to change into Uni-direction is like this:

Ready

Printer
Heads Alignment
Bi-Direction
Step

Horz Begin  mm
Vert begin   mm

X Speed: Fast Y Speed: Fast

Single Leave Scan Type-Heavy

When print end: Stay at current pos

Colorbar-off

Standby flash freq: 128 Hz

Param setting

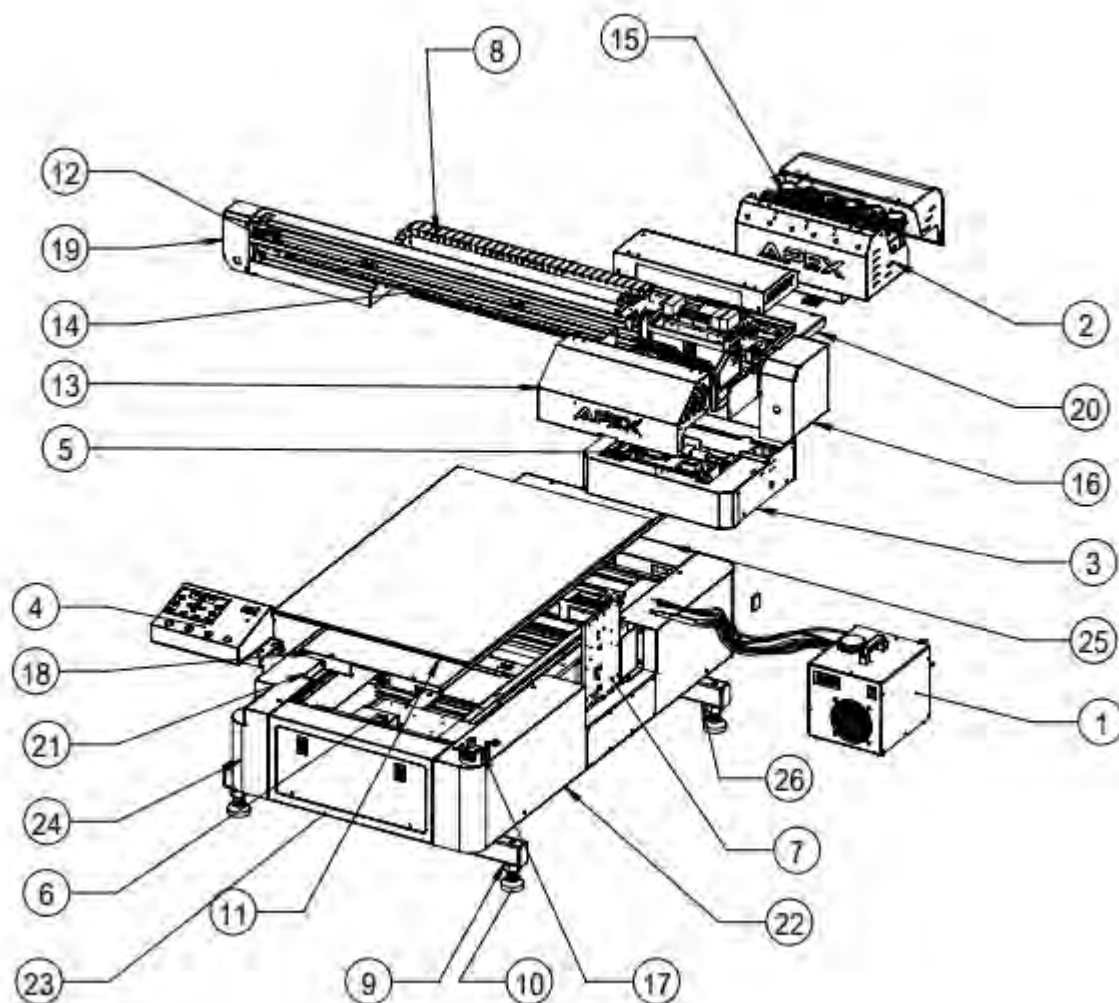
Mode

print direction

☐ Head mask

## 5.MAINTENANCE AND TROUBLE SHOOTING

### 5.3Exploded View



NO.	Part	SN. on sale
1	Water Cooling Case	90011035
2	Ink Bottle Case	80060014
3	Capping System Case	—
4	Control Panel	10060026
5	Capping Station	—
6	Belt Fastening	—
7	Aluminum plate	—
8	Drag Chain	30120012
9	Handle	—
10	Cup Shape Machine Foot	—
11	Printing Table	20651031
12	Belt	—
13	Carriage Cover	—

NO.	Part	SN. on sale
14	Carriage Rail	20560030
15	Ink Bottle	80060005
16	Right Cover of Beam	—
17	Emergency Stop	10020206
18	Black Plate	—
19	Left Cover of Beam	—
20	Ink Bottle Support Plate	—
21	Platform Support	—
22	Right Cover of Machine	—
23	Front Cover of Machine	—
24	Left Cover of Machine	—
25	Back Cover of Machine	—
26	Set Screw	—