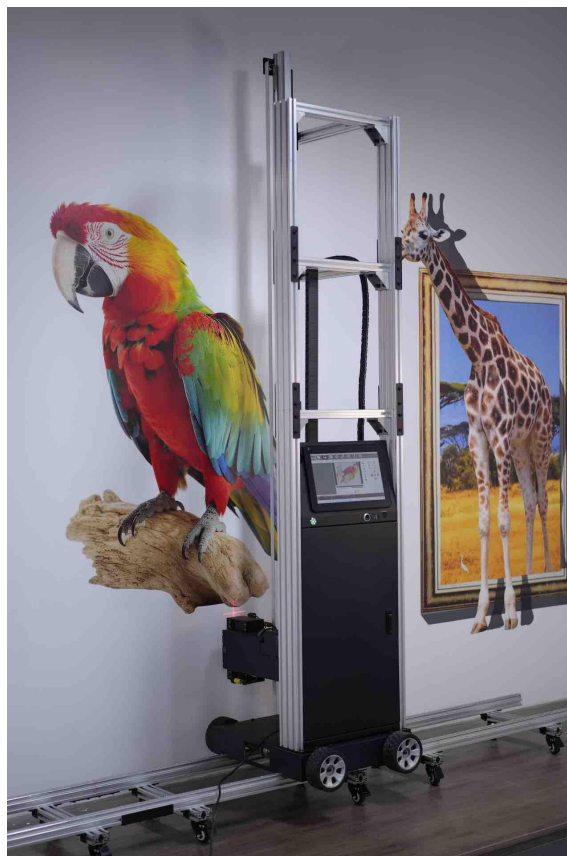




DXonJet **VPJet4.0 Wall Printer**

User Guide

Version 1.0



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DxonJet.com

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Nanjing City, China

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1 Certificate of Compliance

EC Declaration of conformity

Manufacturer:

Nanjing Huikun Hongrong Intelligent Technology Co., Ltd.
 Floor 3, Building 4, Catcher Technology Park East Park, No.
 117 Buyue Road, Qiaolin Street, Pukou District, Nanjing, China



DXonJet

HEREBY DECLARES THAT THE PRODUCT DESCRIBED BELOW:

Product Name: Vertical Wall Printer Machine

Product Model: VPJet4.0, VPJet5.0

COMPLIES WITH THE PROVISIONS OF THE FOLLOWING EUROPEAN DIRECTIVES:

Low Voltage Directive 2014/35/EU

Electromagnetic Compatibility Directive 2014/30/EU

Machinery directive 2006/42/EC

THE PRODUCT HAS BEEN ASSESSED BY THE APPLICATION OF THE FOLLOWING STANDARDS:

2006/42/EC	EN ISO 12100:2010 EN 60204-1:2018
2014/30/EU	EN IEC 61000-6-1:2019 EN IEC 61000-6-3:2021 EN IEC 61000-3-2:2019+A1:2021 EN 61000-3-3:2013+A2:2021
2014/35/EU	EN60335-1:2012+A11:2014+A13:2017+A1:2019+A2:2019+A14:2019 EN 62233:2008



Issue place and date

Signature of authorized personnel

1.1 Introduction

Original instructions

These instructions are DXonJet's original instructions for the VPJet wall printer (henceforth called the machine or DXonJet printer or VPJet4.0).

Purpose

The purpose of these instructions is to ensure correct installation, use, handling and maintenance of the machine.

Accessibility

The instructions are to be kept in a location known to the staff and must be easily accessible for the operators and maintenance personnel.

Knowledge

It is the duty of the employer (the owner of the machine) to ensure that anyone who is to operate, service, maintain, or repair the machine have read the instructions. As a minimum, they should have read the part(s) relevant for their work. In addition, anyone who is to operate, service, maintain, or repair the machine is under obligation to look for information in the instructions themselves.

1.2 General Information

Manufacturer

The machine has been manufactured by:
Company name: **DXonJet Printer Company**
Address: 3rd Floor, Building 4,
No. 117, Buyue Road,
Qiaolin Street, Pukou District,
Nanjing City
China

The Machine's Designation

The machine's complete designation is DXonJet Wall Printer type VPJet4.0

Machine Plate

The machine plate(see the photo) is situated on the back side of the machine on left top:



1.3 Overview And Application

General description

The machine consists of a main case with touch screen computer, platform, printhead kit with 6 ink tanks and a ink pump box, vertical extensions, and Stabilizer bars
If any changes or alterations are made to the machine, these changes or alterations must be reflected in these instructions as necessary.

The machine's purpose and intended use

Application: The machine is used to print on walls, as well as any other materials applied vertically

Attention: The materials should be flat. If you want to print on uneven materials, please consultant our technician.

Warining about foreseeable musese

The VPJet4.0 wall printer may not be used with inks not endorsed by DXonJet. All inks purchased from DXonJet Company or from official DXonJet distributors worldwide are endorsed by DXonJet company.

Technical specifications

Physical dimension in inches and millimeters (Standard dimension without extra extensions):

Length X Width X Height

Length 480mm x Width 630mm x Height 2320mm

Height = platform 1230mm + 1100mm bottom vertical rail + 1100mm second vertical rail

Dimensions and Weight for each part:

Platform: Length x Width x Height Weight: 480mmx630mmx110mm, 29.5kg

Main case with computer: Length 480mm x Height 1100mm x Width 90mm, 26kg

Print head kit with ink tanks and ink pump box: 7.5kg

1,100mm vertical rail: 4kg

1,000mm vertical rail: 3.5kg

1,000mm horizontal track: 8.8kg

Stabilizer bar: 1000mm, 10.5kg

Electrical:

- Nominal supply voltage: 100-240V AC
- Nominal supply frequency: 50-60hz
- Estimated peak consumption: 350W

Temperature:

Recommend operational temperatures

Operation: 66° F – 80° F [19° C – 27° C]

Humidity:

- Optimum: 40% - 60% (non-condensing)
- Operational: 30% - 70% (non-condensing)

Storage:

Store ink and flush solutions at 18° - 32° C (65° - 90° F). If stored at a different temperature, the ink should be allowed to reach room temperature before calibration or printing.

Operating Environment

It is very important that the machine is placed in a clean environment as possible. Avoid placing it in an environment with dust or any other Airborne particles, as the print head nozzles are sensitive to this.

Printable Materials or substrates

The machine can print on porous materials directly, such as plaster wall, cardboard, wall paper, flat brick wall, concrete wall, and etc...

The machine can also print on non-porous materials, such as glass, metal, acrylic. But recommend use primer before printing to increase adhesion for the ink on the substrate.

Print Speed and Resolution

Printing technology: Drop on Demand Piezoelectric inkjet

Resolution and Speed:

6 pass 2 sqm/hour ; 8 pass: 1.5 sqm/hour

12 pass : 1.2 sqm/hour ; 16 pass: 1 sqm/hour

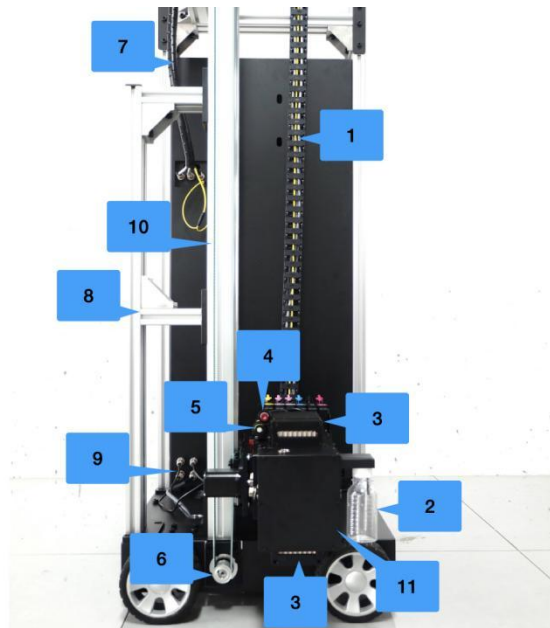
1.3 Overview



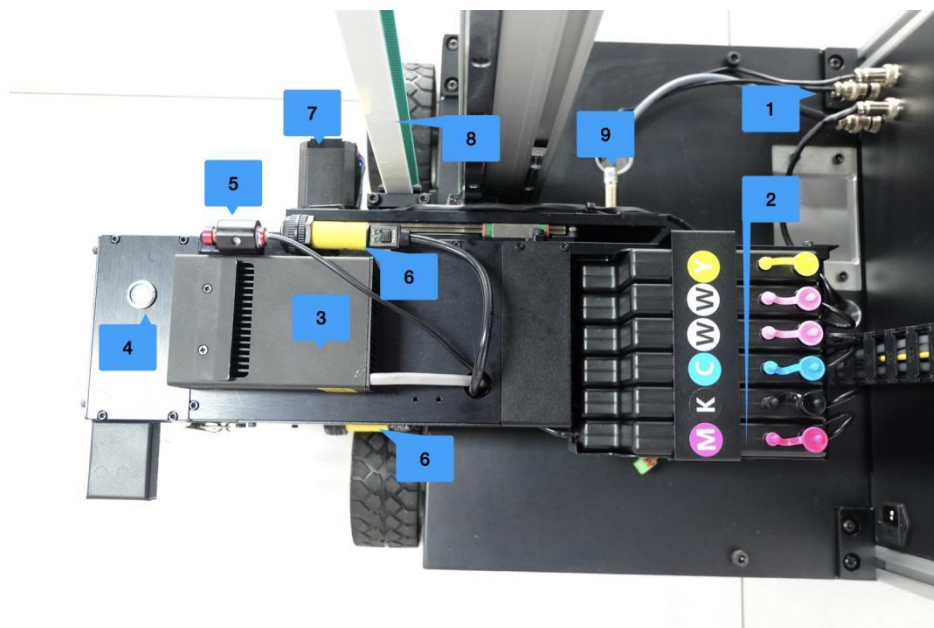
1: Horizontal Rail, 2: Mainframe case with touch screen computer 3: Stabilizer bar 4: Wheels(4 wheels with power), 5: Printhead kit, 6: Touch screen display



1: Door lock, 2: Drive wheel, 3: Touch screen computer, 4: TWO USB 3.0 Port, 5 Network Port, 6: Printer Power switch, 7: Computer power switch (inside the frame, use one or two fingers can touch)



1: Tank Chain(Fiber optic cable and power cables), 2: Waste ink bottle, 3: UV lamps, 4: Laser cross light, 5: Sensor, 6: Gear to drive the belts, 7: Cables connect to the mainboard, 8: Stabilizer bar, 9: Cables for motors and limited location switch, 10: Vertical rail, 11: Ink Pump box



1: Cables for motors and limited location switch, 2: SIX ink tanks, 3: UV lamp, 4: Ink pump box switch, 5: Laser cross light, 6: Sensors, 7: Motor for drive printhead kit, 8: belt, 9: limited location switch

2 Setting Up The Wall Printer

2.1 Physical Setup

The **VPJet4.0 Wall Printer** is packed in a wooden crate and shipped strapped on top of a wooden pallet (Total weight of the package including the crate is around 230kg). After opening the wooden crate, the machine can be lifted out from the crate. The heaviest parts of the machine is around 40kg, therefore it is advised to lift the machine out of the box by multiple persons to avoid injury.

In order to make it more convenient for users to use for the first time, the factory did not disassemble the machine before leaving the factory, but retained the main part.

Kindly Reminder:

After unpacking the machine, please thoroughly inspect each component to see if any damage has occurred during transportation. If any abnormalities are detected, Or accessories are missing, please contact us as soon as possible. Our engineers will assist you in troubleshooting the issue promptly and provide after-sales support and warranty replacement services.

Accessories Overview



Please contact our engineer to get the installation video tutorial. Email: support@dxonjet.com

2.2 Software Setup

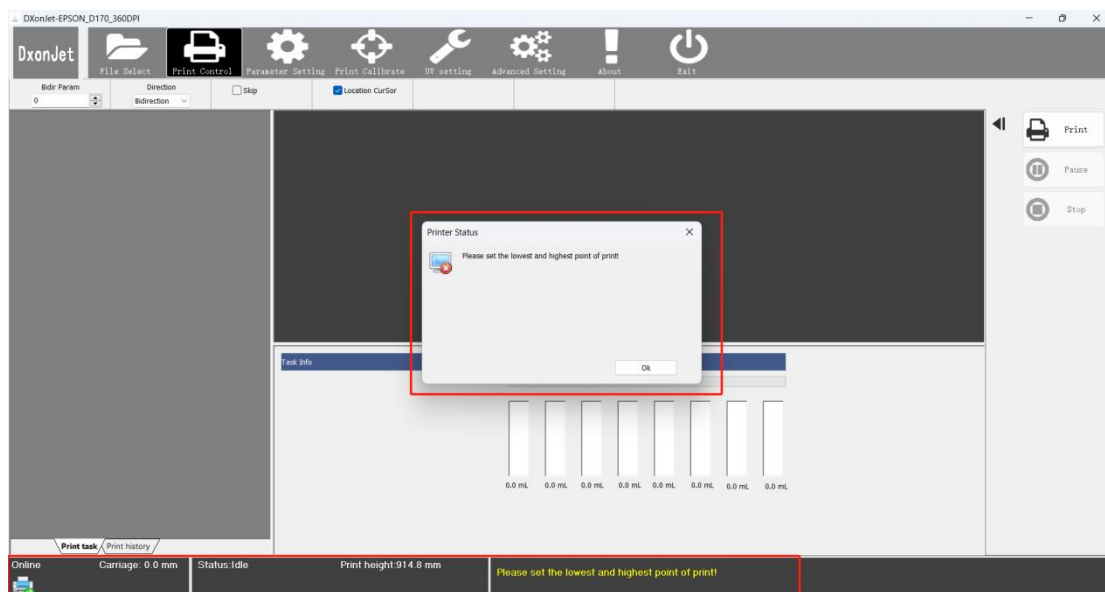
The software are already pre-installed in the computer. If you need to install another copy on your own laptop, please contact our engineer via Email: support@dxonjet.com

3 DXonJet Control Software Operation

3.1 Open the software and connect with the printer



Double click the logo, wait for 5 seconds, the control software will open, and we can see the following interface.

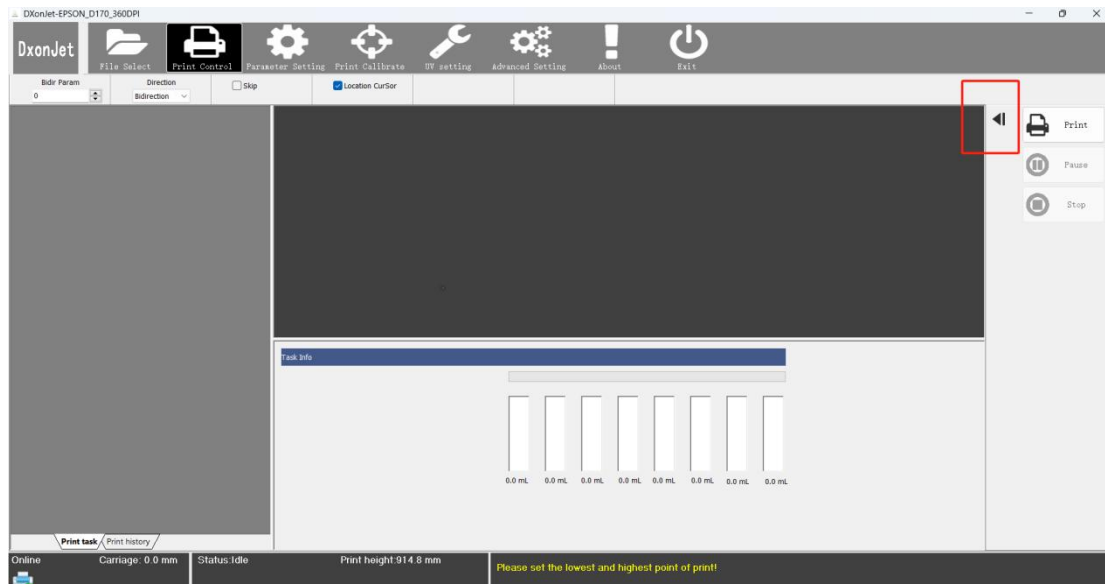


The pop-up window with the red box is a prompt, indicating the area where the movement of the printer head is allowed to be set. This setting needs to be done after we have adjusted the position of the machine and are ready to start printing. After opening the software, simply click OK to complete the setting.

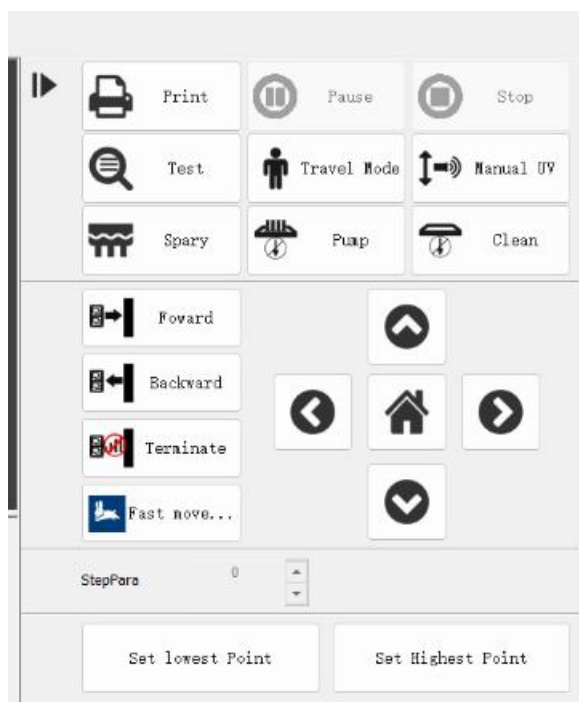
The bottom of the red box displays some values, and when these values appear, it means that the control software and the printer control system have been successfully connected. Now we can operate the machine normally through the software.

If there is no content displayed in the red box, it means that the software has not connected to the printer's control system. At this time, check if the power switch of the machine is turned on.

3.2 Introduction to Control Software Interface



Click on the triangle pop-up symbol in the red box, and we will see the control interface of the machine (click the triangle pop-up symbol again to hide this interface):

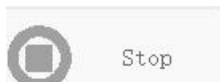




: After the machine is ready and the software has successfully imported the PRN or PRT file, click the Print button and the machine will start printing. At this time, except for the Pause and Stop buttons (which can be used), all other buttons will turn gray (cannot be used).



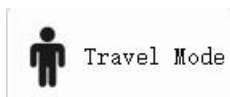
: This button can only be used during the printing process. When you click it, the machine will pause the printing.



: This button can only be used during the printing process. When you click it, the machine will stop printing.



: When you press this button, the machine will start printing color blocks from the set lowest point upwards (if no lowest point is set, then the head will return to the position it was in when the printer power was turned on) to detect the condition of the print head.



: When you click this button, the machine will activate the “travel mode”. The humanoid icon on the button will change to a sleeping position, and the printer will immediately perform the Pump and Clean functions.

Then, every 48 hours, the printer will perform the Pump and Clean functions again. If you are traveling and don't have time to maintain the printer, you can activate travel mode and the printer will automatically maintain itself.

While this function is active, you can turn off the machine's computer, but the machine's power must remain on.

After the machine completes the first round of Pump and Clean functions, you can click the travel mode button again to exit travel mode, and the humanoid icon on the button will change to a standing position.

Note that if the machine's power is disconnected, travel mode will be interrupted.



: When you press this button, the printer head will move up and down along the trajectory of the printed image. At this time, the print head does not spray ink, and the machine does not move in the left and right directions, but the UV light is working. For

example, if you need to pause printing for a period of time, the ink near the paused position will have color difference due to the short exposure time of the UV light, so it is necessary to increase the exposure time of the UV light for this part of the color.

In general, if the pause time is short, such as only about 1 minute, this function can be not used. However, if the pause time exceeds 3 minutes, it is recommended to use this function.



: Click this button, the icon will change to this icon



and the print head will spray ink.

This process will last for 3 seconds, and then the icon will return to normal, and the print head will stop spraying ink.

This function is mainly used to clean the mixed ink in the print head nozzles. For example, after you complete Pump and Clean, you usually do 2-3 Sprays, which can effectively clean the mixed ink inside the print head nozzles.



: Before using this function, you need to install PumpBox on the top of the machine and press the switch button on it. Then, open the small plug of the ink box and make sure there is enough ink in the ink tank.



Click on Pump button, the icon will change to this icon, and at the same time, the on/off button of the Pumpbox will light up. At this point, the Pump motor will pump ink from the ink tank into the waste ink bottle.

The working process of Pump:

1. Click the Pump button, and the Pump function will start working. At this time, carefully observe the waste ink bottle.
2. After the ink comes out, continue to let the Pump work for 5 seconds, and then click the Pump button again.
3. At this time, the Pump icon will restore to its original state, and the Pump function will stop working.
4. Then wait for 10 seconds (it takes time for the ink to stop flowing, so that the pressure will remain balanced and the ink will not flow back, so waiting time is needed),
5. and then repeat the above steps twice, and wait for 20 seconds.



6. Then click the Clean button, and the icon will



change. At this time, the Pump motor will extract the residual ink between the print head and the Pump box.

7. Generally, the Clean work is enough for 5-10 seconds, and then click the Clean button again, and the icon will return to normal, and the Clean will stop working.
8. Then wait for another 20 seconds, and you can remove the Pump box.



Forward

: Press this button, the printer head will move forward



Backward

: Press this button, the printer head will move backward



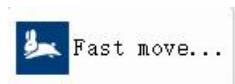
Terminate

:When this button is in this state, it indicates that the Z-axis movement is



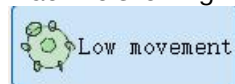
Automatic

in manual mode. Clicking this button will change the icon , and the Z-axis movement will switch to automatic mode (automatically adjusting the forward and backward movement based on the distance detected by the ultrasonic sensor, which can keep the effective printing distance between the print head and the wall). Clicking any of the forward, backward, or automatic buttons will exit automatic mode.



Fast move...

:The status displayed by this button belongs to the fast mode for the machine's left-right and up-down movements. Clicking on this button will change the icon to



Low movement

, and the speed of up-down and left-right movements will become very slow. Clicking on the button again will restore it to its original state.



: Press and hold this button and the machine's head will move upwards. Release your finger or mouse and the machine will stop moving.



:Press and hold this button and the machine's head will move downwards. Release your finger or mouse and the machine will stop moving.



:Press and hold this button and the machine will move left. Release your finger or mouse and the machine will stop moving.



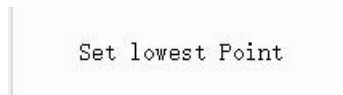
:Press and hold this button and the machine will move right. Release your finger or mouse and the machine will stop moving.



:Clicking this button will cause the machine's head to return to the set lowest position (if no lowest point is set, then the printer head will return to its position when the printer was turned on).

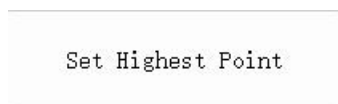


: This is to increase or decrease the step value that the machine moves left or right during the printing process, usually keeping the default setting.



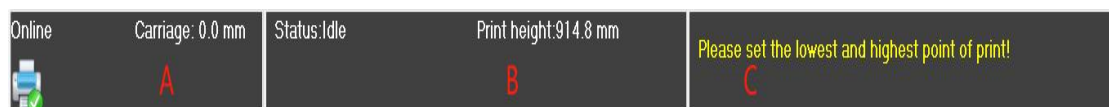
:This is the lowest position set for the printer head, which is the lowest position of the machine head when printing starts. First, adjust the machine head to the desired starting point for printing, and then click this button.

Note: Before printing any images (including doing a test), you must click this button to set the lowest position of the head, otherwise the machine will not execute the print command.



:This is the highest position for setting the printer head. After clicking the "Set lowest Point" button, you need to move the machine's head up a certain location, then click the "Set Highest Point" button. The software will automatically calculate the effective range of the head's up and down movement (i.e. the effective printing height, which must be greater than the height of the image, so that the machine can start printing).

"Set Lowest Point" button and "Set Highest Point" button are a pair of combination functions that need to be set correctly, then after the machine can print normally. The function is to make the machine's head move between the set range, which can avoid the situation of the head exceeding the track and effectively improve the stability of printing and prolong the service life of the machine.



When the 'Set lowest Point' button is clicked, the value of A (Carriage) in the image will become 0, indicating that the position of the head is at the lowest point 0.

When we move the head upwards, the value of A will change, showing the actual distance the head has moved from the set lowest point.

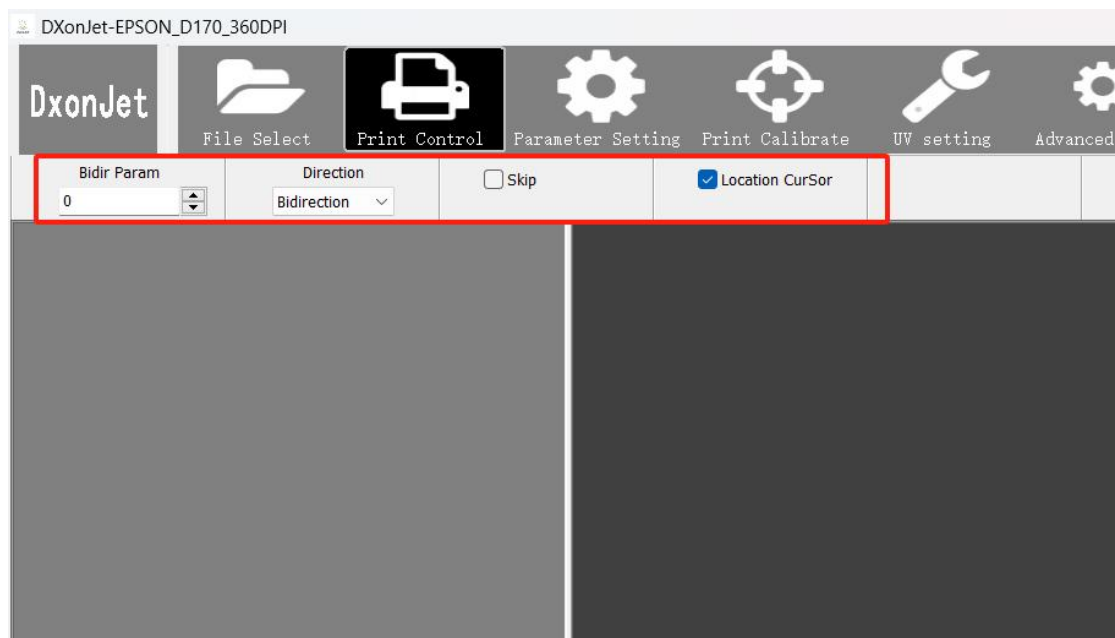
Then, click the 'Set Highest Point' button, and the position of B will display the printing height value, while the reminder at position C will disappear (note that the head needs to rise at least 230MM above the lowest and highest positions of the image to display the correct value at position B, because during the printing process, the head needs to exceed the lowest and highest positions of the image).

Note: The value at position B is the maximum printing height, so this value must be greater than the height of the image. If the value at position B is smaller than the height of the image, you can continue to move the printer head upwards and then click the 'Set Highest Point' button again, at which point the value of B will be updated.

If the value at position B is smaller than the height of the image and the head has already reached the highest point of the machine track and cannot be raised any further, then the only option is to lower the height of the image to complete the printing.



In the above picture, A represents the printer head moving up a distance of 999.3MM from the lowest point, B represents the maximum printing height in the current settings is 772.5MM, and the reminder at position C disappeared.



Bidir Param: This option is a compensation value for bidirectional printing parameters, which are usually set to 0 and do not need to be adjusted.

Direction: Here you can choose between unidirectional and bidirectional printing.

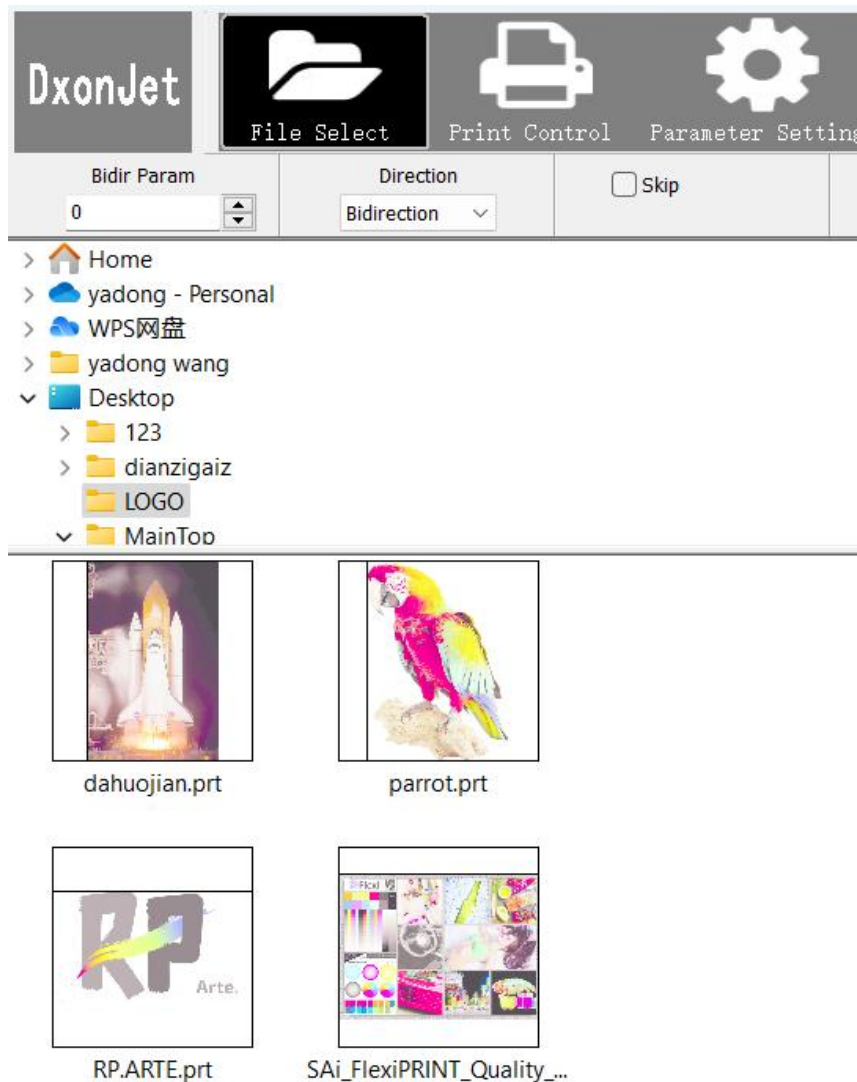
"Unidirection": The jetting process works when the head moves downwards, but not when it moves upwards. This mode produces better results, but the speed is only half that of bidirectional printing. It is generally only used when the ground and walls are very uneven, or when the printing quality requirements are very high.

"Bidirection": The jetting process works when the head moves both upwards and downwards.

Skip: Selecting this function causes the printer head to move along the edge of the image. It is generally used for printing irregular images, where the printer head skips over parts that do not need to be printed, thus shortening the printing time.

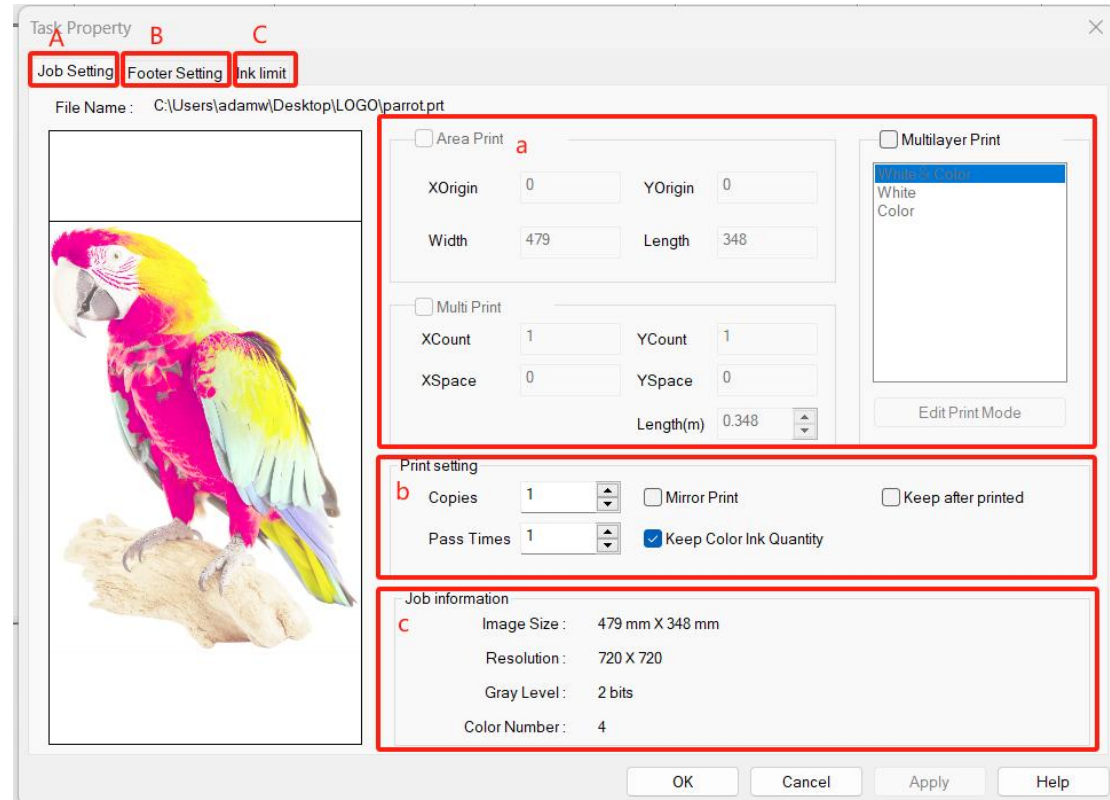
Location Cursor: Selecting this function causes the image to start printing from the center of the red crosshair cursor. If the starting position of the image is offset, it can be adjusted through calibration testing.

3.3 File Select Setting



Click on the File Select button to choose the required PRN (PRN file from Maintop RIP) or PRT (PRT file from Flexiprint RIP) file, and double-click to open it. Then we will get the following

interface:



A: Job Setting:

In this interface, keep the settings in box a as default, generally no need to change.

Box b: Print setting

Copies: keep default.

Pass Times: the software calculates the printing basic unit as 1 Pass, keep default.

Mirror Print: if this function is selected, the image will be automatically printed in mirror.

Keep after printed: after printing is completed, keep the loaded file in the print list.

Keep Color Ink Quantity: keep default, usually need to be selected.

Box C: Job information

Image Size: the printing size of the image.

Resolution: the printing resolution of the image, which is set in the RIP software.

Gray Level: the grayscale level set for the image, generally keep default.

Color number: the number of colors set for printing in the RIP software, for example, if only CMYK is set in the RIP software and there is no W, then 4 will be displayed here; if CMYKW 5 colors are set in the RIP software, then 5 will be displayed here.

B: Footer Setting.

Task Property

Job Setting **Footer Setting** Ink limit

☐ Print footer

Position: Top+Bottom

Margin: 20

Color: K

QRCode size: 10

Font size: 2

Font: Arial

☒ File path ☒ Resolution ☒ Print direction ☒ Print time

☒ Machine No: P001 ☒ Operator No: U010

☒ Extra text: 123

Apply

Keep these settings as default

C:Ink limit

Task Property

Job Setting Footer Setting **Ink limit**

☐ Decrease gray level

Color_CH1 (%)	100	Color_CH2 (%)	100
Color_CH3 (%)	100	Color_CH4 (%)	100
Color_CH5 (%)	100	Color_CH6 (%)	100
Color_CH7 (%)	100	Color_CH8 (%)	100

Decrease gray level: Generally, keep the default settings. If this option is selected, the gray level in the image will decrease by one level.

Color_CH1: represents black

Color_CH2 represents cyan

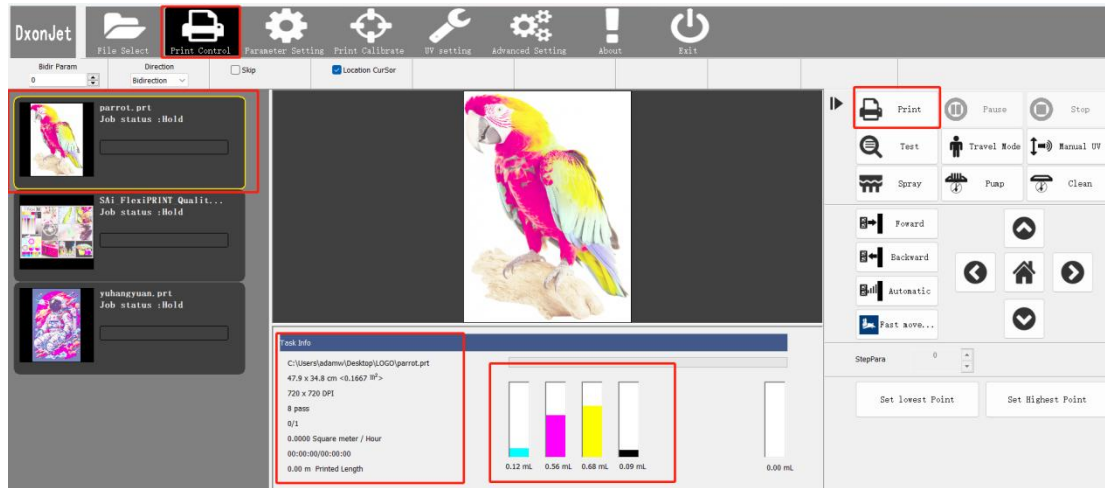
Color_CH3 represents magenta

Color_CH4 represents yellow.

100% represents the maximum ink usage, usually kept at the default value of 100%. This percentage value can only be decreased.

After clicking OK, it will automatically enter the Print Control interface.

3.4 Print Control Setting

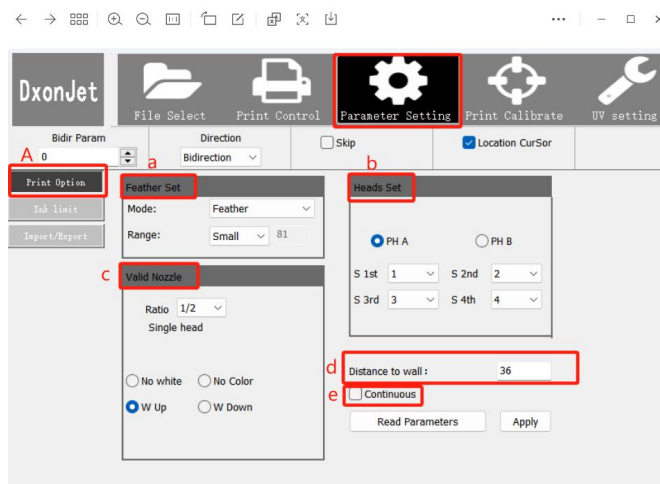


In the Print Control interface, you can import one or more files that need to be printed, then select the files that need to be printed, and then click the print button, and the machine will start printing

Note: Set the lowest point and set the highest point correctly before printing

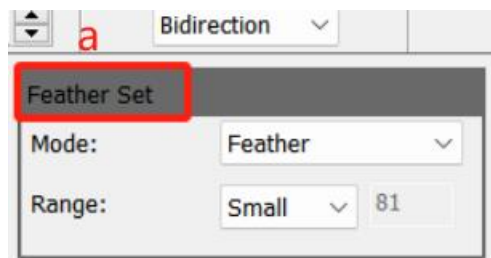
Task info: On the left side of this box, the information of the current task is displayed, including the print size of the image, print resolution, passes, print speed, etc.; on the right side of this box, the ink consumption of the current ink is displayed (this is a simulated value, it will change with the printing process and the accurate value can only be obtained after the printing is completed).

3.5 Parameter Setting

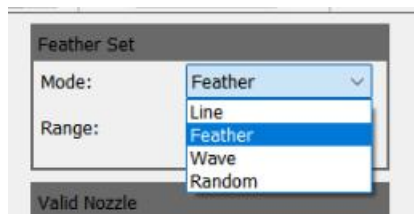


Print Option: Click on this button and its settings will be displayed on the right side.

a:Feather Set



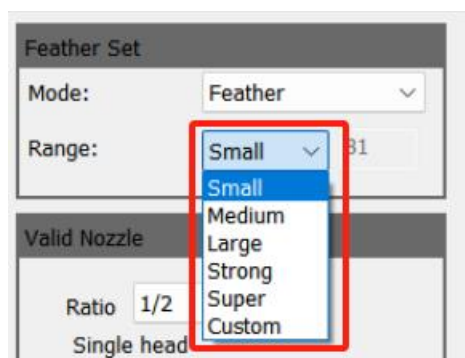
Mode: includes Line mode, Feather mode, wave mode, random mode, as shown in the figure below:



Line: During the printing process, each pass jets ink 100%, which increases printing speed but decreases printing quality, resulting in vertical lines because each pass is directly joined without feathering. This feature is usually only used when printing simple text or graphics, and not at other times.

Note that when selecting this feature, the Range option below it is invalid.

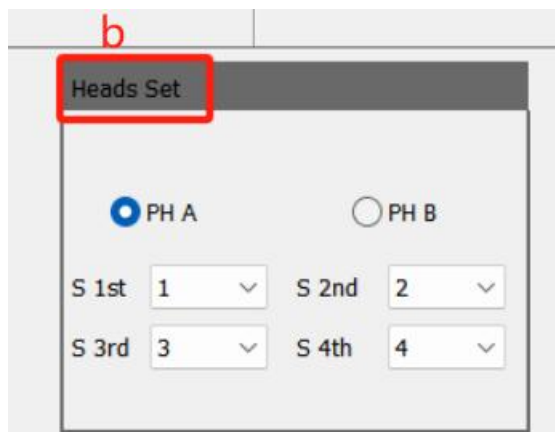
Feather: During the printing process, each pass reduces ink usage by a certain percentage, making the joining between them softer and improving print quality, but slightly reducing printing speed. The feathering ratio can be selected in the Range option below.



The higher the set proportion of feather, the better the printing effect, but the printing speed will be slower. The default setting is Small.

Wave and Random: These two options are not used.

b: Heads Set



Heads Set

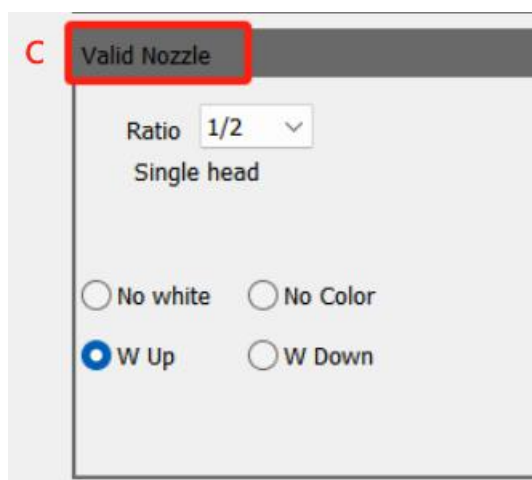
☒ PH A ☐ PH B

S 1st 1 S 2nd 2

S 3rd 3 S 4th 4

Keep the setting as default

C: Valid Nozzle



Valid Nozzle

Ratio 1/2

Single head

☐ No white ☐ No Color

☒ W Up ☐ W Down

Ratio: Keep default, generally no need to change. Only need to reselect the half option if the ink color order of the print head has been changed.

No white: Only use color ink (KCMY) for printing.

No color: Only use white ink (W) for printing.

W Up: Print white ink first, then color ink, color ink will cover white ink (WKCMY).

W down: Print color ink first, then white ink, white ink will cover color ink (KCMYW).

Selection process: As shown in the two pictures below.

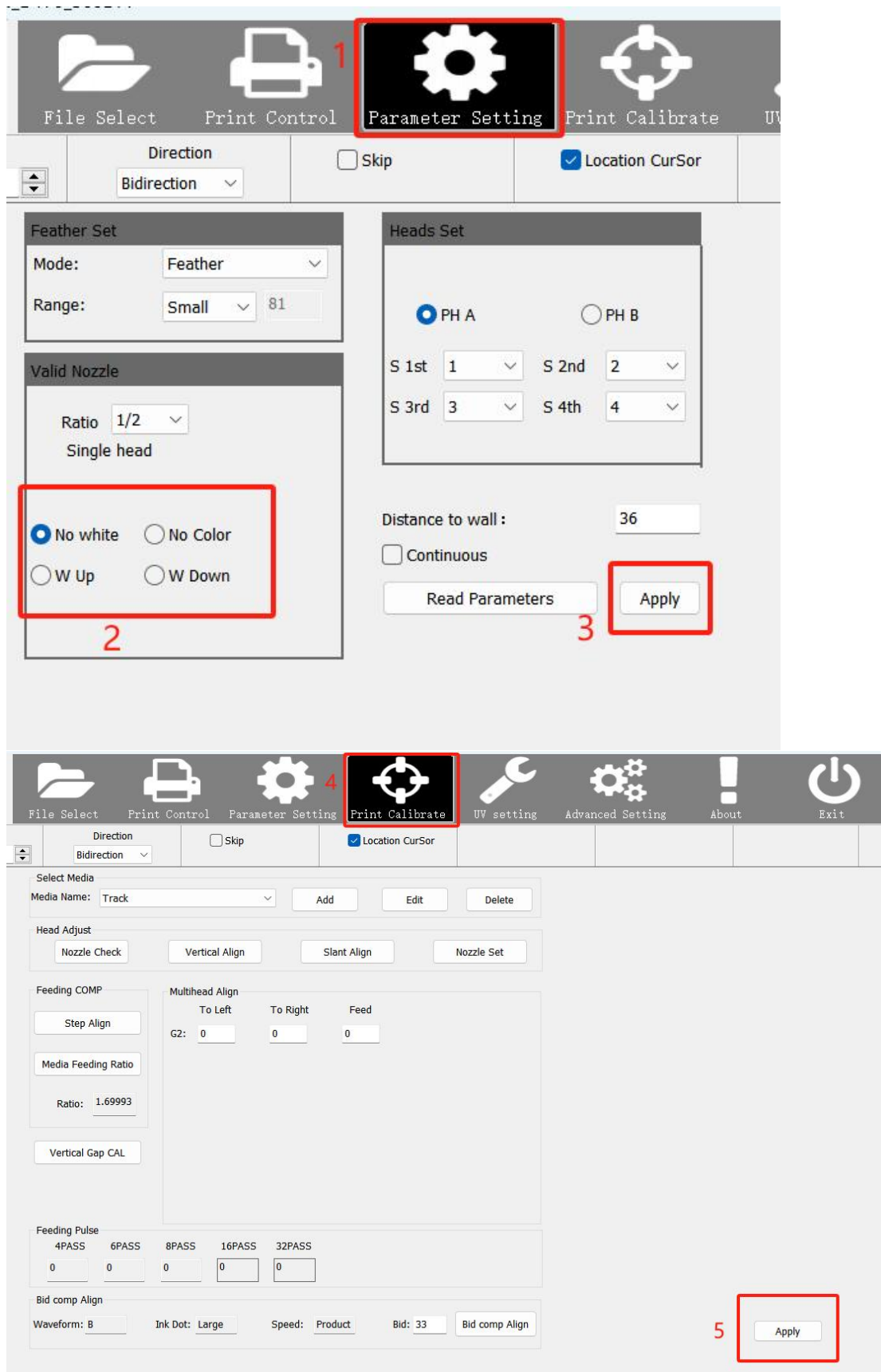
Step 1: Click the Parameter Setting button.

Step 2: Select the desired print mode.

Step 3: Click the Apply button.

Step 4: Click the Print Calibrate button.

Step 5: Click the Apply button.



d:Distance to wall

The values here are simulated values, not actual distances. Increasing this value will cause the print head to move further away from the wall when it moves automatically, while decreasing it will cause the print head to move closer to the wall.

Under normal circumstances, when the print head moves automatically, the distance between the print head and the wall is approximately 6-8MM (this distance needs to be measured manually).

If the wall is not flat enough, the value can be increased appropriately to ensure that the print head does not collide with the wall during the printing process.

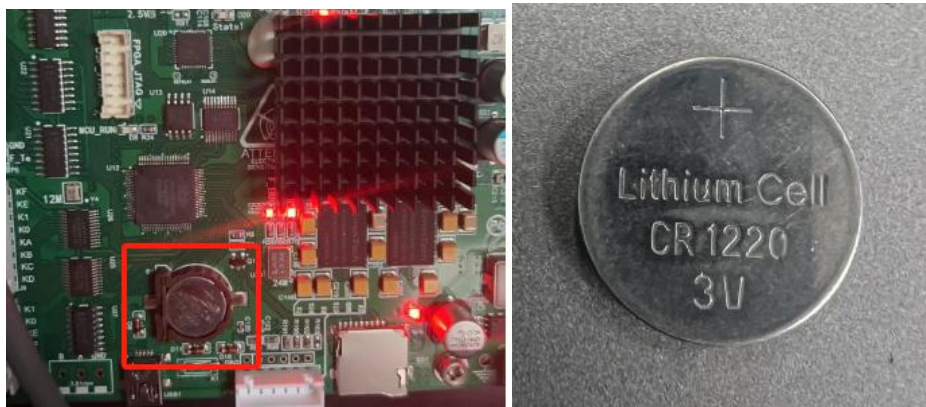
e:Continuous

This is a memory function.

If there are some special situations during the printing process (such as power outage; urgent need to leave and must stop printing, etc.) that cause the printing to not be completed, it will continue printing from where it left off (the machine needs to be manually placed in the correct position).

If this function is frequently used, it is recommended to purchase a UPS power supply of 1000W or more, so that there will be enough time to mark the position where the machine stopped on the wall.

Before using this function, a button battery needs to be installed on the circuit board inside the machine box. Battery model: CR1220, 3V. As shown in the figure below:



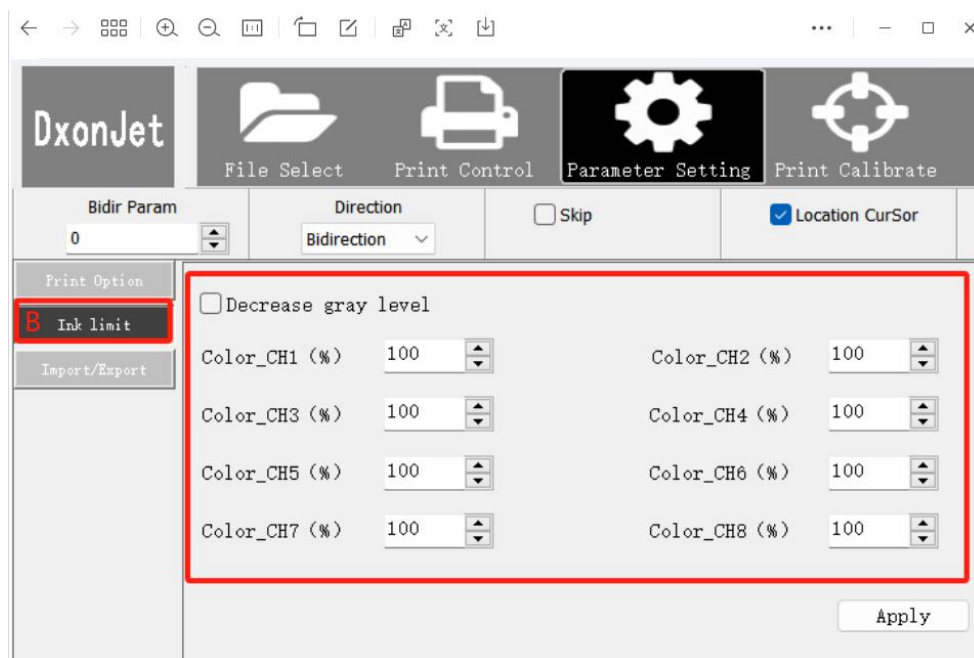
If you need to use this function, you need to select the PRN or PRT file from the last time you printed when you are ready to print, otherwise it will cause printing failure.

There is a video tutorial on how to use this function, please contact the after-sales support service if you need it.(support@dxonjet.com)

Note: When printing normally, you cannot select this option, otherwise it will cause printing failure. The software will also give such a prompt:



B: Ink limit



Decrease gray level: Generally, keep the default settings. If this option is selected, the gray level in the image will decrease by one level.

Color_CH1: represents black

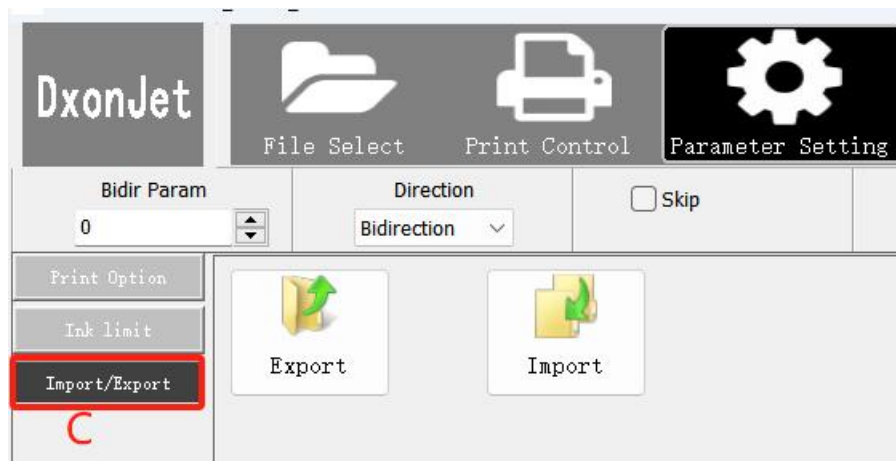
Color_CH2 represents cyan

Color_CH3 represents magenta

Color_CH4 represents yellow.

100% represents the maximum ink usage, usually kept at the default value of 100%. This percentage value can only be decreased.

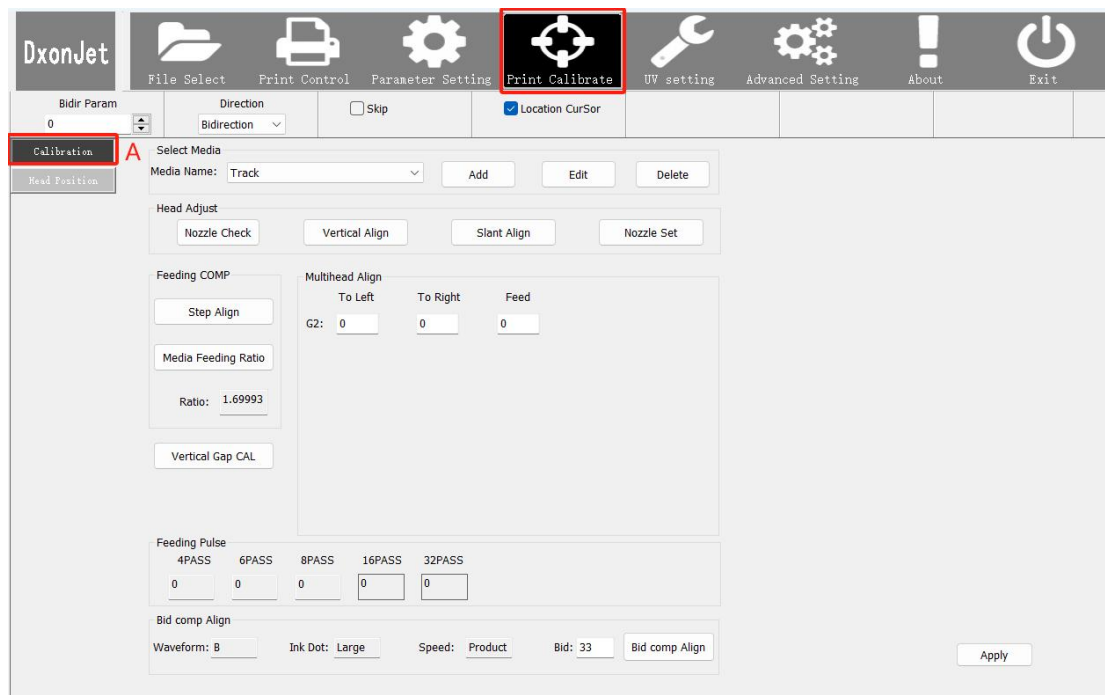
C: Import/Export



Export: Save the software parameters as a file in .cfg format.

Import: Import a file in .cfg format and read its parameters.

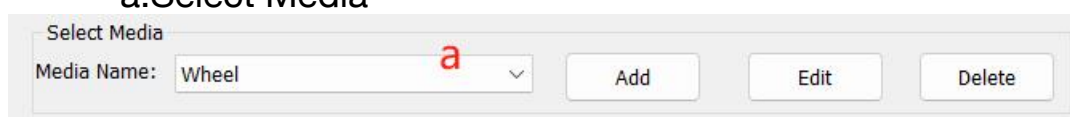
7: Print Calibrate



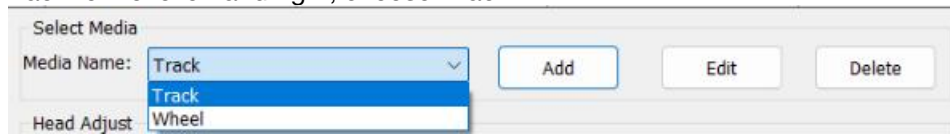
Note that in this interface, any changes to the settings require clicking the Apply button.

A: Calibrate

a: Select Media



This is the selection of the machine's left and right movement method: during printing, if the machine uses wheels to move left and right, choose "wheel"; if the machine uses a ground track to move left and right, choose "track".



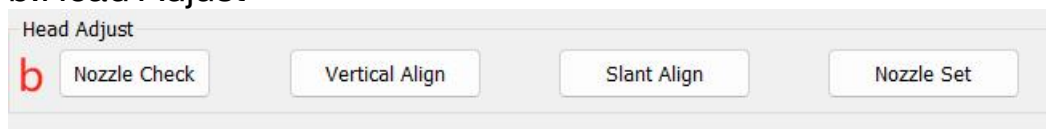
Because the diameter of the wheel and the diameter of the ground track motor gear are different, the circumference of one rotation of the motor is different. Therefore, their settings are different.

Add: Add new media.

Edit: Modify the current media, such as the name.

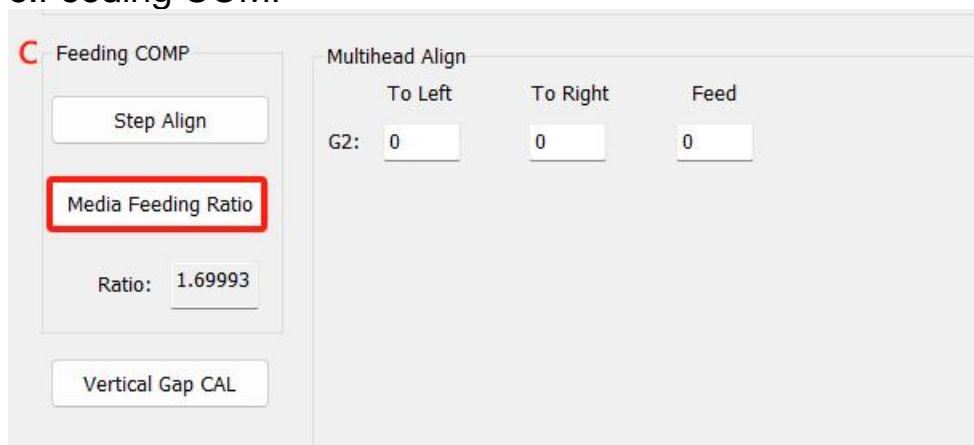
Delete: Delete media.

b:Head Adjust



Keep all of these setting as default.

c:Feeding COMP



Step Align: Detects the distance the machine moves left and right. It is generally not necessary to use it because there are better methods.

Media Feeding Ratio: This function is very important. If the machine's left and right movement value is not accurate enough, which needs to adjust it. Clicking this button will bring up the following interface:

Feeding Ratio

Base Feed Ratio

☐ Mode 1 ☒ Mode 2

Align Value: 0.0

Target mm Move

Real data mm

Cumulative Reset

Feeding CAMP: 1.699930

Feed Fine-turn

Print Pass 1 Pass

Feed pulse 0

Print

Save Quit

In this interface, choose mode 2.

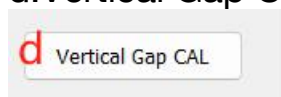
Enter the required machine movement value (such as 400MM) in the Target box, then click the Move button, and the machine will move to the right (note that enough space needs to be left for the wall printer to move).

After waiting for the machine to stop moving, measure the actual distance the machine moved (before clicking the Move button, it is recommended to mark the position of the crosshair so that it is easier to measure the actual distance the machine moved).

Enter the actual distance the machine moved in the **Real data box**, then click the **Accumulate button**, and then click the **Save button**.

Repeat the above steps until the difference between the entered value and the actual distance the machine moved is within 1MM.

d:Vertical Gap CAL



Keep this setting as default

e:Feeding Pulse

e Feeding Pulse

4PASS	6PASS	8PASS	16PASS	32PASS
0	0	0	0	0

Keep the setting as default

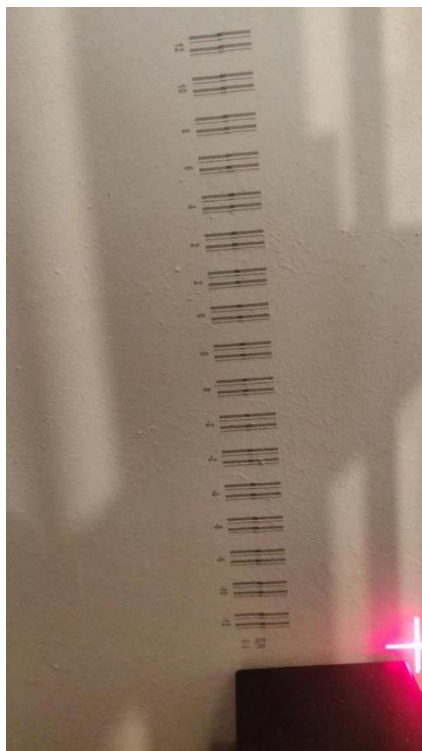
f:Bid comp Align

f Bid comp Align

Waveform: B Ink Dot: Large Speed: Product Bid: 33 Bid comp Align

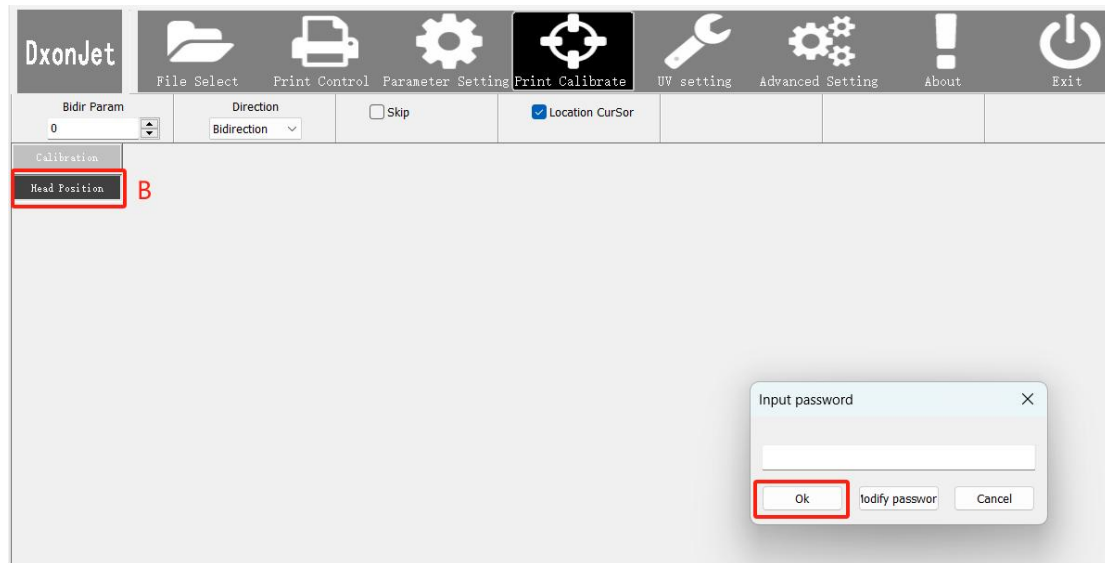
This is the function of calibrating bidirectional printing, which can calibrate the problem of color overlap in the up and down directions. When printing in some very uneven walls, this test needs to be done before printing.

Click the **Bid comp Align** button, and the machine will print a test strip, as shown in the figure below.

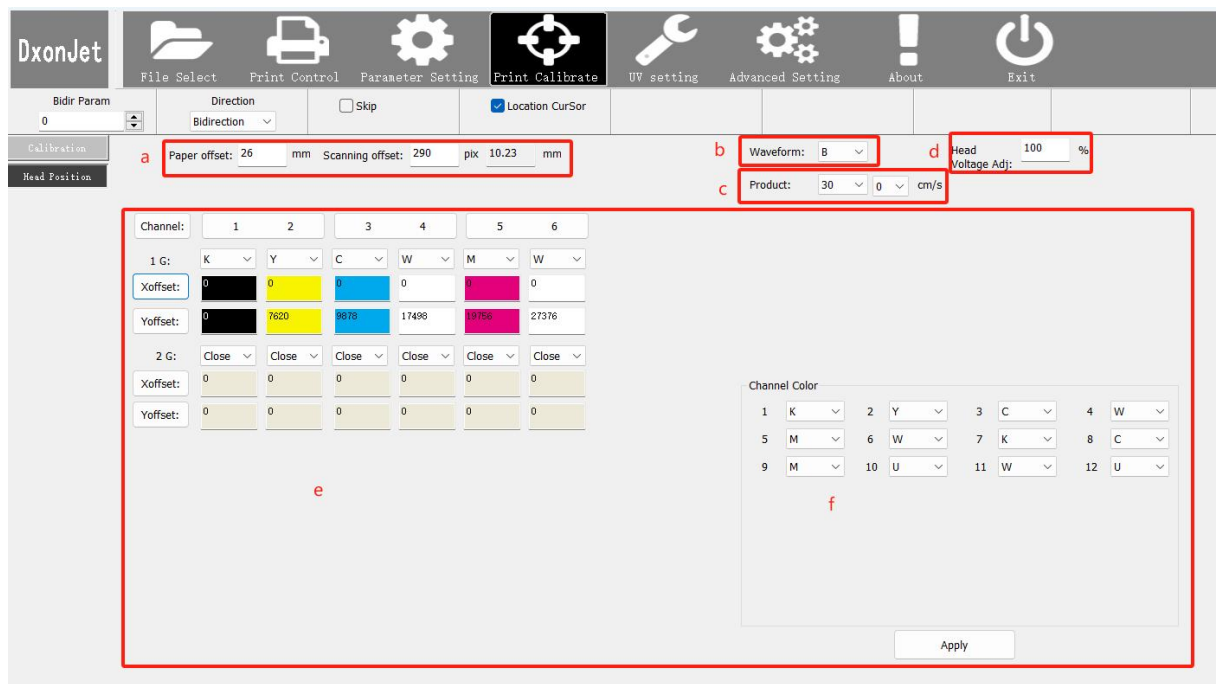


In this test image, we need to find the most horizontal line. If the value next to the most horizontal line is positive, add the value in the Bid box to this value; if the value next to the most horizontal line is negative, subtract the value in the Bid box from this value. Then repeat this test, with the ultimate goal of making the line next to the value 0 the most horizontal.

B: Head Position



Click on the **Head Position button**, and a pop-up window for Input password will appear. Simply click OK, as it does not require entering a password. This is set up to prevent accidental operations. Then, the following interface will be obtained:

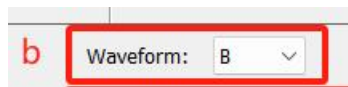


a:Paper offset: Increasing this value can shift the printed image to the right, decreasing it can shift the printed image to the left. The unit for each value is MM.

Scanning offset: Increasing this value can shift the printed image upwards, decreasing it can shift the printed image downwards. The unit for each value is in pixels.

Paper offset and Scanning offset are used to adjust the position of the crosshair.

b:Waveform

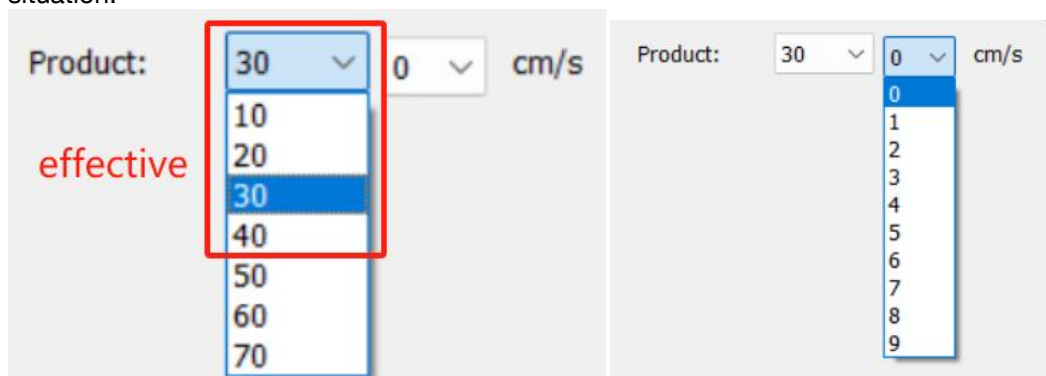


Keep the setting as default.

c:Product



This represents the speed at which the head moves up and down during the printing process. The limit for the VPJet4.0 wall printer is a maximum of 40CM/S and a minimum of 10CM/S. The default setting is usually 30CM/S, but it can be adjusted according to the actual situation.

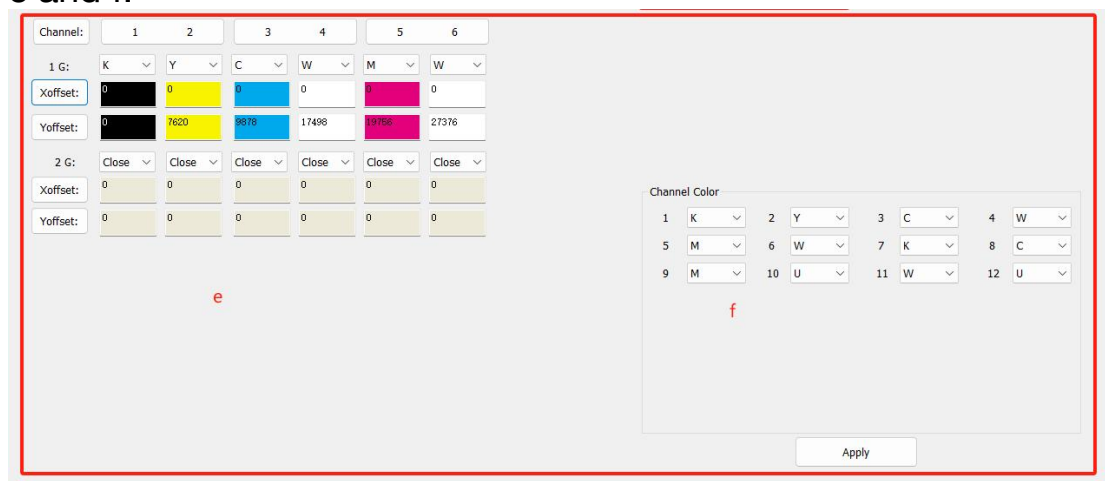


d:Head Voltage Adj

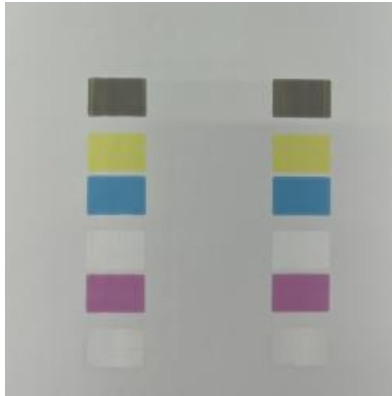
This is to control the force of the inkjet of the print head. The larger the value, the farther the inkjet distance; the smaller the value, the shorter the inkjet distance.

The default value is 100, the maximum value is 120, and the minimum value is 80.

e and f:



This is the jetting ink order setting, and the default value is shown in the picture. The order here is arranged according to the results of the test:



If the connection order of the ink pipeline is changed, the result of the test will also change. At this time, it is necessary to reset the parameters here according to the result of the test.

First set f box, and then set e box; the order of f and e must be the same.

8: UV setting

The screenshot shows the DXonJet software interface. The top bar contains icons for File Select, Print Control, Parameter Setting, Print Calibrate, and UV setting (highlighted with a red box). Below the top bar, there are controls for Bidir Param (0), Direction (Bidirection), Skip, and Location CurSor (checked). The main panel is titled 'UV Lamp Control'. It contains two sections: 'UV Lamp setting' (labeled 'a') and 'Normal' (labeled 'b'). The 'UV Lamp setting' section has two rows: 'Upper UV lamp' and 'Lower UV lamp', each with a dropdown menu and a 'Test' button. The 'Normal' section has two radio buttons: 'Normal' (selected) and 'Delay times'. Below 'Normal' are two rows: 'Delay times' and 'Delay Distance', each with a text input field and a unit label (PASS and mm respectively). An 'Apply' button is located at the bottom of the panel.

a: UV Lamp setting

In general, keep the default settings.

Upper UV lamp: click on the box to the right to set when it will turn on.

UV Lamp setting

Upper UV lamp Up disable, Down enable Test

Lower UV lamp Up enable, Down enable Test

☒ Normal

☐ Delay times 0 PASS

☐ Delay Distance 0 mm

Lower UV lamp: Click on the box on the right to set when it lights up

UV Lamp setting

Upper UV lamp Up disable, Down enable Test

Lower UV lamp Up enable, Down disable Test

☒ Normal

☐ Delay times 0 PASS

☐ Delay Distance 0 mm

The right **Test button** can test whether the UV lamp is working properly. Click the **Test button** above, and the Upper UV lamp will light up; click the **Test button** below, and the Lower UV lamp will light up.

UV Lamp setting

Upper UV lamp Up disable, Down enable Test

Lower UV lamp Up enable, Down disable Test

b: Normal

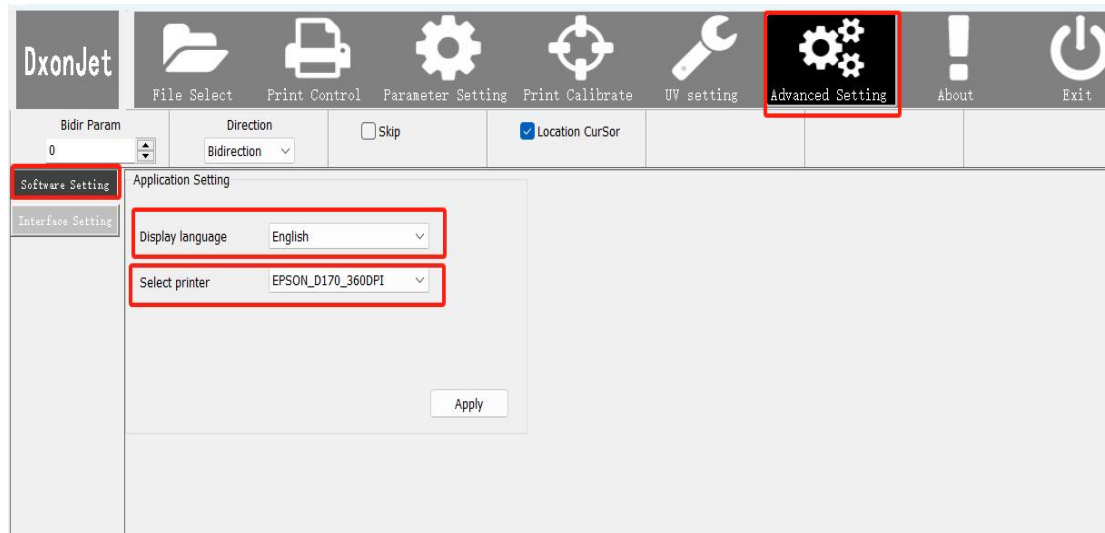
☒ Normal b

☐ Delay times 0 PASS

☐ Delay Distance 0 mm

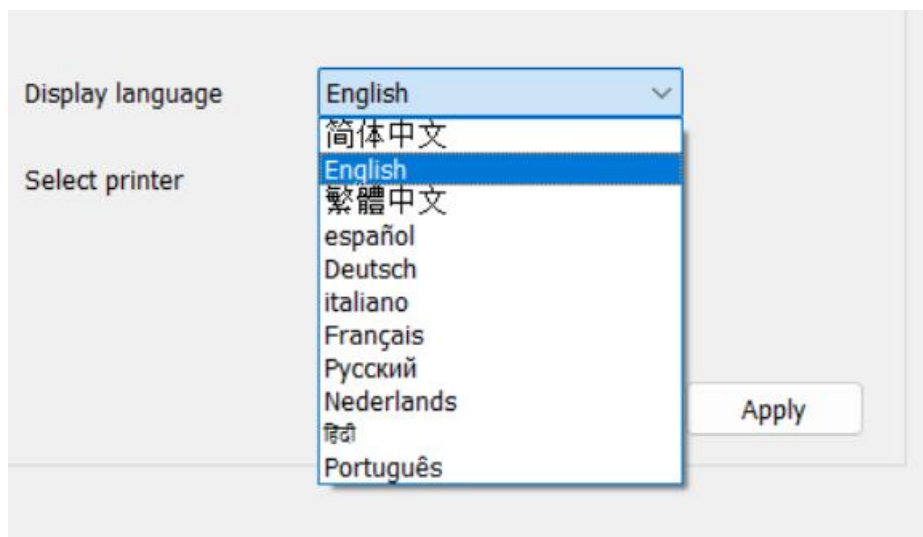
Here we choose Normal option, keep the others as default.

9: Advanced



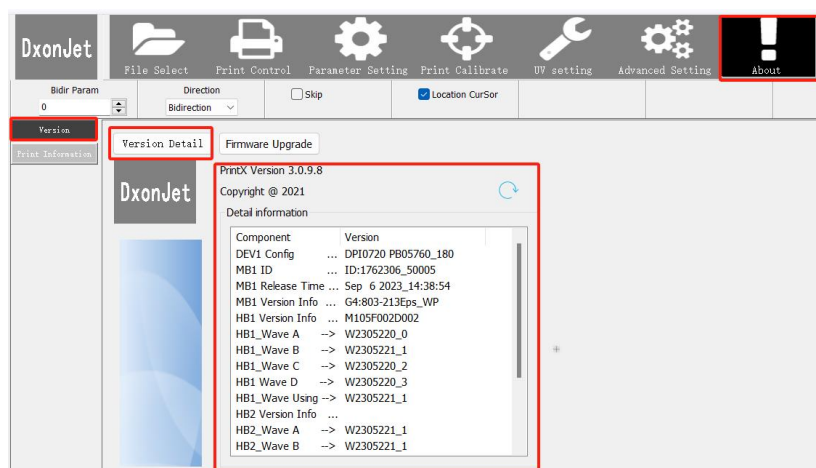
Software Setting: On this interface, you can select the language and machine model.

Display language: Click on the box on the right side and select the desired language.



Select printer: Keep it as default

10: About

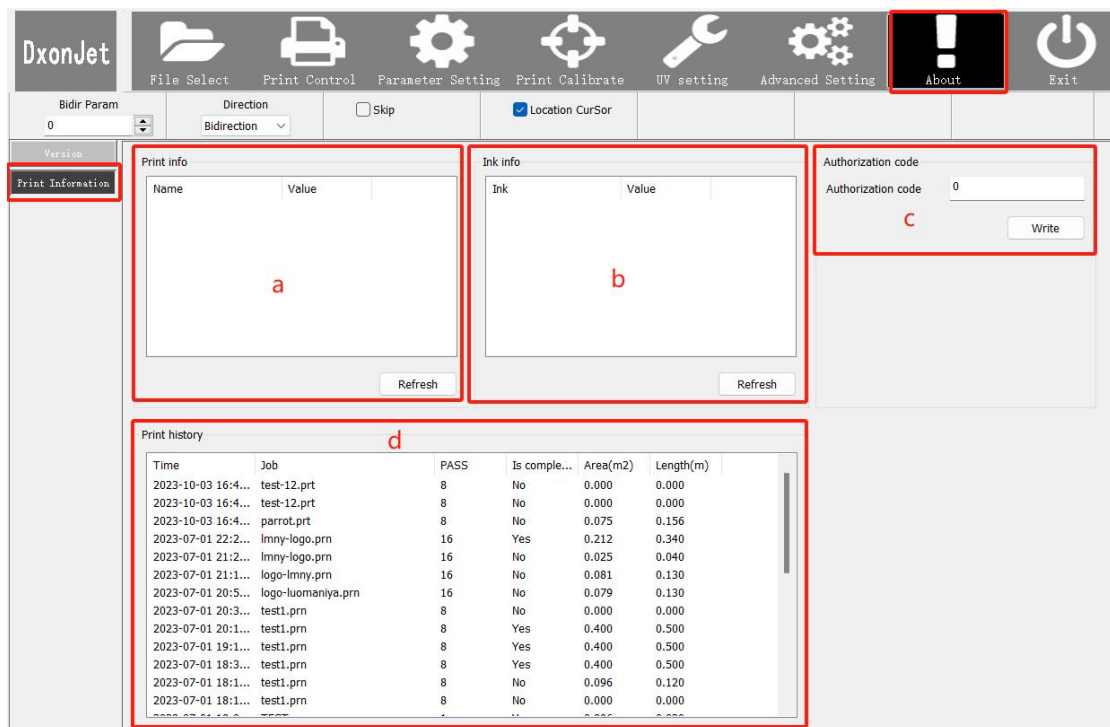


Version: Clicking this button will enter the software version information interface.
 Version Detail: Clicking this button will display the software information.
 Firmware upgrade: Clicking this button will enter the firmware upgrade interface.

If an upgrade is needed, please contact the after-sales support engineer:
support@dxonjet.com

Print Information: Here you can enter the printing information interface.

Print Information: Here you can enter the printing information interface.



a: Print info displays information about PRN or PRT files.

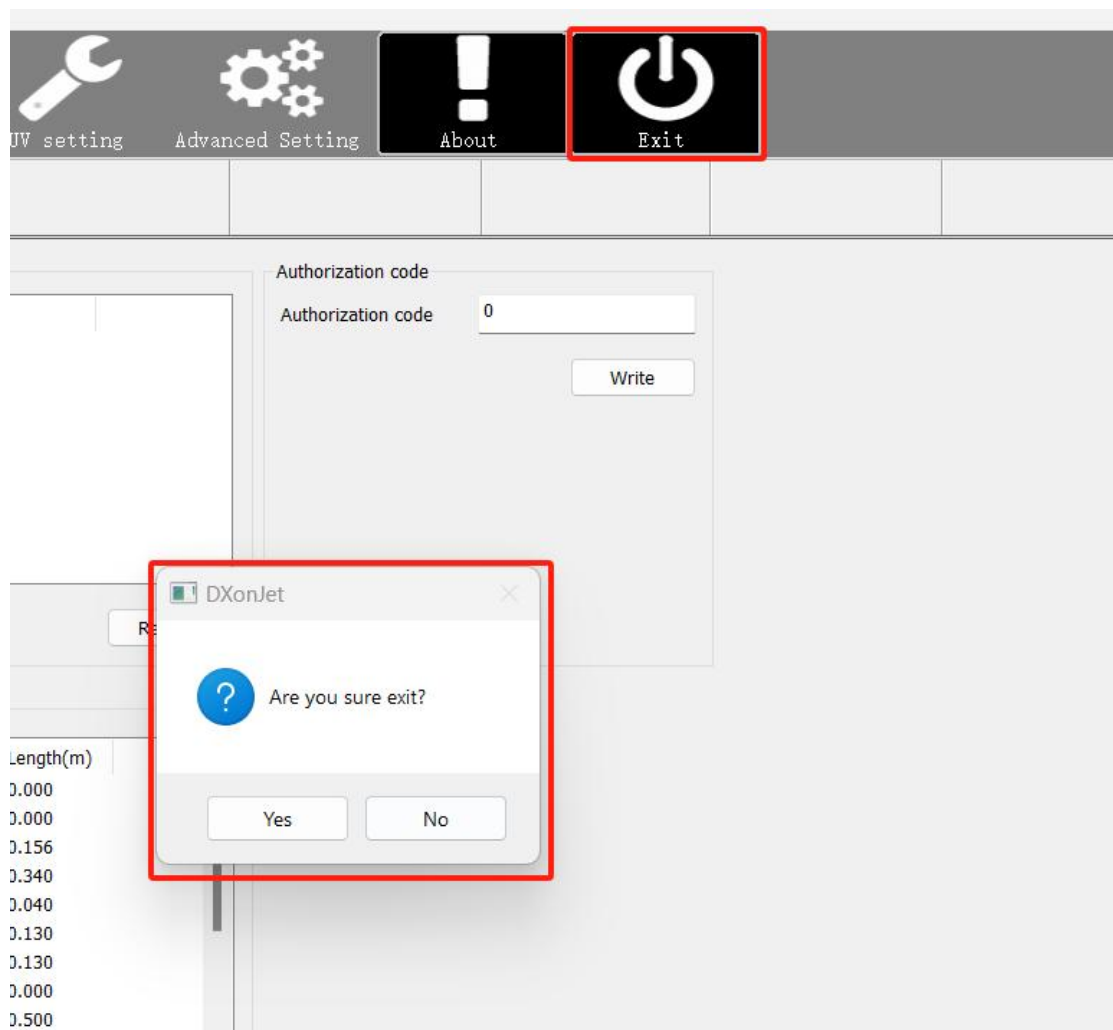
b: Ink info displays information about ink usage.

c: Authorization code is where you enter the installment password, keep it default.

d: Print history records the printer's history of printed information.

11: Exit

The exit button of the software, when clicked, will pop up a dialog box. If you want to exit the software, click Yes. If you don't want to exit, click No.



4 MainTop RIP Software Operation

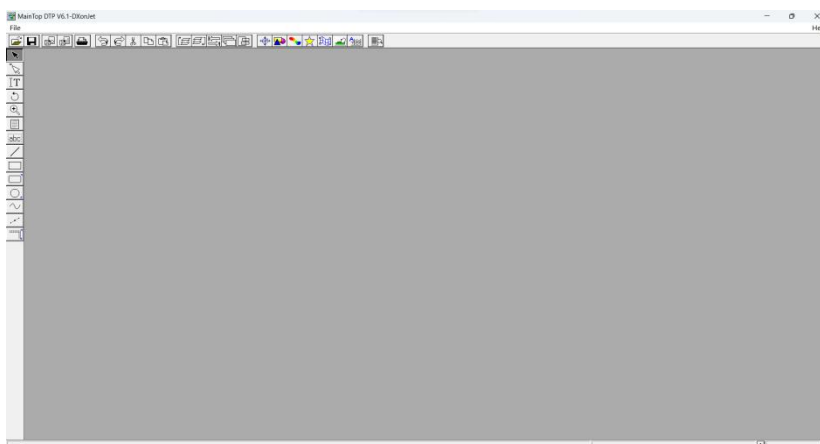
MainTop is a RIP (Raster Image Processor) software (color management software) that converts the pixels in an image into the ink distribution information required by the printer, so that the printer can print the image in the correct color order. Maintop supports image formats such as JPG, TIFF, BMP, PDF, etc. However, based on our experience, TIFF and JPG formats work best, and PDF files often experience parsing errors. So we suggest converting the image to TIFF or JPG format.

Before opening the Maintop software, we must connect the dongle to the computer.

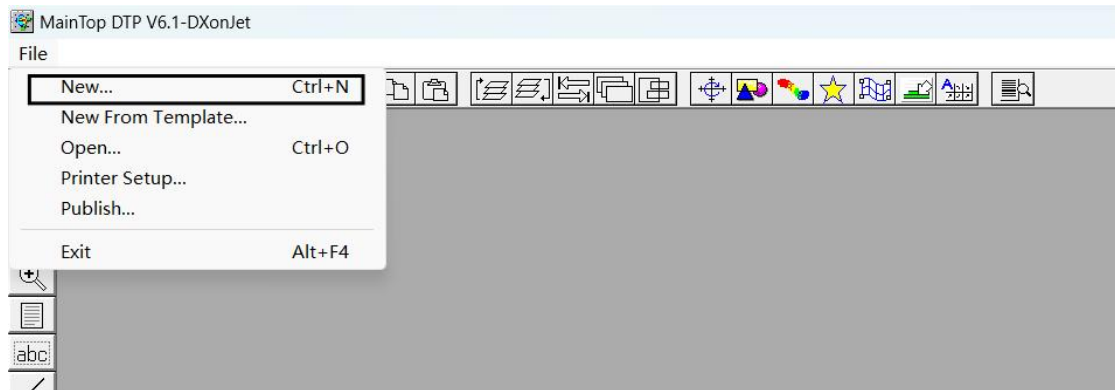
Note: not to unplug it during use. (Note that this is only a security token, not a USB drive).



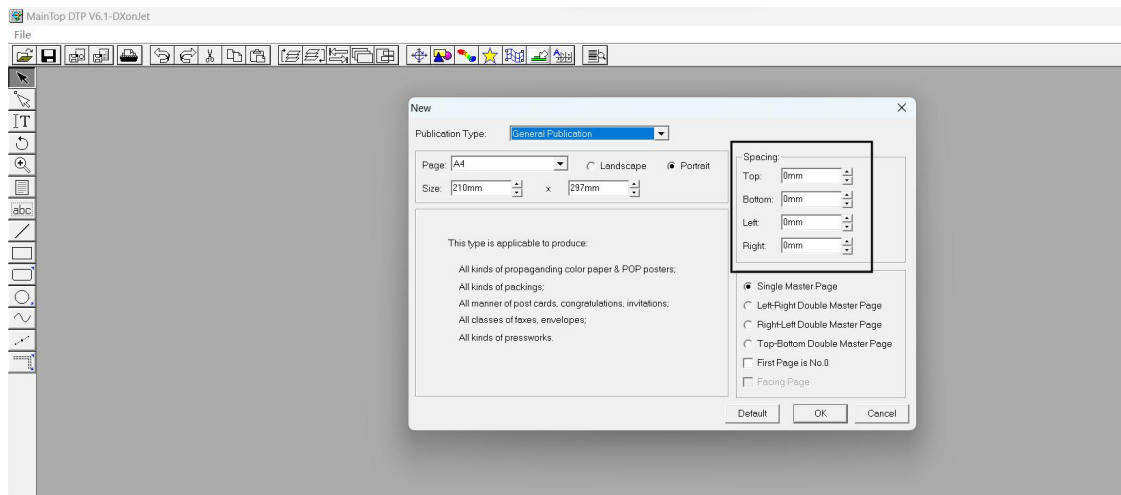
Double click on the Maintop icon ,The software will be opened. We will get the following interface:



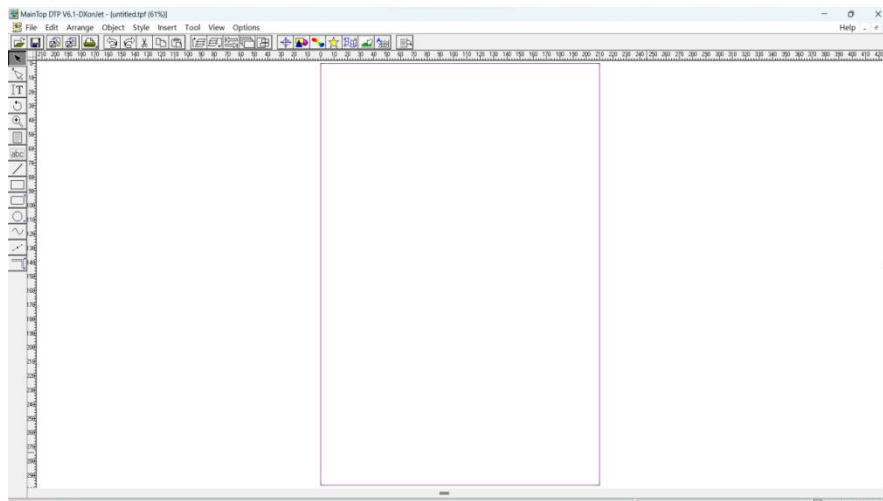
Click on the File menu in the upper left corner, and we will get the following pop-up window:



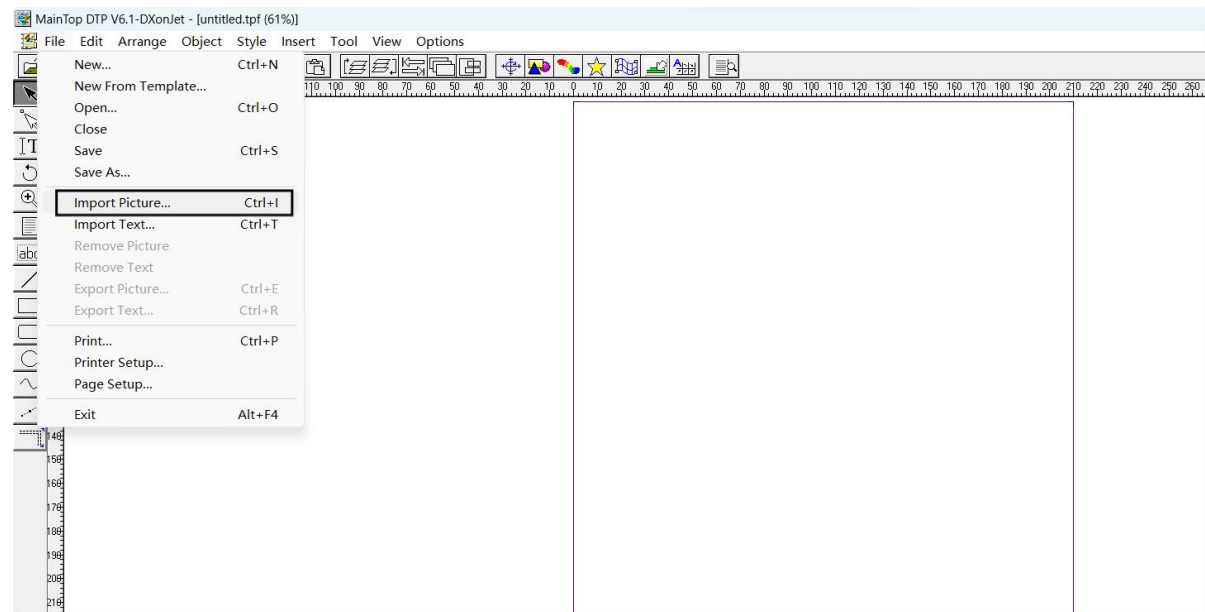
Select the first one: New... and we will get the following pop-up window:



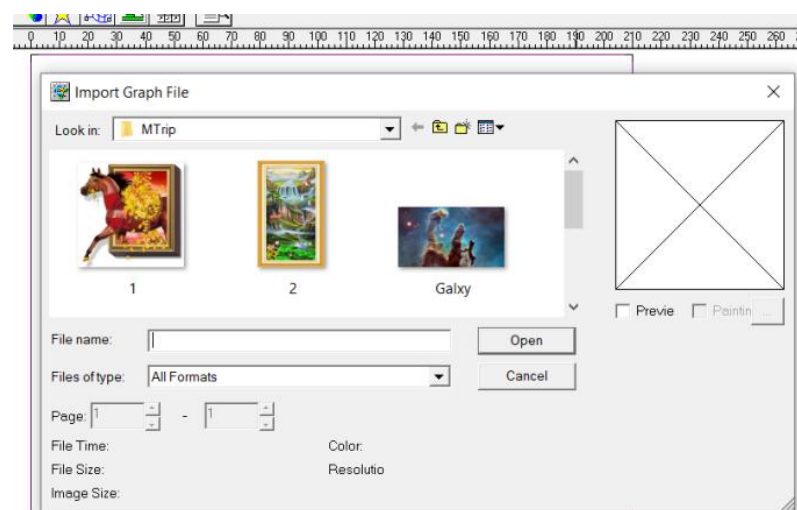
In this interface, we need to note that the four values (Top, Bottom, Left, Right) in the Spacing option in the upper right corner of the pop-up window must all be 0mm. If these four values are not 0, you need to modify them to 0. Other parameters do not need to be changed. Then click OK. Then we will get the following interface.



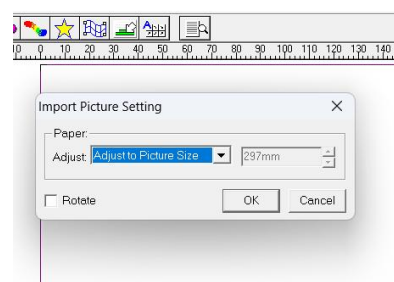
Click on the File menu in the upper left corner, and we will get the following pop-up window:



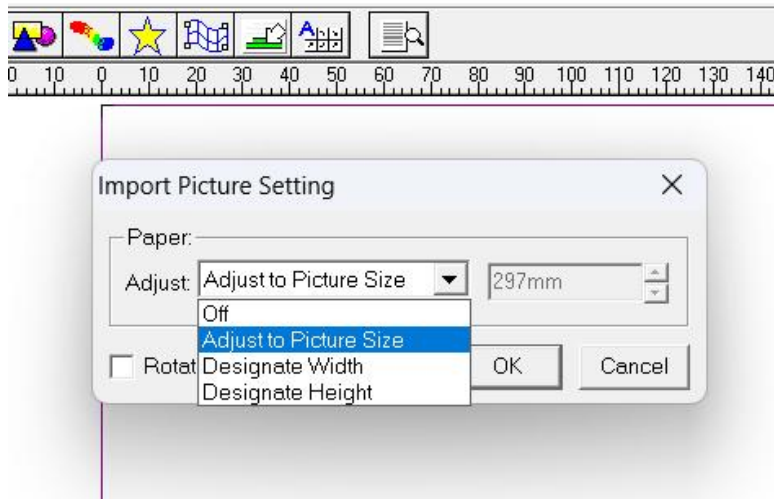
In this pop-up window, select Import Picture, and we will get the following pop-up window:



In the Look in option, we can find the location of the image folder, select the image you want to print, and open it. Then we will get the following pop-up window:



Then click on the triangle symbol in the Adjust option box, and we will get the following pop-up window:

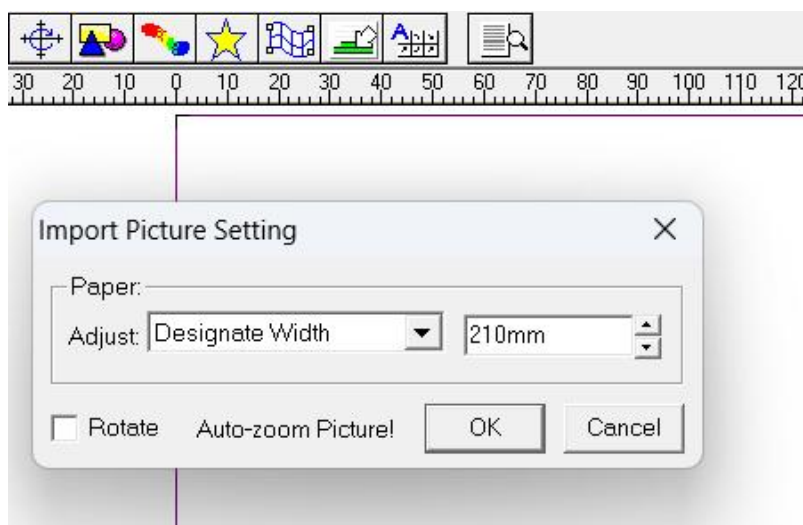


In this pop-up window, we have 4 options to choose from:

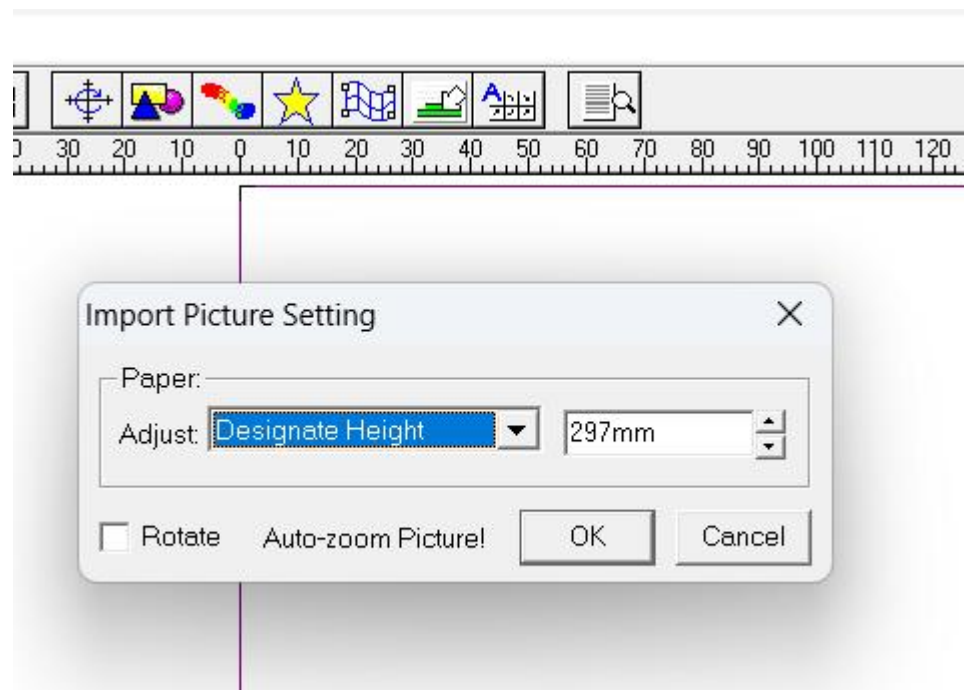
1. The first option is Off. Generally, we do not choose this option.
2. The second option is 'Adjust to Picture Size', which means selecting the size of the image itself as the printing size.

Explanation: Each image has its own size, and you can check the size of the image through professional design software such as Photoshop. Usually, we use professional image design software to design the image according to our requirements. During this design process, we will set the size of the image. If you need to print the same size as the image design, then choose this option.

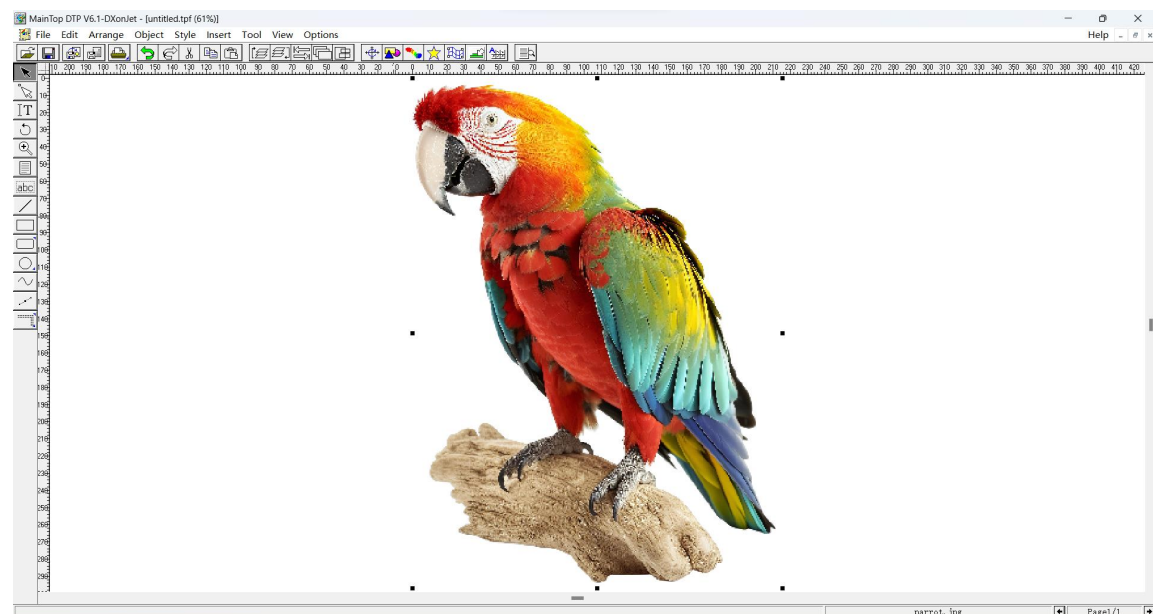
3. The third one: Designate Width means to specify the width size of the image, and the height size of the image will be automatically generated according to the proportion of the image. After selecting this option, you can enter the size in the box on the right side of the pop-up window. Please note that the size is in millimetre.



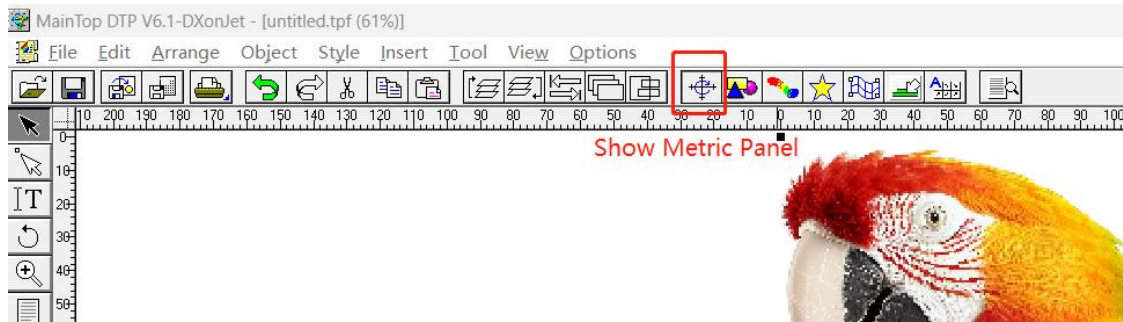
The fourth one: Designate High means to specify the height size of the image, and the width size of the image will be automatically generated according to the proportion of the image. After selecting this option, you can enter the size in the box on the right side of the pop-up window.



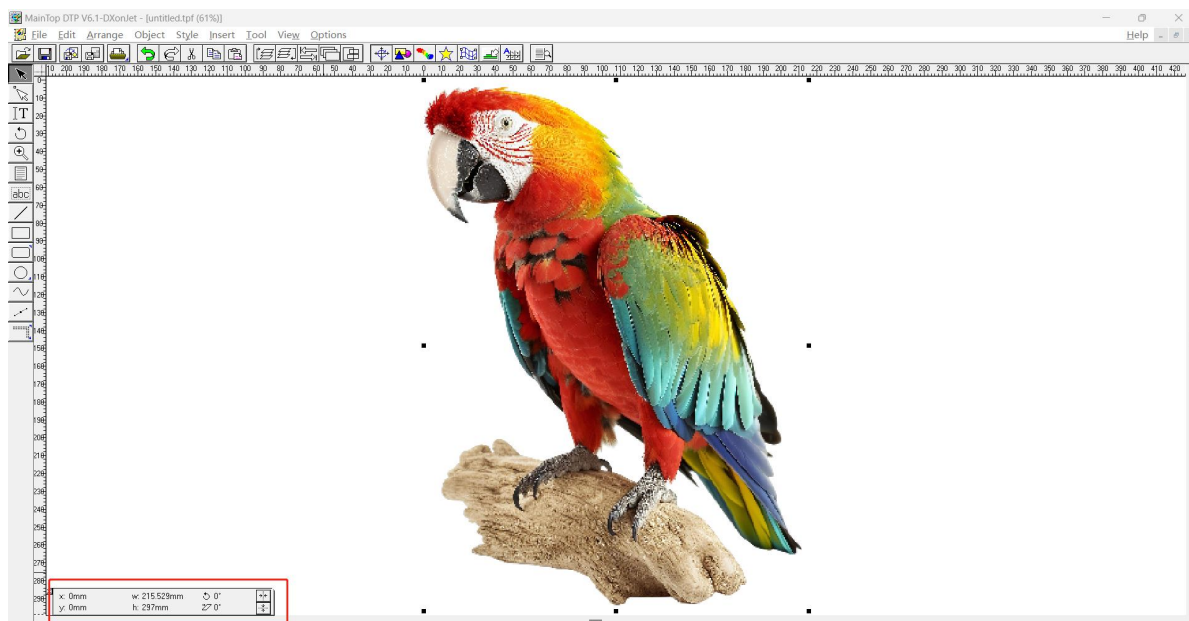
After selecting the options we need, click OK, and the image will be loaded into the software, as shown in the following figure:



Sometimes the image may appear a bit blurry, which is normal. Don't worry, it won't affect the print. Then we click on the Show Metric Panel button as shown in the following figure:



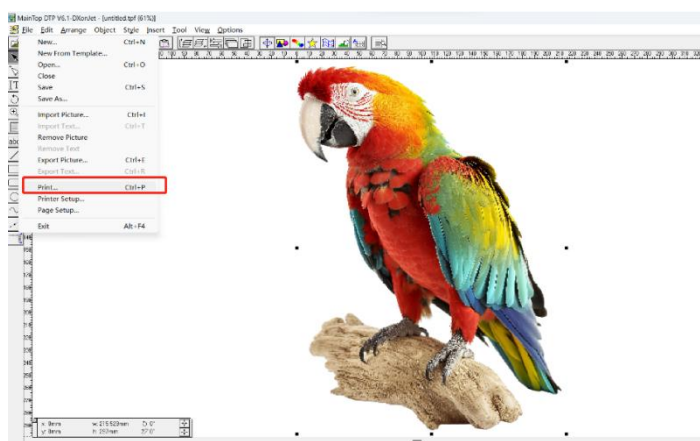
Then the size of the image will be displayed in the bottom left corner of the software:



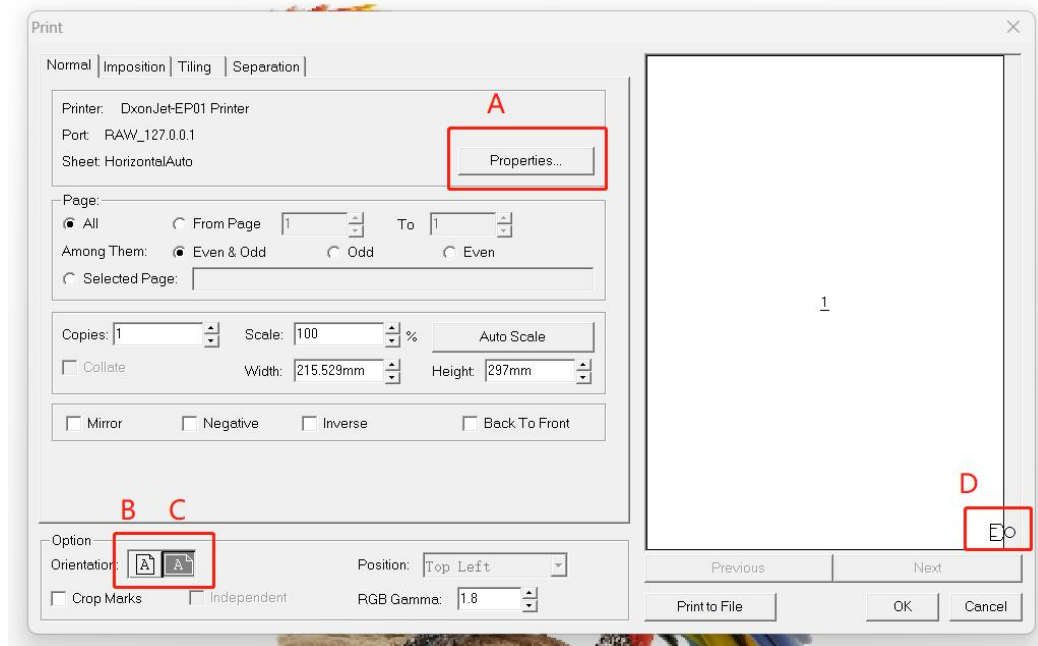
x and y are the coordinate positions of the starting point of the image, and generally they need to be 0.

W and H are the width and height dimensions of the image.

Then click on the File menu in the upper left corner of the software, and select “Print” in the pop-up window that appears:

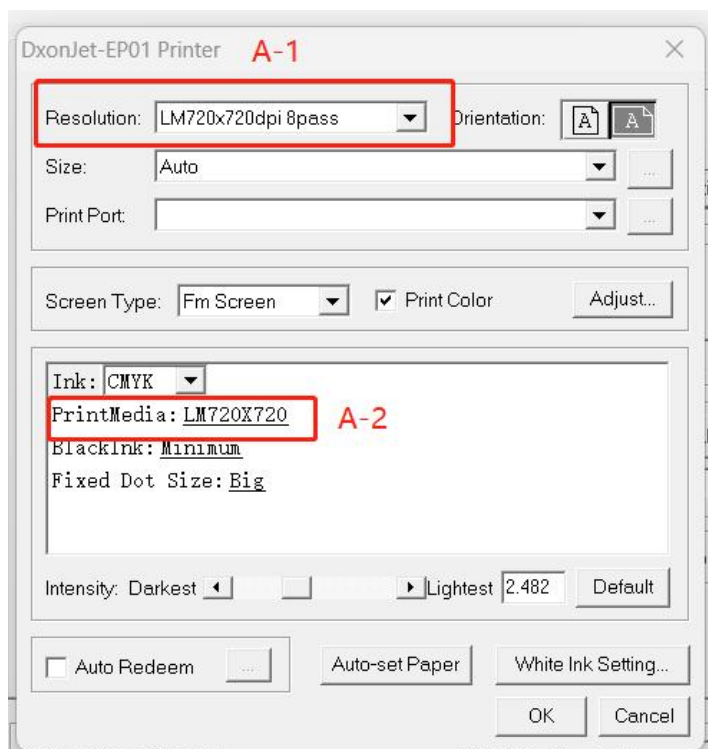


Then we will get the following pop-up window:

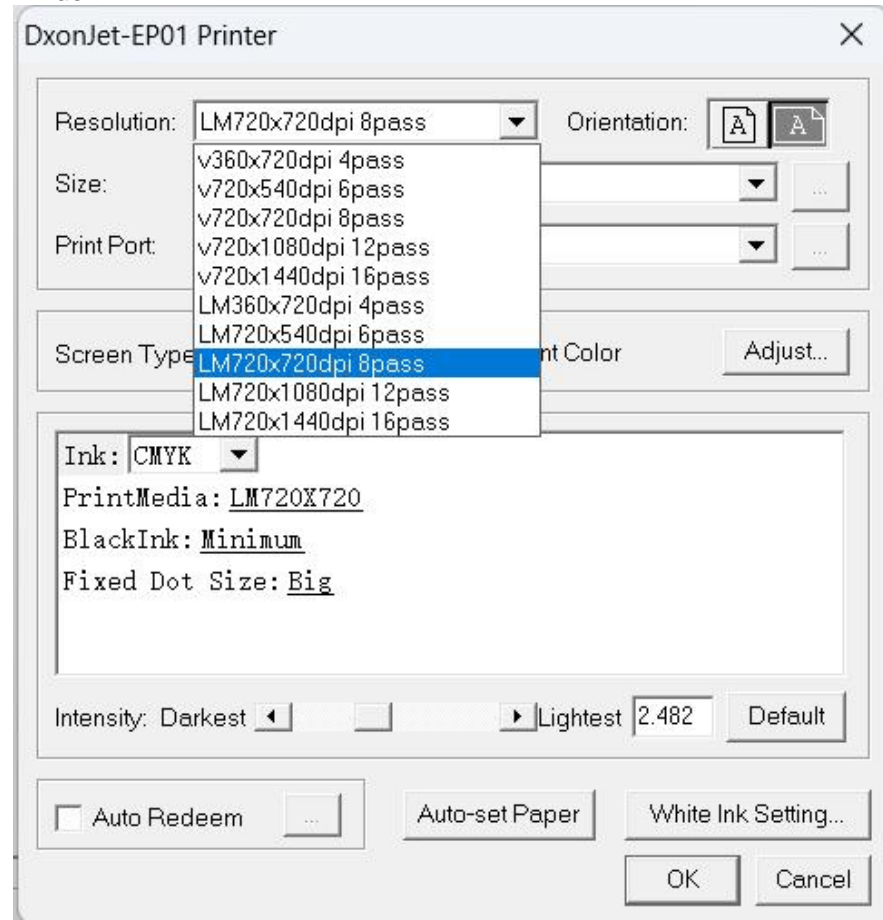


In this interface, we need to **note that the portrait icon in position D must be asleep**, otherwise the direction of the image we print is rotated by 90 °. The orientation of the portrait can be adjusted through the buttons in positions B and C.

Then we click on the Properties button in position A, and we will get the following pop-up window:

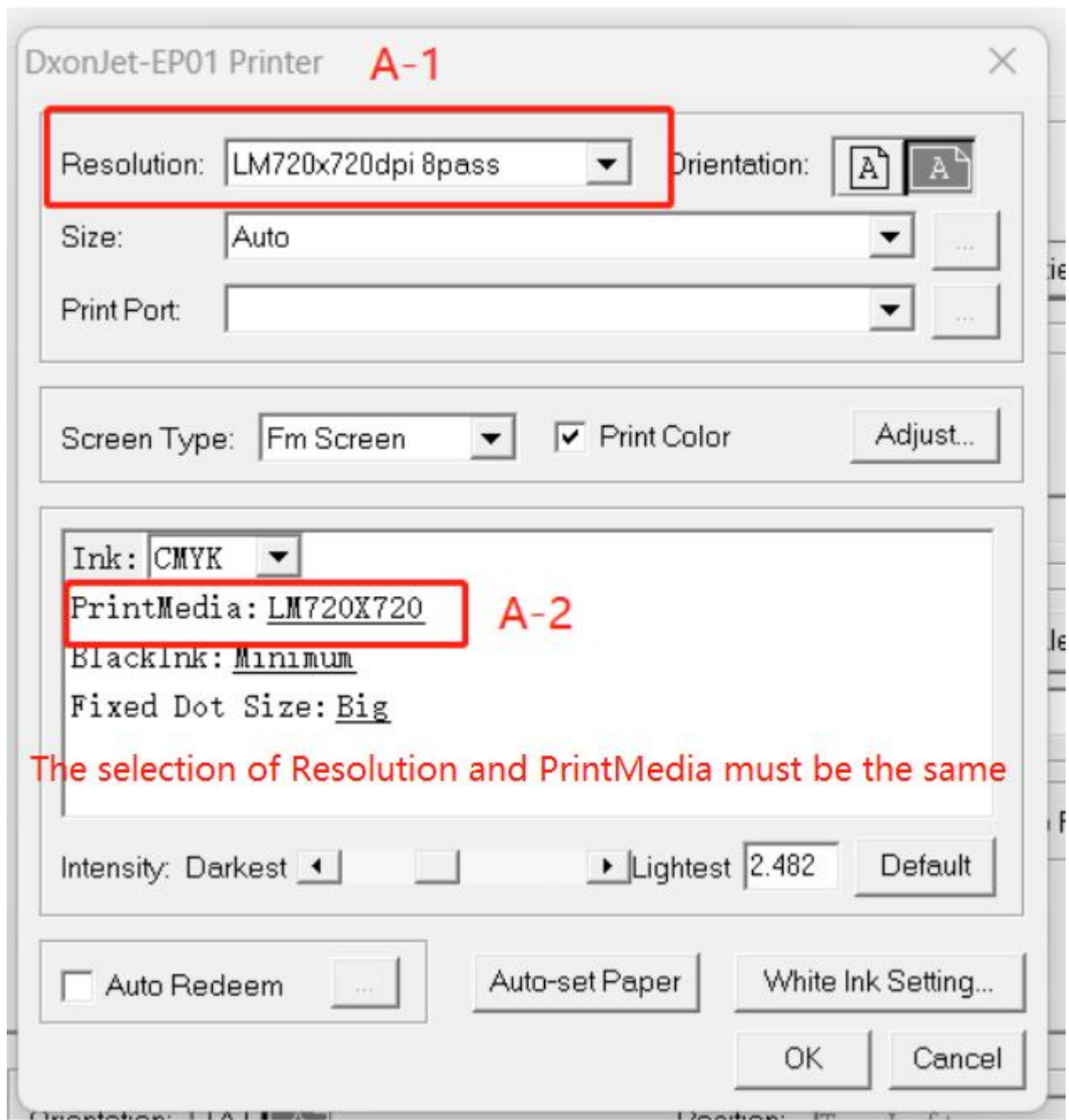


In this interface, we can set printing resolution, white ink settings, and so on. Firstly, if we click on the option at position A-1 (Resolution), we will get the following pop-up window:

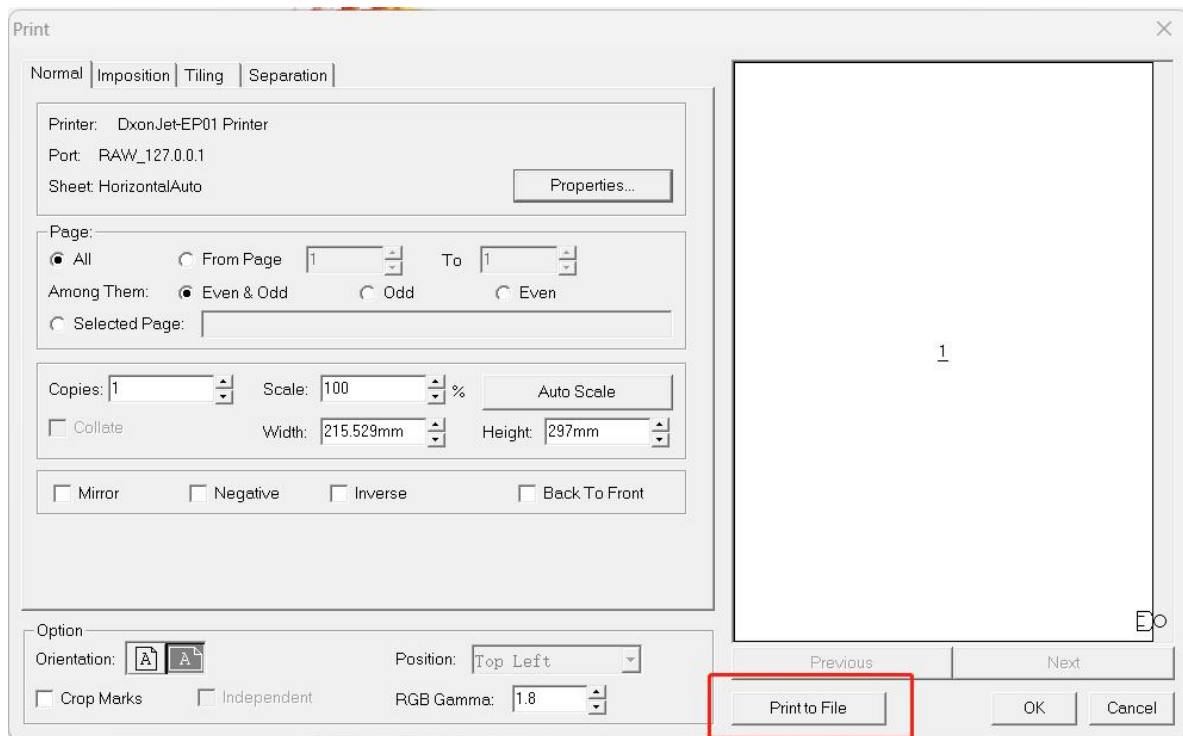


In this pop-up window, we can choose printing resolution. Generally, we choose the option starting with LM, which is more suitable for wall printers. The higher the printing resolution value, the better the printing effect, but the slower the printing speed. In general, we recommend using LM720x720dpi 8pass, which can meet most printing resolution requirements while also taking into account printing speed.

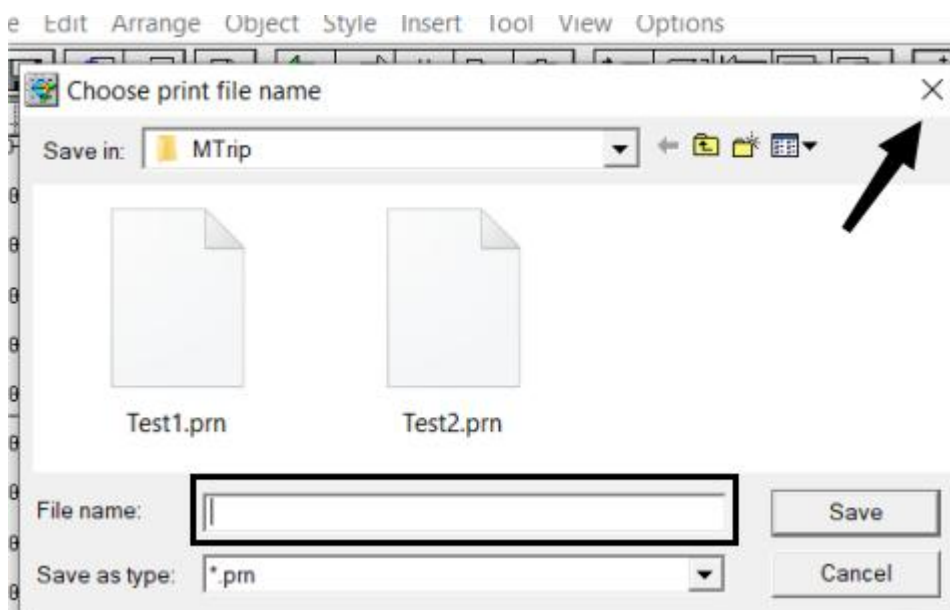
Note: After selecting the printing resolution in the A-1 (Resolution) option, it is important to select the same resolution option in the A-2 (PrintMedia) option, otherwise it may result in incorrect color output for printing.



Keep other settings as default. After setting the printing resolution, click the OK button and you will return to the Print option pop-up window.

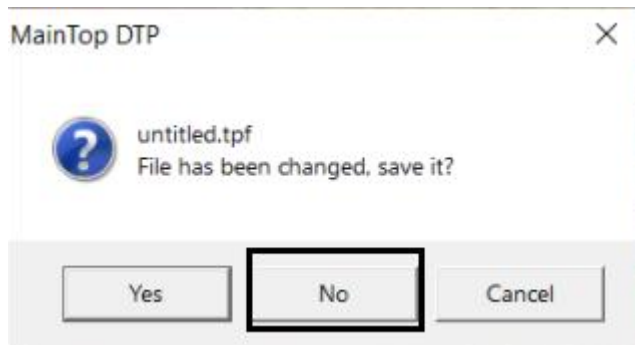


Then click the Print to File button, and you will receive a pop-up window to save the file:



In the Save in option, we define the storage location for the file. Then you need to give the new PRN file a name and enter a name in the File name option. Then click the Save button to save it.

Finally, you need to close the software. When you click the X button in the upper right corner of the software, the software will prompt a pop-up window:



In this pop-up window, always select No so that it does not change the original image.

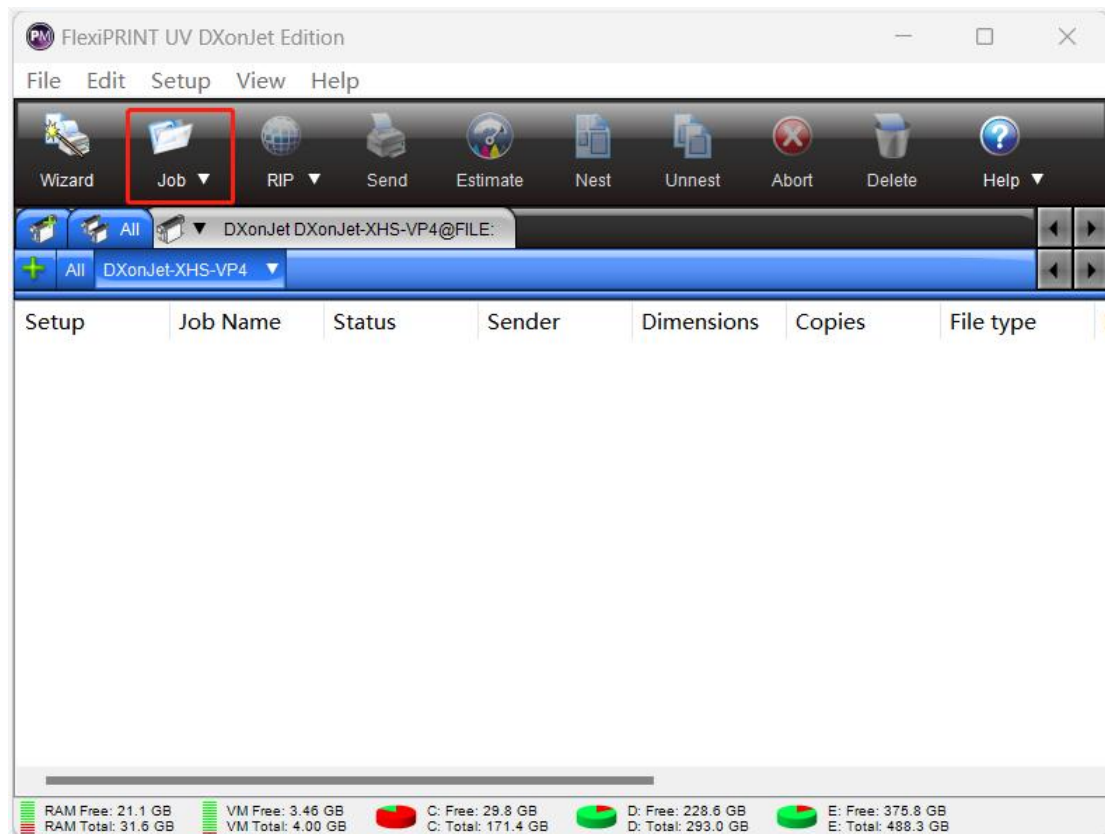
5 FlexiPrint RIP Software Operation

FlexiPrint RIP software is a very popular RIP software developed by the American software company SAI. It uses ICC Profiles calibrated by Sai engineers to provide high-quality color conversion and printing effects. If you have purchased this software, you can refer to the following operating methods. Please note that this is an optional product.

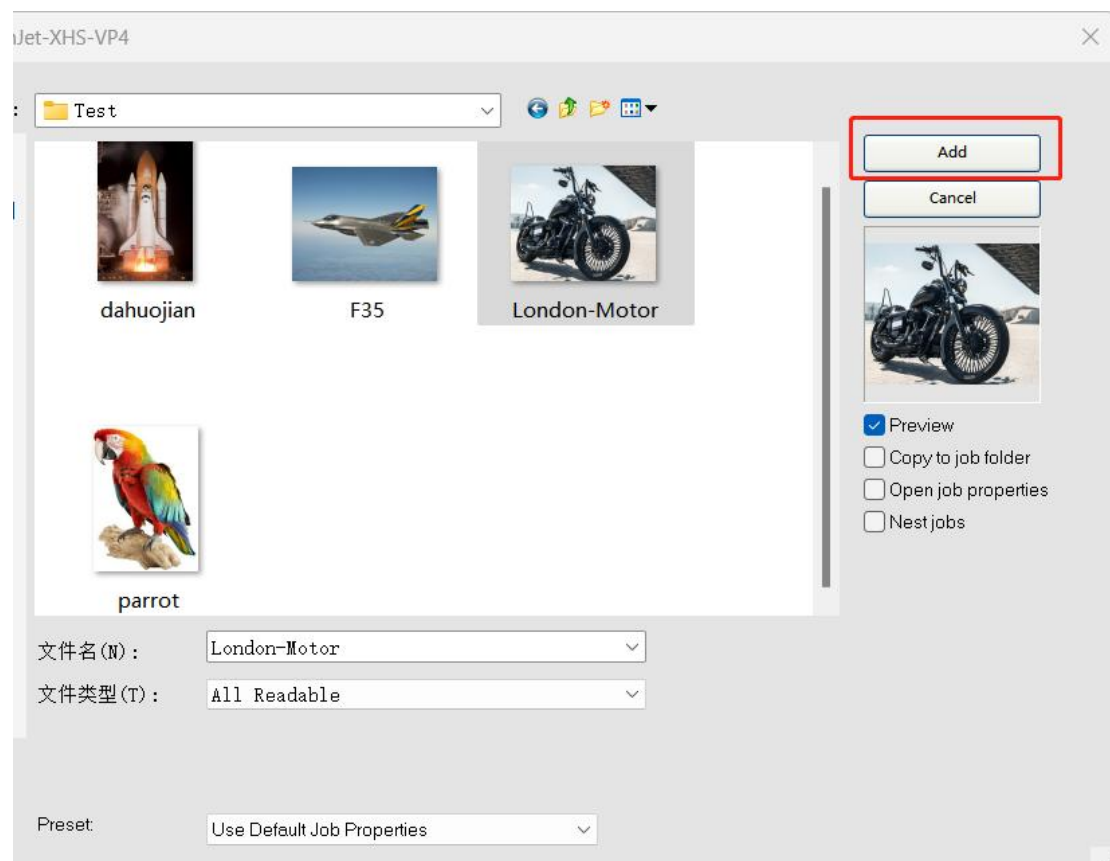
FlexiPrint supports various image formats such as JPG, TIFF, PNG, BMP, and PDF. Before using this software, you need to connect the Dongle to your computer and keep it connected while using the software. It is important to note that the Dongle is only a USB Dongle and cannot be used as a USB drive. Some versions of FlexiPrint software are serial number versions and do not require a Dongle. Please make sure to confirm which version you need before purchasing. Also, each software Dongle is unique, so be sure to keep it safe.



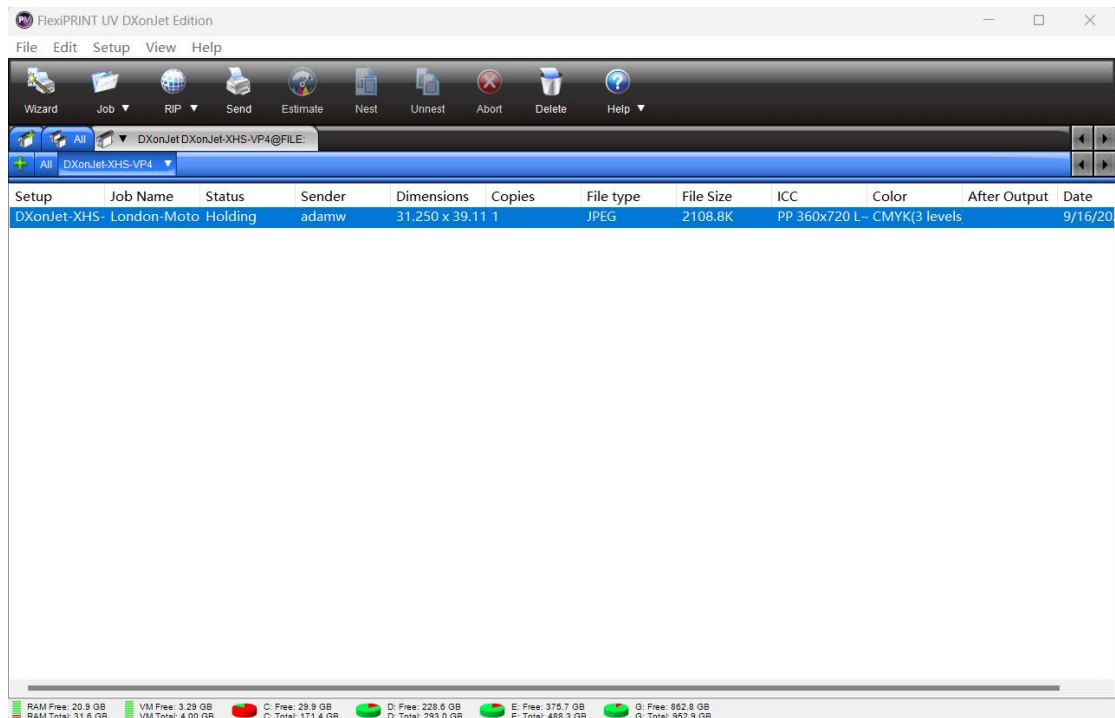
Double-click the FlexiPrint icon, and the software will be opened. We will get the following interface.



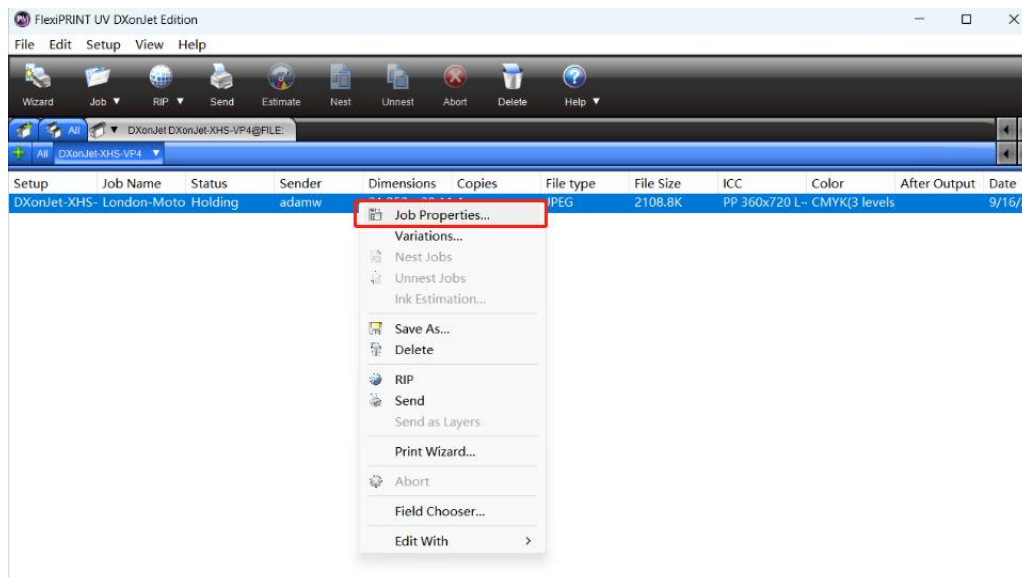
Click Job, and we will have the interface:



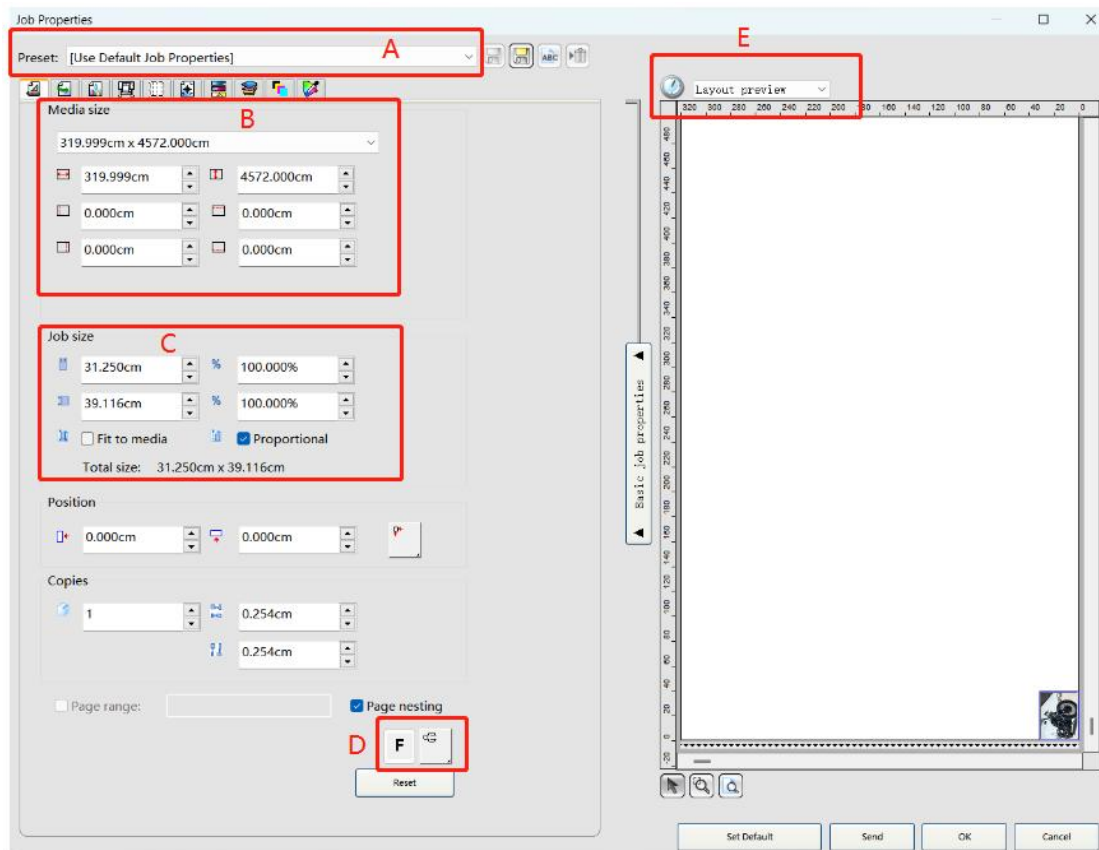
On this page, you can select the images you want to print and click the "Add" button. Next, the system will display the following interface:



Choose this task and click the right mouse button (or press and hold for 2 seconds if using a touch screen computer) to see the interface below.



Double click "Job Properties"



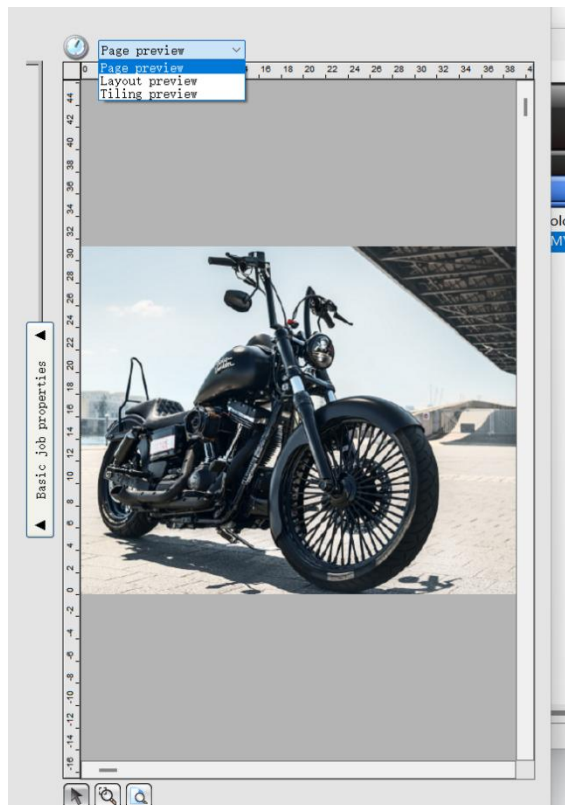
A: Please note, select the [Use Default Job Properties] option in the Preset menu. This is usually the default setting. However, sometimes this option may be changed due to incorrect operations. Please check this option every time you enter this interface.

B: Media size is the default setting and does not need to be changed. Please keep it as default.

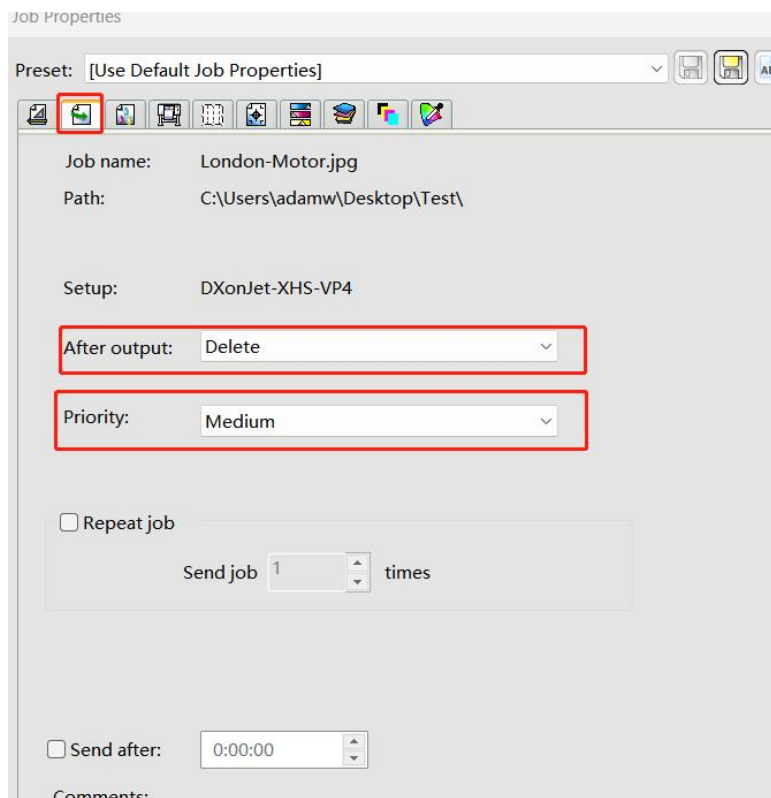
C: Job size refers to the print size of the image, and you can fill in the desired size in the box. If you use the proportional scaling function, when you enter the height or width, the width or height of the image will automatically scale proportionally.

D: Please remember this option, when using the wall printer, the direction of the task icon should be like this.

E: This menu has 3 options, usually we choose the first option (Page preview), so the image will be larger and easier for us to view. Look at the picture below.



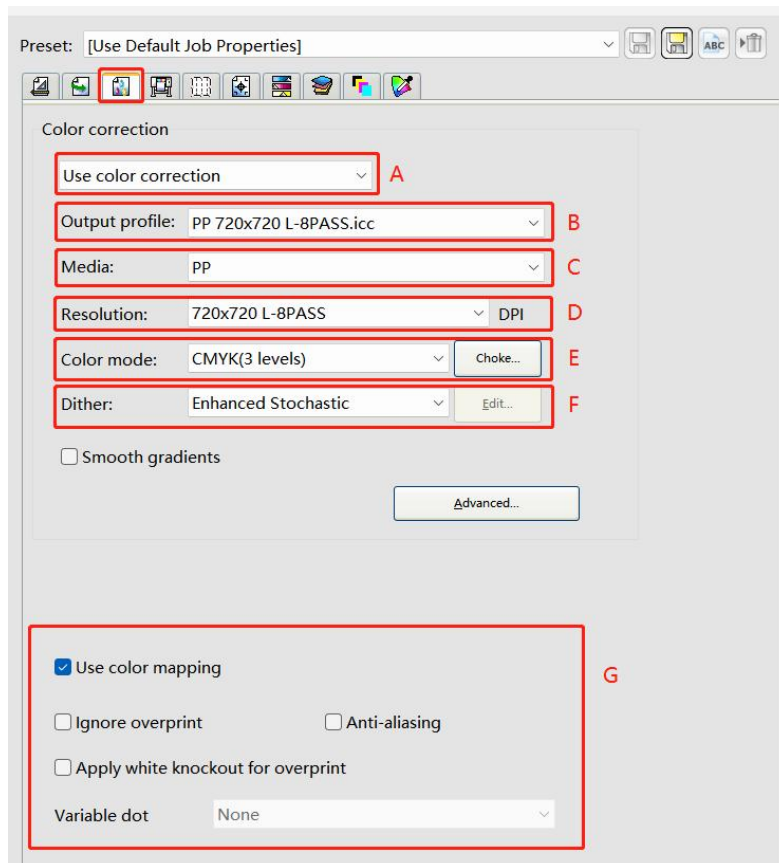
The second Page(Workflow):



In the “After output” option, you can choose “Delete” or “Hold”, which means whether to delete the imported images or keep them after completing the prt file production.

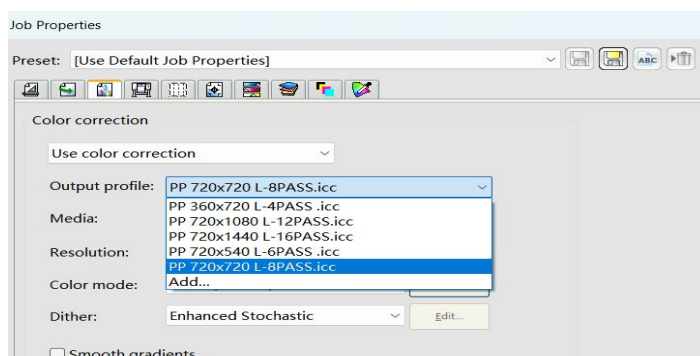
In the “Priority” options, it is generally recommended to keep the default selection of Medium.

The Third Page(Color Management)



A: Select the option: User color correction

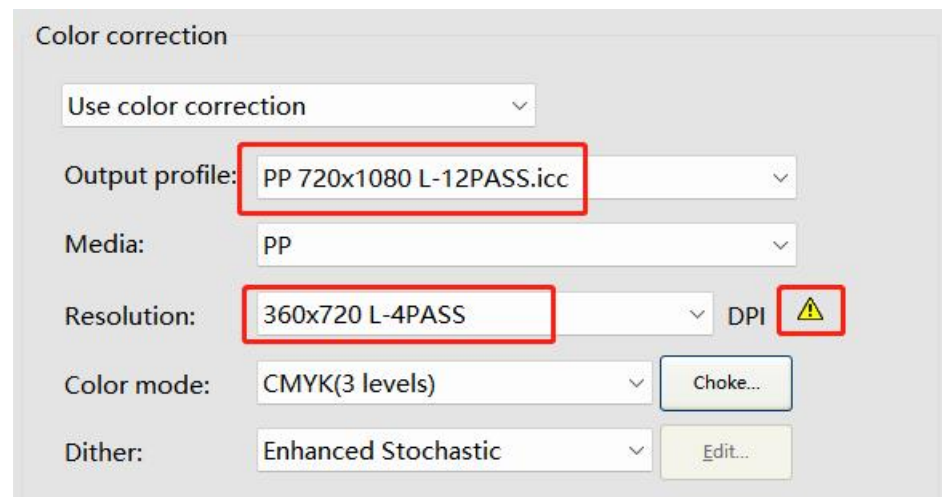
B: Select the “Output profile”, where we can select the printing resolution as shown in the following picture:



Here we can choose the printing resolution, with a minimum of 360x720 (4PASS) and a maximum of 720x1440 (16PASS). The higher the printing resolution, the better the printing effect, but the slower the printing speed. In general, we recommend using 720x720 (8PASS), which balances printing quality and printing speed. Note that after you make your selection here, the D Resolution option will also automatically change.

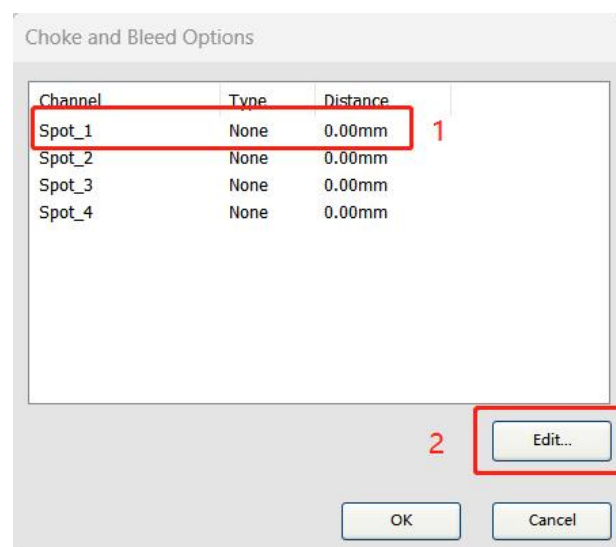
C: Keep it default

D: The Resolution option will automatically change according to the options selected in the 'B Output profile', so there is no need to adjust it separately. If an error occurs, it will give a yellow triangle warning, as shown in the following image:

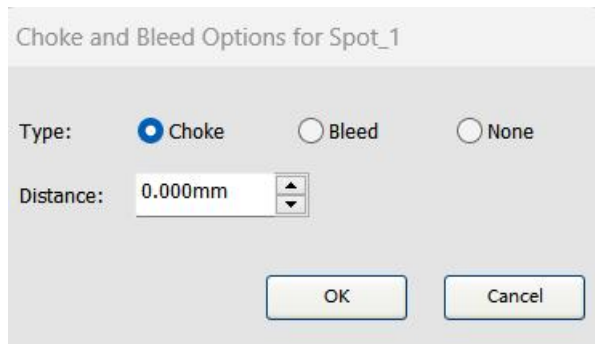


E: Keep it as default: CMYK(3 levels)

In this option, there is a choke button (note that this function is only effective when preparing to use white ink for printing, and it is generally not necessary to use it). Clicking on this button can control the variation of white ink at the edges of the image, as shown in the following figure:



Select Spot_1, and click Edit, we will have the interface:



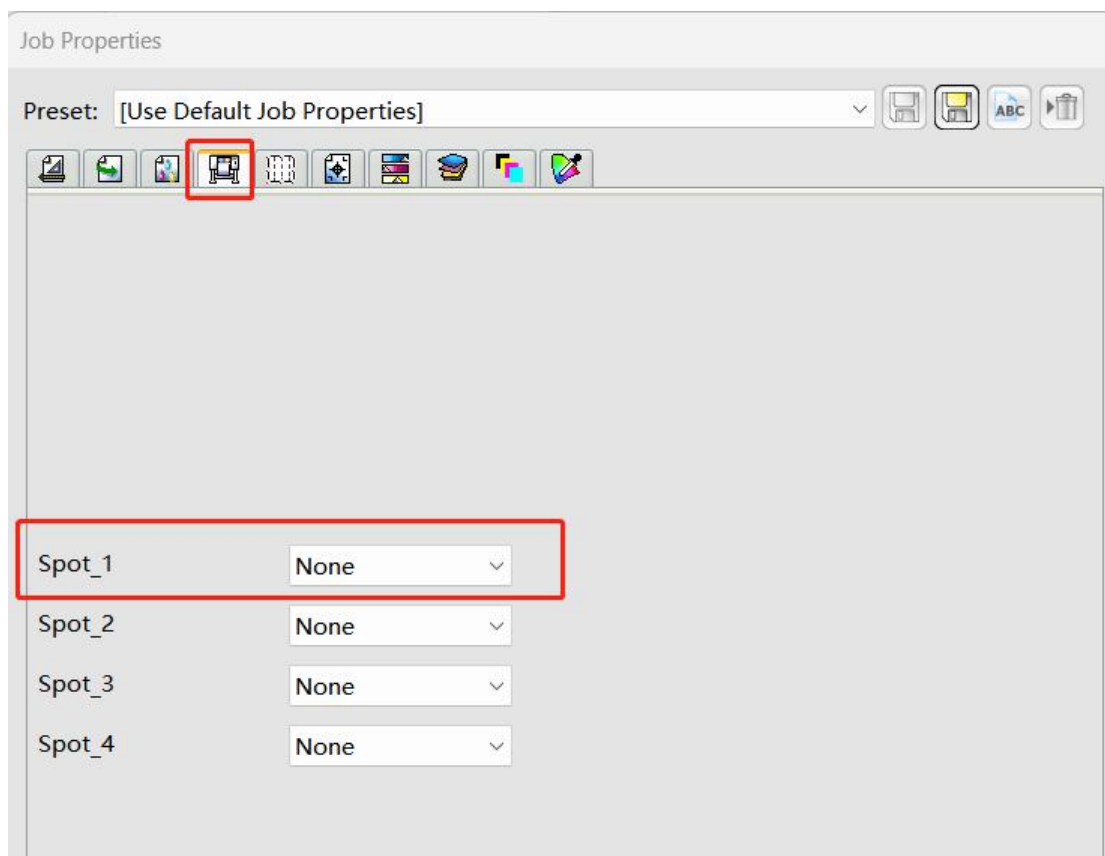
Choke: White ink that will shrink the edges of the image

Bleed: White ink that will spread to the edges of the picture

F: Keep the option as default

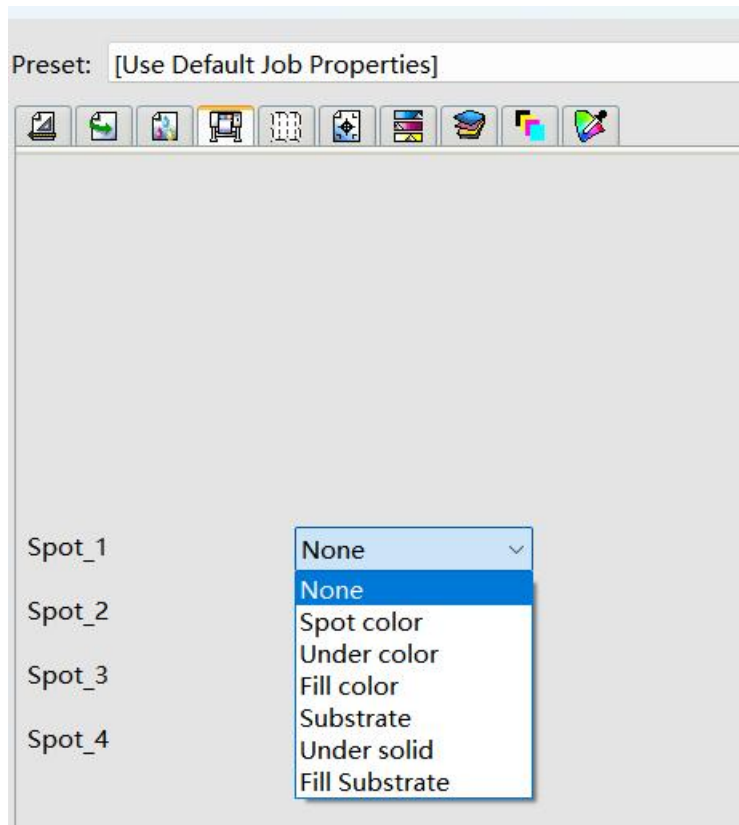
G: Keep the option as default

The fourth Page(Printer Options)



The main function of the “Printer Options” is to select the usage method of white ink. Please note that for the Wall printing, only Spot_1 is valid, the others are invalid and do not need to be adjusted.

Select Spot_1, we will have the interface:



If there is no need to print white, select “None”

And about the other options:



Note

Because the white color cannot be viewed in this document, black color is used to replace the white color. This means that the black parts in the image below are where white ink should appear.

None: Turn off white color

Spot Color: Regarding Spot color Option, will provide a detailed explanation later. Before using this feature, you need to add a spot color channel to the image in Photoshop software.

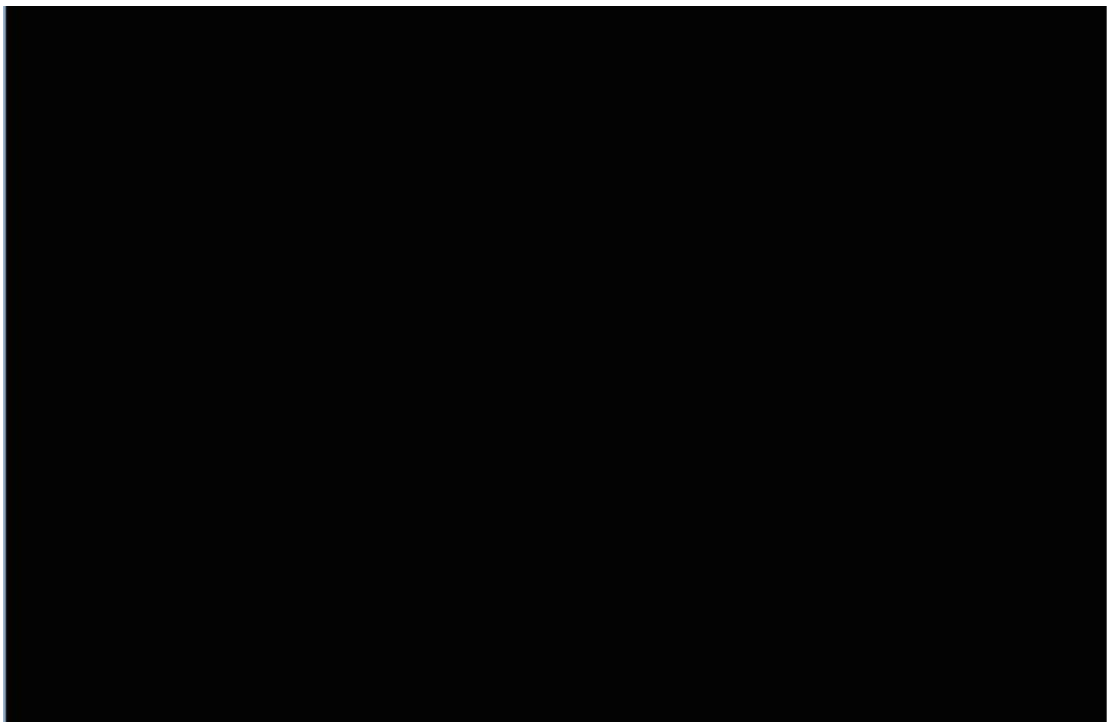
Under color: Output white according to color depth



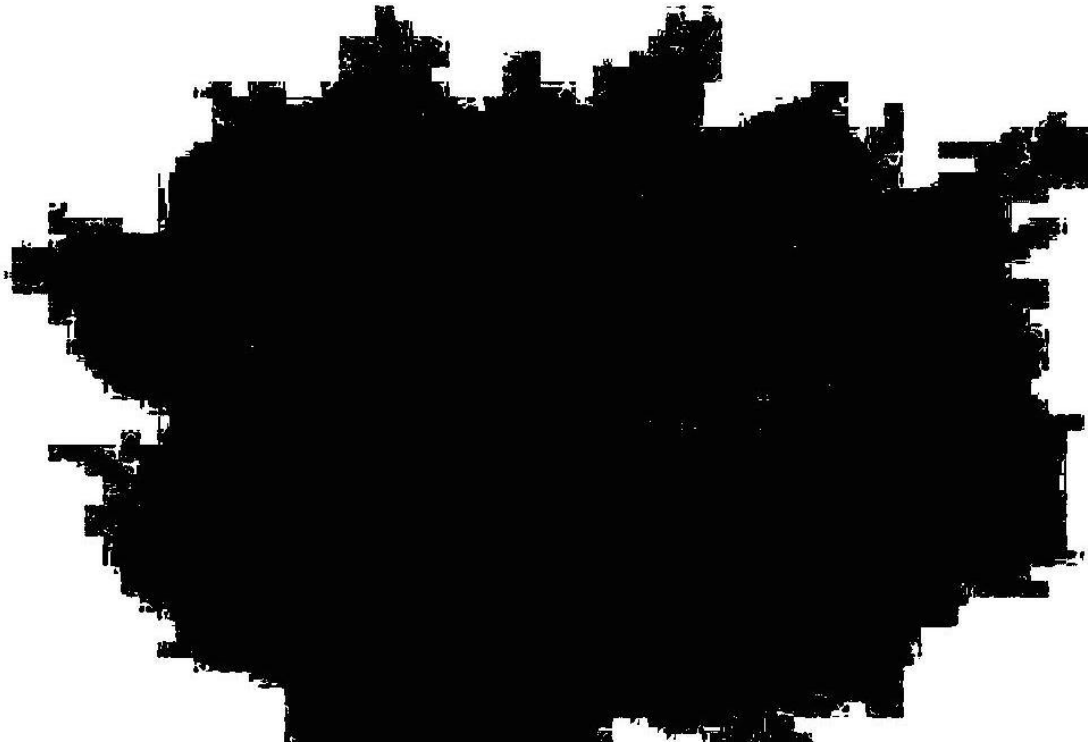
Fill color: Output white in inverse according to color depth



Substrate: Full white output



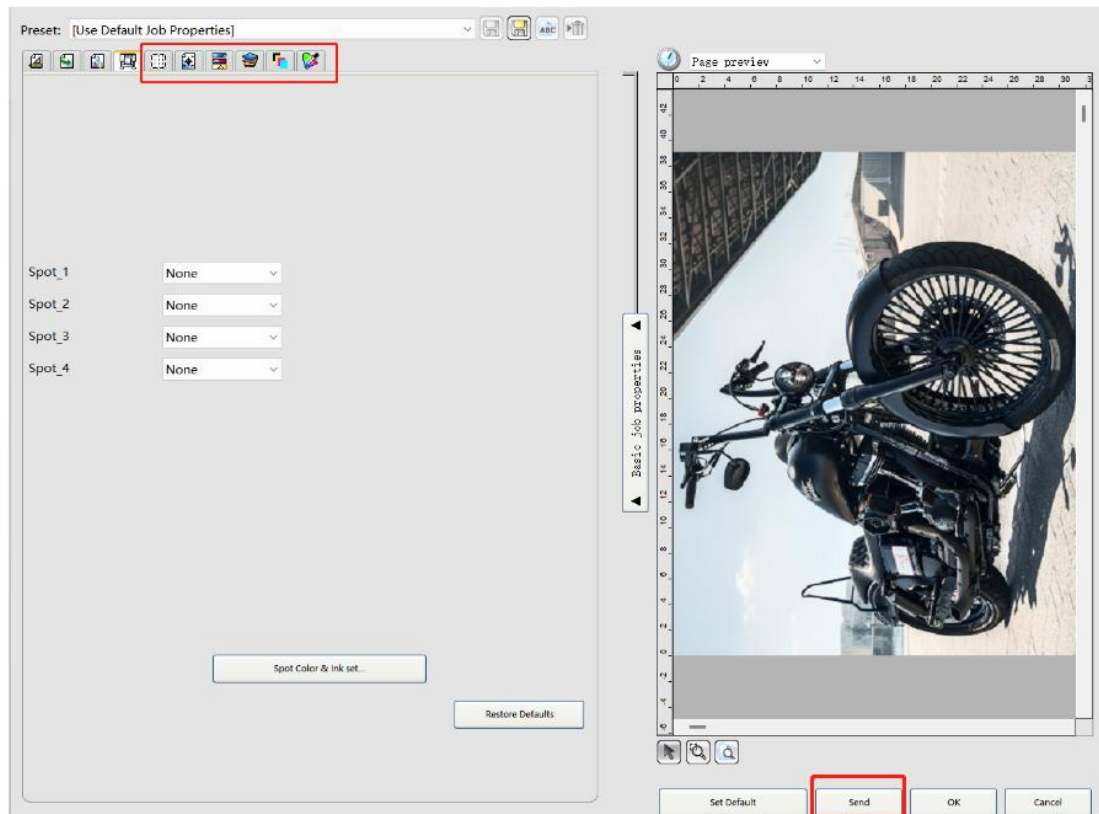
Under solid: 100% output white in colored parts



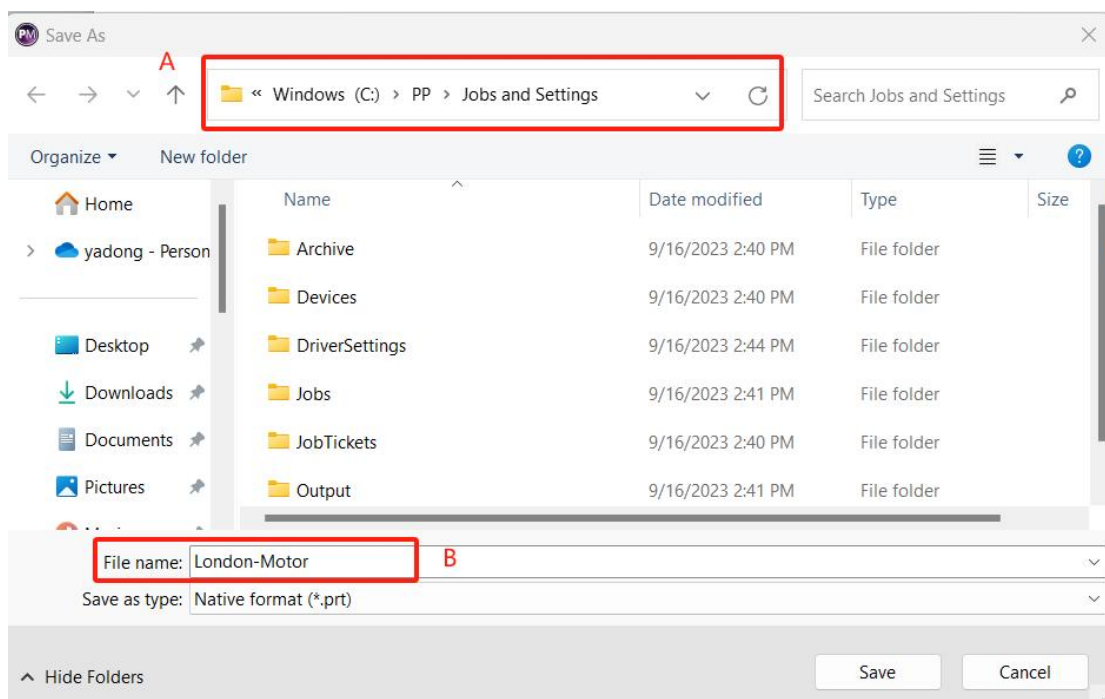
Fill substrate: Output white in inverse according to color depth in colored parts:



Generally, we often choose a suitable option from under solid, Substrate, and Spot color for white printing.



Keep the parameters of these 6 options as default, then click Send, and save the prt file.



At position A, you can change the location where the file is saved. Please remember the file's location. At position B, you can change the file's name. Please remember the file's name.

6 Maintenance

6.1 Regular cleaning/ checking tasks

1. Cleaning the UV lamps surface

The power of the UV lamp may weaken due to surface dust or ink powder coverage, and regular cleaning is recommended. The cleaning method is to wipe the UV lamp head with a wet non-woven cloth, and it can only be used after it is dry.

2. Maintenance of the guide rails

Accurate vertical movement of the print head kit is crucial for print quality. Maintaining lubrication on the vertical guide rails can help ensure smooth movement. The maintenance method is to apply mechanical lubricant oil to the guide rails regularly.

6.2 Maintenance of the print head

1 Storage printer

Place the printer in a cool and shaded area where it is not exposed to direct sunlight. It is also important to always cover the ink pump box over the print head. This will prevent the ink on the print head surface from curing and damaging the print head.

2 Maintain the print head

The key to maintaining the print head is to keep it moist, prevent ink from drying or curing on the surface of the nozzle, and prevent the ink inside the nozzle from drying and clogging.

3 Travel Model for automatic maintenance

If you are unable to operate the machine for more than 3 days, it is recommended that you keep the machine in standby mode and enable the travel mode.

1. Turn on the machine power and computer
2. Turn on the ink pump box switch
3. Click the "Travel mode" button



Not activated



Activated

The ink pump box will automatic process the first maintenance program.

1. 5 seconds-Pumping Ink
2. 5 seconds-Holding
3. 5 seconds-Pumping Ink
4. 20 seconds-Holding
5. 5 seconds-Cleaning Printhead

!!! Do not take down the ink pump box. As the printer will proceed this program every 48 hours.

48 Hours Circle of Auto-Maintenance Process

- 5 seconds-Pumping Ink
- 5 seconds-Holding
- 5 seconds-Pumping Ink
- 20 seconds-Holding
- 5 seconds-Cleaning Printhead



4 Regular Maintenance

It is recommended that you turn on the machine every three days and perform a nozzle check and test print to see the status of the print head.

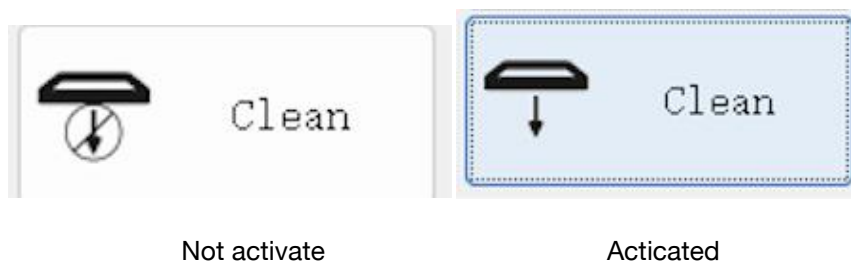
1. Make sure the ink pump box is connected with the print head, and turn on the switch



2. Click the pump button in the control software. PUMP starts to work, when the ink comes out, wait for 5 seconds, then click the button again and stop PUMP.



3. Waiting for 10 seconds
4. Start PUMP works for 5 seconds, then stop PUMP
5. Waiting for 10 seconds
6. Then start PUMP works for 5 seconds, then stop PUMP
7. Wait 20 seconds
8. Then start Clean work for 5 seconds, then stop Clean. (Cleaning process is for cleaning the ink between printhead and cap, in order to ink leaks when you take down the ink pump box)



9. Waiting for 20 seconds, then remove the Ink PUMP BOX

5 Check the condition of the print head

1. Take down the ink pump box.



Locked



Unlocked

2. Prepare the Lint-free cloth and Distilled water



WARNING !

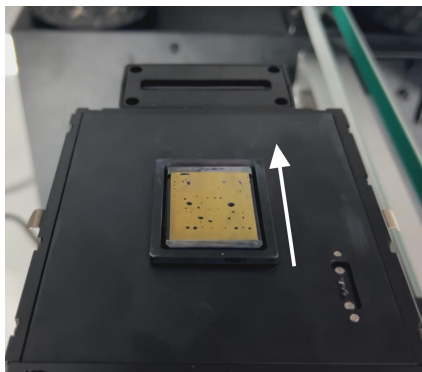
Only use Distilled or de-Ionized water or cleaning liquid from DXonJet for cleaning the printhead, Never use any chemicals or alcohol for cleaning/wiping the printhead. Chemicals and alcohol are damaging the printhead nozzles.

3. Use distilled water or cleaning liquid and make a piece of lint-free cloth wet:



NOTE: USE LINT-FREE CLOTH ONLY! Using other than lint-free cloth can cause blocked printhead nozzles due to lose fibers or scratch the printhead damaging it physically.

4. Wipe Printhead surface: Make a single move from up to down



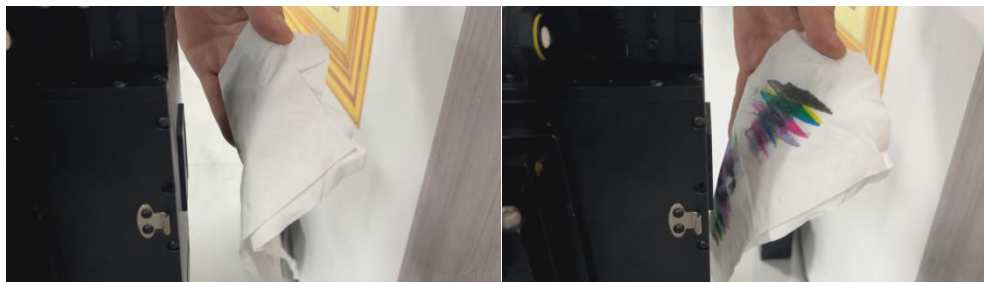
WARNING: DO NOT MOVE THE CLOTH BACK AND FORTH!

Always wipe with a single move from one end to the other. Do not apply to much pressure either. Just gently wipe the surface of the printhead.

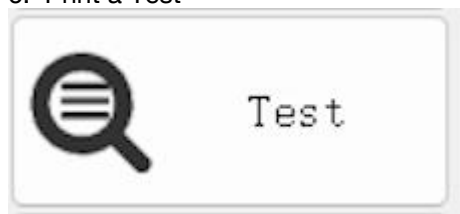
5. Perform SPAY 3 times. Every Sapy process lasts for 10 seconds



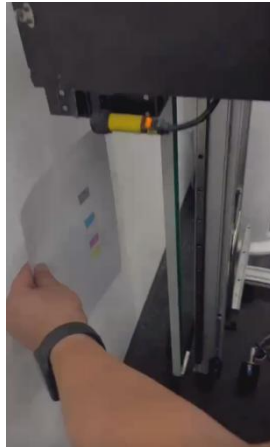
Place a piece of paper in front of the printhead when you perform Spary



6. Print a Test

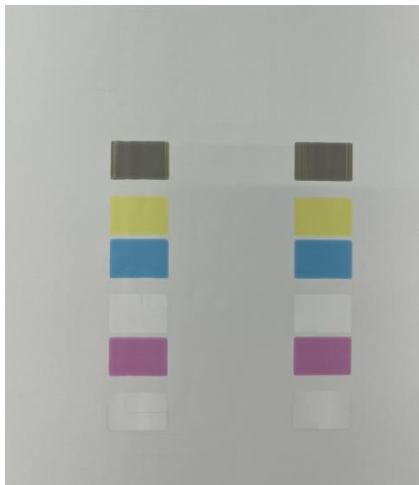


Put a piece of paper in front of the print head, click the test button. Keep the paper still, and let the printhead move and print on that paper.



Keep the paper still

7. Check the Tested color block



It will be 6 color blocks, 2 white color, and the other 4 color of Yellow, Black, Cyan and Magenta. Color blocks should be complete show on the paper. If there is stripes or color mixed in some blocks, you need to proceed maintenance process again.

Before each print job, a print test should be performed to ensure that the printer is in optimal condition. If the print test results are unsatisfactory, the reason might be a blockage in the printhead. In this case, the ink pump and spray process should be repeated to remove any particles inside the nozzles.

The End of The Guide Book

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