CALCA® DTF
Professional Supplier

CALCA 24inch DTF PRINTER

DTF-HY-24

User Manual

Thank you very much for choosing our CALCA brand series DTF printer, please read the manual carefully, including the operation and maintenance to ensure the best output and the lifetime of the machine.

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Professional Supplier

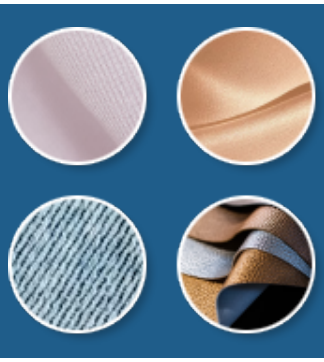
Direct Transfer Printing is a revolutionary new printing technique that's more affordable and accessible compared to DTG, screen printing, sublimation or laser white toner transfers.

What sets DTF apart from other transfers?

- √ A great option for small orders.
- √ No cutting and weeding required.
- √ Crisp, defined edges and images from start to finish.
- √ Low cost on waste.
- √ Low investment – high reward (Print Cost: $0.007/inch^2).

Works on Most any Fabrics

DTG technology works best on cotton pre-treated fabrics while DTF opens the door to a wide range of choices and is capable of printing onto non-treated cotton, silk, polyester, denim, nylon, leather, 50/50 blends, and more. It works equally well on white and dark textiles.



Technical Specs:

24.4inch (620mm) Maximum print width
Dual Epson I3200-A1 Printheads (CMYK + WWWW)
Printer Size: 70.3in x 31.1in x 63.5in (1785mm x 790mm x 1613mm)
Printer Weight: 396 lbs (180 kg)
Speed: 6 pass: 8m^2 / h; 8 pass: 6m^2 / h
1 Liter per color ink bottle capacity
Printing Software: Flexi PhotoPrint Rip
Printing Resolution: 1440 / 2160 / 2880dpi
Print Head Cleaning: Automatic
Platform Suction Adjustment: Yes
Rewinding Function: Automatic
Heating Sections: Pre-heater, printing bed heater, rear heater: 86˚F-149˚F (30˚C-65˚C)

Requirements:

> Working Power Supply: AC 110V / 220V, 50HZ / 60HZ, 1 phase.
> Current: 5.5A (220V), 11A (110V)
> Operating System: XP / Win7 / Win10
> Temperature control set to 68˚F - 82˚F (20˚C - 28˚C) and 65 - 75% humidity.

CONTENT

1. Notice on Safety Using

1.1 General

Carefully read the instructions in this manual as they contain important information regarding proper, efficient and safe installation, use and maintenance of the unit.
The installation of this unit must be carried out in accordance with the manufacturer's instructions.
Switch off the unit in case of failure or malfunction and contact your distributor for service information.

1.2 Symbols that may be used in this manual

This symbol informs about a situation where a safety risk might be at hand. Given instructions are mandatory in order to prevent injury.

This symbol informs about the right way to perform in order to prevent bad results, appliance damages or hazardous situations.

This symbol informs about recommendations and hints that help to get the best performance out of the appliance.

1.3 Safety

1.3.1 Safe use of the appliance

For your safety. Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

1.3.2 Other prohibitions (dangerous procedures)

Using any parts other than genuine CALCA approved manufactured parts can void the warranty.

Improper installation, adjustment, alteration, service or maintenance can cause property damage or major injury. Read the installation and operating instructions thoroughly before installing or servicing this equipment.

1.3.3 Caution

Users must draw attention to content have this mark, if not damage or lost may been caused by improper operation.

1.4 Notice before starting it:

This machine have large power, high temperature, in order to use the machine better please know about the machine's following specification.

Equipment installation instructions

Installation and placement

① This is high-power electrical heating equipment Should be placed in a dry and ventilated environment

② The equipment must be placed horizontally

Power connection instructions

Electricity parameters

Rated voltage: AC110V / 220 V, 1 phase

Rated current: 11A / 6A, 1200W

Rated power: 1200W

The access power must be consistent with the rated power of the equipment, and the diameter of the access power supply line must meet the rated requirements Ground connection.

Ground connection

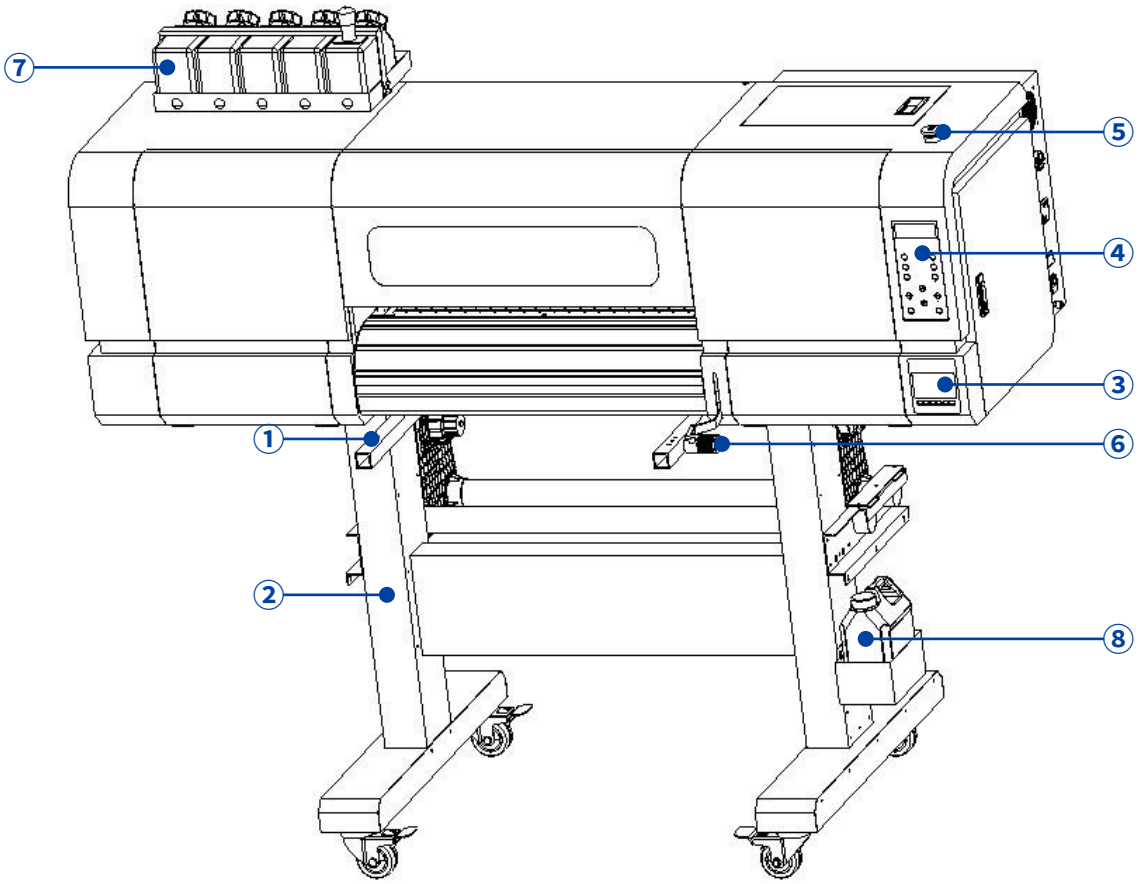
Before getting the power-on, the ground wire must be connected properly to avoid accidents.

Those who are sensitive to static electricity should take protective measures when operating the equipment.

Those who are allergic to static electricity should wear an anti-static wristband or anti-static gloves.

2. Illustration of the Printer

2.1 Illustration of the Front of the Printer



① **Printer Lift :** the lift can be removed when the printer is first installed and fixed on the floor of wooden box during transportation.

② **Printer Bracket:** The bracket of the machine. Refer to the bracket installation for details.

③ **Platform Heating Control Panel:** Set up the platform before and after the heating, installation instructions refer to the platform heating settings.

④ **Panel Board:** Adjust and set the operation and internal parameters of the printer. Refer to the panel board instructions for details.

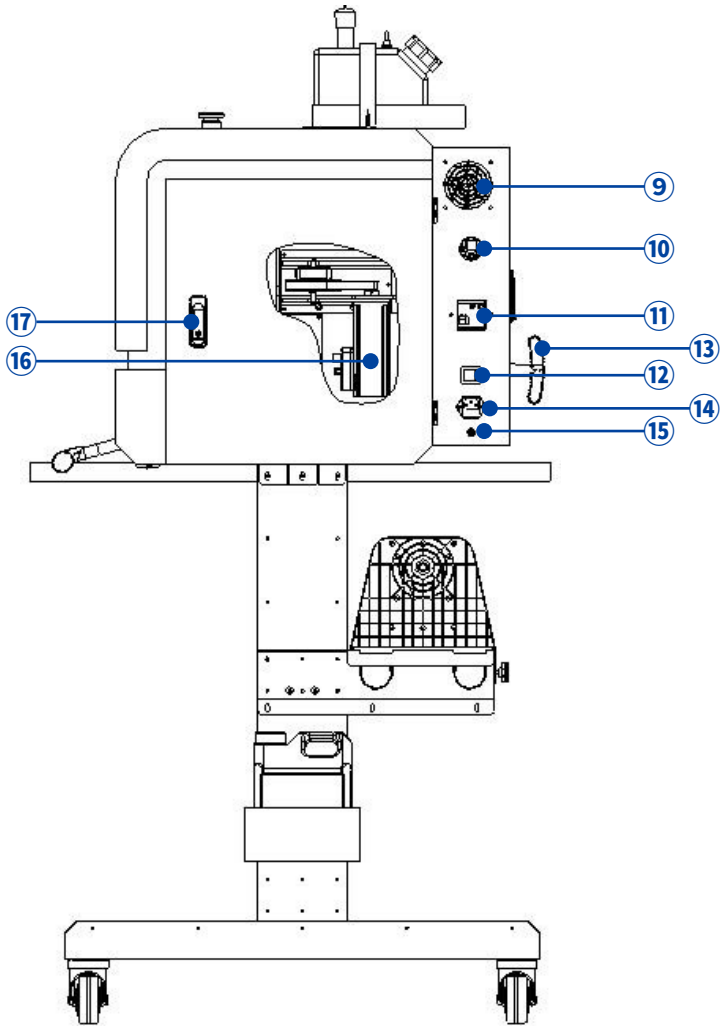
⑤ **Emergency Stop Switch:** Press the stop switch in case of emergency.

⑥ **Paper Lifting Handle:** Lift the Pinch Roller to install the Film.

⑦ **Ink Bottle:** Device for storing ink.

⑧ **Waste Ink Bottle:** Device for storing waste ink.

2.2 Illustration of the Right Side of the Printer



⑨ **Cooling Fan Air Outlet:** Please do not block the air outlet when the printer is working.

⑩ **USB Cable Clip:** Fix the USB data cable.

⑪ **Earth Leakage Switch:** Earth leakage protective device.

⑫ **Power Switch:** On-off control of the main power supply.

⑬ **Paper Lift Handle:** Lift the pinch roller for easy installation of the film.

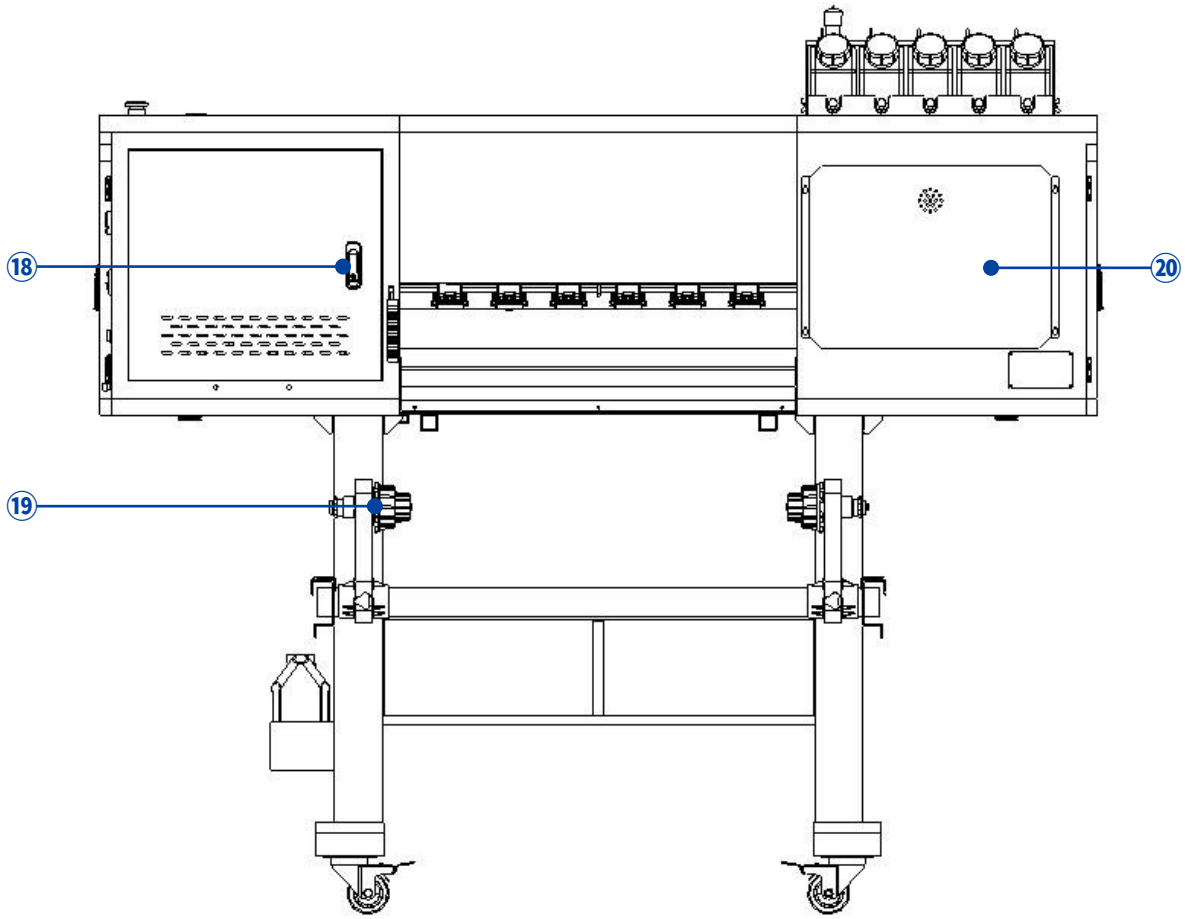
⑭ **Main Power Supply:** Connect the power plug.

⑮ **Ground Terminal:** External ground wire to protect the printer from static electricity or external electric field.

⑯ **X-axis Motor:** X-axis drive motor set.

⑰ **Right Side Door:** There are X-axis motor unit, control panel board, temperature control board and other circuit units, non-professionals do not open.

2.3 Illustration of the Rear Side of the Printer

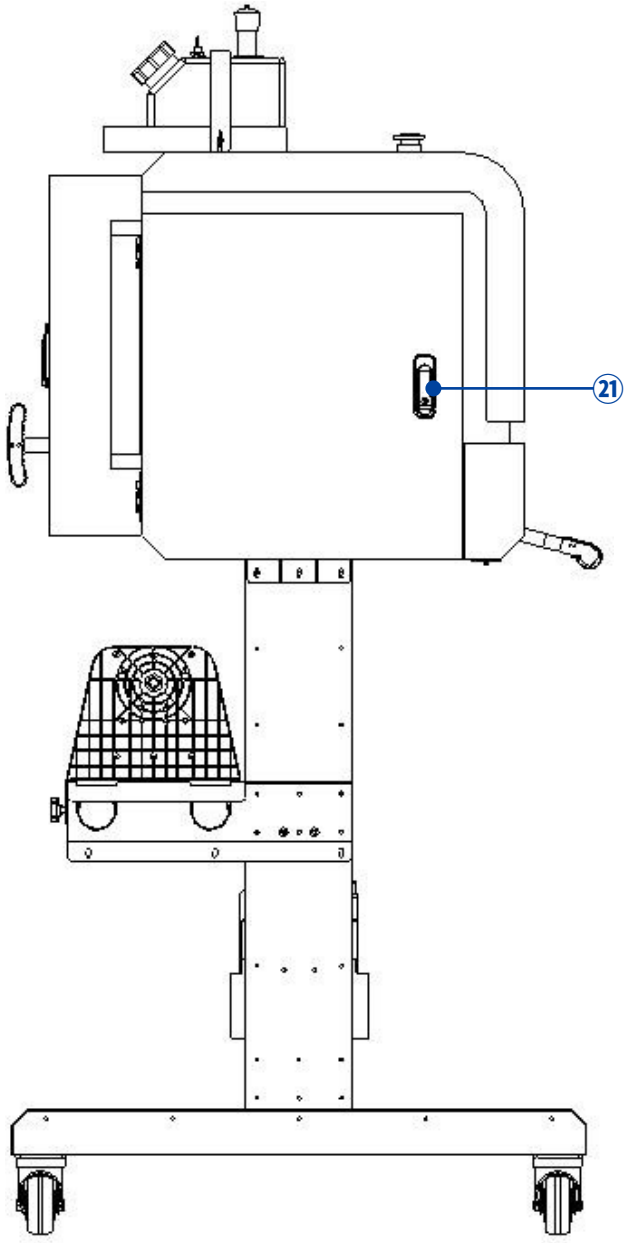


⑱ **Electrical Box Door:** Main circuit is inside, non-professionals do not open.

⑲ **Paper Feeder Adaptor:** Device for placing the film.

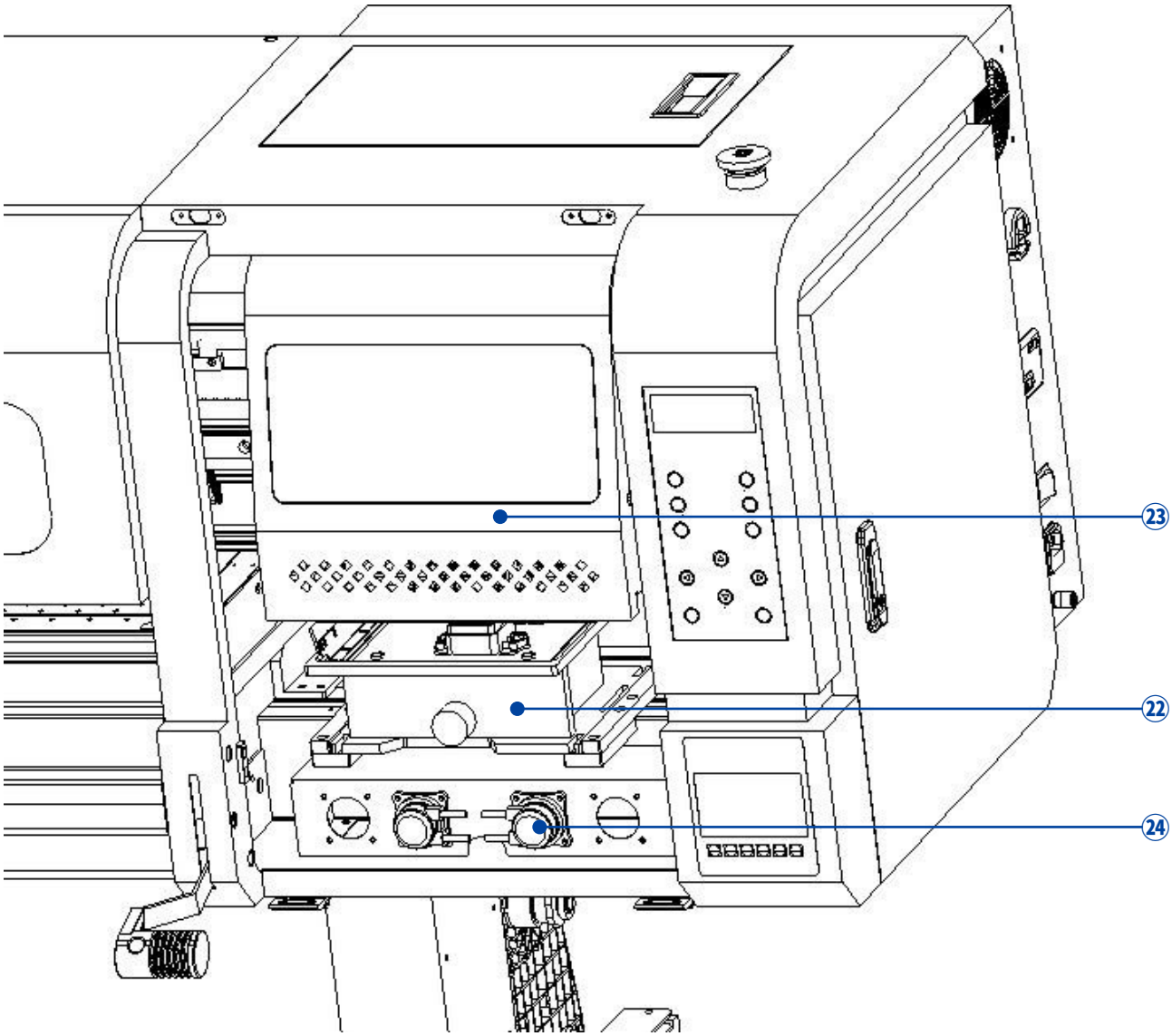
⑳ **Ink Cover:** Internal ink system, non-professionals do not open.

2.4 Illustration of the Left Side of the Printer



㉑ **Left Side Door:** Y-axis drive group is inside, non-professionals do not open.

2.5 Illustration of the Printer Head on the Right Side of the Printer

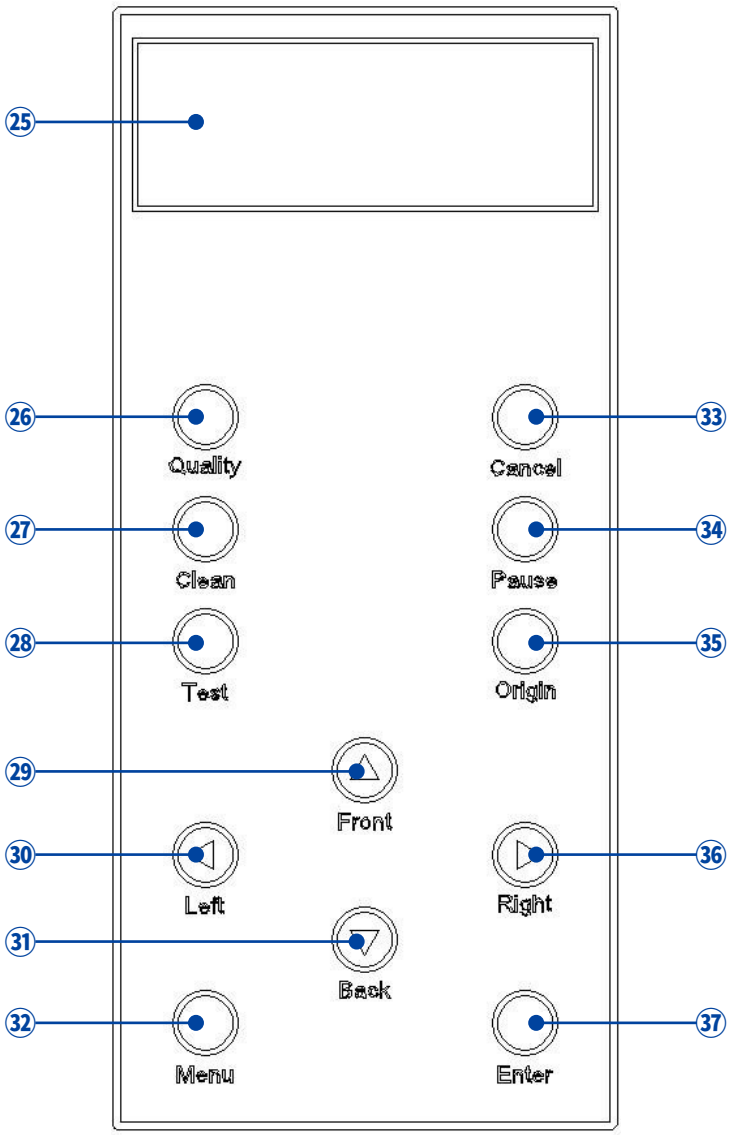


㉒ **Ink station:** nozzle suction and nozzle moisture device. The nozzles must be sealed by cap tops when the printer is not working.

㉓ **Carriage:** Printing device, refer to carriage instrutions for details.

㉔ **Ink Pump:** The component for extracting the ink.

2.6 Illustration of the Panel Board



㉕ **Display Screen:** Printer operation information display.

㉖ **Quality Button**

㉗ **Cleaning Button**

㉘ **Testing Button**

㉙ **Front Button:** The film moves back.

㉚ **Left Button:** The carriage moves to the left.

㉛ **Back Button:** The film moves forward.

㉜ **Menu Button:** Menu selection

㉝ **Cancel Button**

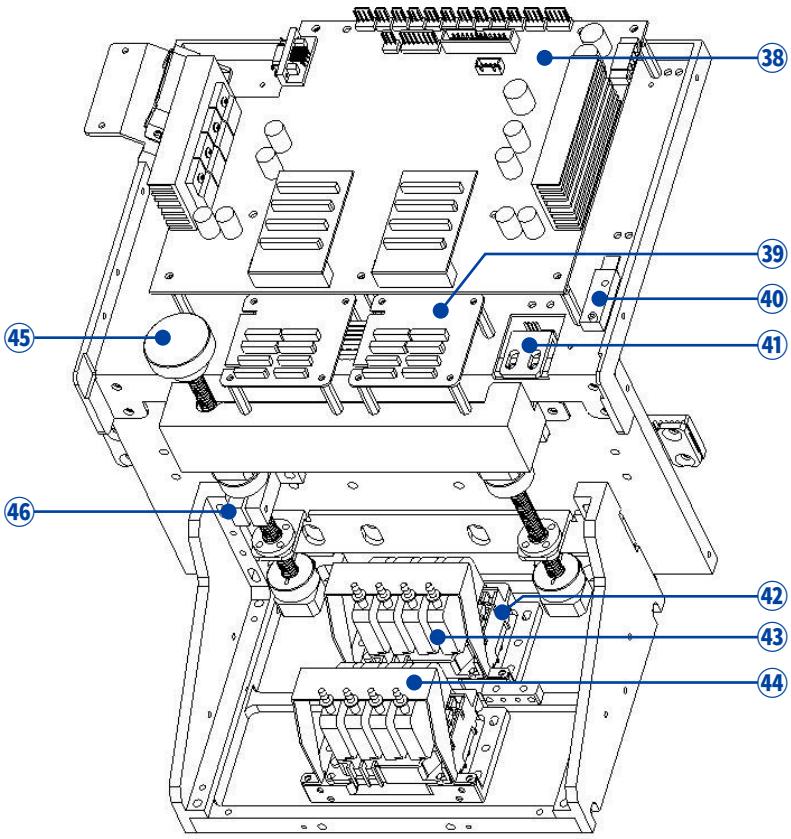
㉞ **Pause Button**

㉟ **Origin Button**

㊱ **Right Button:** The carriage moves to the right.

㊲ **Enter Button**

2.7 Illustration of the Carriage



㊳ **Carriage Board:** Include printer online port, data pore and ink system.

㊴ **Decryption card:** Only use for encrypting the print head, the original print head does not need to be used.

㊵ **Origin Sensor:** The component for positioning the origin.

㊶ **Encoder Sensor:** The element for reading the X-axis encoder stripe.

㊷ **Print Head:** Output the ink, the head condition directly affect the printing effect.

㊸ **Ink Damper:** Ensure continuous supply of ink, filter impurities.

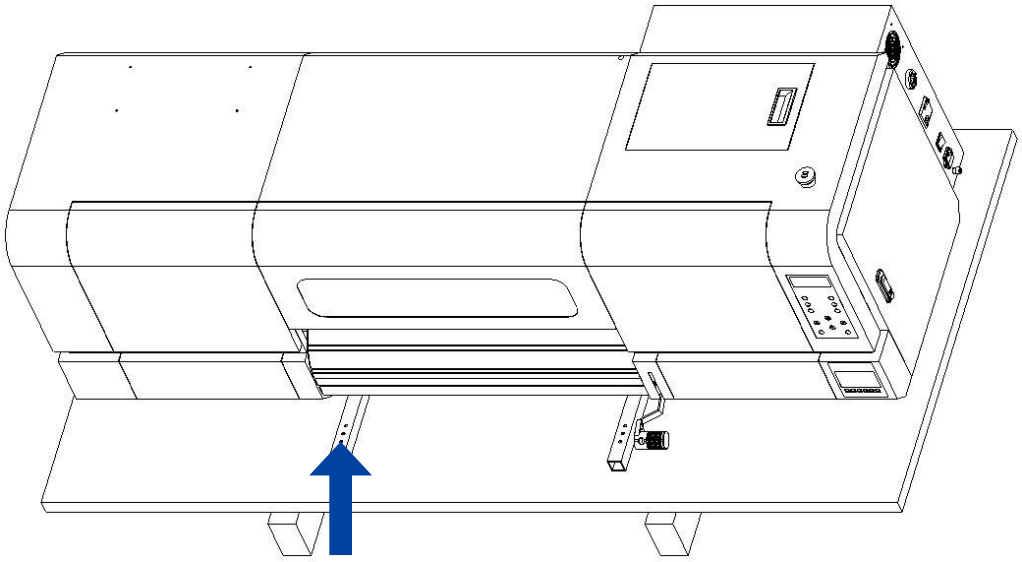
㊹ **Ink Damper Holder:** Prevent the damper from falling off.

㊺ **Lifting Knob:** Adjust the height of the print head according to the thickness of the film.

㊻ **Clamp Blade:** Usually it's locked to prevent the print head from moving up and down, and it needs to be loosened when the height of the print head needs to be adjusted. This clamping piece and the left and right side panels of the carriage can only be adjusted with five screws. After the height adjustment, the screws need to be re-tightened.

3. Printer Installation

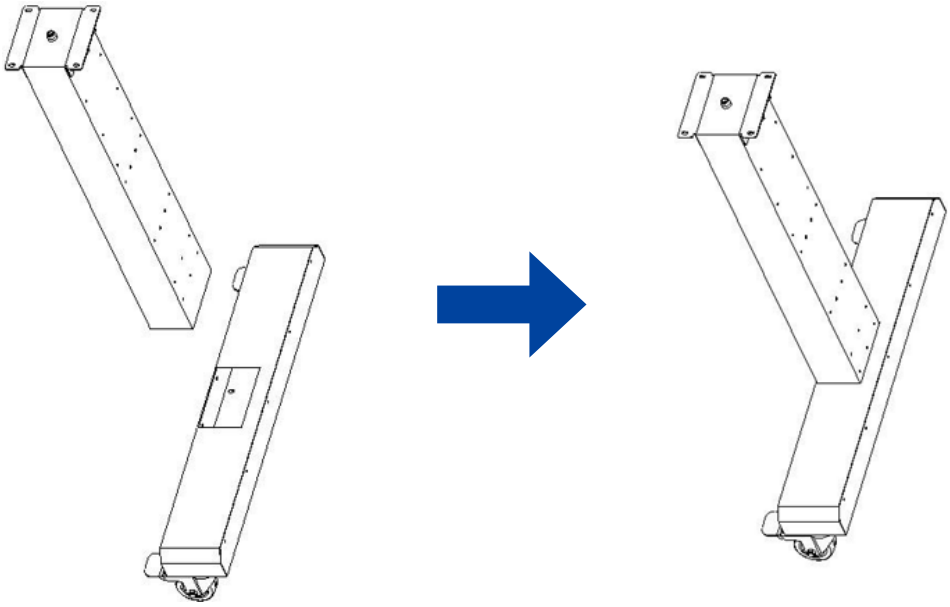
3.1 Printer Unpacking



Printer Unpacking: Open the wooden box and remove all the screws which fasten the printer lifting rod to the bottom plate.

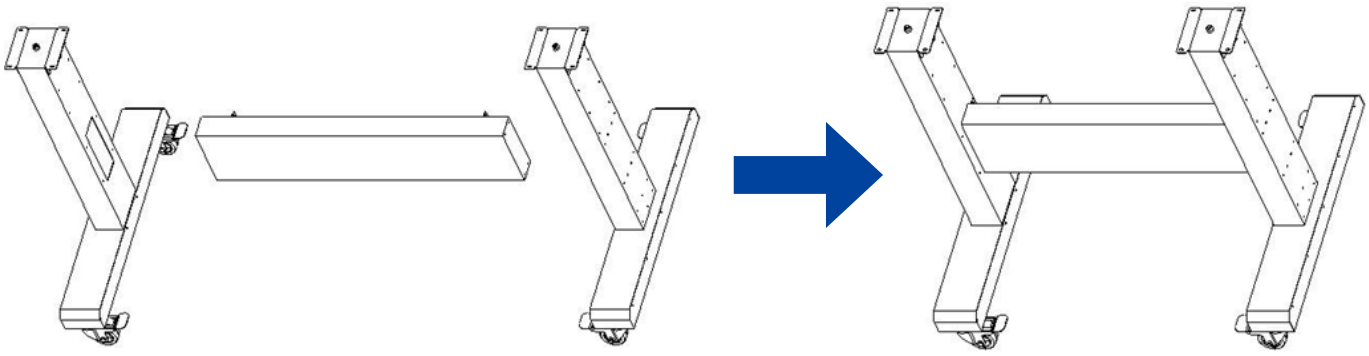
3.2 Bracket Installation

3.2.1 Bracket Foot Installation



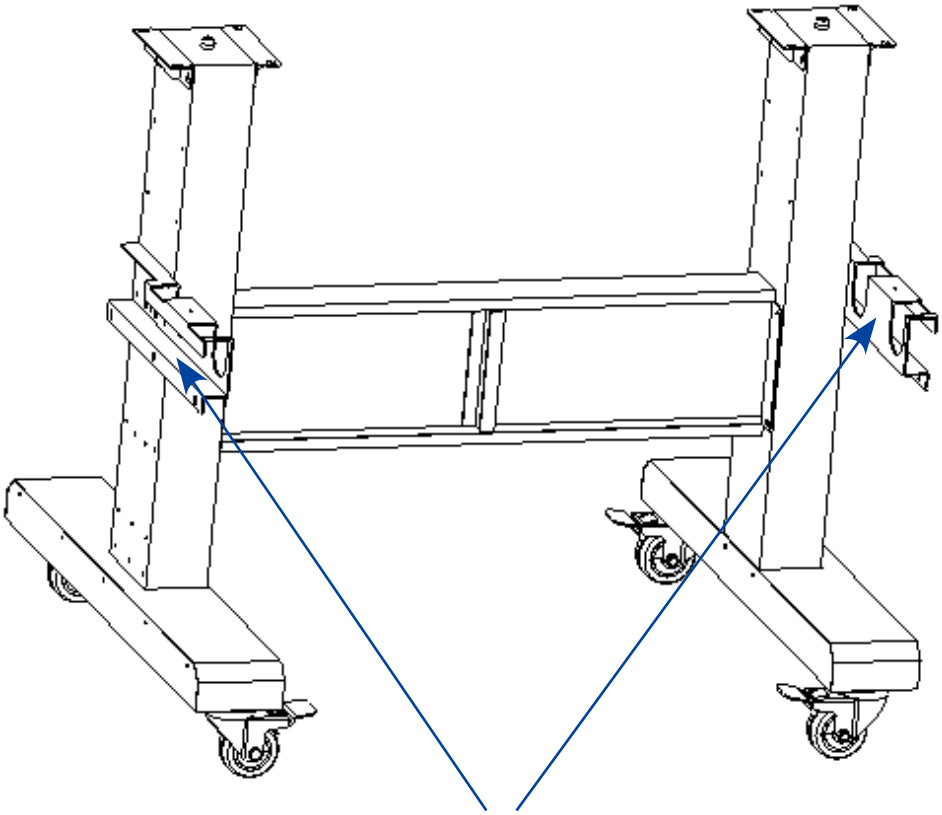
Installation Instructions: Fix the bracket feet together. There are totally six screws.

3.2.2 Bracket Crossbar Installation

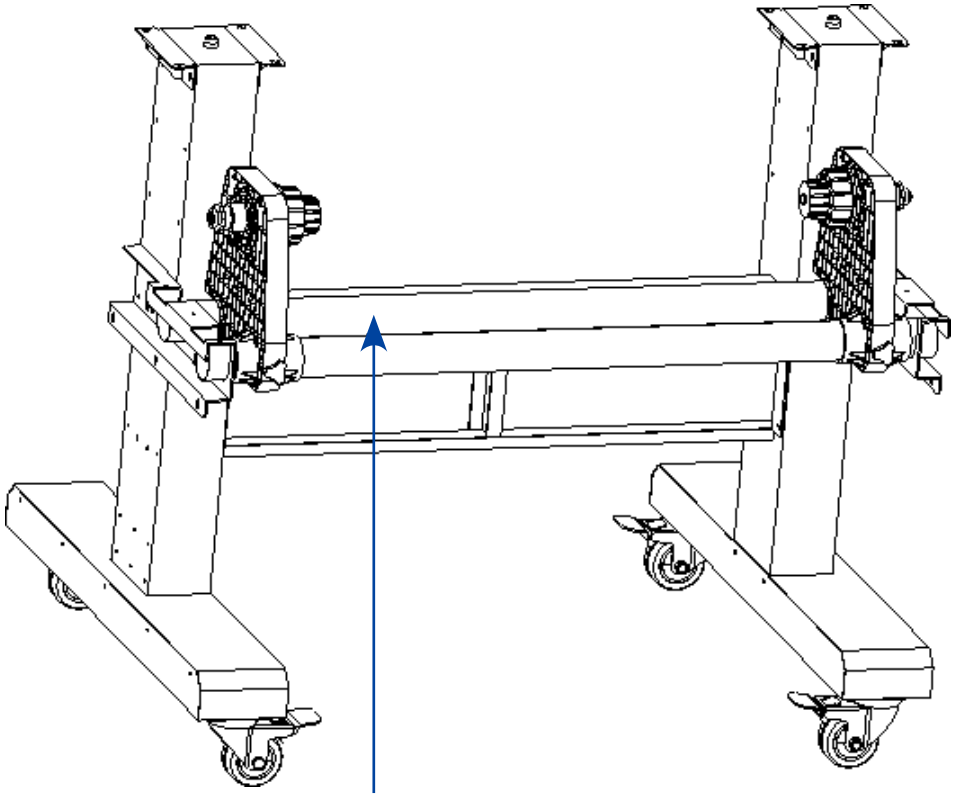


Installation instructions: Fix the bracket crossbar and bracket foot together. There are totally 12 screws.

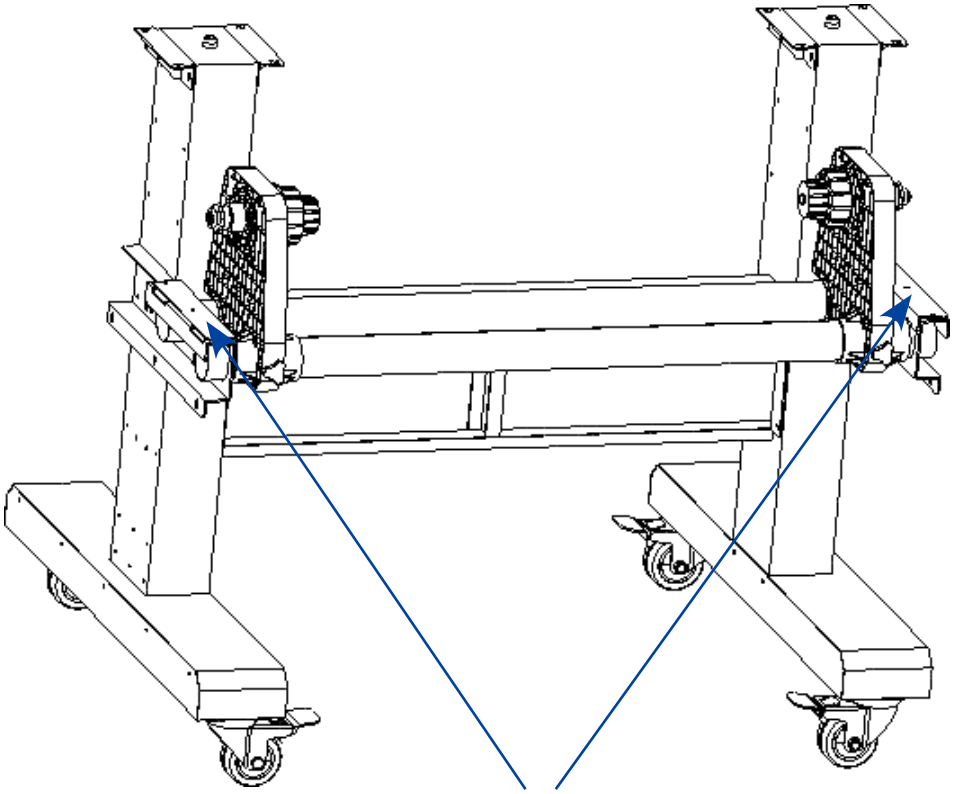
3.2.3 Paper Feeder Installation



Install the left and right side of the steel pipe frame.

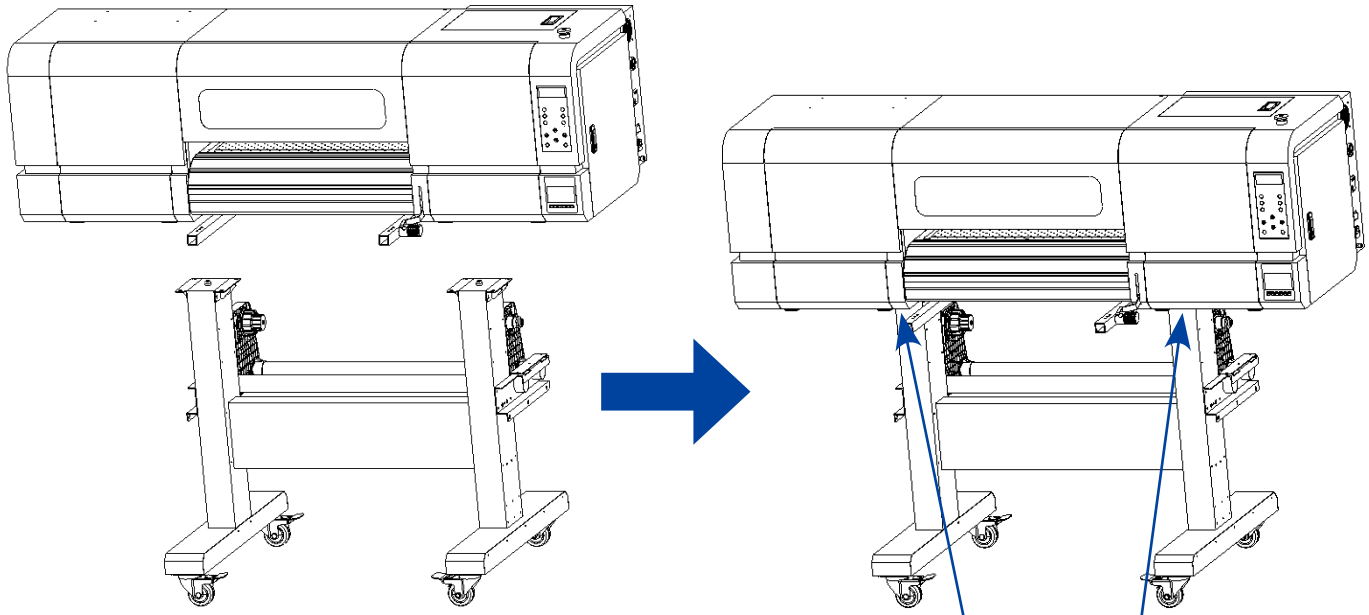


Put the two steel pipes and the paper feeders on the holder.



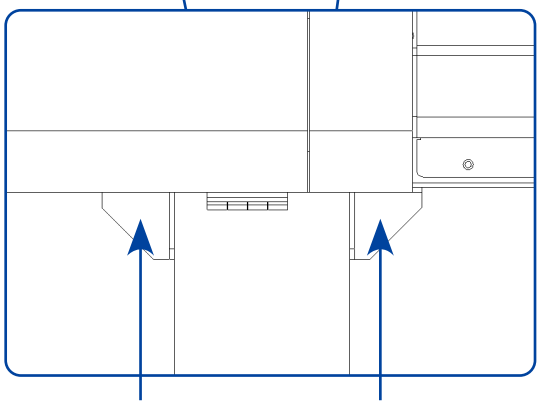
Fix the pipe tighten plate on the pipe frame.

3.3 Printer Head Installation



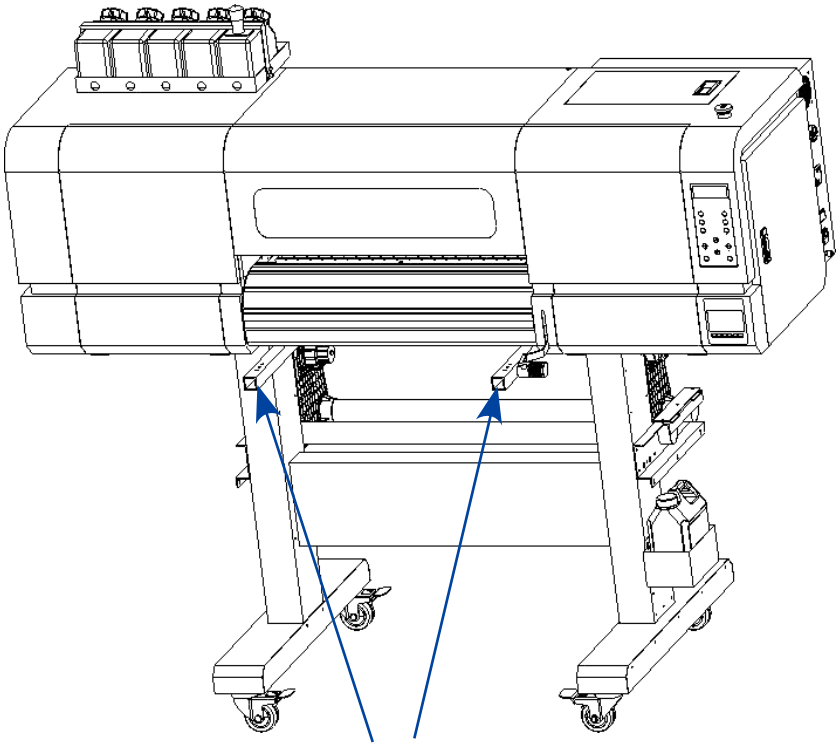
Installation instructions:

1. Place the unpacked main body on the stand.
2. Loosen the screws on the bracket connecting plate, then make the bracket connecting plate close to the bottom beam and the feet at the same time, and then tighten the screws.
3. Fix the four bracket connecting plates the same way.

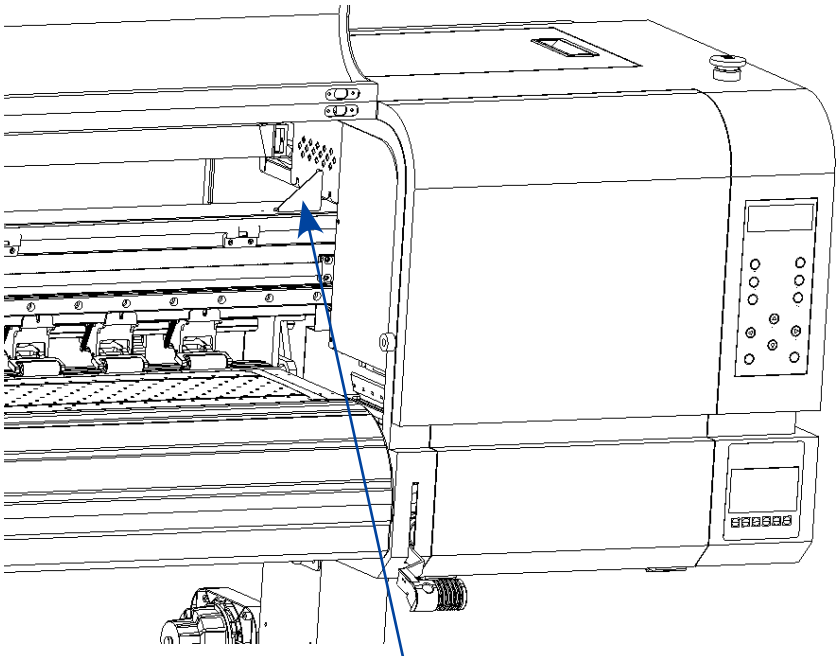


The bracket connecting plate needs to be attached to the bottom beam and the feet at the same time, and then tighten the screws.

3.4 Removal of the Printer Lifters and Carriage Fixer



Remove the two printer lift rods.

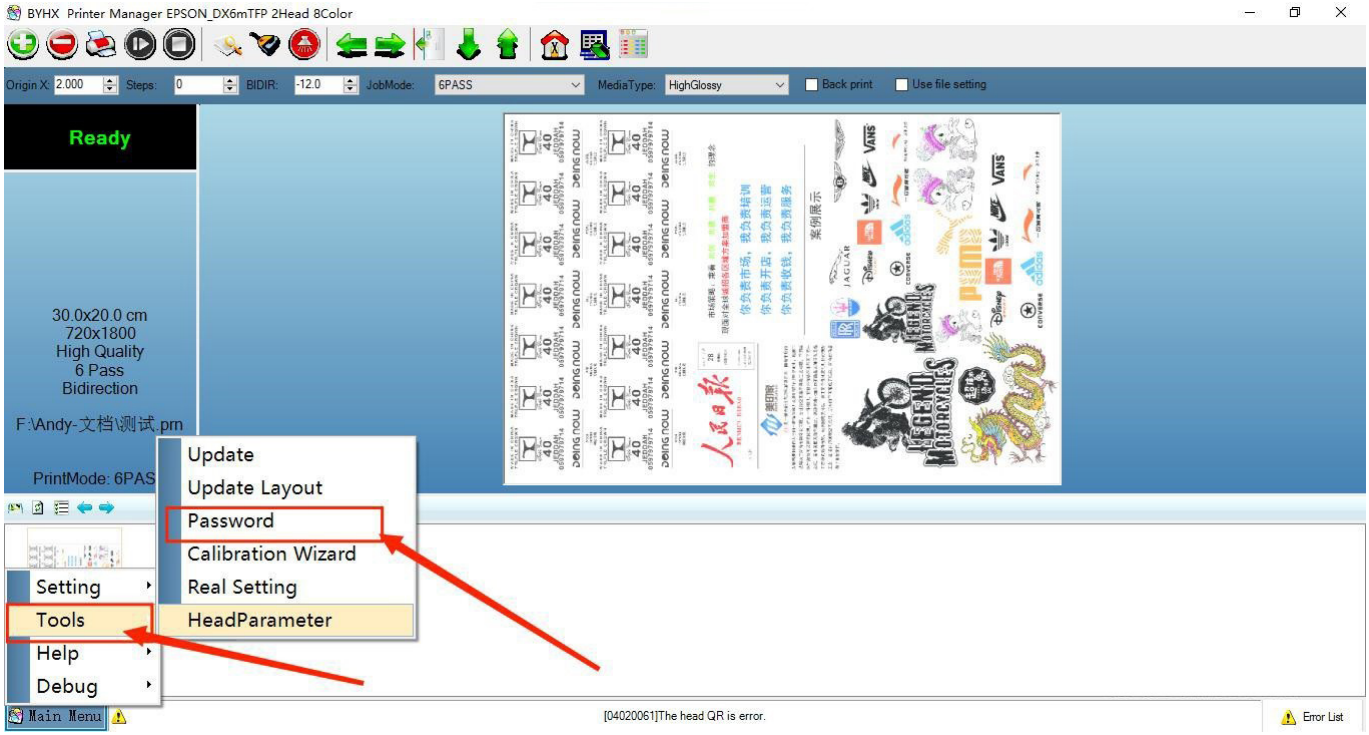


Remove the Carriage fasteners.

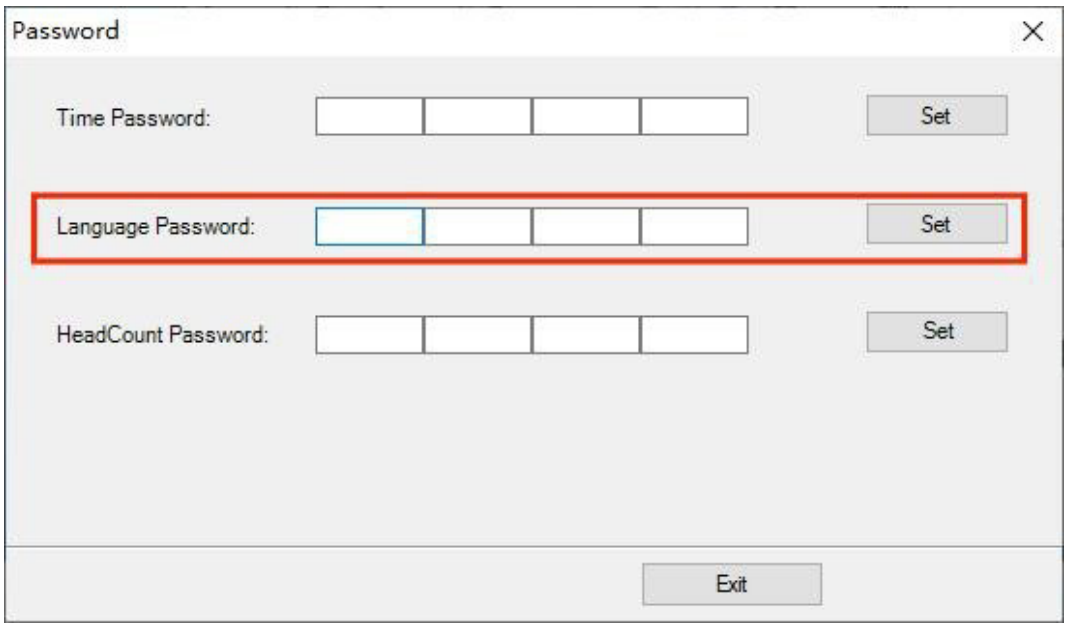
4. Introduction of the Software Interface

4.1 Turn on the printer and input the language password first.

4.1.1 “Main Menu” → “Tools” → “Password”



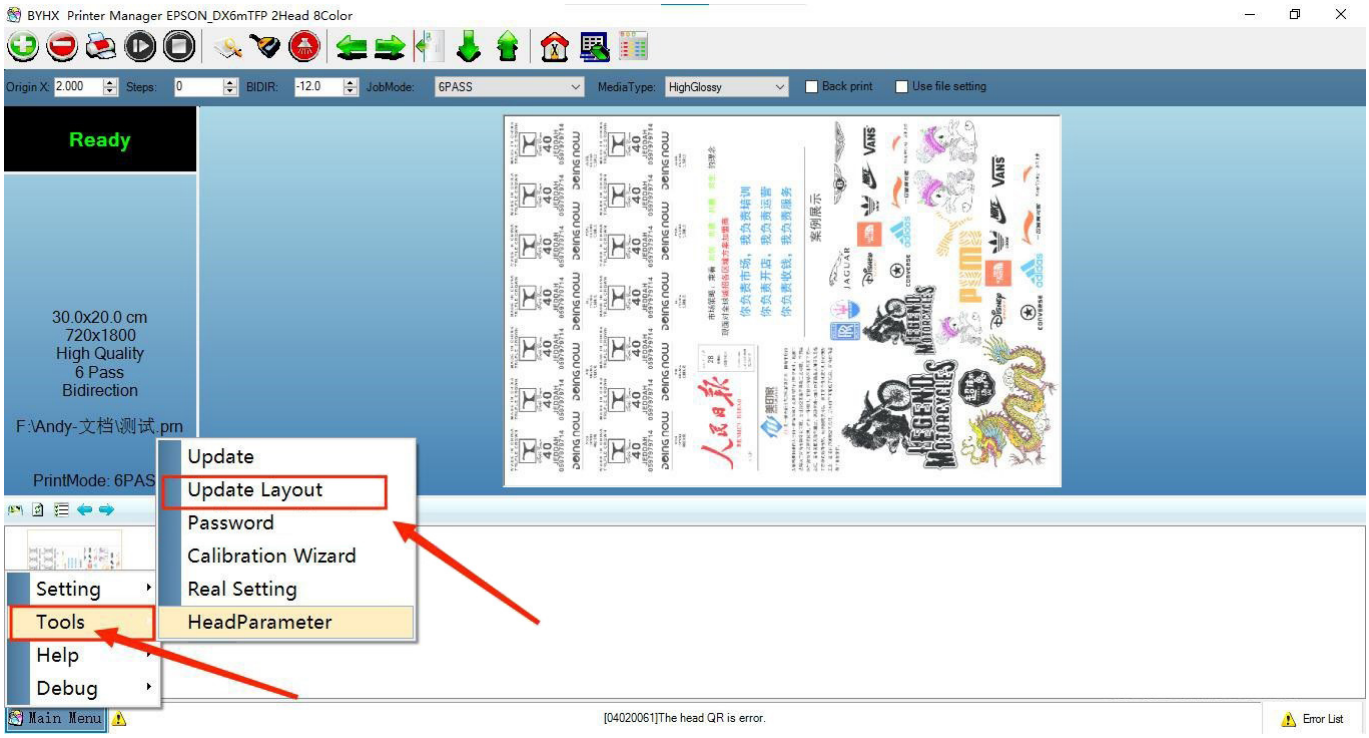
4.1.2 Input “Language Password” → click “setting” → click “Close(X)”



4.1.3 Restart the printer and control software.

4.2 Upgrade the layout and settings

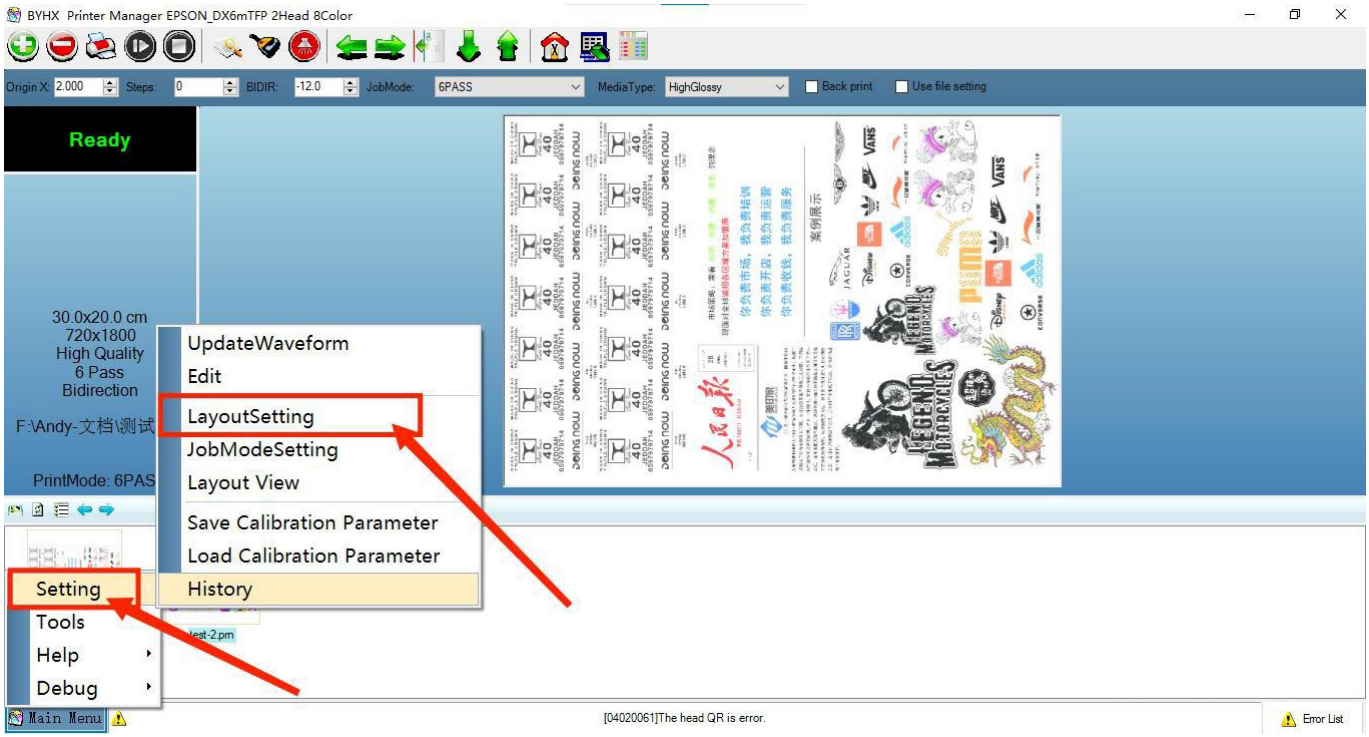
4.2.1 Upgrade Layout Package and setting: “Main Menu” → “Tools” → “Update Layout”



4.2.2 Update “.plb” file.

名称	修改日期	类型	大小
Epson_DX6_8H_4C0W0V_20200713.jpg	2020/7/13 10:08	JPG 图片文件	62 KB
Epson_DX6_8H_4C0W0V_20200713.pdf	2020/7/13 10:08	WPS PDF 文档	61 KB
Epson_DX6_8H_4C0W0V_20200713.plb	2020/7/13 10:08	PLB 文件	5 KB
Epson_DX6_8H_4C0W0V_20200713.png	2020/7/13 10:08	PNG 图片文件	48 KB
Epson_DX6_8H_4C0W0V_20200713_100820_HeadLayout_Updater.dat	2020/7/13 10:08	DAT 文件	5 KB

4.2.3 Restart the software and layout setting: “Main Menu” → “Setting” → “LayoutSetting”



4.2.4 Click “Add”

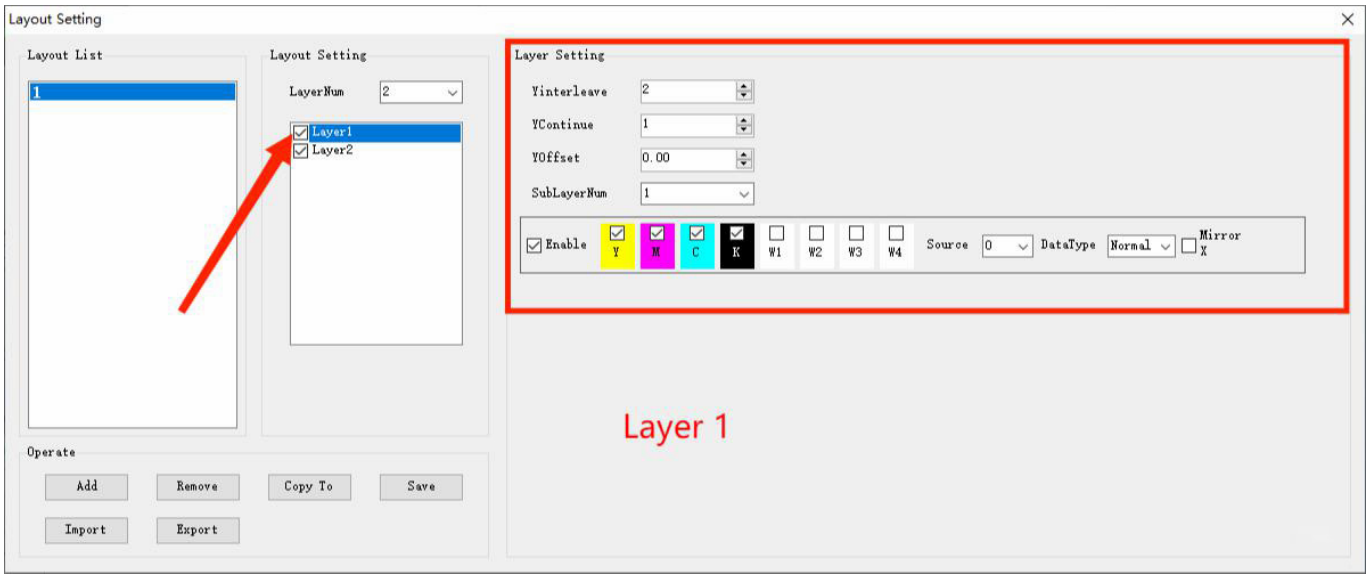
Create a new Layout with a new name

4.2.5 Select appropriate “LayerNum”.

Eg: “White Color”, Set “LayerNum” as 2,

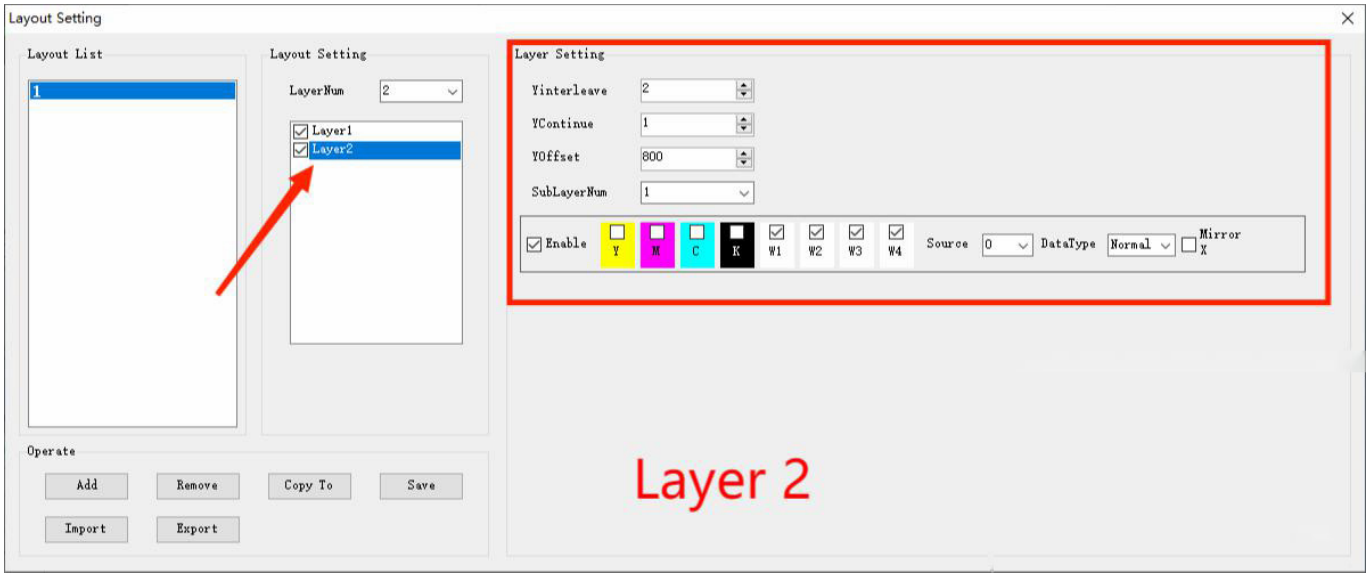
Layer1: “Yinterleave” as 2, “YContinue” as 1, “YOffset” as 0, “SublayerNum” as default.

Check “Enable”, “Y M C K” , “Source” and “DataType” as default;



Layer2: “Yinterleave” as 2, “YContinue” as 1, “YOffset” as 800, “SublayerNum” as default.

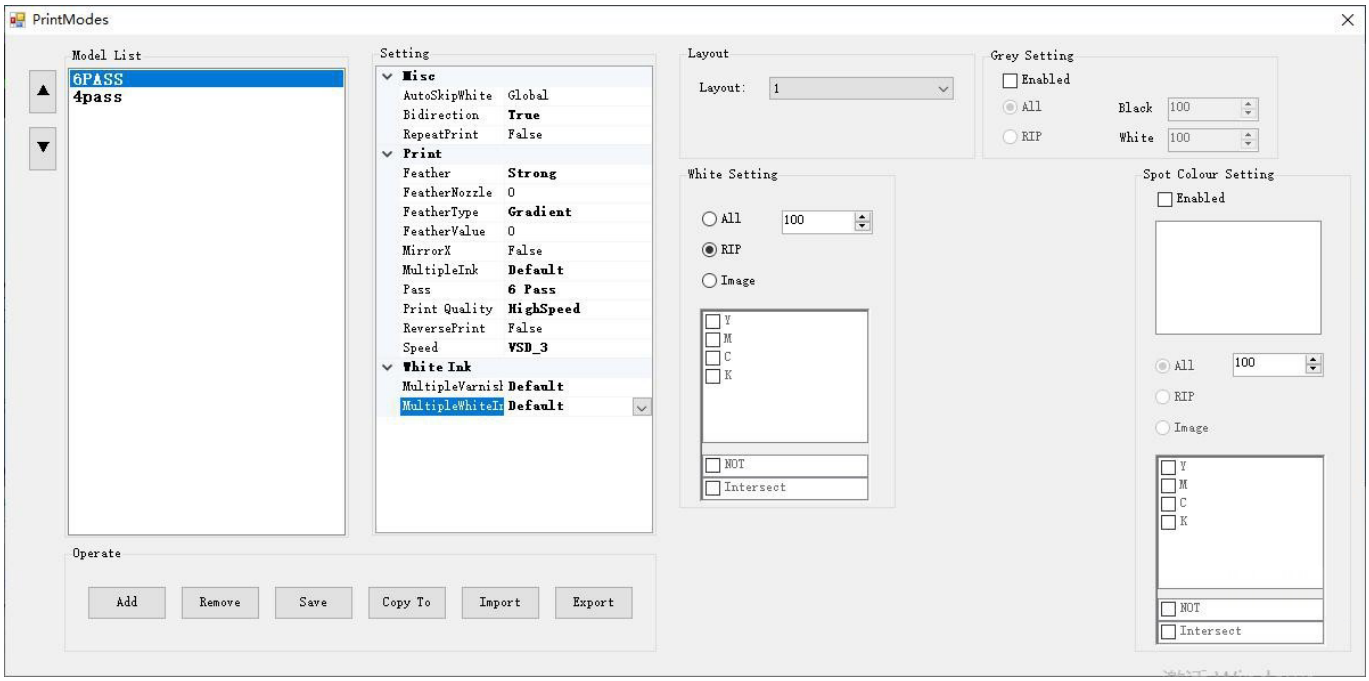
Check “Enable”, “W1 W2 W3 W4”, “Source” and “DataType” as default;



(Notice: For Multi Layers, the “YOffset” for each layer is defined by the Yoffset of the print head.)

Eg: EPSON I3200-A1, initial DPI is 400, the distance of one print head staggered is 400. Click “Save”.

4.3 Print Mode Settings

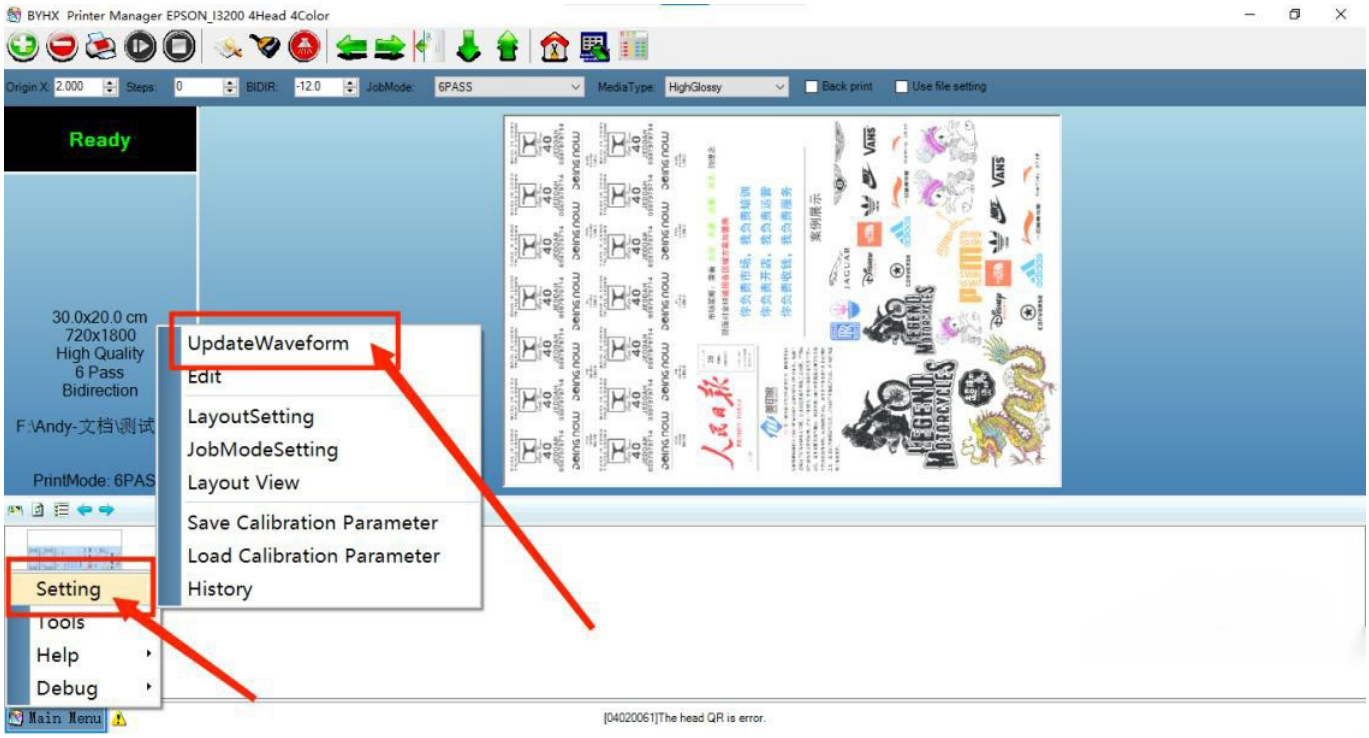


4.3.1 Click “Add” to create a print mode name (Print Condition is recommended for recognition).

4.3.2 Set the printing parameters according to the actual requirements. Attention:
There're 2 options for "Printing Quality": "High Precision" and "High Speed".
Eg: "360*1800 3pass" should be selected as "Print Quality".
"720*900 3pass" should be selected as "High Speed".

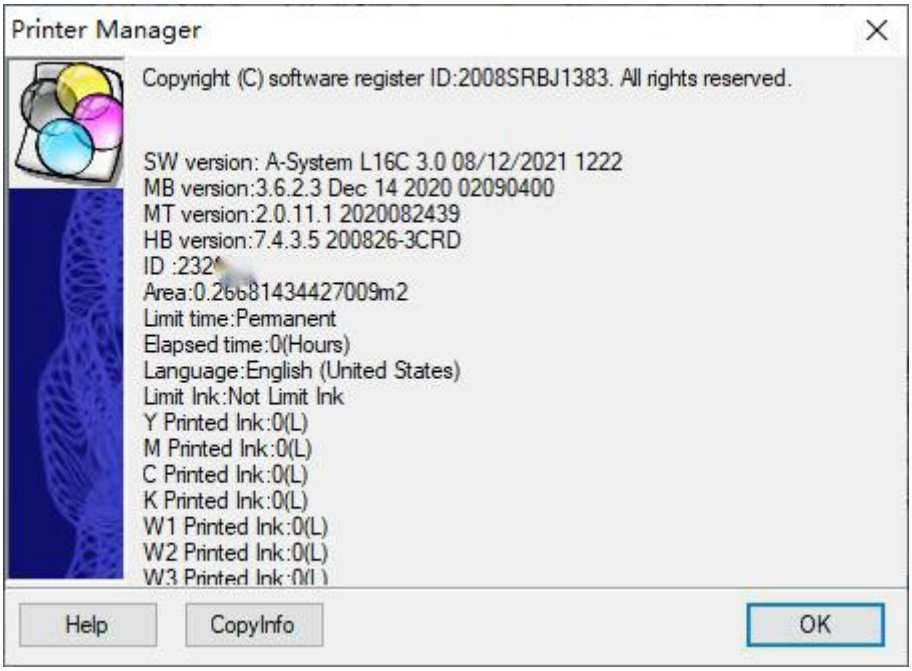
4.4 Update the Waveform

Click "Main Menu" → "Setting" → "UpdateWaveform". The update is a wave file in ".Wav" format, and there is no need to restart the printer and software after updating the wave.



4.5 Check the version information

Click "Main Menu" → "Help" → "About"



SW version: Software version

MB version: Main Board version

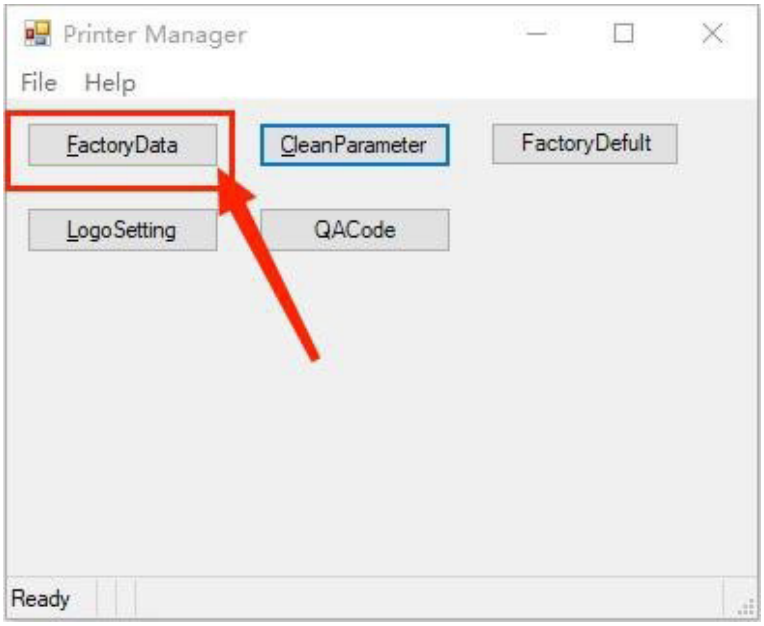
(Notice : 02090400 is the password for “FactoryData”)

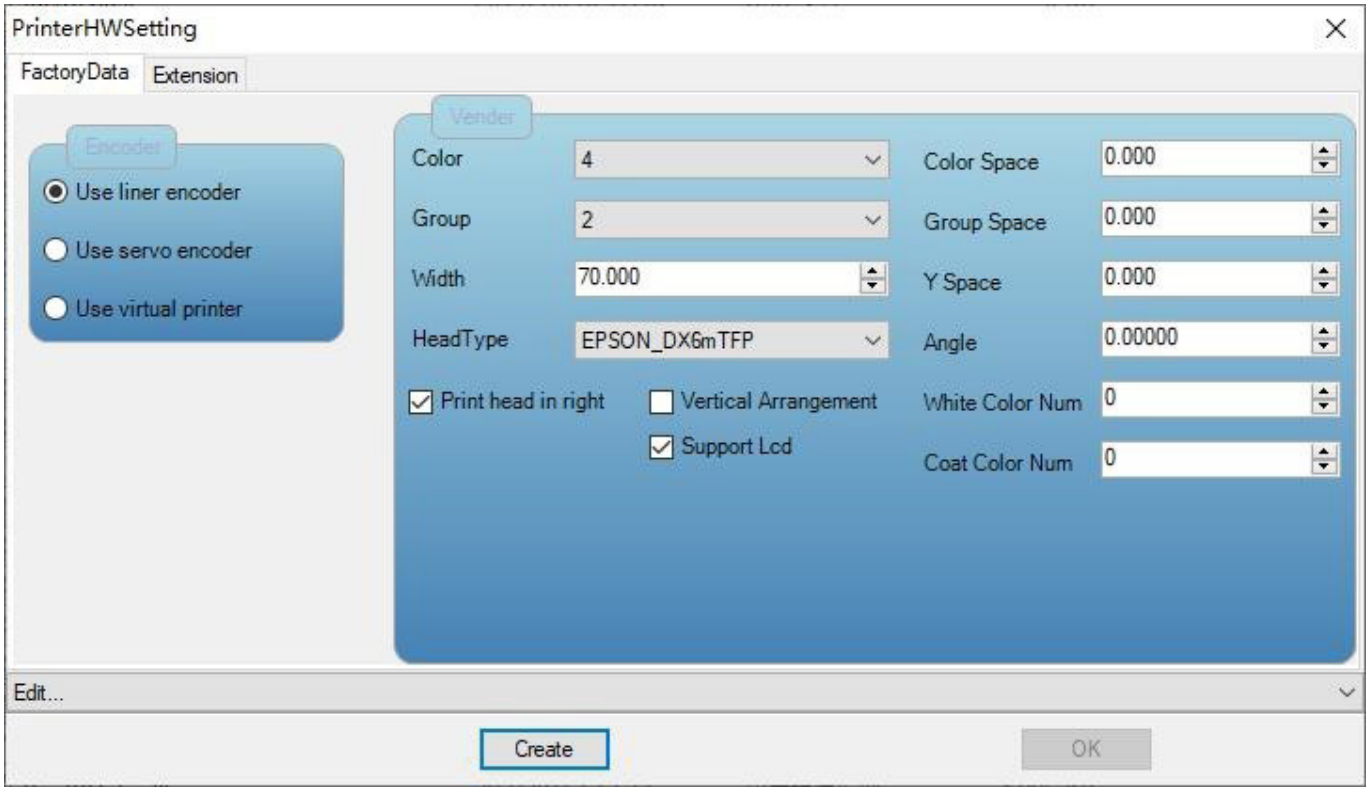
HB version: Head Board version

ID: The Serial Number of Main Board

4.6 FactoryData settings and Extension Settings.

FactoryData: Enter “FactoryData” Setting





Give an example to illustrate the main function of each parameter:

a. Normal I3200-2H-700: Color: 4, Group: 2, Width: 700. Set other parameters as default.

b. I3200-3H-UV-700: Color: 4, Group: 1, Width: 700, White Color Num: 4, Coat Color Num: 4. Set other parameters as default.

c. Notice: If the carriage is on the right side of the printer, “Print head in right” should be selected.

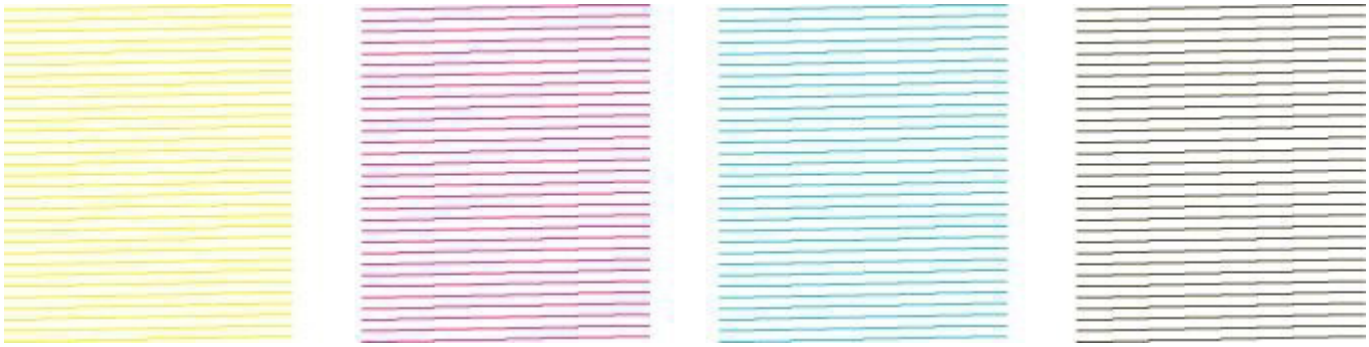
d. Layout package is used to define the Layout of print head, so that position-related parameters do not need to be set .

e. After modifying the parameters, click “Create”, then click “Edit”, select the last row, click “OK” and save. Restart the printer when finished.

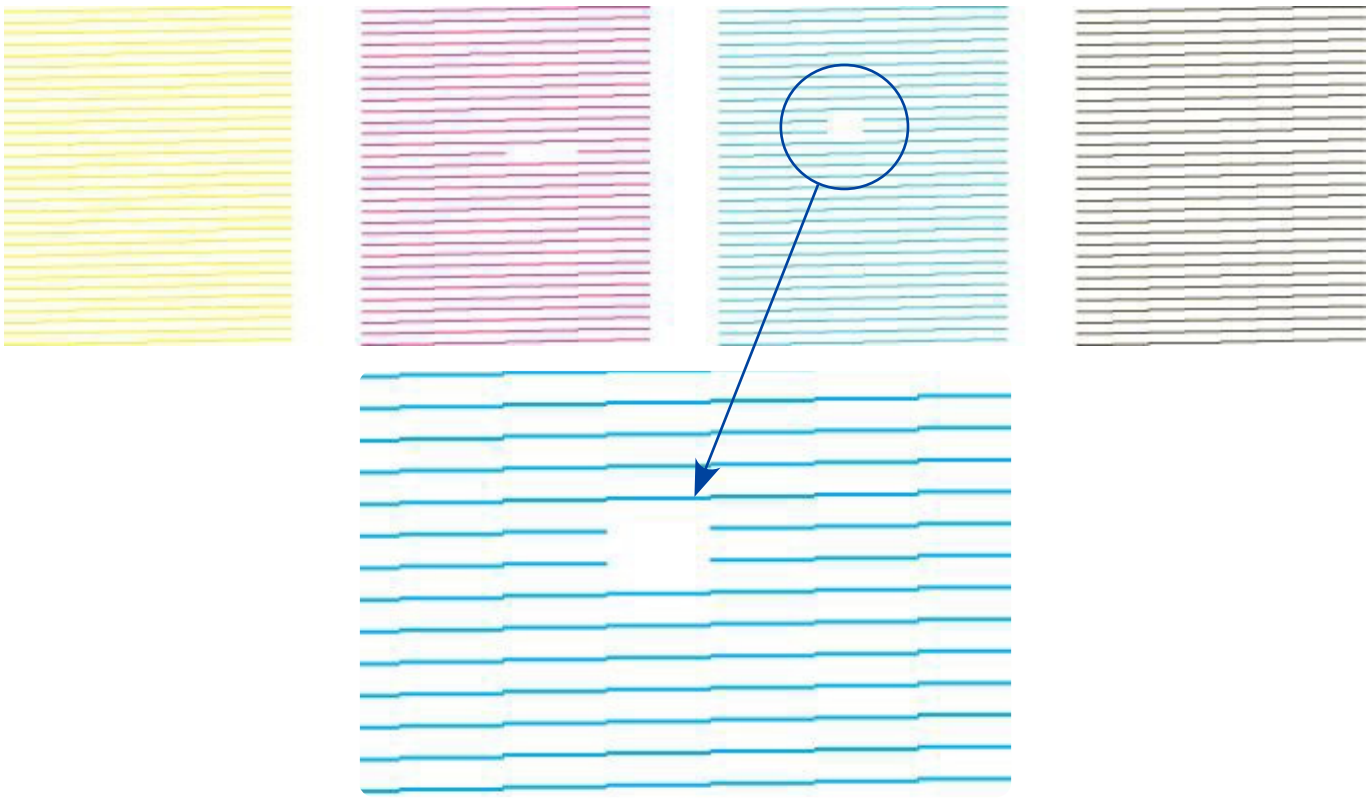
5. Calibration Manual

5.1 Nozzle Check

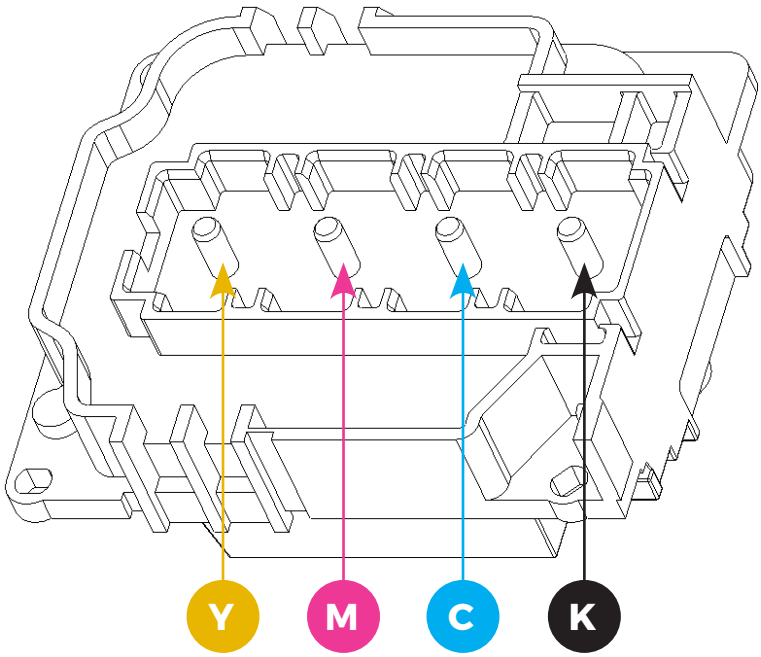
Before calibrating, check the print nozzles first to ensure that all nozzles are in the best working condition.



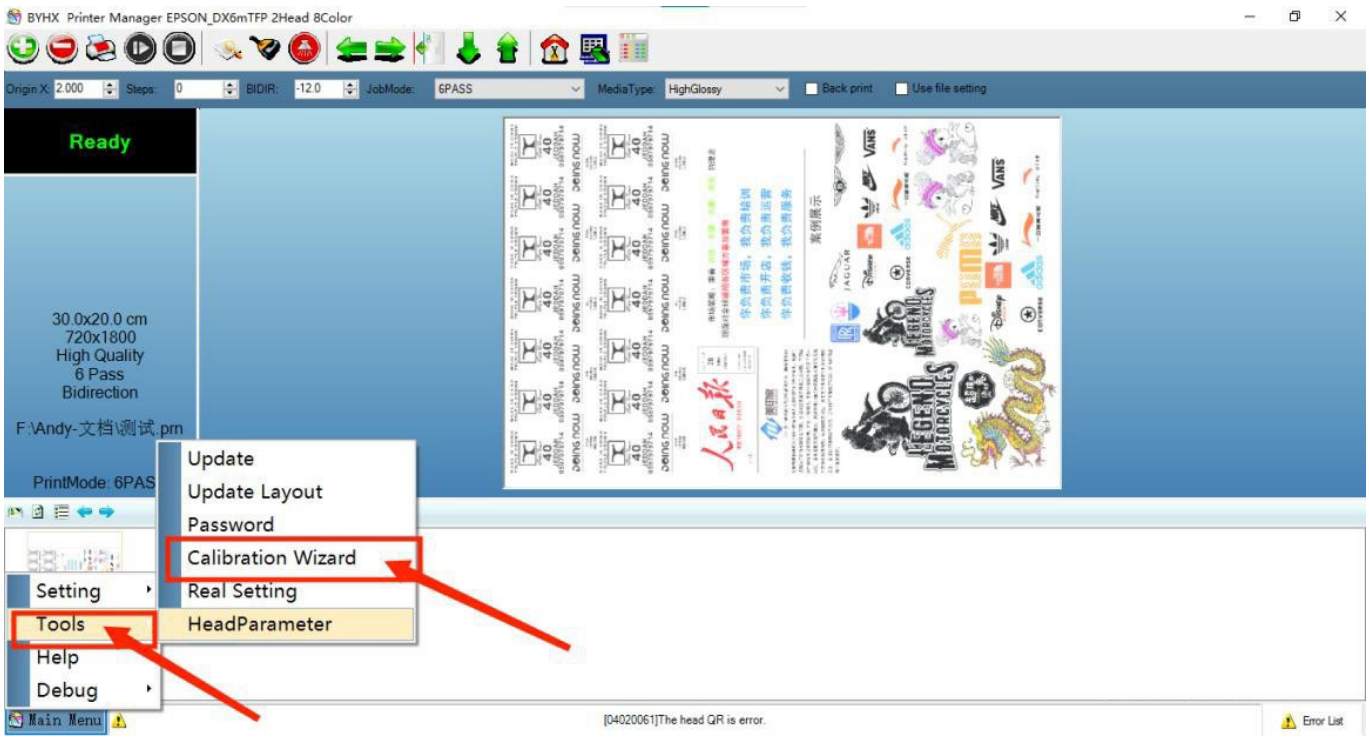
If the nozzles is blocked or missing (as shown in the figure below), please clean it in time until the complete nozzle state is obtained.

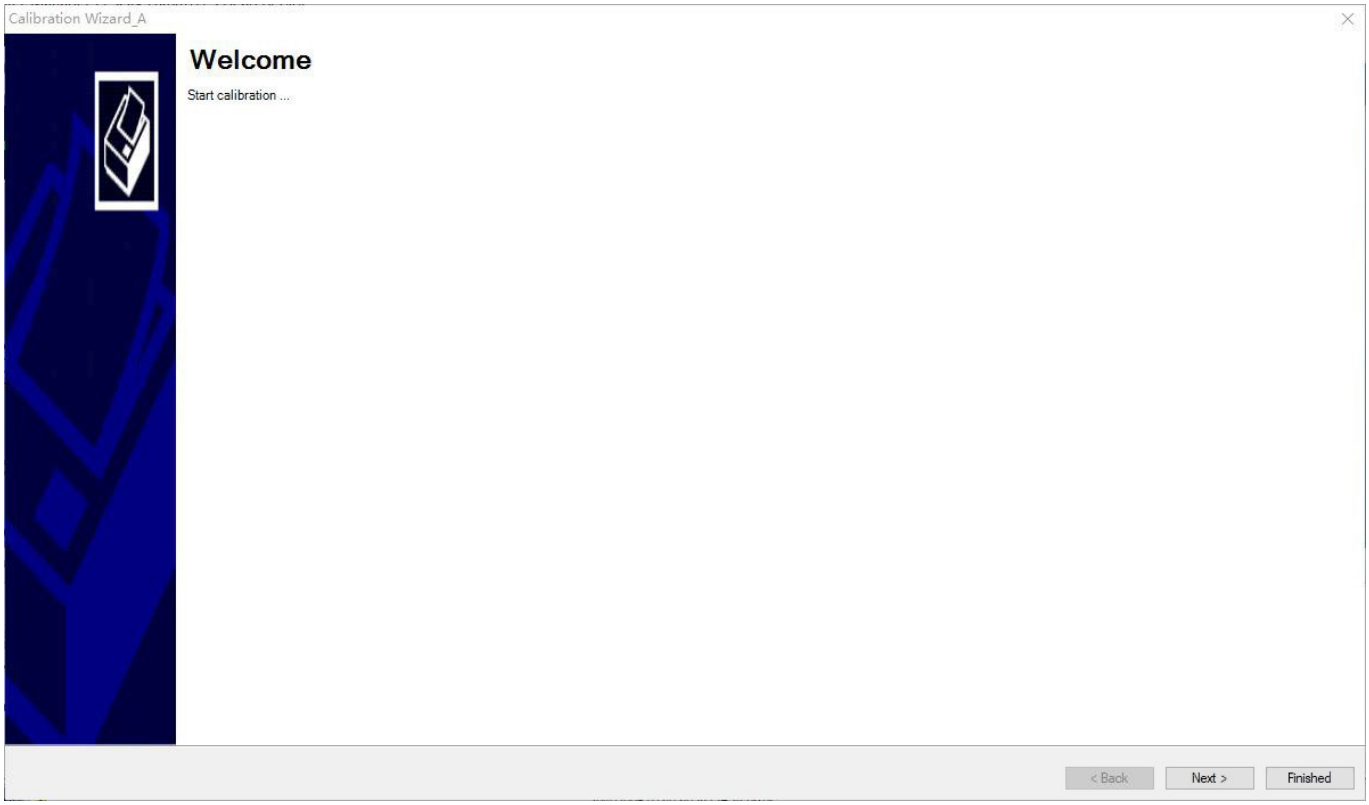


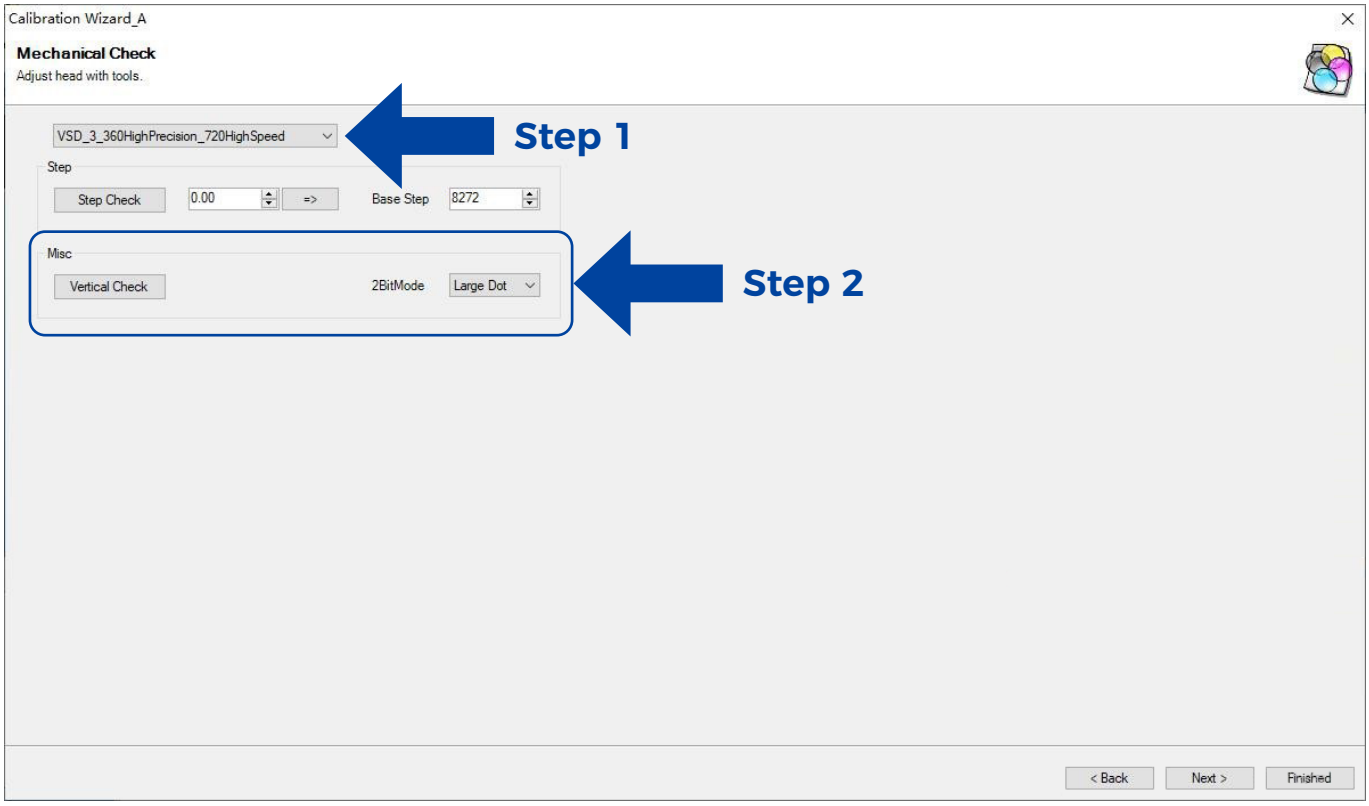
The order of the ink dampers is as shown in the figure.



Click “Main Menu” → “Tools” → “Calibration wizard”, as shown below:




Calibration Wizard_A
Welcome
Start calibration ...
< Back
Next >
Finished


Calibration Wizard_A
Mechanical Check
Adjust head with tools.
VSD_3_360HighPrecision_720HighSpeed
Step 1
Step
Step Check
0.00
=>
Base Step
8272
Misc
Vertical Check
2BitMode
Large Dot
Step 2
< Back
Next >
Finished

5.2 Vertical Check

When installing the print head, should pay attention to the installation angle (left and right inclination) and vertical (up and down inclination) of the print head. After installing the print head, the mechanical installation of the print head can be inspected through “Vertical Check”. Correction of the print head’s position by mechanical adjustment.

Step 1: Print Mode selection

VSD-3-360 Precision-720 Speed

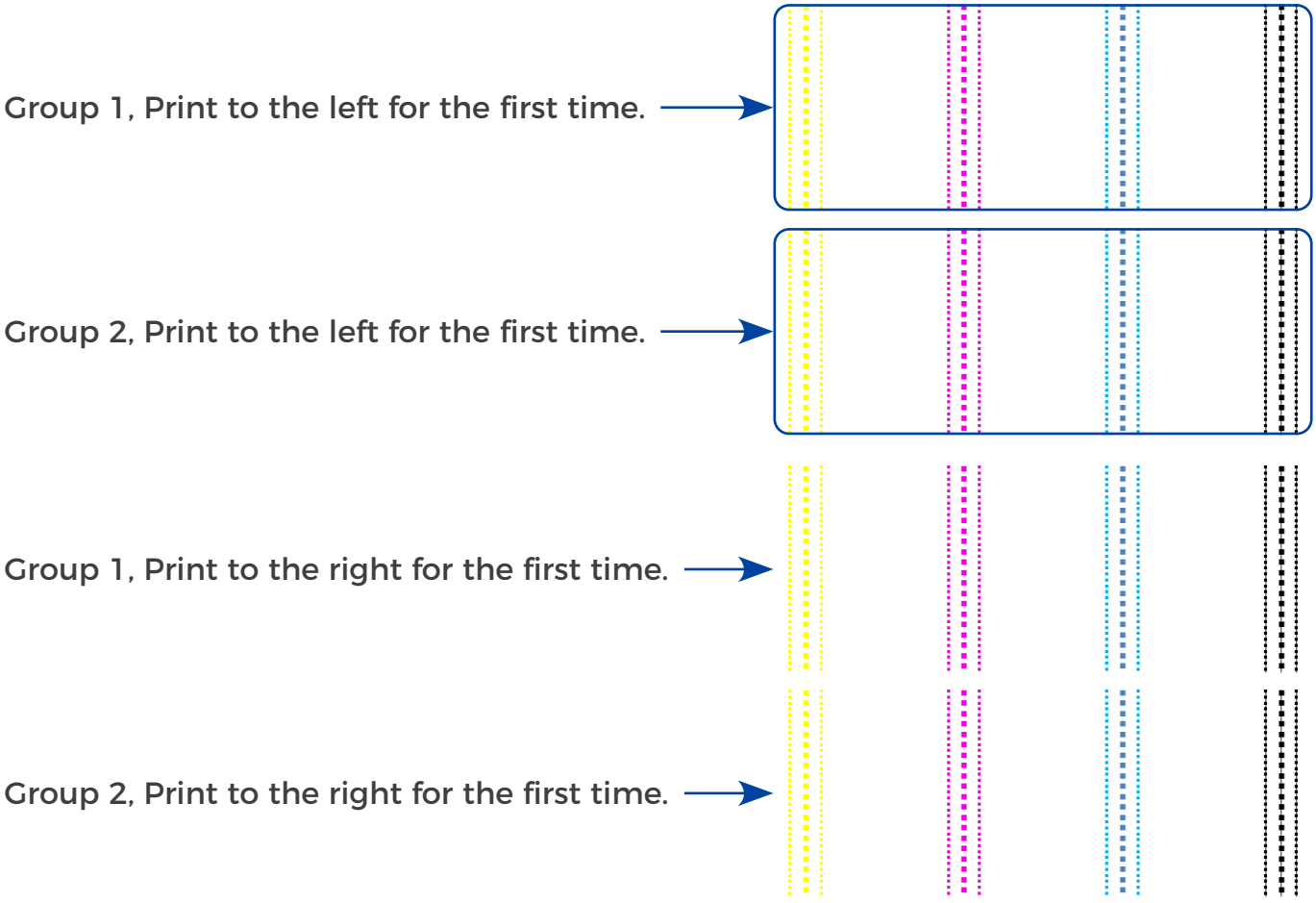
Step 2: Other selections

“L”

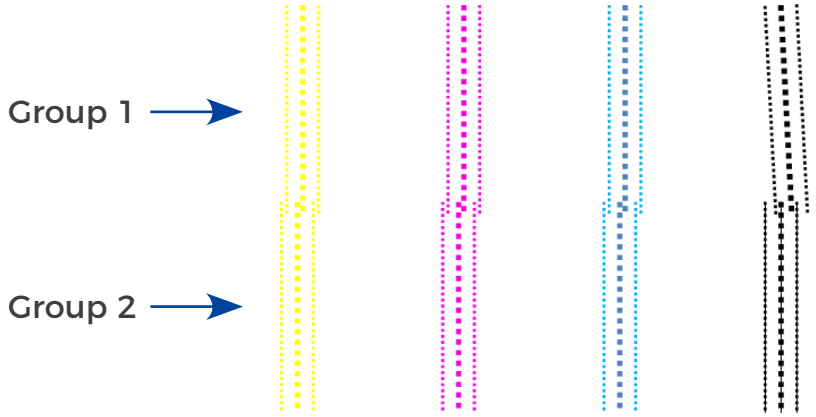
Step axis: Click “Vertical Check” → “Physical Calibration”

5.3 Angle Check

Click “Angle Check”, the software will print the calibration pattern as shown below (1 head with 4 colors, and there are 2 heads in 1 group of 4 colors) :

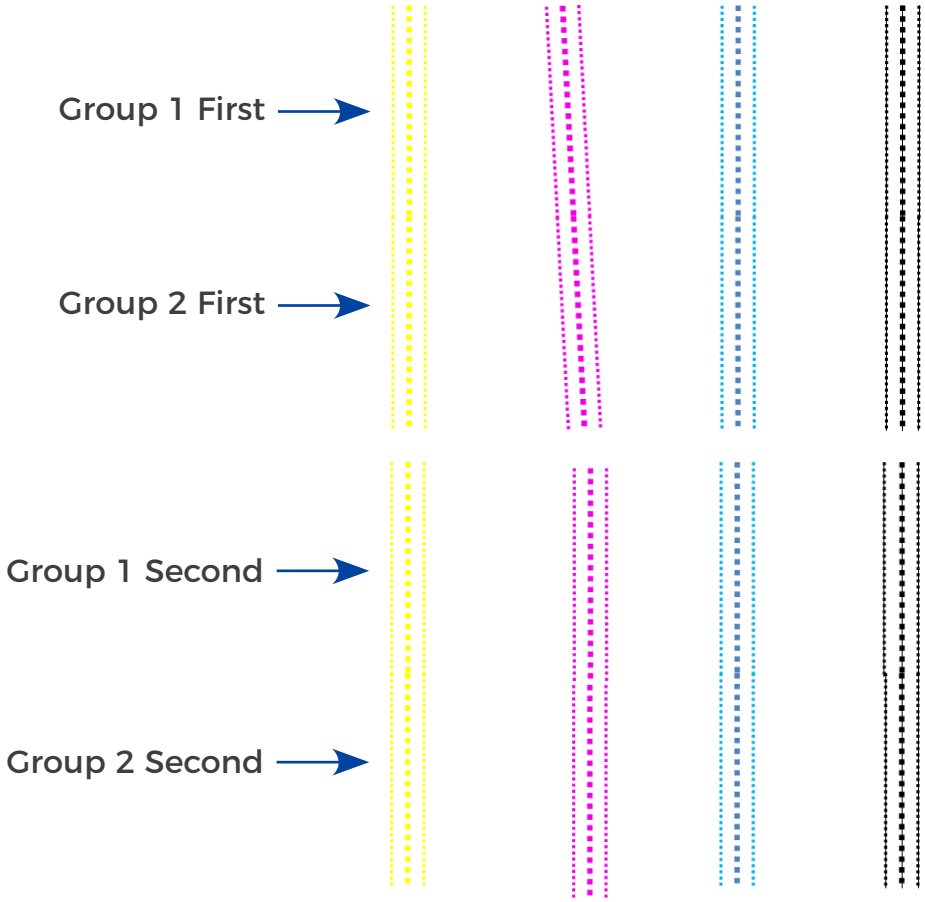


5.3.1 Check and calibrate between Group 1 and Group 2 (Observe the angle inspection of different groups of nozzles within the same color.)



As shown above, the black nozzles are angled and the black nozzles of Group 1 need to be adjusted mechanically.

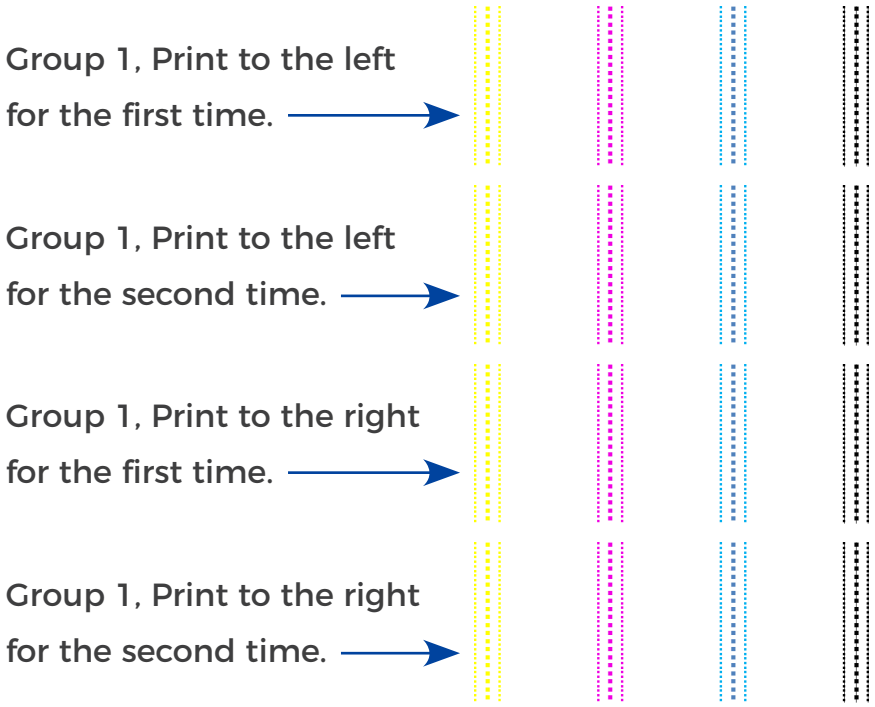
5.3.2 Printing twice and compare (Observe the angle of all colors.)



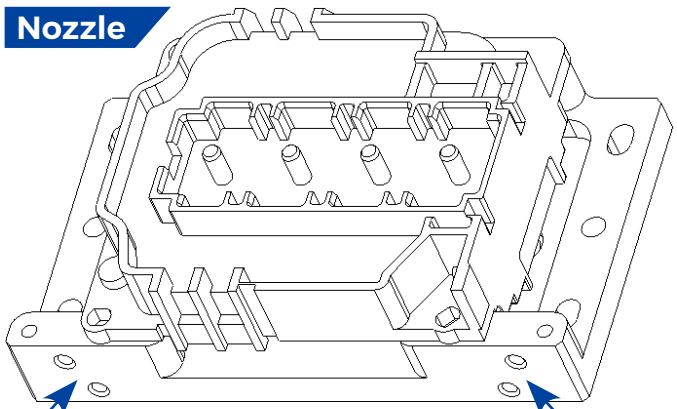
The whole Magenta color has the problem of angle and needs to be adjusted mechanically.

5.3.3 Angle check between left and right (to observe if the base plate of the print head installation is parallel to the printing platform)

Here we use a single set of nozzles as an example to explain.



The adjustment method is shown in the figure:



Loosen / Tighten the thrust screw.
Adjust the tightening screw outward.

Loosen / Tighten the tightening screw.
Adjust the thrust screw inward.

Printing in both directions, as shown in the figure above.

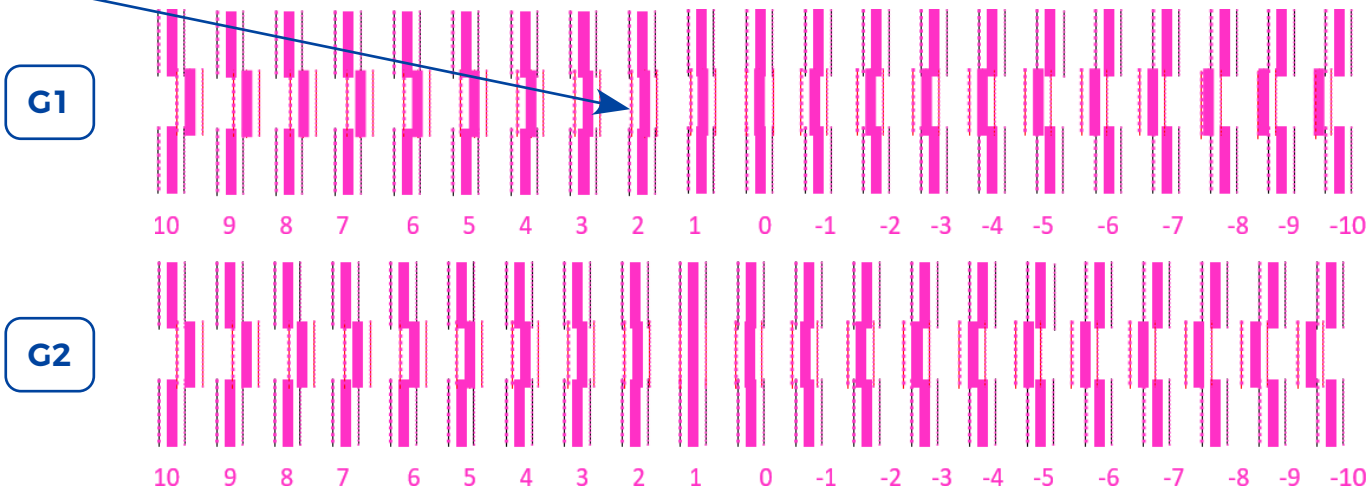
5.4 Group Level (horizontal calibration between nozzles .)

Print alignment to the left, “Print” and the software will print out the corresponding calibration reference chart.

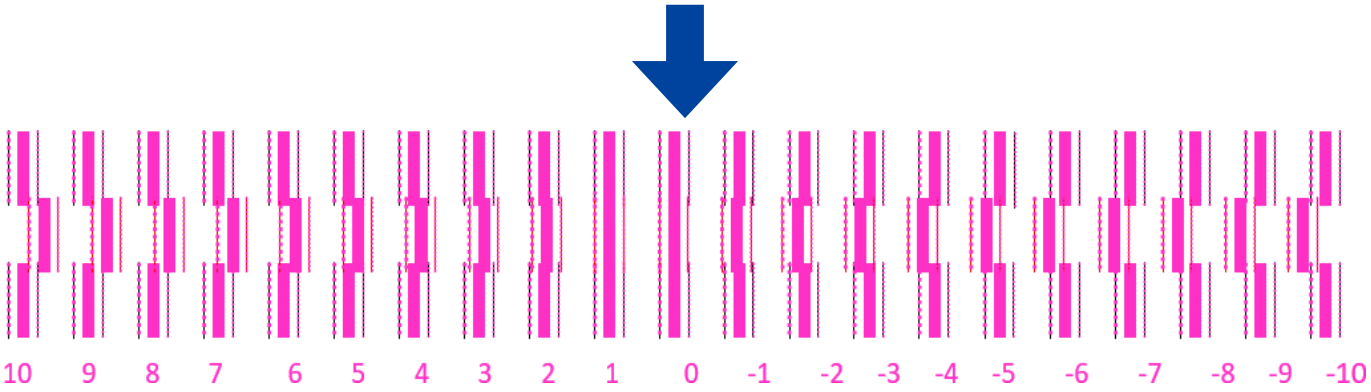
G1: Head 1(1 # head as the base head and 2 # head’s calibration based on 1 # head)

G2: Head 2

The final calibration results for each nozzle are as follows:



Corresponding value position selection (the most suitable value here is the number 1), and enter the corresponding number, that is, +1 at -9 below G2. Repeat this step until the most uniform arrangement is at the 0 position.



Print to the right

Same as above

Click “Save” after calibration, then click “Next” as shown below:

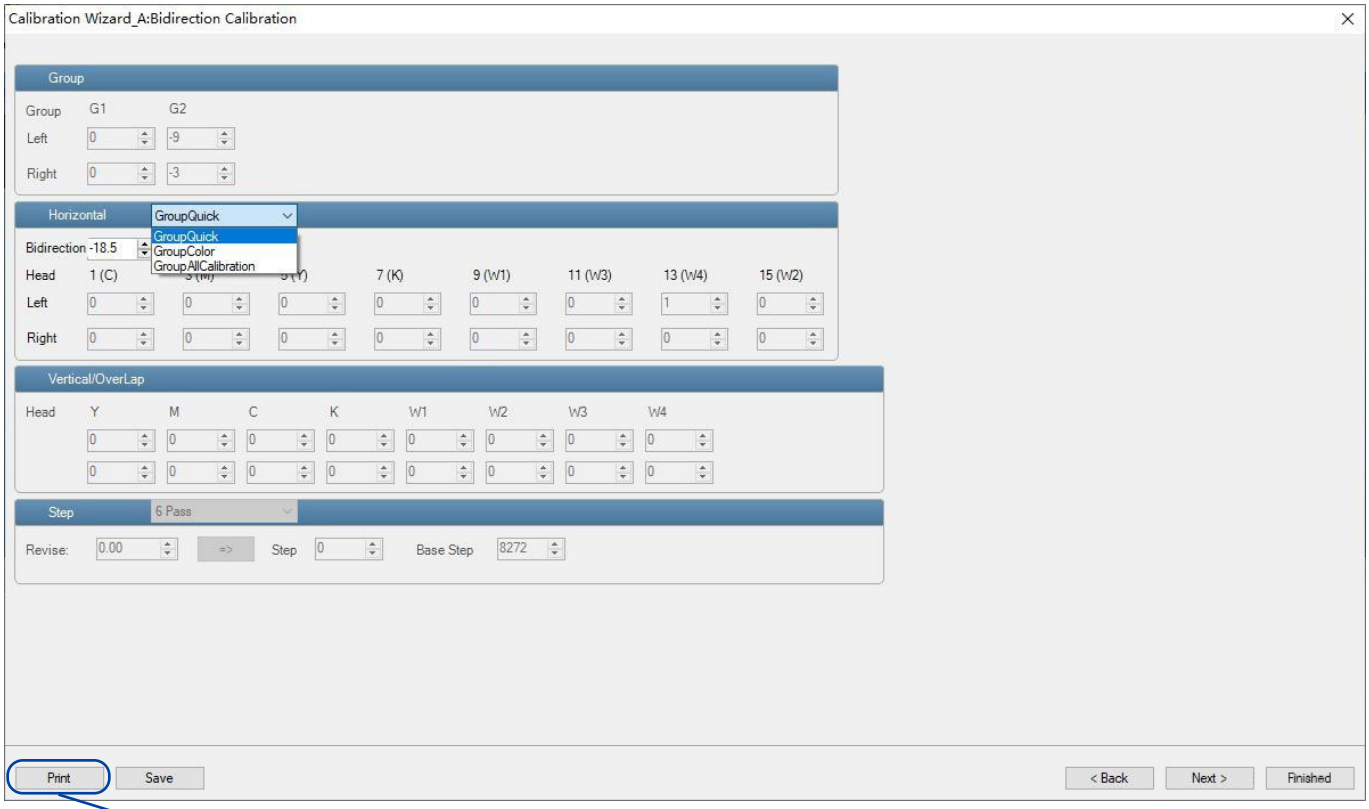
5.5 Horizontal Calibration

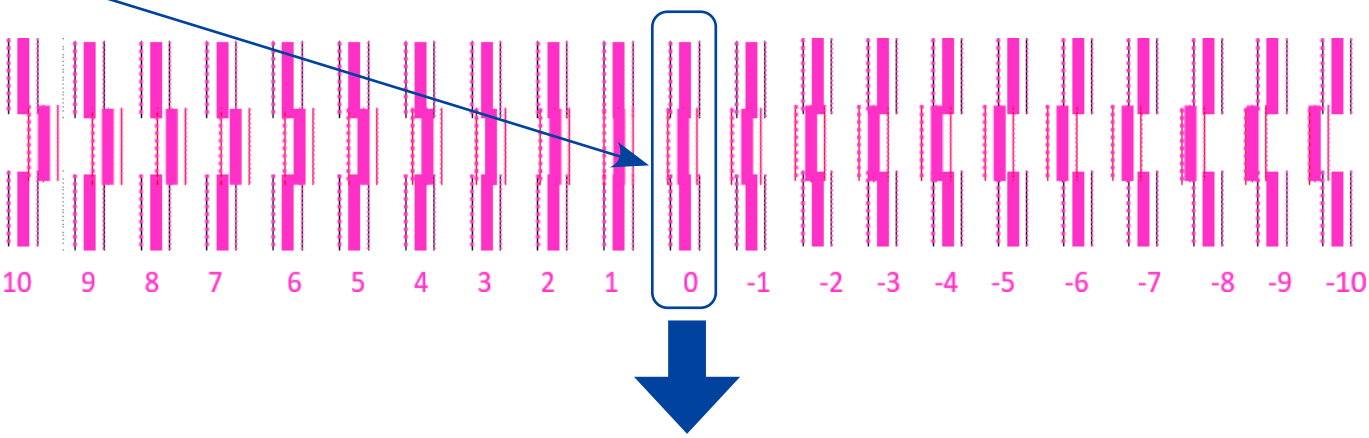
Select the corresponding printing content, “Print” the software will print out the corresponding calibration reference chart.

Quick calibration in group: Bidirectional calibration between Group 1 and Group 2 head.

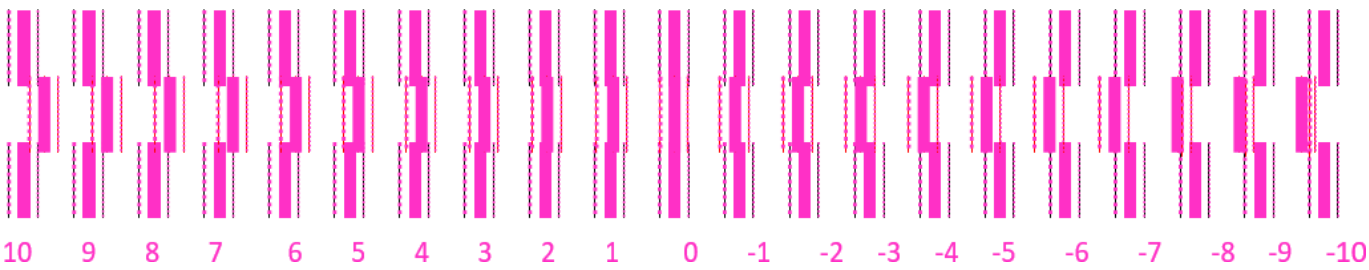
Color calibration in group: Calibrate each of the color between Group 1 and Group 2.

Full calibration in group: In summary





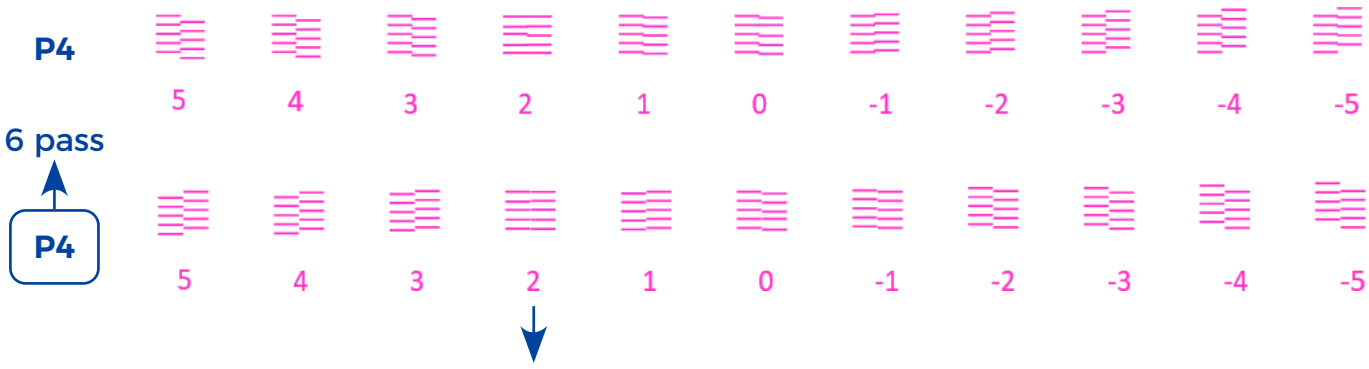
Corresponding value position selection (the most suitable value is seen here as the number 1), and enter the corresponding number, that is, +1 at Bidirection -18.5. Repeat this step until the most uniform arrangement is at the 0 position.



5.6 Step Calibration:

Select the appropriate pass value to click “Print”

Check the calibration pattern. For example: Select 6pass for numeric printing:



Select the well-proportioned pattern, and enter the corresponding value, the method is to fill in the corresponding value in the revised box.

Then click ⇨ to calculate the modified reference step until the “0” line evenly arranged.

The calibration steps are as follows:

Calibrate 1pass first, then calibrate other pass based on 1pass.

Click “Save” after calibration, then click “Complete” and exit the calibration window.

WARRANTY CARD

MODEL		**LOT #**	
BUYER		**DATE**	
SELLER		**TEL**	

Notes

i. The warranty card should be filled out by seller and kept by buyer. Alterations are prohibited.

ii. 24 Month Warranty - CALCA DTF printer includes a 24 month warranty, consumable parts are excluded from the warranty.

iii. No free repair is available for any damages caused by the improper use.