

**polaroid**

# **POLAROID X1 DTF Printer**

## **USER MANUAL**





**Thank you very much for purchasing Polaroid X1 series products**

In order to ensure the correct and safe use of this product based on a comprehensive understanding of its performance, please read this manual thoroughly and keep it properly.

Illegal reproduction of this manual in whole or in part is prohibited, otherwise the company will investigate its legal responsibility according to law.

The contents of this manual and the parameters of this product are subject to change without notice.

We have tried our best to edit this operation manual and test this product. If you find any misprint or error, please let us know, and we will be very grateful.



## Chapter 1 Security guidance

Please read the following instructions before using your Polaroid X1 series printer and follow the warnings and instructions marked on the printer

### 1.1 Important safety instructions

- Be careful not to spill liquid into the printer.
- Do not put anything on the platform of the printer. Be careful not to splash liquid into the printer.
- Connect all equipment to an appropriate grounding socket to avoid socket used in the same circuit with the equipment switched between on and off high-power systems such as air conditioning.
- Avoid using sockets controlled by wall switches or automatic timers.
- Keep your computer system away from potential sources of electromagnetic interference, such as fans.
- Do not use damaged or worn power cords.
- If you use an additional power cord, remember that the total amperage of the equipment plugged into the additional power cord does not exceed the rated amperage of the power supply. In addition, remember that the total amperage of all equipment plugged into the wall does not exceed the rated amperage of the wall socket.
- Do not try to repair the printer yourself.
- In case of the following situation, please ask experienced maintenance personnel to maintain after cutting off the power supply:
  - If the power cord or plug is damaged
  - If liquid splashes into the printer
  - If the printer falls or the case is damaged
  - If the printer does not operate normally or there is a significant change in performance

### 1.2 Precautions when using the printer

- Do not move the print head by hand, or the print may be damaged.
- Always use the power switch to turn off the printer. However, when the key is pressed, the power supply will be cut off. Do not unplug the printer or data cable until the power supply is cut off.
- Before handing the printer, ensure that the print head is in the initial position and fixed

### 1.3 Precautions for use of ink bottle

- Please put the ink bottle out of the reach of children. Don't let children drink or touch the ink bottle.
- If the ink sticks to the skin, rinse it with soap and water. If ink splashes into your eyes, please rinse it with water immediately.
- Do not shake the ink bucket, which will cause ink leakage.
- After the ink bucket is used for a period of time (usually three months), it should be removed immediately for thorough cleaning and dried. When replacing a new ink bucket, pay attention to cleaning to ensure the printing quality.

### 1.4 Installation requirements of printer

#### Site preparation

It is the customer's responsibility to comply with all installation requirements and perform them during machine operation. If this is not done, the machine may not work properly



## **Work area**

Work area refers to the area close to X1 series machines (hereinafter refers to as equipment), as shown in the figure. It should be emphasized that users should ensure the safety of operators in this area. The work area is 5.2m long, 3M wide and 3M high

## **Environmental requirement**

Equipment should be kept away from radio frequency sources. Floors should be easy to clean without dust and static electricity. In order to help operator and customers judge the accuracy of color, neutral gray decoration and pure white light (fluorescent lamp) should be used for as far as possible. The device must be installed in a clean and dust-free environment where the temperature and relative humidity are controlled in the following ranges: Altitude: below 1000m temperature: 18- 28° C, relative humidity: 40%-60%.

## **Load bearing requirements**

D7003-2H/4H fixing machine 300KG, printer 100KG.

Install the device on a relatively flat place and screw off the feet for support.

## **Space retention requirements**

The front of the device refers to the machine input edge. The device requires 1.0 meters in front of it. Reserve 1.0m on the back and 1.0m on the left and right sides .In addition, the space reserve area also includes a height of 3 meters above the ground level. In addition, the front and rear of the machine should also leave space for loading and unloading pictures and consumables.

## **Safety requirements**

Fire prevention: In order to prevent the danger caused by the accumulation of volatile gas, there must be sufficient ventilation to ensure that the air in the working area is changed about 6 to 8 times every hour. The vent should be low enough to prevent the accumulation of volatile gas near the floor.

The electrical equipment installed near the work area must comply with GB/T standards and the provisions of national electrical regulations on class I and class II sites, and shall be installed by professional electrical contractors with corresponding qualifications. The regulations on hazardous waste treatment shall meet the special storage and treatment requirements of relevant departments.

**Improve air circulation:** In order to prevent the danger caused by the accumulation of volatile gas, there must be sufficient ventilation to ensure that the air in the working area is changed about 6 to 8 times every hour. The vent should be low enough to prevent the accumulation of volatile gas near the floor.

The electrical equipment installed near the work area must comply with GB/T standards and the provisions of national electrical regulations on class I and class II sites. And shall be installed by professional electrical contractors with corresponding qualifications. The regulations on hazardous waste treatment shall meet the special storage and treatment requirements of relevant departments.

**Electrical requirement :** ( UPS and power regulator are highly recommended)

X1 machine uses single-phase power supply, printer must be well grounded.(The voltage of ground and neutral cannot be greater than 0.3V,and the grounding resistance must be less than 30hms.)



Power supply voltage range 220V ( $\pm 10\%$ ), AC 50Hz or 60Hz. The customer must have a professional electrician or contractor install the power line output. Circuit breaker ratings are as follows:

Main input/supply voltage	AC 220V	AC 110V
Single phase	15 <sup>a</sup> /phase	30 <sup>a</sup> /phase

The maximum power consumption is less than 3KW, and the average power consumption is 2KW. UPS can be 3KV A, access to all electricity.

The distance between the main power socket and the power access terminal of the device must be no more than 2m.

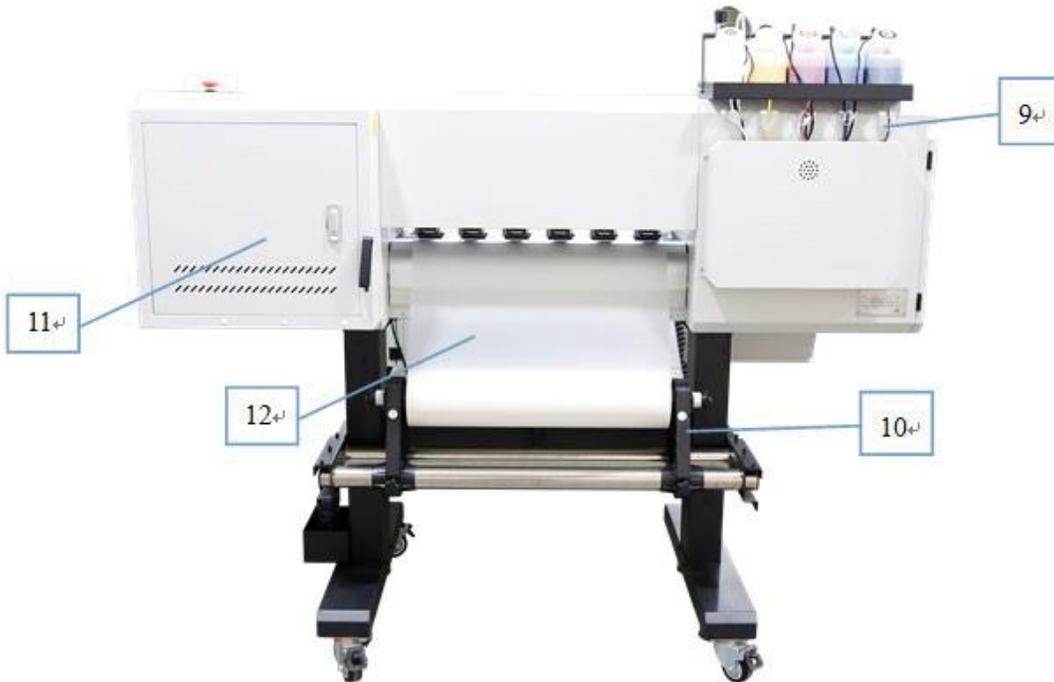
**Polaroid X1 machine power:**

About 3600W, it is recommended to install the ground cable of the stabilized power supply: install the ground cable on the public ground plate in the device. Then use a multimeter to hit the AC 200 range. one meter pin ground wire, the other meter pin is connected to the AC input zero line. The measured value is less than 1.



## Chapter 2 Structure diagram

### 2.1 Machine structure





- |                                       |                                   |
|---------------------------------------|-----------------------------------|
| 1. Control board                      | 11. Back cover of board           |
| 2. Platform temperature control board | 12. Printing material             |
| 3. Waste ink bottle                   | 13. Shaking powder control system |
| 4. Emergency stop                     | 14. Recycling powder storehouse   |
| 5. Front cover                        | 15. Powder storehouse             |
| 6. Ink barrel                         | 16. Smoke vent                    |
| 7. Printing platform                  | 17. Mesh belt                     |
| 8. Foot stool                         | 18. Cooling fan                   |
| 9. Ink tube                           | 19. Take up system                |
| 10. Feeding system                    | 20. Purifier (optional)           |



## Chapter 3 Basic parameter of the printer

Machine type	Polaroid X1DTF	
Print head type	I3200-A1	
Printhead Quantity	2/4	
Printing efficiency (2H/4H pass)	2H :8-15 square/hour 4H:15-30 square/hour	
The height of printing	2-3 mm	
ink	Color	CMYK+W
	Type	Water/paint/pyrography
	Ink Supply	Siphon type continuous ink supply system
Feeding mode	Roll	Roll to roll manual feeding
Printing width	Maximum width of material	600mm*50m
Drying system	Pre-and post-printing heating system/tunnel drying system/heat press machine	
Material type	Poliamide film	
Printhead cleaning system	Automatic lifting cleaning structure	
Workflow	After RIP, use the printer management software/RIP while printing	
Interface	Reticle	
RIP software	Riin/MT/PP	
Operating system	Windows 7/Windows 10 64 bit	
Computer configure	CPU	Core™i5 CPU @ 3.5GHZ or higher
	Memory	8GB or higher
	Hard Disk	300GB or higher (Solid-state drives are recommended)
Working Environment	Humidity	45-75%RH
	Temperature	Temperature 20-30°C (68-86°F) Optimum temperature 24-28°C (75-82°F)
Power	Oven 7.9KW Printer 1KW	
Size	<ul style="list-style-type: none"> <li>• Packing size of fixing machine: L2400*W1120*H1136</li> <li>• Printer package size: L1875*W950*H725</li> <li>• Net size of fixing machine: L2305*W1092*H1105.5</li> <li>• Printer net size: L1719*W640*H1399</li> <li>• Net size of smoking machine: L625*W575*H1360</li> <li>• Package size of smoking machine</li> </ul>	

**Attention: Polaroid reserves the right of final interpretation, subject to change without prior notice.**



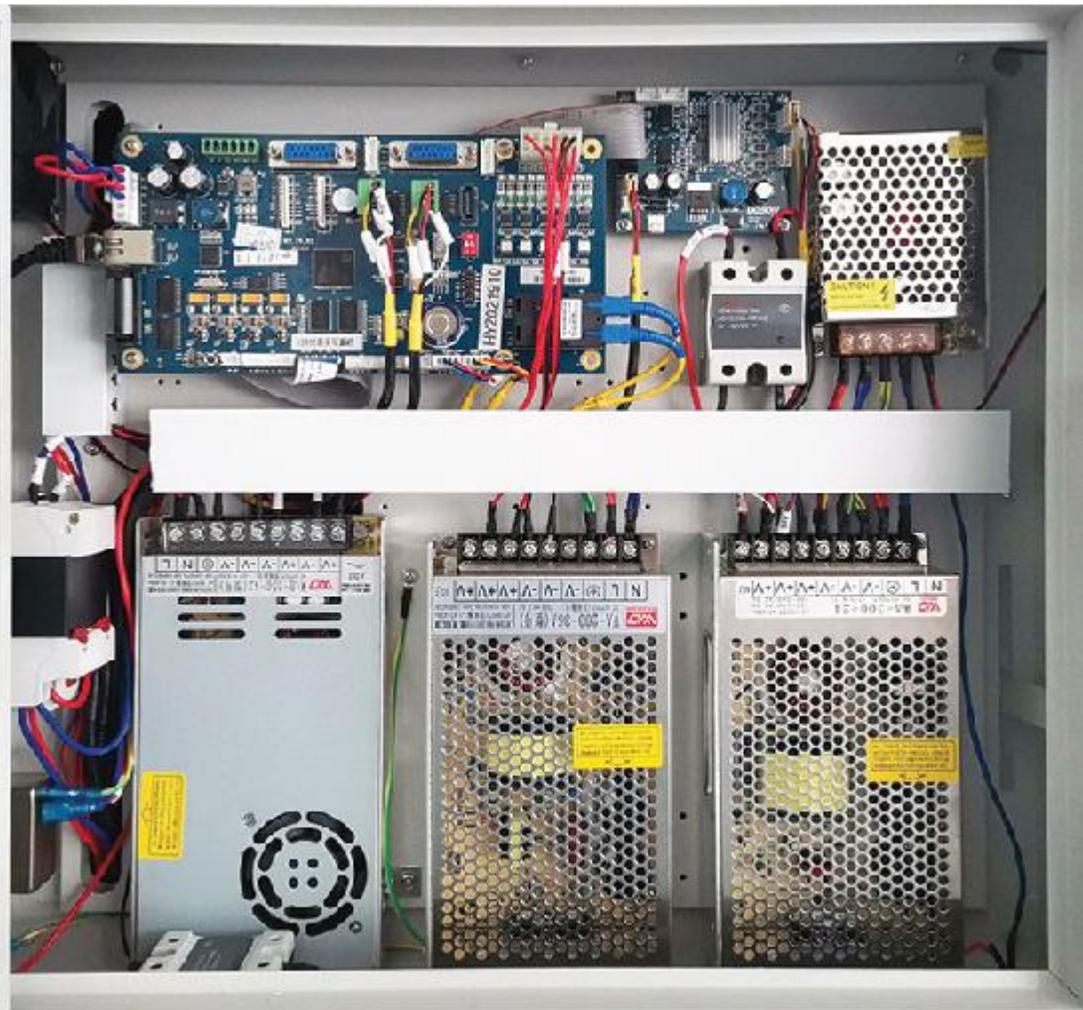
## Chapter 4 Hardware installation

### 4.1 Introduction of printing system

The Xenons print control system consists of three parts: the main board, the printhead board and the control software, which are connected by PC port.

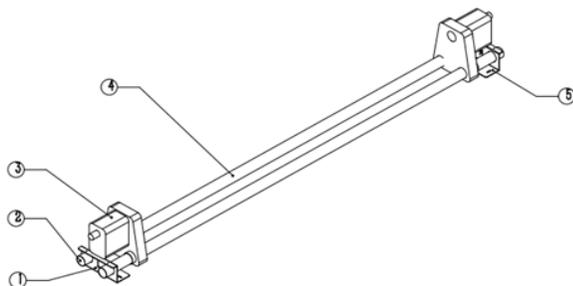
### 4.2 Board related

#### 4.2.1. The main board is as follow:



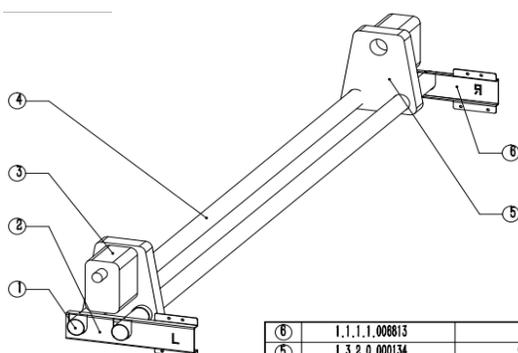
## 4.3 Installation of feeding and take up system

### 4.3.1 Installation steps of take up system



⑤	1.9.1.0.000827	双动力收纸器右侧安装板	1	冷轧3.0	华美黑砂纹	钣金
④	1.2.2.1.000081	重理放纸器侧管Φ50*1.5*2400mm	2	不锈钢		钣金
③	1.3.2.0.001177	SHLB双动力收纸器	1			外购件
②	1.1.3.0.000427	侧管堵头	4	塑料	管螺纹	外购件
①	1.9.1.0.000826	双动力收纸器左侧安装板	1	冷轧3.0	华美黑砂纹	钣金
序号	物料代码	零件名称	数量	材料	表面处理	备注

### 4.3.2 Installation steps of feeding system



⑥	1.1.1.1.000813	X2S重理放纸器右侧板	1	冷轧3.0	华美黑砂纹	钣金件
⑤	1.3.2.0.000134	SHLB01放纸器组件(右)	1			外购件
④	1.2.2.1.000081	放纸器侧管Φ50*1.5*2400mm	2	不锈钢		钣金件
③	1.3.2.0.000133	SHLB01放纸器组件(左)	1			外购件
②	1.1.1.1.000812	X2S重理放纸器左侧板	1	冷轧3.0	华美黑砂纹	钣金件
①	1.1.3.0.000427	侧管堵头	4	塑料	管螺纹	外购件
序号	物料代码	零件名称	数量	材料	表面处理	备注

## 4.4 Installation instructions for cartridge holder

### 4.4.1. The cartridge components



## 4.5 Installation of printhead

Note: The improper operation will cause irreparable damage to the printhead, so it must be carried out under the guidance of professional personnel.

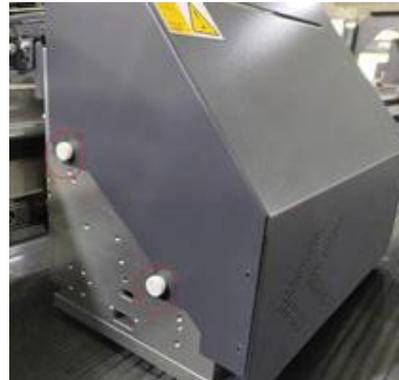
### 4.5.1 Accessories required for installation

Name	Quantity
I3200 printhead	2
I3200 damper	8
Printhead cable(14p/55cm)	8
Phillips screwdriver	1
Scissor	1
Printhead car stickers	4
M3*8 cross round head screw	6

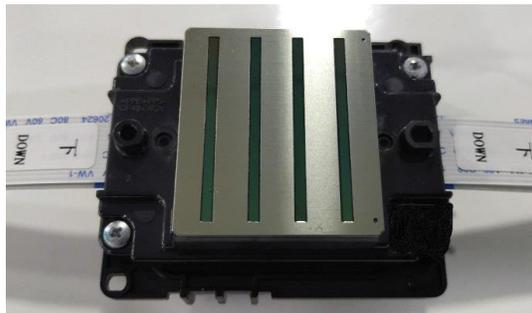
Note: All materials required for installation are in the accessory box, and common tools are provided by yourself.

### 4.5.2 Installation step

1. Remove the carriage support, yellow sheet metal, i.e. carriage support, is shown in figure 1 below. After removal, the carriage can slide left and right, remove 4 fixing screws of the carriage cover plate, and remove the carriage cover, as shown in figure 2.



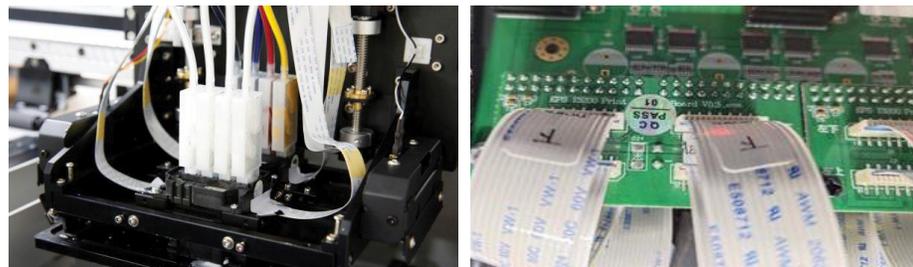
2. Install the printhead: (Before installing the printhead, make sure the machine is in normal motion)
  - 2.1 Plug in the printhead data cable (14P printhead data cable)



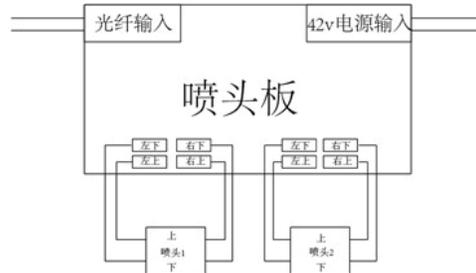
- 2.2 Attach car stickers to the printhead and data cable connection part. Use scissors to cut the sticker into a suitable shape to prevent ink from entering the printhead data cableslot.



- 2.3 Fix the printhead on the bottom plate of the carriage, as shown in the following figures:



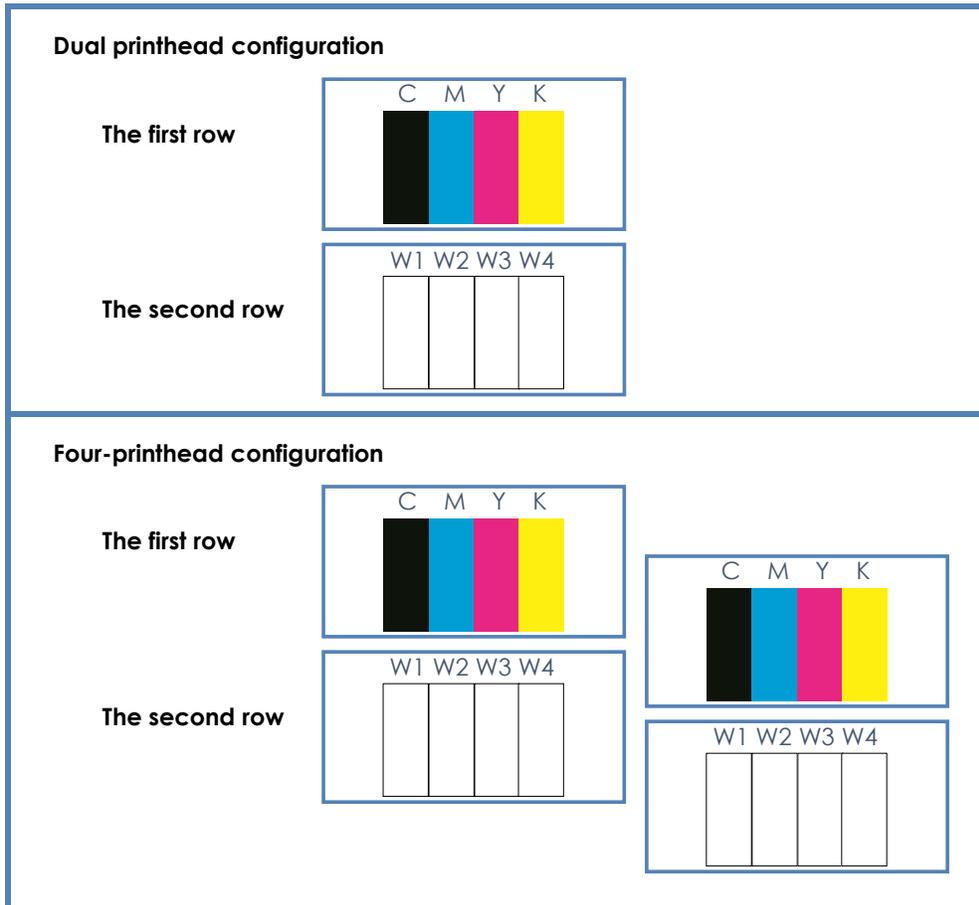
- 2.4 Connect the other end of the printhead data cable to the printhead board, as shown in the following figures:



Install the data cable of the printhead strictly according to the instructions below; otherwise serious irreversible damage will be caused to the printhead.

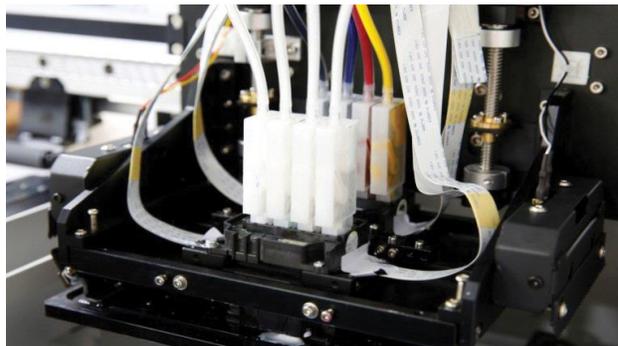


3. Install the damper  
After all the 8 ink tubes are loaded with dampers, install the dampers of four ink colors from left to right of no.1 printhead in the order of :KCMY", and then install NO.2 printhead in the order of N0.2 printhead. The order of dampers is as follows:



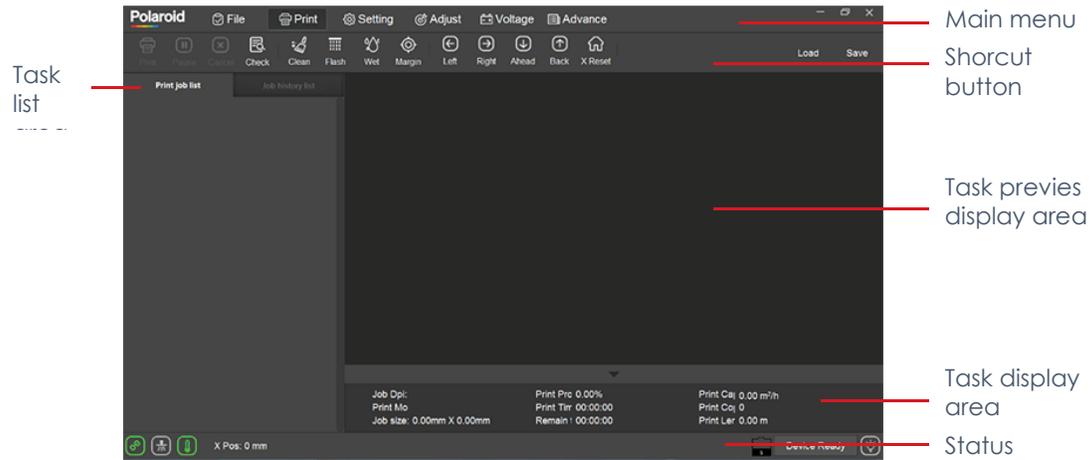
#### 4.5.3 Check Installation

Check that the installation is correct as shown in the following figure. Check the installation of data cable emphatically. Start calibration after confirmation.

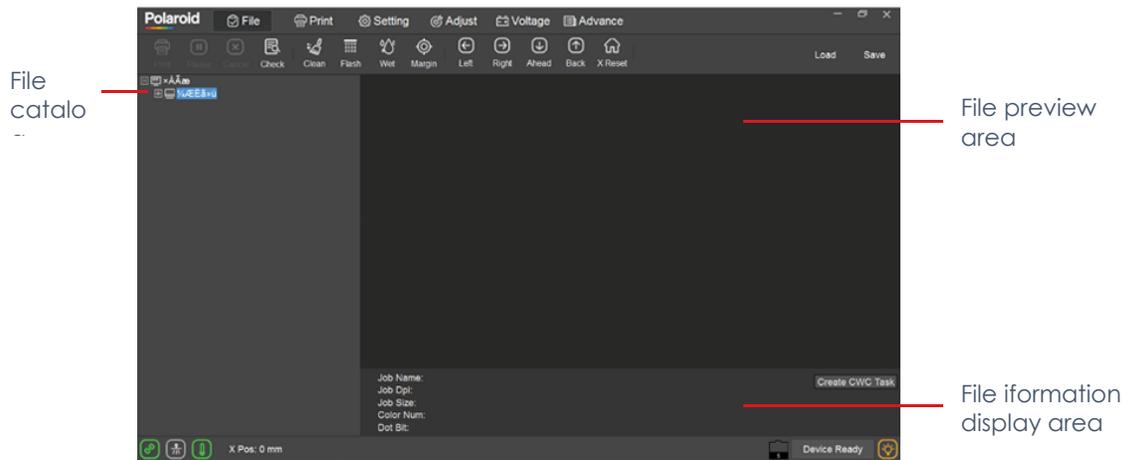


## Chapter 5 software functions

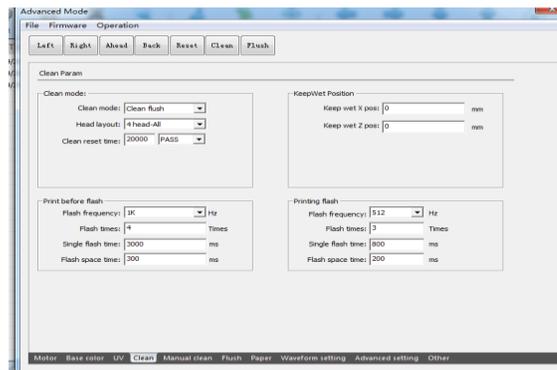
### 5.1 User-friendly control interface, simple interface and convenient operation



### 5.2 Import and export parameters and save the parameters to the board, ensuring system stability



### 5.3 Automatic cleaning and moisturizing function, single cleaning parameters can be adjusted together.



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