

Xinflying 6090 UV Flatbed Printer

User Manual

Preface

Dear Customer,

Thank you for your trust in and choice of Xinflying printers. We believe this product — designed for convenience, safety, and cost-effectiveness — will bring greater efficiency and enjoyment to your work and daily life. We look forward to our quality products and services meeting and exceeding your expectations.

Before using the printer for the first time, please read and follow all instructions in this manual carefully. Doing so will help you better understand and operate the printer, ensure the equipment remains in good working condition over the long term, and consistently achieve the best possible print quality. The more familiar you are with your printer, the more efficiently you will be able to operate it.

Should you encounter any issues during use, please contact our service personnel promptly for check and repair. We are committed to providing high-quality after-sales service. Please also follow the maintenance schedule specified in this manual to perform routine maintenance on time.

This manual covers information for all models in this product series. Due to differences in model configurations, the descriptions in this manual may not exactly match your specific printer. Please refer to the actual machine as the definitive reference.

All content in this manual reflects the most current information at the time of publication. Changes may be made without prior notice. Please visit our official website for the latest updates.

Safety Instructions

1. Do not install or use this product in areas where children may be present.
2. Do not cover or block the ventilation openings of the product.
3. Always wear protective gloves when performing maintenance or handling ink to protect your hands.
4. During printing, keep the UV cover closed to prevent prolonged direct UV light exposure, which may cause harm to the human body.
5. Do not place the printer on an unstable or unsteady surface, or anywhere that may cause the printer to vibrate.
6. When lifting this product, ensure you grip the designated lifting positions as indicated in this manual.
7. Do not install the printer in locations with excessive dust, oil fumes, or moisture.
8. When moving the product, do not tilt it more than 15° in any direction (forward, backward, left, or right).
9. This product is heavy — do not attempt to carry or move it alone. Always use at least two people.
10. Leave sufficient space at the rear of the printer to allow the print platform to move freely.
11. Install and operate the printer away from locations with large temperature fluctuations, and avoid direct sunlight on the machine.
11. Do not place the printer on an uneven surface. Ensure the printer is level during operation.
12. Place the printer on a firm, stable platform.
13. Do not use any damaged power cable to connect to the printer.
14. Using accessories or ink not purchased from our company that causes damage to the printer will void the warranty.
15. Using ink not purchased from our company does not guarantee print quality.

Information Notices

[⚠ WARNING] If this warning is ignored, it may result in serious personal injury. The steps described in this notice **MUST** be strictly followed.

[⚠ CAUTION] The event described here must be strictly followed, otherwise it may result in damage to your equipment.

[★ NOTE] Indicates that the described device or function is only available on certain models, or may vary according to customer requirements. Your purchased printer may not include this feature.

Unpacking

Step 1 — Receiving the Machine

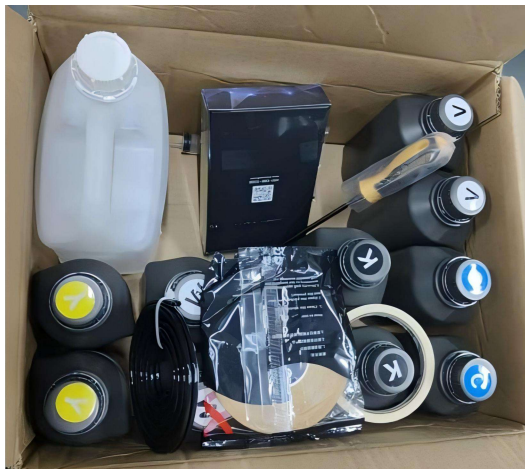
Using a hammer and screwdriver, begin by removing the lid of the wooden crate. Next, remove the crossbeam (support beam) from the top. Then use the hammer to knock off all four side panels of the wooden crate. The machine can then be lifted out.



Step 2 — Checking Accessories

After unpacking, verify that the following accessories are included:

Item	Description
Ink	UV ink (supplied per order; verify quantity and color against packing list)
Dongle (USB Key)	Software authorization dongle — required to run the RIP printing software



Step 3 — Lifting the Machine

The handles on both sides of the machine can be used for lifting and carrying. If the machine needs to be hoisted to an upper floor, the handles on either side may also be used as hoisting points.

⚠ WARNING: Never hoist or lift the machine by its crossbeam (top beam). Only use the designated side handles for lifting or hoisting.

**Designated side handles**

Step 4 — Initial Setup

After placing the machine in its operating position, perform the following checks:

- Remove the triangular brace (support bracket) used for shipping protection.
- Check that the grating strip (encoder strip) is positioned in the center of its guide track. The grating strip must be centered for proper carriage movement and print registration.



- Push the carriage to the middle of the platform
- Plug the dongle into the USB port of the computer
- Connect the power supply, activate the emergency stop, and reset the machine



Carriage



Riin dongle



Power Supply



Emergency stop

Software Installation

Step 1 — Riin Rip & Printexp. installation

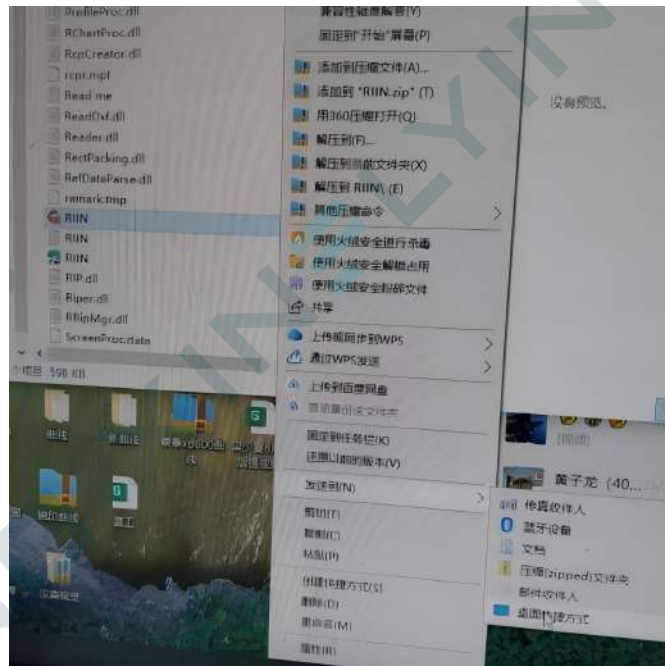
1. During installation and use, it is necessary to uninstall antivirus software and turn off the firewall, otherwise the RIP software cannot be used.
2. It is best to use WIN11, a 64 bit system for installation



Riin Rip Software

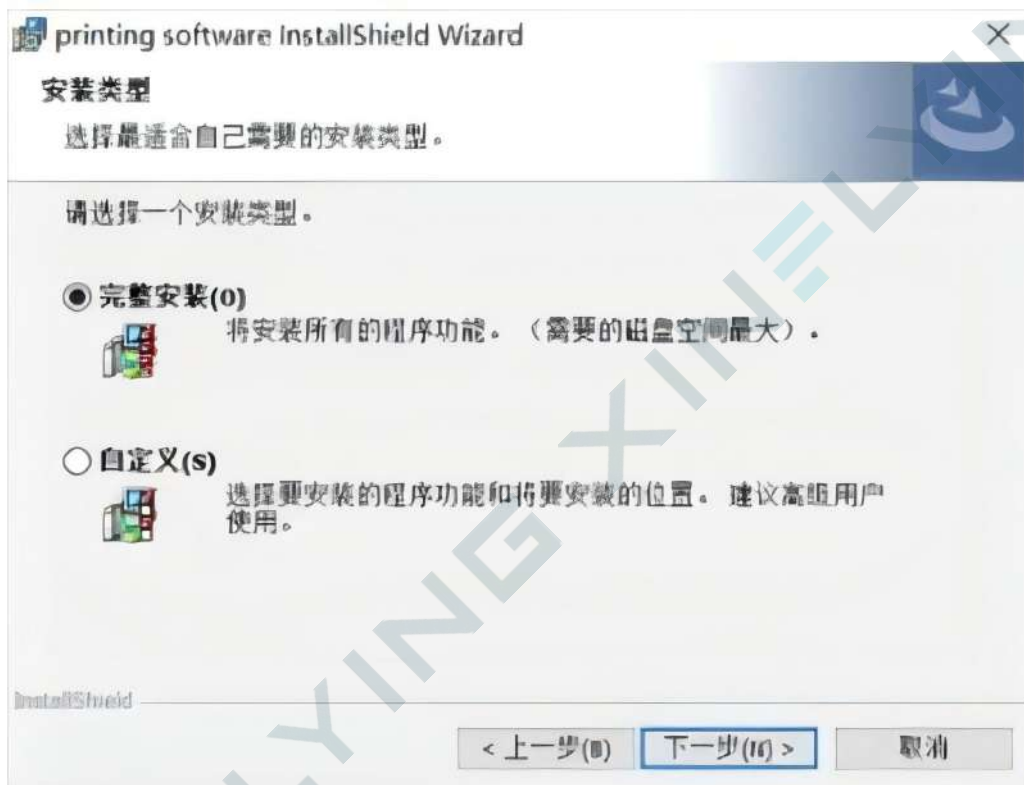


PrintExp. Software

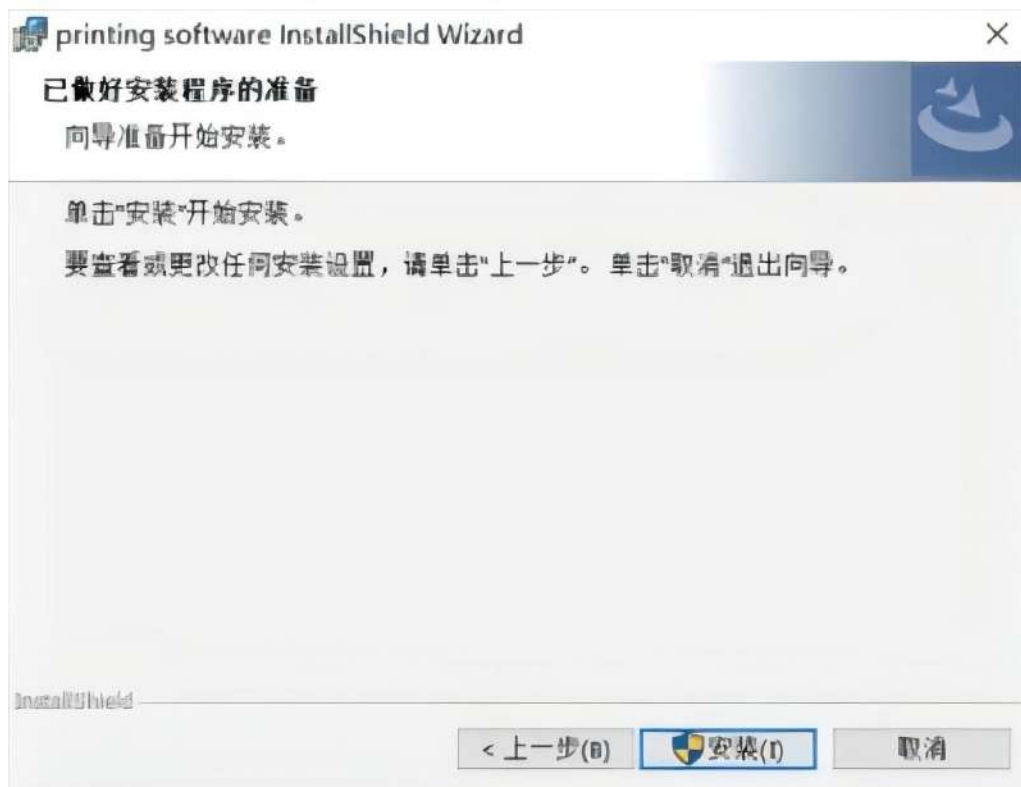


After installing Riin software and Printexp. software, it is necessary to provide Shortcut for both of them;

About other software, just simply unzip and install



Click "Next "



Click "Set Up "

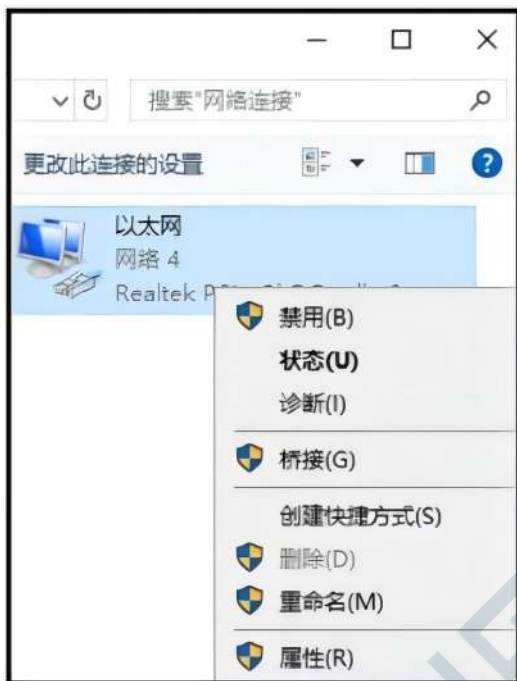


Finish installation and create a Shortcut icon

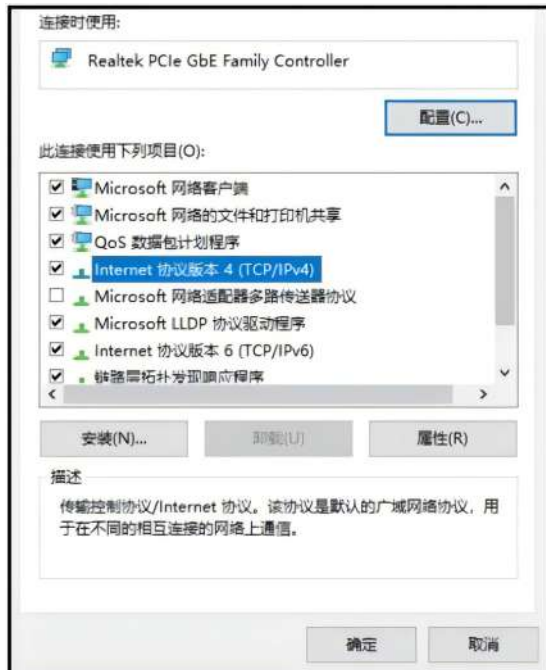
Step 2 — IP Setting and Connect the computer



1. Open Control Panel → Network and Internet → Network and Sharing Center, then click "Change adapter settings" in the upper left corner.



2. Find the icon for the wired network card (often named 'Ethernet'), right-click on it, and choose 'Properties'."



3. Select 'Internet Protocol Version 4 (TCP/IPv4)', click 'Properties'.



4. Select 'Use the following IP address', then enter the IP address using the parameters supplied by the technician, and click 'OK'."

Step 3 — Driver Installation

1. Right-click to run this software as an administrator



2. Click the icon “Riin” on the top left corner → "Printer Management" → "Custom Printer".



3. Locate the driver files in the USB drive, and select the driver files with the suffix ".dpf". And Click "OK" to complete the driver installation.



Add Ink

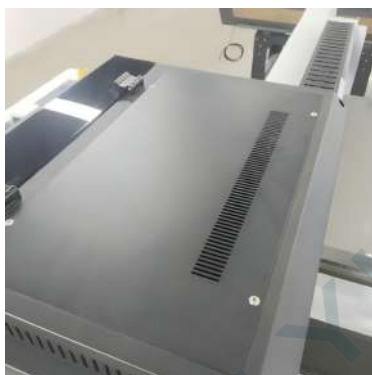
1. Fill the corresponding colors at the back of the machine – follow the labels strictly and do not mix colors.



2. Switch on all ink alarms (they beep when ink is below half, Marked Green circle will beep).



3. Unscrew the metal plate on the printhead, connect the ink wires, After that, tighten the metal plate.

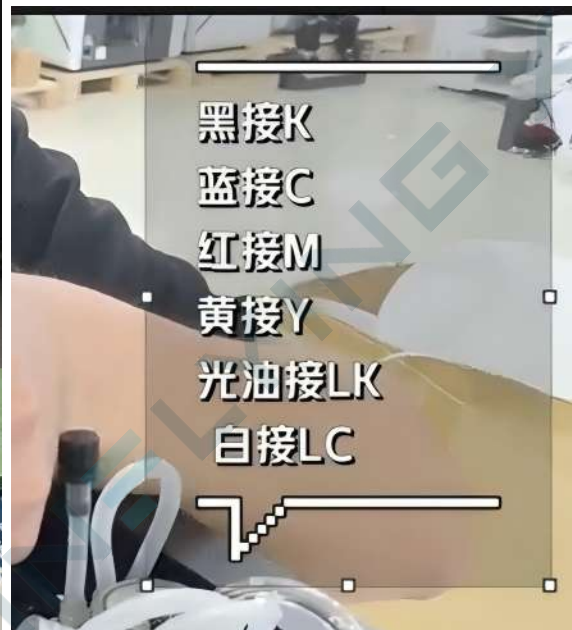
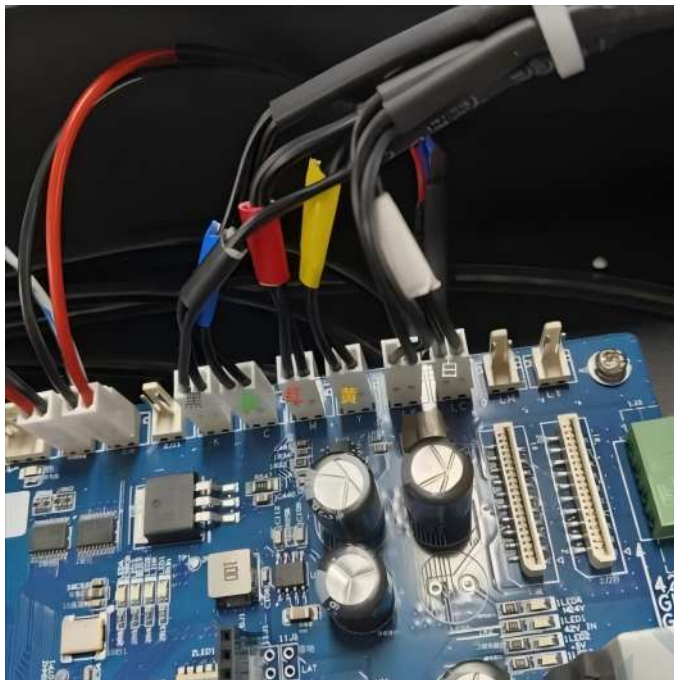


Precautions for Connecting Ink Supply Wires:

- (1) Connecting the ink supply wire of the Secondary Ink Cartridge to the Headboard, which is a step to be performed after ink refilling is completed.
- (2) Pay close attention to the number displayed on the Headboard: 0 indicates normal standby status.
- (3) First, insert the black ink wire into the K port. Watch the Headboard display – it should show 6 (which means the system is pumping ink). Wait until the display returns to 0, then insert the blue tube into the C port.

Follow the same procedure for the remaining tubes in the order shown in the diagram.

If the display shows 9, turn off the machine immediately and contact a technician.



Black connect into the K port

Blue connect into the C port

Red connect into the M port

Yellow connect into the Y port

UV Varnish connect into the LK port

White connect into the LC port

To purge air:

1. Place a clear empty bottle under the white tube. (Marked red circle,if done, like Fig 2 shows).
2. Press the pump button (Marked yellow circle) repeatedly for 2 seconds, then stop.
3. Repeat the Pressing action (Step 2) several times until the air is out of the white printhead and color printhead.
4. Finally, using a lint-free cloth to wipe the surface of the printheads.



Fig 1



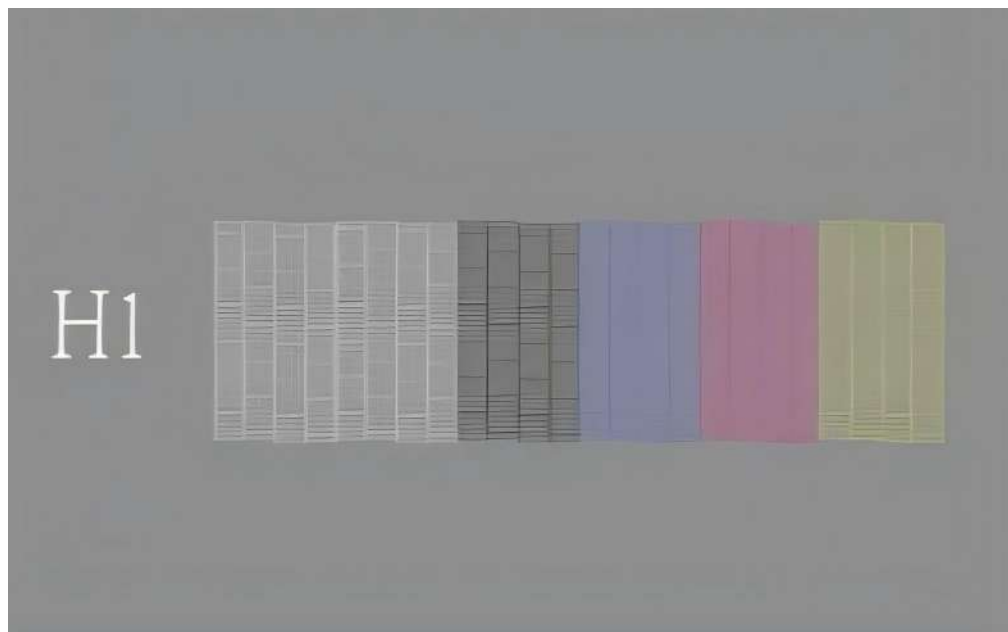
Fig 2

Printing Operation**Step 1 — Check and Print the nozzle test**

Prepare an A4 sheet and masking tape. Place the A4 paper on the platform. Turn on the vacuum suction. If the paper is not flat, secure it with masking tape, then adjust the print height to 2 mm.



- Place a piece of paper on the platform, then adjust the height to be 2-3mm from the print head of the item to be printed.
- After adjusting the height properly, press the "Nozzle" button on the keypad



Single-head nozzle check



Dual-head nozzle check

1. Evaluate nozzle condition against the following criteria:

Missing lines < 10% – Within acceptable range; print quality is not affected, and you may continue printing.

Missing lines > 10% – Perform 2–3 cycles of Light Cleaning (may be combined with Strong Cleaning). Note: After each Strong Cleaning, a Light Cleaning must be performed immediately afterwards.

2. Machine model correspondence:

Single-printhead models (ZZ1)

Dual-printhead models (ZZ2, 6060, 6090)

Note: For better legibility of the schematic diagrams, the illustrations in this manual have been brightened. They are for reference only; please always rely on the actual printout for final judgment.

Step 2 — Color Block Printing

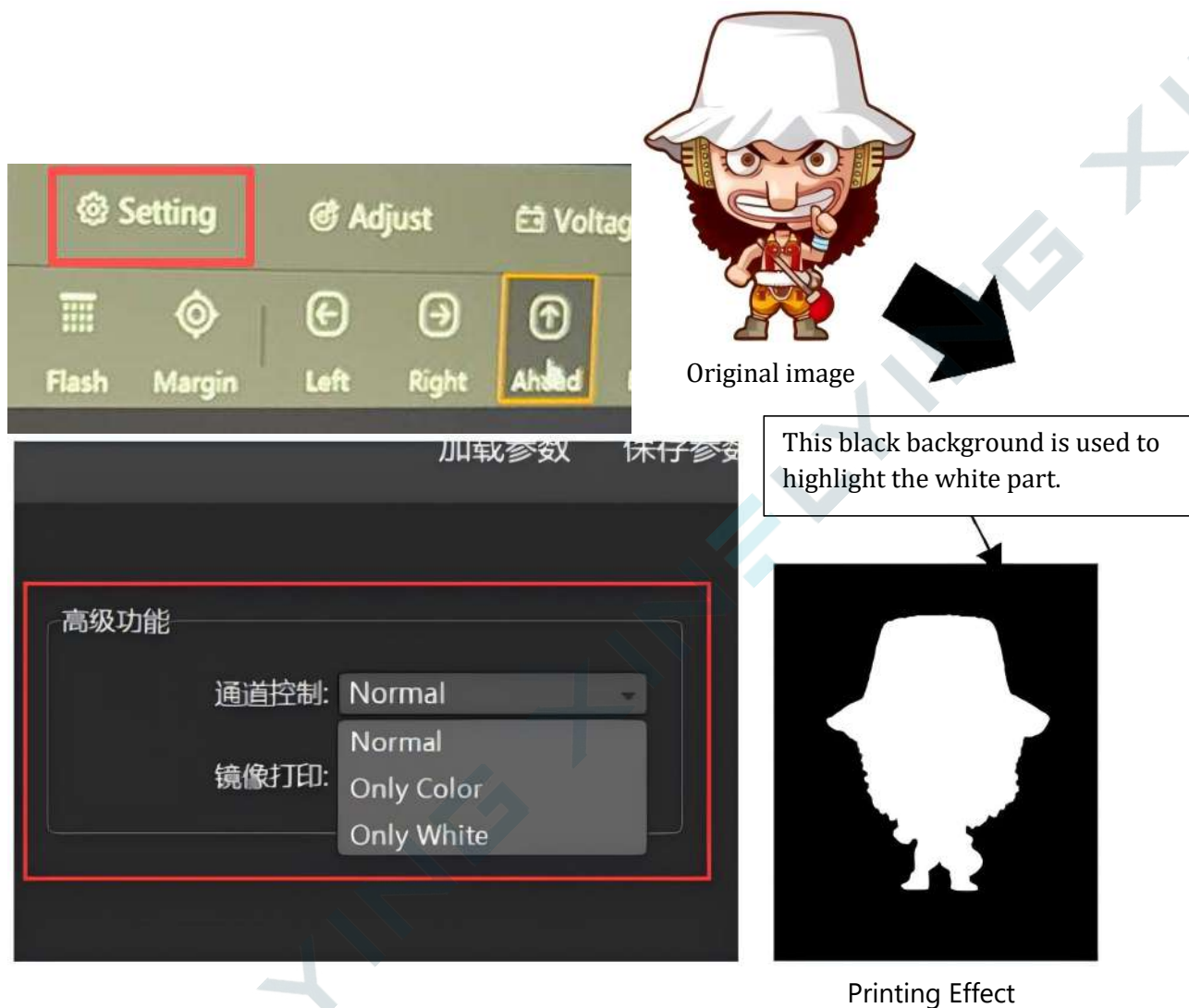
1. Open the Riprint software and click "Import".
2. Find the test image folder provided by the technician, and double-click the color block image to import it.
3. Click "Print", select the appropriate printing profile, set the "Send Mode" to "Print Immediately", and click "Print" again.
4. Once the color block print is satisfactory, you may proceed to print the final items.

⚠ Throughout the entire printing process, pay close attention to the print height to prevent the printhead from colliding with the items, which could cause damage.

Step 3 — How to print Only white ink

Before using this function, please make sure you are familiar with the basic operations for white ink printing.

1. Open PrintEXP. software, click "Settings" at the top, then go to "Advanced Functions" → "Channel Control" and select "Only White".
2. Ensure that the white ink setting is enabled in Riprint software; if it is not enabled, nothing will be printed.
3. After modifying the parameters, click "Save Parameters".



Printing Operation

Step 1 — Check and Print the nozzle test

Material Guidelines & Printing Instructions

This printer uses a non-contact printing method and supports a wide range of printable materials, including: phone cases, leather, nameplates, power banks, USB drives, KT boards, stone, wood, ceramics, crystal, acrylic, PVC, ABS, and more.

1. Notes on Print Objects

1. Before printing, make sure the surface of the object is clean.
2. Glass, metal, and other smooth-surfaced objects require a primer coat before printing; otherwise, the ink will not adhere properly and may peel off.
3. The height variation across the surface of the print object must not exceed 3 mm; objects beyond this range cannot be printed normally.
4. For textile printing, it is recommended to use fabrics with a cotton content of 30% or more; lower cotton content will reduce print quality.
5. Do not apply silicone oil treatment to garments, as this will prevent the ink from adhering securely.
6. Objects with a flat base can be placed directly on the platform. For smooth-surfaced objects that tend to shift, use double-sided tape to secure them.
7. For paper-like materials (thin and prone to wrinkling), it is recommended to use a vacuum suction platform.
8. When spraying fixative, using it together with an automatic spray bottle will yield better results.

2. Image Requirements

1. Use high-resolution images of 300 dpi or above to ensure optimal print quality.
2. Before printing, resize the image in Photoshop to match the dimensions of the print object.
3. You may adjust the image brightness in Photoshop to achieve better print results.
4. If spot color printing is required, create spot color channels in Photoshop.
5. Supported image formats: TIFF and JPG.

3. Important Printing Notes

1. Before printing, confirm that the distance between the print object and the print head is 2-3 mm (optimal print distance).
2. The infrared anti-collision system cannot detect transparent objects. Please take extra care when printing on transparent materials.
3. When printing on dark-colored substrates, the white ink setting must be enabled; otherwise, the printed pattern will not be visible.

4. Ink Specifications

Ink Type	Compatible Materials
UV (Hard) Ink	Hard materials such as metal, glass, acrylic, and nameplates
UV (Soft) Ink	Soft materials such as leather, phone cases, PVC, and canvas
Textile Ink	Textile fabrics (must be used with a heat press or similar equipment)
Edible Ink	Edible items such as cookies, milk tea, and candy

Machine Maintenance & Troubleshooting

1. Maintenance During Extended Downtime

Downtime Duration	Procedure	Reference Video
Not used for 3 days	1. Clean the printhead and print a nozzle check test strip. 2. Move the carriage to the capping position (Printhead should align well with the ink capping and power off. 3. Seal the ink bottle.	Can contact techs ask for the video
Not used for 1 week	1. Manually clean the print head and flush the ink pump. 2. Move the carriage to the capping position and power off. 3. Seal the ink bottle caps.	Can contact techs ask for the video

⚠ The printhead is a precision consumable. All maintenance operations must be performed using consumables supplied by our company. We shall not be held responsible for print head clogging or damage caused by different usage environments or improper operating procedures.

The storage environment temperature for the equipment should be kept above 10°C. If you have any questions during operation, please consult a technician.

2. Common Troubleshooting

Issue 1: Software Fails to Open

If an error window appears, it indicates that your computer is missing the required framework program.

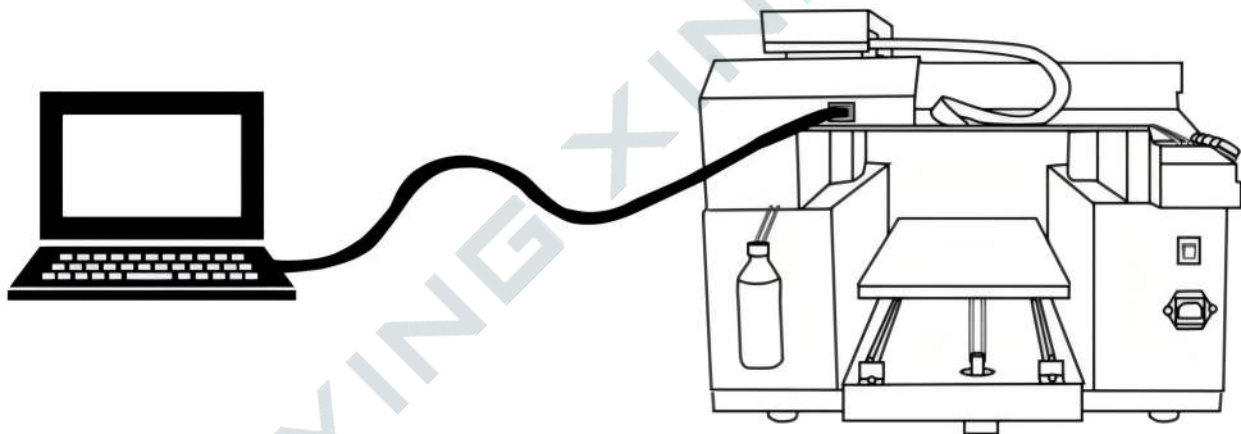
Solution: Insert the USB drive and open the "Common Problem Solutions" folder. Find and double-click "Microsoft C++ .exe" to install it. After installation, run the printing software again as Administrator.



Issue 2: Printer Still Cannot Connect to the Computer After Changing the IP Address

Please follow the steps below to diagnose the issue:

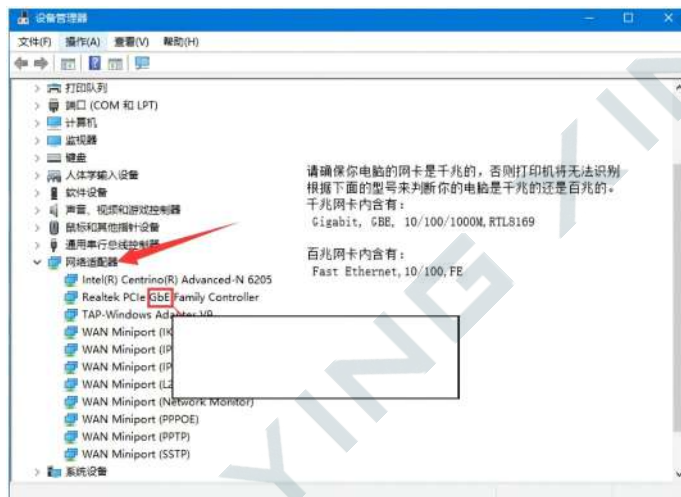
1. Check whether the printer is connected to the computer via an Ethernet cable.



2. Check whether the printer is powered on (observe whether the display screen is lit: If the display is off, it means the printer is not powered on. Please turn on the printer. If you are certain the printer is already on but the issue persists).



3. Confirm that your computer's network card is a Gigabit NIC (this printer model only supports Gigabit network cards). To check: watch the video "How to Check Your Network Card Type" on the USB drive under "Common Problem Solutions," or search online for "how to check network card model." A card with "GBE" in its model name is a Gigabit NIC.



4. If your network card is only 100 Mbps, you will need to purchase a separate Gigabit network card adapter.



Issue 3: Blurry Prints or Ink Splatter

The primary cause is an excessive print distance. The optimal print distance for this model is 2-3 mm between the print head and the object surface. When the distance exceeds 3 mm, the ink spreads, resulting in blurry images or ink splatter.

Solution: Refer to the video "How to Adjust Print Distance" on the USB drive to recalibrate, or contact a technician for assistance.



Good(Correct distance)



Bad (Closer distance)



So bad (Exceeds 3mm)

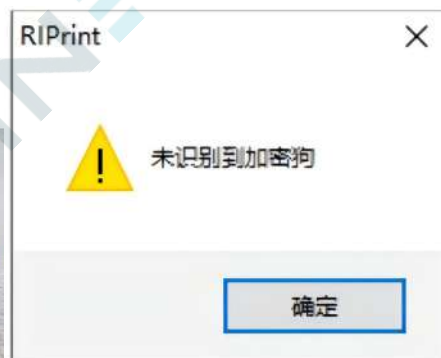
Issue 4: "Dongle Not Detected" Message When Accessing White Ink Settings

Please confirm that the dongle (a blue USB-shaped device) is inserted into the computer's USB port. If the error persists even after insertion, try the following:

- Try inserting the dongle into a different USB port.
- Restart the Riin software and try again.
- Restart the computer and try again.



Riin Dongle



Issue 5: Printed Images Contain Watermarks or Extra Lines

Cause: The dongle is not inserted into the computer. The software has a built-in anti-piracy mechanism that requires the dongle to function properly. (Think of the dongle as a key to the software - please keep it safe.)

Solution: Same as Issue 4 - insert the dongle and try again.



Watermark

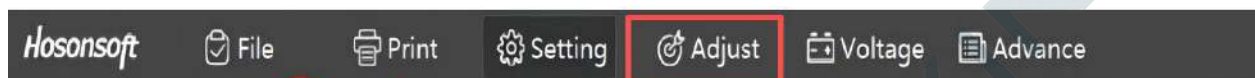
Issue 6: How to Calibrate Bidirectional Printing

If printed images show double outlines, bidirectional printing calibration is required.



Steps:

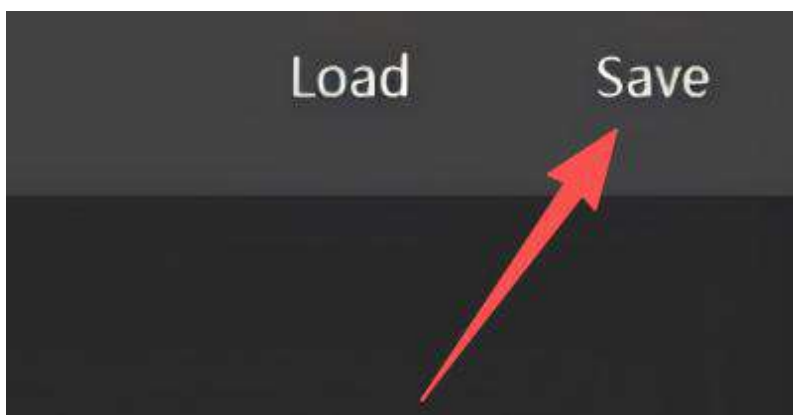
1. Open PrintEXP software, click "Adjust" in the top menu, and select "Bidirectional Adjust" on the left.



2. Set the horizontal print resolution to 720 DPI.

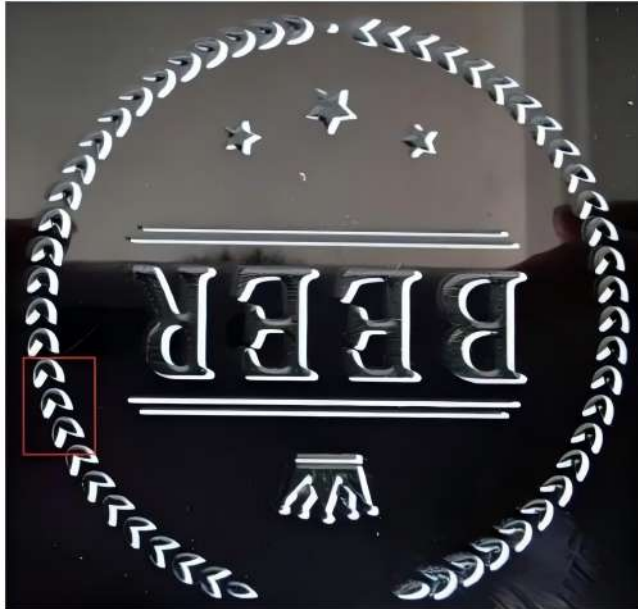


3. Print one calibration line chart for each bidirectional offset value: "0, 5, 10, 15, 20" (5 prints total).
4. From the 5 results, identify the two values that produce the thinnest lines (e.g., "5" and "10").
5. Print one chart for each value in the range between those two (e.g., 6, 7, 8, 9), and select the value that produces the thinnest line.
6. Save that parameter to complete the calibration.



Issue 7: How to Calibrate Print Head Spacing (Dual-Head and Above Models Only)

If white-color misalignment appears in the printed pattern (white ink and color ink are offset by approximately 1-2 mm), print head spacing calibration is required.



Note: Only the white ink print position can be adjusted in the settings; the color ink position is used as the reference.

- White shifted right: move white ink to the left (increase the value)
- White shifted left: move white ink to the right (decrease the value)

Steps:

1. Open PrintEXP software, click "Adjust" -> "Head Spacing."
2. Set the resolution to 720 DPI.
3. Locate the "H2" input fields (there are two of them) and increase or decrease the values according to the direction of misalignment (adjust by approximately 3 units at a time).
4. Both H2 values must be set to the same number.
5. After making changes, click "Save Parameters."



Issue 8: How to Address Incomplete Nozzle Check Patterns

If the nozzle check shows missing lines (missing less than 10% of total lines is within the acceptable range), first perform multiple cleaning cycles to resolve the issue. If cleaning does not help, refer to the table below to identify the faulty component:

Symptom	Possible Faulty Component	Est. Probability
One color prints very poorly	Ink cartridge (damper) damaged	50%
Multiple colors print very poorly	Print head clogged	60%
One color completely fails to print	Flex cable damaged	50%
One color outputs very little ink	Ink cartridge (damper) misaligned	60%

If you have any questions during the procedure, please contact a technician for assistance.

Note: This manual is provided for reference only. For specific details regarding your model, please refer to the actual machine.