



EN/CN - A01

CJ270 User Guide

WARNING **注意事项**

-
1. Please refer to this Guide for initial printer setup.
 2. This printer uses UV-curable resin as the printing material. During operation, please ensure that the workspace is well ventilated and wear a mask and nitrile or rubber gloves to avoid inhaling fumes or direct skin contact.

1. 请您按照本指南的步骤，完成打印机的初始化设置。
 2. 本机使用光敏树脂作为打印材料，操作时请确保环境通风，并佩戴口罩与丁腈或橡胶手套，避免吸入挥发气体或直接接触皮肤。
-

Safety Notice **安全提示**

Do not power on the printer before the shipping fixtures have been removed.

请勿在打印机运输用固定件拆装完成之前通电。

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WARNING LABELS

Notice

It is strictly prohibited to tear off the warning label. Otherwise, the party responsible for such action shall bear all consequences arising therefrom, and our company shall not be held liable.



Danger:

Persons with pacemakers must not approach this device! It contains strong magnets that may interfere with pacemaker operation.



Warning:

This component contains moving parts. Keep your body, clothing, and long hair at a safe distance during operation to prevent entanglement.



Warning:

This component contains UV lamps that emit radiation during operation. Do not look directly at the light source, as this may cause skin burns or permanent eye damage. Appropriate protective measures must be taken during operation.



Warning:

Hot surface. This component may become hot during operation. Do not touch to avoid burns.



Warning:

Electrical hazard. Live electrical components are present inside the device. Risk of electric shock.



Warning:

Risk of top cover falling! Be careful when opening or closing the top cover to prevent injury.

NOTICE

SAFETY NOTICE: PLEASE CAREFULLY READ AND STRICTLY FOLLOW ALL THE SAFETY WARNINGS AND NOTICES BELOW ALL THE TIME.

Note: Each 3D printer undergoes print testing before leaving the factory. As a result, the build plate may have minor scratches, and small amounts of residual resin may be present on the resin bottles, nozzle surface, and within the resin station's maintenance area. These are normal and do not affect performance.

EMERGENCY HANDLING

WARNING

- ◆ If smoke, unusual odors, or resin leakage occurs, immediately turn off the main power and unplug the power cord. Do not attempt to repair the device yourself. Contact your dealer or a service center.

CAUTION

- ◆ **Skin Contact:** If resin, waste resin, or other liquids used with this product come into contact with skin, wipe off immediately and wash thoroughly with soap and water. Seek medical attention if discomfort persists.
- ◆ **Eye Contact:** If resin, waste resin, or other liquids enter the eyes, immediately flush with plenty of water for at least 15 minutes (remove contact lenses after flushing, if worn). Seek immediate medical attention.
- ◆ **Ingestion or Inhalation:** If resin, waste resin, or other liquids are ingested or inhaled, immediately rinse the mouth or move to fresh air. Do not induce vomiting. Seek immediate medical attention. Inducing vomiting may cause the liquid to enter the airways.
- ◆ If a large amount of vapor is inhaled, move to a well-ventilated area, keep warm, and rest in a position comfortable for breathing. If symptoms do not improve, seek medical attention immediately.

IMPORTANT

- ◆ If resin leakage occurs, immediately disconnect the power, manually move the carriage to the left initial position and contact qualified professionals.

INSTALLATION SITE

WARNING

- ◆ Do not install the device in locations with flammable or explosive materials, open flames, moisture, splash-prone areas, or areas accessible to children.

CAUTION

- ◆ If ventilation is poor, a ventilation system must be installed. Exhaust ports must meet regulations and valves must remain open.

IMPORTANT

- ◆ Avoid installing in environments with heavy dust, strong airflow, vibration, direct sunlight, rapid temperature or humidity changes, chemical gases (e.g., acid mist, amines), or excessive noise.

OPERATING ENVIRONMENT

- ◆ Temperature: 18-30°C; humidity: 30-70%RH (non-condensing);
precision-guaranteed range: 20-25°C

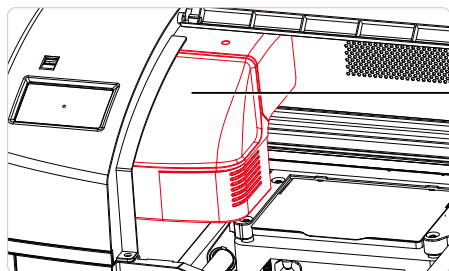
INSTALLATION SPACE

- ◆ The device must be placed in a dry, well-ventilated environment.
- ◆ Leave sufficient space around the device for safe operation and maintenance. The installation area must be no less than 1100 mm (L) × 600 mm (W) × 800 mm (H). When placing multiple units side by side, a minimum clearance of 500 mm must be maintained between adjacent machines.
- ◆ The workbench must have adequate load-bearing capacity (≥50kg).

ELECTRICAL SAFETY

WARNING

- ◆ Only use the original power cord. Do not use this cord for other electronic devices.
- ◆ Always grip the plug when connecting or disconnecting. Do not pull the cord. Pulling may damage the cable, leading to malfunction, electric shock, or fire.
- ◆ Keep the plug clean and dry. Do not operate with wet hands to avoid the risk of electric shock.
- ◆ Do not use if the power cord appears damaged or if core wires are exposed/broken. Do not use damaged, modified, extended, or multi-socket power strips, which may cause malfunction, electric shock, or fire.
- ◆ The device must be connected to a properly grounded power outlet.
- ◆ Do not power off the equipment while it is operating. If the equipment experiences an unexpected power outage during operation, refer to [Handling an Abnormal Power Loss].
- ◆ Before disconnecting the equipment from power, ensure that the carriage is in its initial position.



Printhead Carriage

CAUTION: When the equipment is not printing, it is recommended to keep it powered on; powering off is not advised.

IMPORTANT

- ◆ Operate the device only with a power supply that meets specifications.
- ◆ Ensure the power specifications match, the plug is securely connected, and power is supplied from an independent circuit to prevent tripping.

MOVING PARTS

CAUTION

- ◆ Keep your body and clothing (especially loose clothing and long hair) away from moving parts to prevent entanglement and injury.

UV-LED UNIT

WARNING

- ◆ Do not place flammable items under the unit or cover it. UV radiation leakage is possible. Always wear UV-protective goggles, gloves, and long-sleeved clothing. Do not look directly at the light source to avoid skin and eye damage (including inflammation or long-term risks such as cataracts).

IMPORTANT

- ◆ Avoid scratching or striking the unit. When cleaning the bottom glass, use a soft cloth dampened with ethanol. Do not allow liquid to splash onto other components.

CHEMICAL HANDLING

WARNING

- ◆ Prevent leaks from contaminating water sources. Some components are toxic to aquatic life.

CAUTION

- ◆ Always ensure ventilation and wear safety goggles, gloves, and a mask during operation.
- ◆ Avoid impact, shaking, or unauthorized disassembly of resin containers.
- ◆ Store out of reach of children.

IMPORTANT

- ◆ Resin is designed specifically for this device. Do not use it with other equipment.

RESIN STORAGE

IMPORTANT

- ◆ Store in a cool (5-30°C), dark place, in sealed containers, at a low position ($\leq 1\text{m}$ from the ground).
- ◆ After removal from a cold environment, allow the resin to sit at the same temperature as the device for at least 3 hours before use.
- ◆ Use opened resin as soon as possible to prevent degradation.
- ◆ Avoid direct sunlight and keep away from volatile chemicals such as cutting fluids.

RESIN LIMITATIONS

- ◆ Shelf life: Refer to the label on the container. It is recommended to use within 2 months after opening.
- ◆ After expiration: Resin may still be printable for 1-2 months after expiry but replacement is recommended. Printing beyond 2 months post-expiry is not possible.
- ◆ Resin Cards: You must use original resin cards matching the specific color and model, or the device will not recognize it.

DEVICE MAINTENANCE

- ◆ Regular professional maintenance is required. Do not use compressed air for cleaning. Prevent liquids from entering the interior of the device.

WASTE RESIN DISPOSAL

CAUTION

- ◆ Dispose of discarded devices, resin, waste resin, cleaning solutions, and models in accordance with local regulations.

OTHER

WARNING

- ◆ Keep children away from the device.
- ◆ Users are strictly prohibited from disassembling or repairing the device without authorization.

LEGAL STATEMENT

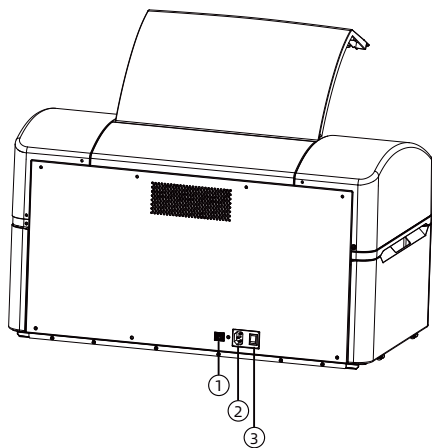
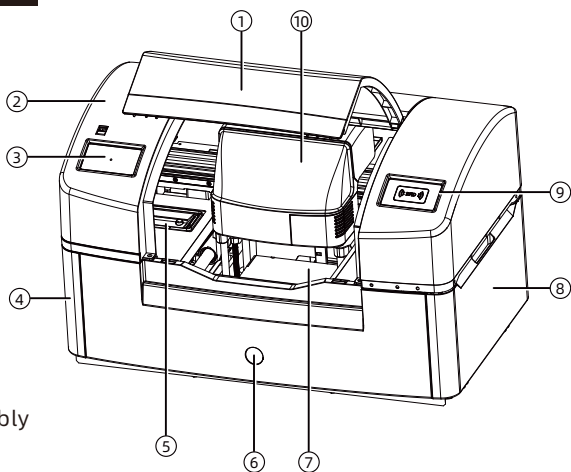
- ◆ Users are not authorized to make any modifications to this User Guide.
- ◆ Flashforge shall not be held responsible for any safety incidents resulting from the disassembly or modification of the equipment by the customer. No one is allowed to modify or translate this Guide without Flashforge's permission. This Guide is protected by copyright, and Flashforge reserves the right of the final interpretation of this Guide.
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1. Printer Overview

1.1 Printer Components

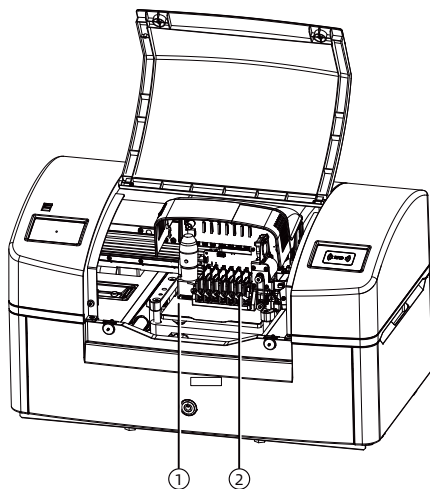
1.1.1 Printer Appearance

1. Front Door
2. USB Port
3. Display
4. Left-Side Door
5. Printhead Maintenance Assembly
6. Power Button
7. Build Platform
8. Right-Side Door
9. RFID Card Scan Area
10. Printhead Carriage Assembly



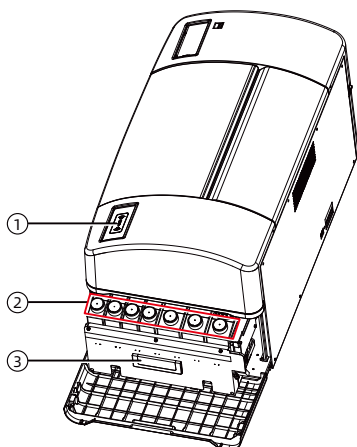
1.1.2 Ports and Switches

1. Ethernet Port
2. Power Input
3. Main Power Switch



1.1.3 Printhead and Build Platform

1. Build Platform
2. Printhead Assemblies (7 total)



1.1.4 Resin Supply Module

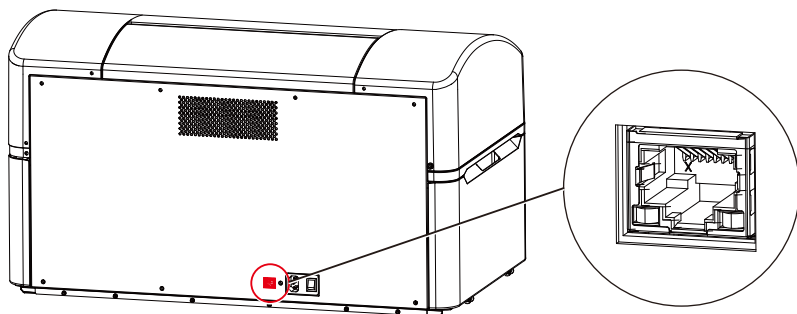
1. RFID Scan Area
2. Resin Bottles (7 total)
3. Recessed Handle

1.2 Technical Specifications

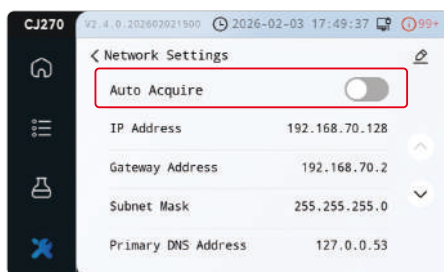
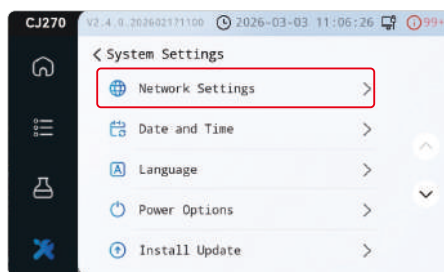
Product Name	CJ270
Printing Technology	Multijet Printing (MJP)
Build Volume	180*120*100mm
Precision	Layer thickness: 7μm
Noise Level	≤ 55dB
Air Filtration	Activated carbon filter
Post-Processing	Water-soluble support removal; Optional tools: Ultrasonic cleaner, sandblasting and coating kits
Device Dimensions	697*410*405mm
Device Weight	33.5kg
Material Types	Part materials: CMYK, White, Clear; support material: water-soluble support

2. Network Connection

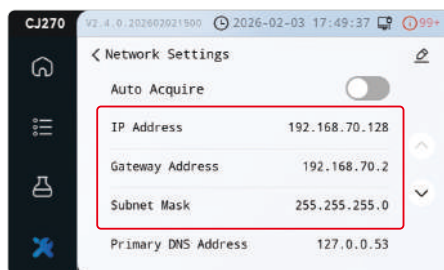
1. Insert an Ethernet cable into the Ethernet port on the rear of the printer.
2. Connect the other end to a computer, router, or switch.



3. On the printer screen, tap [Network Settings].
4. If connected to a switch, tap [Auto Acquire].



5. If not connected to a switch, please check and record the printer's current IP address, gateway, and subnet mask.



6. Configure IPv4 settings as follows:

- a. Open Control Panel → Network and Sharing Center → Change adapter settings
- b. Right-click Ethernet and select Properties
- c. Select Internet Protocol Version 4 (TCP/IPv4) and click Properties
- d. Select Use the following IP address and enter:
 - i . **IP address:** The first three segments must match the printer's IP. The last segment must be different, not 1 or 2, and not used by another device on the network.
 - ii . **Subnet mask:** Same as the printer
 - iii . **Default gateway:** Same as the printer

Internet Protocol Version 4 (TCP/IPv4) Properties

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

☐ Obtain an IP address automatically

☒ Use the following IP address:

IP address:	192 . 168 . 1 . 3
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	192 . 168 . 60 . 1

- e. Click OK to save and close all windows.

3. Software Overview

3.1 Download and Installation

1. You can download our slicing software by scanning the QR code (see right)



2. You may also visit our official website to obtain the latest software installation package:
www.flashforge.com

- a. Hover over [Support] in the navigation bar.
- b. Click [Download Center] in the dropdown menu.
- c. Select the software version matching your device and click [↓] to download.

3. Installation and Launch

After downloading, run the installer and follow the on-screen instructions. Once installation is complete, launch ColorPrint to begin.

Visit our wiki to learn more about how to use ColorPrint:

https://wiki.flashforge.com/en/mjp_cj270/how_to_use_colorprint

4. Printer Initialization Configuration

Before initialization, ensure the printer and computer are properly connected.

If the printer cannot connect to the computer, first check if the printer is properly connected to the network, and then confirm the printer and computer are on the same local network.

3.2 Basic Setup

After confirming the printer and the computer running ColorPrint are on the same LAN, proceed as follows:

1. Launch and Connect

Open ColorPrint, click the Printer icon, and select [Settings]. The "Connect Printer" window will appear.

Select the target device from the list by its Printer Name or IP Address and click [Next].

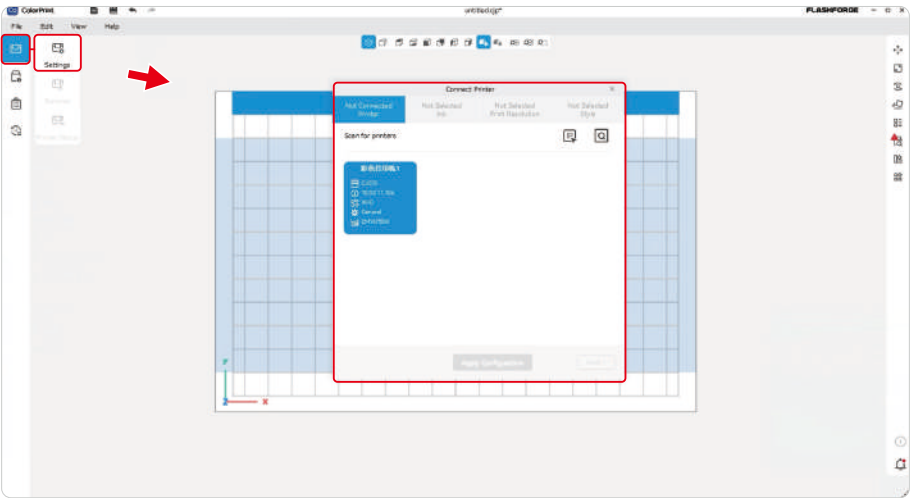
2. View Device Information

During connection, you can view information such as material levels, current print resolution, and default scaling for imported models.

3. Complete Connection

Confirm the information and click [Apply Configuration] to establish communication between the computer and printer.

Note A printer can only be connected to one computer at a time.

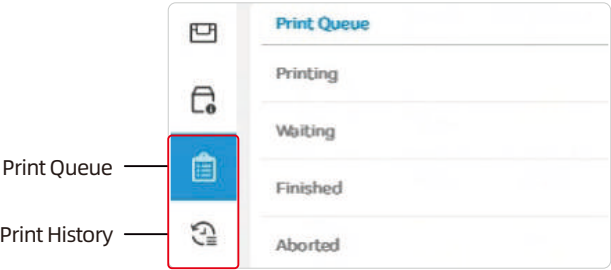


4. Multi-Device Management

If managing multiple printers, it is recommended to use [Rename] under [Settings] to assign each printer an identifiable name.

5. Print Job Monitoring

Use [Print Queue] and [Print History] to monitor current job status and view past print records.



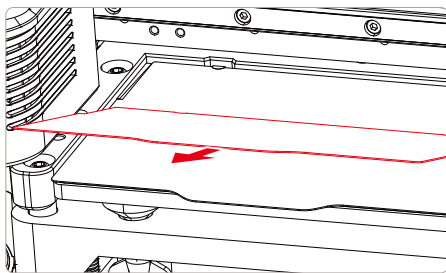
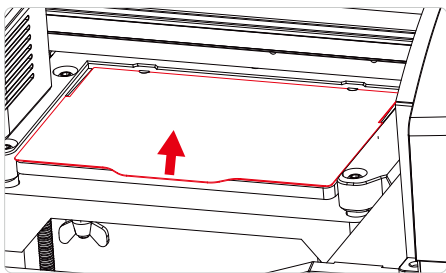
6. If you encounter connection issues, first verify network connectivity and ensure the printer's IP address is set correctly.

4. Build Platform

Models are formed on the build platform. Before printing, please ensure the build plate is correctly installed and leveled. After printing, remove the build plate together with the model for post-processing.

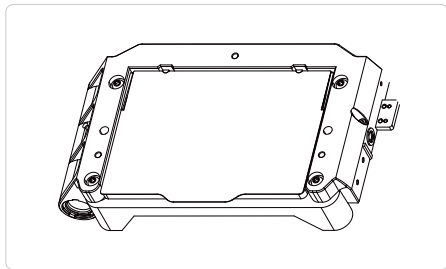
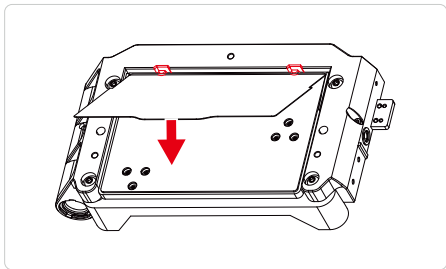
4.1 Removing the Build Plate

Grip the front edge of the build plate with your thumb and index finger, lift it upward at about a 30° angle to detach it from the magnetic plate, then pull it straight back to remove it.



4.2 Installing the Build Plate

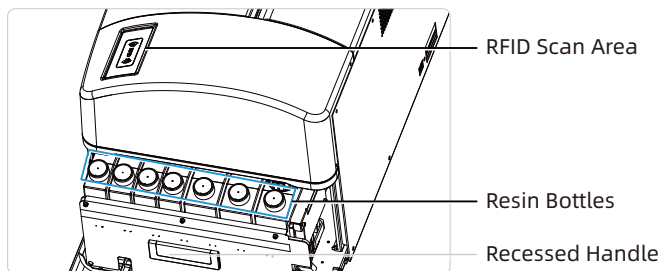
1. Align: Precisely align the locating features on the bottom of the build plate with the corresponding semicircular locators on the printer.
2. Attach: Gently place the build plate down and ensure it sits flat and is securely attached to the magnetic plate. Verify it is firmly installed.



5. Adding Materials

5.1 Material Loading and Card Scanning

1. Open the right-side door. Modules labeled Y, M, C, K indicate the material loading areas.



5.2 Resin Overview

5.2.1 Part Resin

1. CMYK Resin

Forms the basis of the full-color gamut. Through precise mixing of Cyan (C), Magenta (M), Yellow (Y), and Black (K), nearly any color can be reproduced, delivering realistic images, gradients, and fine details.

2. White Resin

Enhances color vibrancy: Applied as a base layer before printing colored patterns to improve the saturation and contrast of CMYK colors and prevent the model's base color from showing through.

Creates Light Tones: Can be mixed directly with other color resins to produce soft pastel or highlight shades.

3. Clear Resin

Surface coating: Applied as a final layer to create glossy or matte protective finishes, improving surface texture, wear resistance, and color durability.



5.2.2 Support Resin



1. When models include overhangs or suspended structures (such as arms, eaves, or bridges), support resin is printed underneath as a reliable "scaffold" to prevent sagging or dripping before curing.
2. The support material used is specially formulated to have different physical or chemical properties from the model material. After printing, supports can be easily removed by soaking the model in water.

5.3 Resin Card System

This device uses an original smart resin card system to manage printing materials. Each bottle of original resin (CMYK, White, Clear, and Support) comes with a dedicated card. Its functions and usage are as follows:



5.3.1 Functions

- Authentication: Ensures the use of original resin, protecting printheads and ensuring optimal print quality.
- Usage tracking: After reading the card, the device obtains the corresponding resin capacity authorization and automatically detects how much resin is added. Only authorized resin can be used.

How to Use

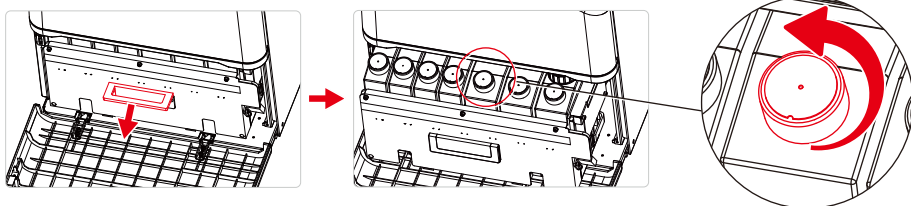
1. Scan card: Before adding any resin, scan the corresponding resin card on the control panel.
2. Add resin: Pour the resin from the bag into the corresponding resin bottle.
3. Automatic measurement: The device automatically detects the weight of resin added and updates the corresponding resin capacity in the system.



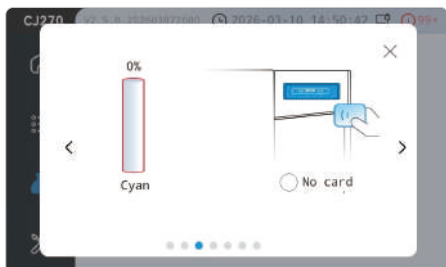
Important: Using uncertified third-party resin may cause printhead clogs or damage, and void quality and warranty coverage. Always use original resin with proper card scanning.

5.4 How to Add Resin

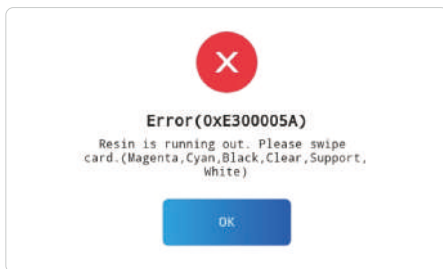
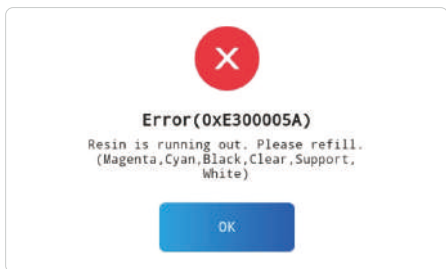
1. Open the right-side door, pull out the resin cartridge holder, and unscrew the cap of the resin bottle to be filled.
2. The printer uses 7 resin bottles. Make sure each bottle is filled with the correct color resin. Do not mix colors.



3. A pop-up will appear when you scan an RFID card or add more than 60g of resin at once. Please follow the on-screen instructions.
4. The printer will read resin data only after both resin refilling and card scanning are completed.



5. After filling, tighten the bottle cap, push the cartridge holder back in, and close the right-side door.
6. If resin levels are low, a warning will appear. Please refill promptly to avoid print interruptions.

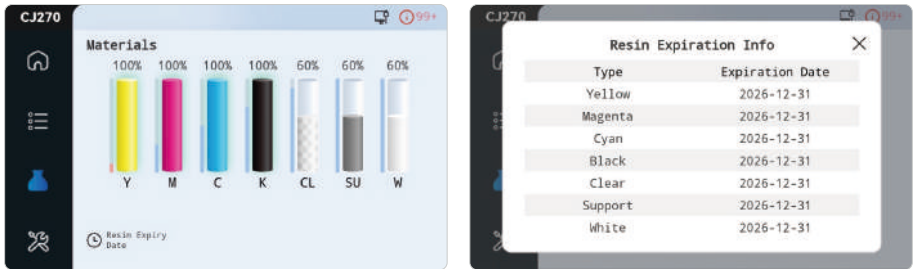


CAUTION: Each swipe deducts the card's entire remaining resin balance, after which the card becomes invalid. If the balance is sufficient, no further swipe is required after refilling; if insufficient, the device will prompt for another swipe. The resin card must be removed from the bag and used separately; otherwise, the aluminum lining inside the bag may interfere with the card reading.

5.5 Resin Shelf Life

Printing resin has a limited shelf life. Using expired resin can affect print quality and device lifespan. Check regularly to avoid using expired resin.

1. For resin inside the device, check via [Resin Expiry Date] in the Materials interface. Expired resin should be cleared promptly to avoid affecting the device's lifespan. If the material has been stored too long or the wrong material was added, the material in the device must be removed.



6. Printing

This chapter provides detailed guidance on transforming your 3D model into a physical object. Before printing, it is recommended to review previous chapters on powering on the device and loading materials, as well as to familiarize yourself with the functions of the ColorPrint software.

6.1 Device Preheating

•The printhead requires preheating before printing. Please wait until it reaches the set temperature before starting a print job.

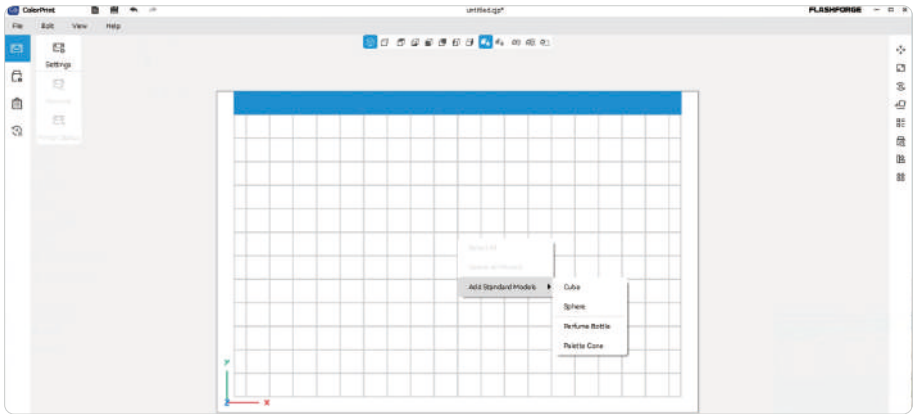


6.2 Checking the Resin and Build Plate

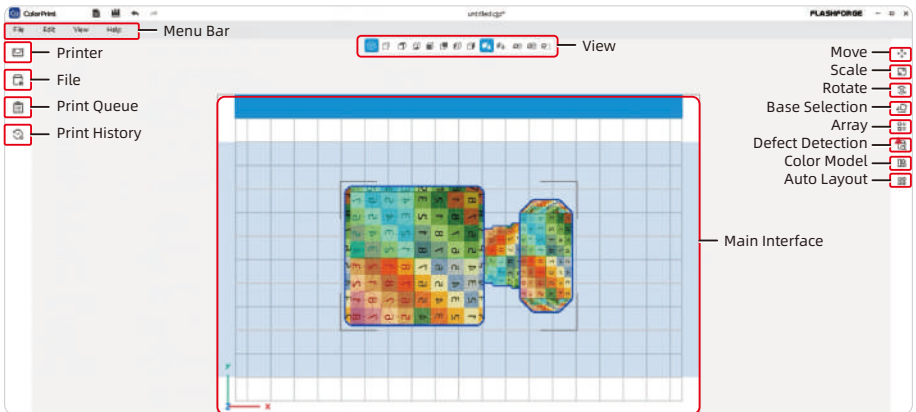
1. Check resin: Ensure there is enough resin to complete the print job.
2. Check the build plate: Ensure the build plate is clean, free of residue, and correctly installed.

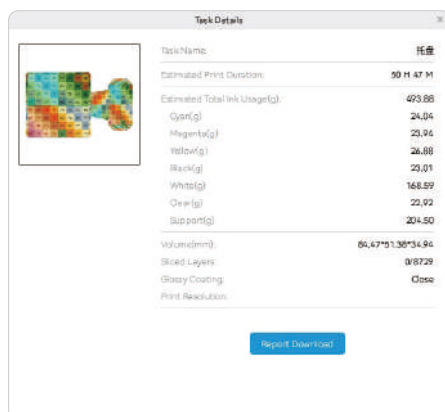
6.3 Printing Operation

1. Connect the printer: In the software, complete the connection setup via [Printer] → [Settings].
2. Import the model: Right-click on a blank area of the main interface and click [Add Standard Models] to open the file you wish to print. Alternatively, click [File] in the top menu, select [Load file...], and choose the model file to be printed from your local folder.



3. Supported file formats: .stl, .obj, .3mf, .step/.stp, .glb, .gltf, .fbx, .wrl.
4. Edit the model and layout: Use the view control tools to adjust the model's position, size, and orientation.
5. To maximize the efficiency of your full-color 3D printer, please orient your model in the following order during preparation:
 - a. Reduce the height: Set the shortest side of the model as the vertical direction. This directly reduces the total number of layers and is the most effective way to save printing time.
 - b. Optimize the printhead movement path: Align the longest side of the model as parallel as possible to the longest side of the build platform. This allows longer and more continuous single-pass movements per layer.
 - c. Reduce the required channel count: Align the shortest side of the model as parallel as possible to the short side of the platform, minimizing the model's span in that direction. This reduces the number of fixed channels occupied per layer, allowing the printhead to operate within a more concentrated area and improving per-layer efficiency.
6. Click the File icon on the left and click [Create Estimation Report] to calculate the approximate resin consumption and print time for the file.



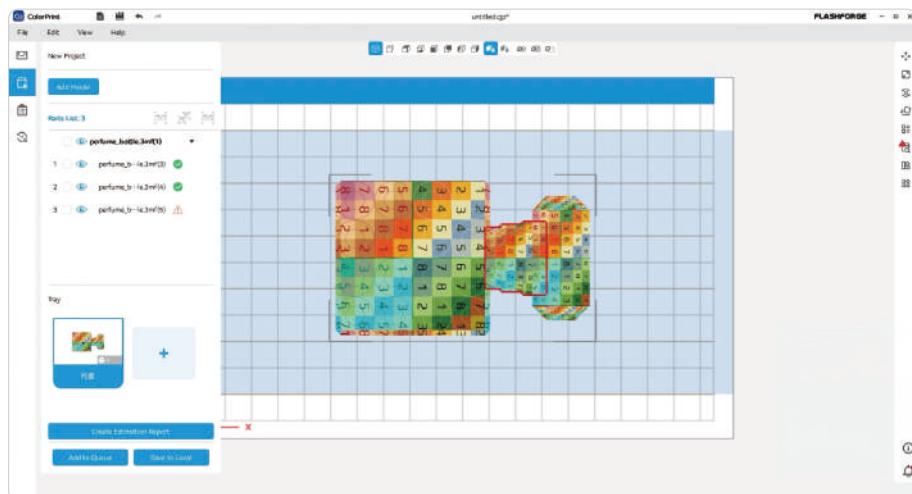


Initiate printing

Prepare to start the print job. There are two ways to transfer print files to the device, as detailed below.

6.3.1 Transferring Files from the Computer

1. Before transferring print files from the computer, ensure your computer is connected to the device.
2. Open ColorPrint and complete the layout.
3. Click the File icon on the left and click [Add to Queue] to send the print file directly to the device.
4. Click the File icon on the left and click [Save to Local] to save the file on your computer and transfer it via USB.



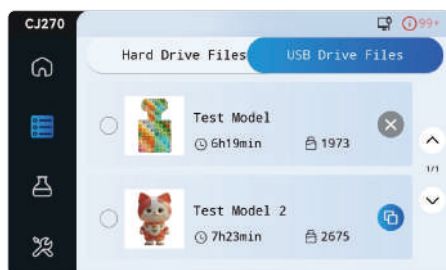
6.3.2 Printing via USB

Copy the exported 3D model file from ColorPrint onto a USB flash drive and import it into the device.

Note Sliced files must be in the root directory of the USB flash drive to be recognized.

1. After inserting the USB flash drive, you can check its files in the file list.
2. Tap [] to import the file from the USB flash drive to the device's internal storage.

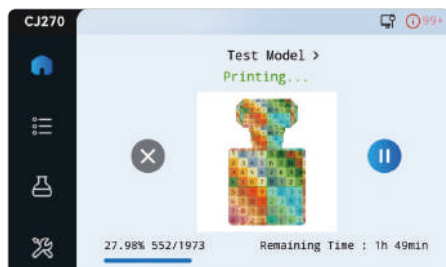
Note Only one file can be imported at a time.

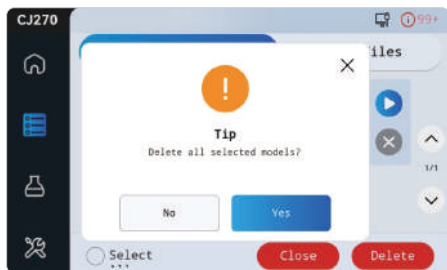


3. During import, the file will appear in internal storage, and you can start printing from there.
4. The device's internal storage is limited. Please delete completed print jobs promptly to avoid import failures.

6.3.3 Printing Directly from the Device

1. In the hard drive file list, find the file you wish to print and tap [] to start the print job.
2. During printing, the home screen displays the printing progress and remaining time.





3. After printing, remove the model promptly to avoid affecting subsequent jobs. To start a new print, initiate printing from internal storage after handling the platform.
4. Printing can also be started while a USB file is being imported, but deleting the file before import completion will terminate the print job.

6.4 Removing the Model from the Build Platform

1. Preliminary removal: After printing, wear rubber gloves and remove the build plate from the device. Hold both sides and gently flex it back and forth repeatedly to separate the model's base from the build plate.
2. Use a tool: Once a gap appears at the model's base, insert the scraper horizontally and carefully lift the model from the build plate.
3. Manual removal: Once most of the model is detached, carefully remove it by hand.

Safety Note: Keep the scraper blade parallel to the build plate surface at all times.  Never point the blade vertically at or press it into the model surface to avoid scratches.

6.5 Model Post-Processing

6.5.1 Preliminary Support Removal

Removing supports is the first post-processing step. Choose one of the following methods as needed:

Method 1: Water Soaking



Steps:

1. Soak: Fully submerge the model removed from the build plate in a container of clean water.
2. Wait: Let it soak. The supports will gradually dissolve over time.
3. Completion: Once all supports are completely dissolved, remove the model and let it dry.

Method 2: Ultrasonic Cleaning

This method uses ultrasonic vibrations to accelerate dissolution, significantly improving efficiency. It requires an ultrasonic cleaner and a beaker.

Steps:

1. Prepare the beaker: Place the model in a beaker and fully submerge it in water.
2. Prepare the device: Fill the ultrasonic cleaner tank with water. Place the beaker inside the tank. Ensure the tank water level reaches at least one-third the height of the beaker for effective energy transfer.
3. Start cleaning: Turn on the ultrasonic cleaner, activating only the ultrasonic function (heating not required). Set a single cleaning cycle for 30 minutes. Models with complex or extensive supports may require multiple cycles.
4. Monitor and change water: If support dissolution slows or stops noticeably, it indicates the water is nearing saturation. Change the water in the beaker and resume cleaning.
5. Completion: Cleaning is complete when all supports on the model surface has dissolved.



6.5.2 Surface Finishing and Residue Removal

Water soaking or ultrasonic cleaning removes most supports. However, for models with complex structures, deep holes, or fine gaps, some residual support may remain as burrs or particles, affecting surface quality. For a smooth finish, fine processing is recommended. Two methods are suggested:

Method 1: Sandblasting

This method is recommended for models with complex structures.

This process uses a mixture of water and abrasive media, propelled by compressed air, to uniformly remove all residual support from the model surface.

1. Equipment and Material List

Equipment/Material	Specifications	Image
Sandblasting Machine	Dry/wet dual-use, manually operated; operating pressure range: 0.4-0.7 MPa	
Air Compressor	Tank capacity ≥ 50 L; air delivery ≥ 200 L/min; maximum pressure ≥ 0.8 MPa	
Abrasive Media	80-100 grit white corundum sand	
Auxiliary Items	Compressed air gun; personal protective equipment (safety goggles, dust mask)	/

2. Steps

◆ Preparation:

- a. Mix abrasive media: Mix the white corundum sand and water at a 1:1 volume ratio. Add to the sandblasting machine's hopper. The total amount must not exceed the internal separator plate.
- b. Connect the air supply: Use an air hose to securely connect the air compressor to the air inlet of the sandblasting machine.
- c. Place the model: Put the model to be processed into the sandblasting machine's chamber.

◆ Sandblasting:

- a. Power on and pressurize: Close the chamber door and turn on the sandblasting machine. Step on the foot pedal and first adjust the pressure to 0.4 MPa. Fine adjustment may be made based on the result, but the pressure must never exceed 0.7 MPa to prevent damage to the model.
- b. Start processing: Insert both hands through the glove ports and hold the model securely. Press and hold the foot pedal with one foot to begin sandblasting.
- c. Ensure even treatment: During sandblasting, continuously and slowly rotate the model to ensure all surfaces are evenly processed. Maintain a distance of 10-15 cm between the nozzle and the model surface.
- d. Observation and duration: Monitor the processing result through the viewing window. For models with a volume of approximately 216 cm^3 (e.g., $6 \times 6 \times 6 \text{ cm}$), it is recommended that a single processing session does not exceed 3 minutes. If the desired result is not achieved, stop the machine, inspect the model, and continue as needed.



◆ Completion:

- a. Clean the model: After sandblasting, use an air gun to thoroughly blow off any remaining water and abrasive particles from the model surface.
- b. Equipment maintenance: After processing is complete, release the internal pressure of the device and clean the hopper and the working chamber.



Method 2: Manual Sanding and Polishing

This method is mainly recommended for flat surfaces or localized fine finishing. This process gradually removes remaining supports and layer lines through physical sanding from coarse to fine, followed by polishing to achieve a smooth surface.

1. Equipment and Material List

Equipment/Material	Specifications	Image
Power Tool	Handheld sander (electric recommended; rotation speed: 2000-2500 rpm)	
Sanding Materials	Sanding wheels/discs (recommended grit sequence: 200 → 400 → 800 → 2000)	
Polishing Materials	Wool or cotton buffing wheels, used with dedicated polishing compound or liquid	
Auxiliary Items	Water container (for wetting), safety goggles, dust mask	/

2. Steps

Core Principles: Wet sanding throughout the entire process; keep the model surface wet at all times. Proceed from coarse to fine abrasives, step by step.

- ◆ Sanding:
 - a. Coarse sanding: Install a 200-grit sanding wheel. Start the sander. After wetting the model, use extremely light pressure (only the weight of the tool) to contact areas with residual supports for initial removal. Do not apply downward force.
 - b. Progressive fine sanding: Switch to a 400-grit wheel and repeat, smoothing scratches from the previous step. Then, proceed sequentially with 800-grit and 2000-grit wheels for fine sanding. After each grit change, rinse the model thoroughly with clean water to avoid scratches from coarser particles.
- ◆ Polishing:
 - a. Polishing preparation: Install a clean wool wheel and apply a small amount of polishing compound.
 - b. Polishing: While keeping the model surface wet, polish with moderate pressure. This step effectively removes fine scratches and restores surface gloss.
 - c. Final cleaning: After polishing, thoroughly clean the model with clean water and a soft cloth to remove all abrasive residues.

 Safety Precautions

- ◆ Personal protection: When sandblasting or sanding, always wear safety goggles, a dust mask, and cut-resistant gloves.
- ◆ Ventilation: Ensure good ventilation in the working area, especially during sandblasting and dry sanding.
- ◆ Equipment inspection: Before use, check that all electrical wires, air hoses, and connections are intact and secure.
- ◆ Pressure control: Strictly observe the pressure limit during sandblasting (≤ 0.7 MPa).
- ◆ Testing first: For valuable models, it is recommended to test parameters and processing time on an inconspicuous area or a scrap part first.

6.5.3 Coating

This process applies a layer of UV-curable varnish to the model surface, primarily for the following two purposes:

Enhance appearance: Improves surface gloss and makes colors more vibrant and saturated.

Provide protection: After curing, the varnish layer is wear-resistant, protecting the model surface from minor scratches and daily wear.

1. Equipment and Material List

Category	Item	Specifications/Requirements
Material	UV varnish	High-transparency and low-yellowing formula recommended to avoid affecting the underlying colors
Equipment	UV curing lamp	Power: 40-50W; wavelength: 395nm
Tool	Lint-free cloth	Lint-free and highly oil-absorbent
Safety	Personal protective equipment	Required: polarized safety goggles, N95 mask, and chemical-resistant gloves



Safety Precautions

- ◆ Ventilation: Operate in a well-ventilated area; use an exhaust system if available.
- ◆ Ozone protection: UV curing generates ozone; always wear an N95 mask.
- ◆ UV protection: Never look directly at the UV light source; always wear polarized safety goggles during operation.
- ◆ Skin protection: Wear nitrile or rubber gloves to avoid direct skin contact with the varnish.

This process applies a layer of UV-curable varnish to the model surface, primarily for the following two purposes:

Enhance appearance: Improves surface gloss and makes colors more vibrant and saturated.

Provide protection: After curing, the varnish layer is wear-resistant, protecting the model surface from minor scratches and daily wear.

2. Standard Operating Procedure

◆ Step 1: Varnish Application

- Thoroughly soak a lint-free cloth with UV varnish, then wring it out until no liquid drips from the cloth.
- Use the cloth to evenly wipe the surface of the model, ensuring a uniform layer of varnish is applied across all areas.
- As you continue wiping, the varnish on the cloth will gradually be used up. If the varnish becomes uneven or intermittent during application, re-soak the cloth and wring it out before continuing.



◆ Step 2: UV Curing

a. UV exposure:

- Position the UV lamp 20-30 cm above the model.
- Turn on the UV lamp and expose all surfaces of the model. For common model sizes, 5-10 seconds per surface is recommended.
- Slowly rotate the model during exposure to ensure even curing on curved surfaces and recesses.

b. Curing check:

- After curing, gently touch an inconspicuous area with your fingertip to check if the coating is fully hardened (non-tacky).



Key Parameters and Notes

- ◆ Curing time: Actual duration depends on the varnish brand, coating thickness, and model color (darker colors absorb light faster). Perform a test on a first use to determine the optimal duration.
- ◆ Coating control: Too thick may cause drips, incomplete curing, or an uneven surface; too thin reduces protection and gloss. Even wiping is critical.
- ◆ Equipment maintenance: Clean containers and tools immediately after use. Uncured varnish can be wiped off with alcohol. Regularly clean the UV lamp cover to maintain light transmission.

6.6 Waste Disposal

In full-color multijet 3D printing, the printhead will perform a flushing process when necessary to achieve precise color changes and clean color output. The leftover resin from this process is considered printing waste. The device automatically disposes of it through a dedicated waste channel at the rear.

To ensure consistent print quality and proper waste handling, please follow these guidelines:

1. Set up a dedicated collection container

Place a dedicated waste resin tank directly under the device's waste outlet.

2. Keep the waste channel clear

Always ensure the area in front of and below the waste outlet is free of obstructions so that waste can fall freely into the waste resin tank.

Do not install any covers, cables, or accessories that might block or cover the waste channel.

3. Perform regular checks and cleaning

Before printing: Routinely check inside the waste channel to ensure no residual waste or blockages from previous jobs.

During printing: For long, multi-color, or high-precision prints where color switching is frequent, waste generation increases. Monitor the liquid level in the collection container and empty it promptly.

After printing: Establish a regular cleaning schedule to prevent waste from building up and blocking the outlet, which could cause poor discharge or backflow.

4. Dispose responsibly

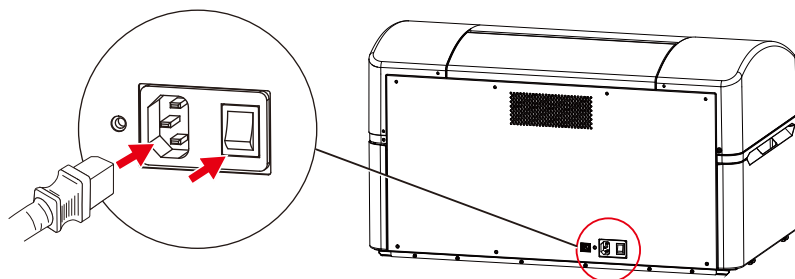
Once the collected waste is fully cured, please transport it to designated waste recycling points for disposal in accordance with your local environmental regulations and policies.

7. Other Printer Functions

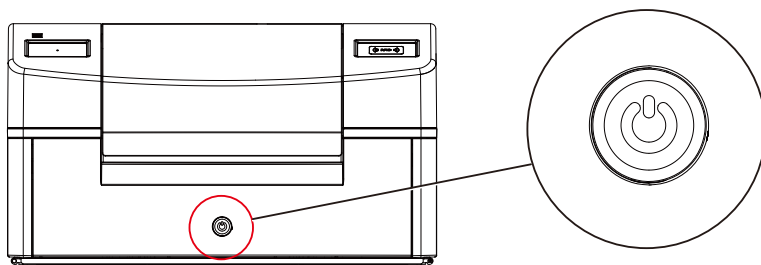
7.1 Power On/Off and Restart

Power On

1. Connect the power cable to the rear of the printer and turn on the main power switch.

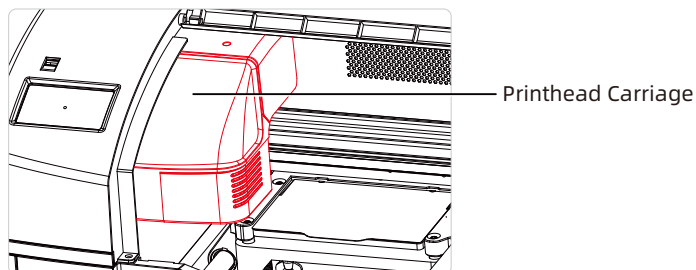


2. Briefly press the power button (1-2 seconds).

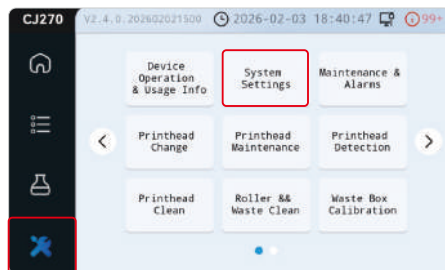


Power Off

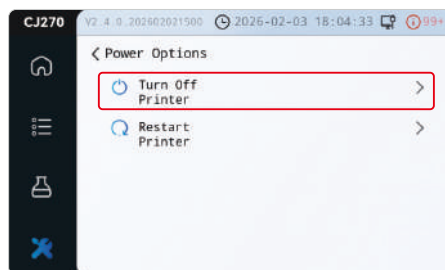
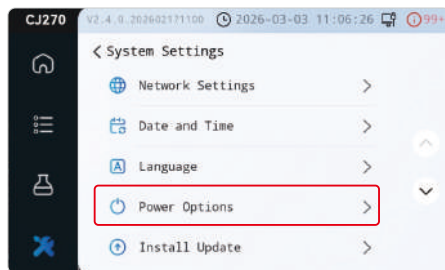
1. Note: Before powering off, ensure the carriage has returned to its initial position.



2. On the maintenance interface, tap [System Settings].



3. Tap [Power Options] to enter the power settings page.



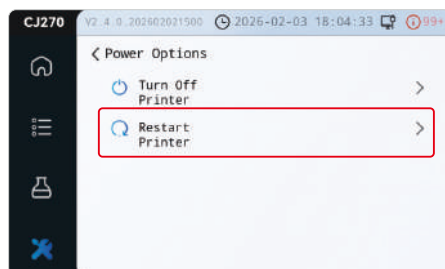
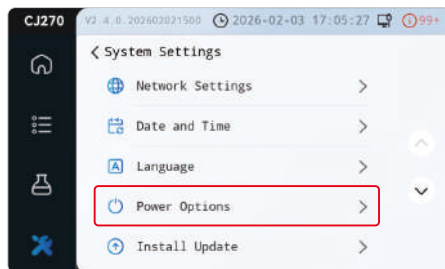
4. Tap [Turn Off Printer] to turn off the device (without cutting off the main power).

Restart

1. On the maintenance interface, tap [System Settings].



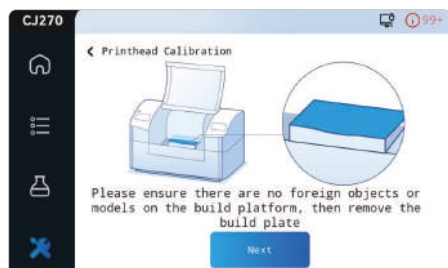
2. Tap [Power Options] to enter the power settings page.



3. Tap [Restart Printer] to restart the device.

7.2 Printhead Calibration

1. Tap [Printhead Calibration] in the Device Operation & Usage Info interface and follow the on-screen instructions.



8. FAQ

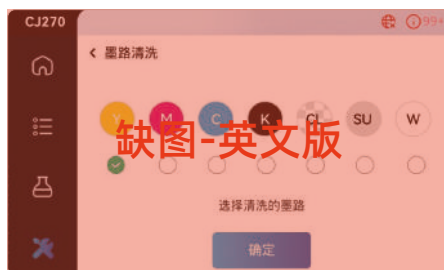
8.1 What to do if the wrong resin is loaded

If you accidentally load the wrong resin, prepare an appropriate amount of isopropyl alcohol and run the built-in resin path cleaning function.

1. Navigate to System Settings > Device Maintenance and select [Resin Path Cleaning].



2. Follow the on-screen instructions.



8.2 What to do if the printer cannot connect to the computer

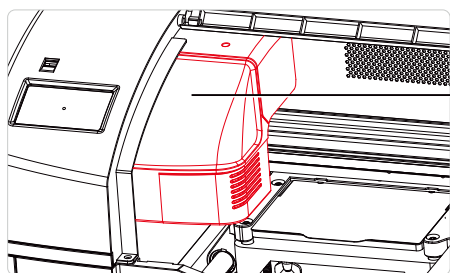
If the printer fails to connect to your computer, try the following:

1. Check physical connections: Ensure the Ethernet cable is securely plugged in at both ends.
2. Disable VPN: If a VPN is active on your computer, temporarily disable it and try reconnecting.
3. Check firewall settings: Make sure the computer firewall is not blocking network access for the printer.

If the issue persists, further check the printer's status and network settings.

8.3 Handling an Abnormal Power Loss

1. If an unexpected power loss occurs, check and ensure that the carriage is in its initial position. If it is not, manually adjust it.
2. If there is an unfinished print on the build plate, clear the build plate and restart the print job.

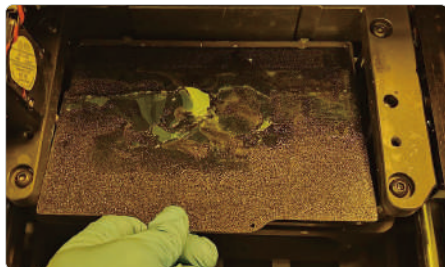


Printhead Carriage

9. Daily Maintenance

9.1 Cleaning the Build Plate

1. Remove the build plate from the printer and use a scraper to remove any resin residue from the surface. Wear cut-resistant gloves during operation and always point the scraper away from your body to avoid injury from slipping.



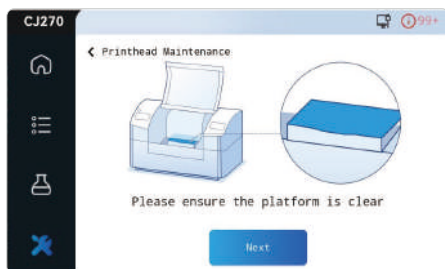
2. Wearing nitrile gloves, thoroughly moisten a lint-free cloth with isopropyl alcohol (IPA) at a concentration of 70% or higher.
3. Wipe the entire build plate surface thoroughly until no oil, stains, or residue marks remain.
4. Allow the IPA to evaporate and the build plate to dry completely before reinstalling it for use.

9.2 Cleaning and Unclogging Nozzles

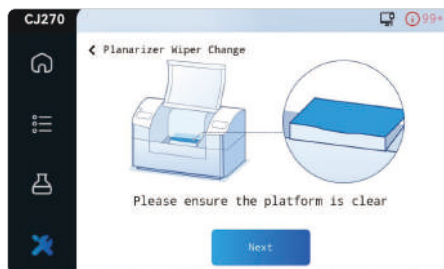
1. Tap [Printhead Clean] in the Device Operation & Usage Info interface and follow the on-screen instructions.



2. Tap [Printhead Maintenance] in the Device Operation & Usage Info interface and follow the on-screen instructions.

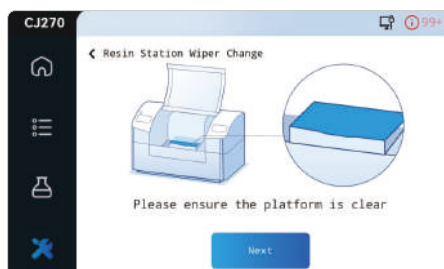


9.3 Replacing the Planarizer Wiper



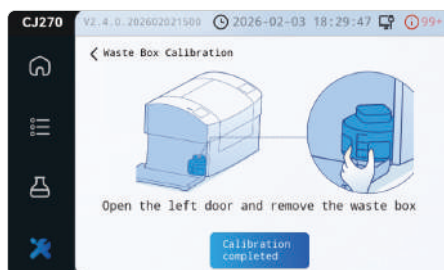
1. Tap [Planarizer Wiper Change] in the Device Operation & Usage Info interface and follow the on-screen instructions.

9.4 Replacing the Resin Station Wiper



1. Tap [Resin Station Wiper Change] in the Device Operation & Usage Info interface. Follow the on-screen instructions to remove the old wiper and replace it with a new one.

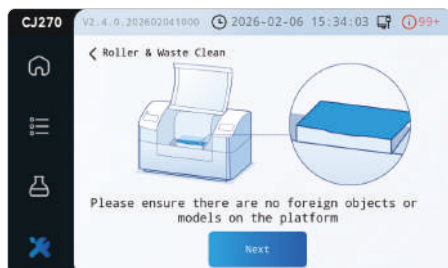
9.5 Cleaning the Waste Resin Tank



1. Tap [Waste Tank Calibration] in the Device Operation & Usage Info interface and follow the on-screen instructions to remove the waste resin tank.
2. Clean the waste resin tank, place it back, and tap [Calibration completed].

9.6 Cleaning the Roller and Waste Tray

1. Tap [Roller & Waste Clean] in the Device Operation & Usage Info interface and follow the on-screen instructions.



2. After cleaning, please return the UV module and resin collector to their original positions.

9.7 Storage Recommendations for Long-Term Non-Use

1. Drain: Empty all resin from cartridges and tubing.
2. Clean: Flush the entire resin path system with isopropyl alcohol (IPA). Drain the cleaning solution from the tubes and ensure the system is completely dry.
3. Store: Keep the printer sealed in a dry, dark place.

10. Help and Support

Technical Support

If you encounter any issues during use, please contact our after-sales team at cjsupport@flashforge.com.

Self-Help Resources

You can also visit our product knowledge base for more information and FAQs: <http://wiki.flashforge.com>

FCC Caution.

(1) § 15.19 Labelling requirements.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

§ 15.21 Changes or modification warning

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

§ 15.105 Information to the user.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

RF warning for Mobile device:

- This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

-