

USER MANUAL



APPLICABLE TO
SLASH 2 PLUS

DISCLAIMER



Please read and understand the contents of this installation and user manual.

Failure to read the manual may lead to personal injury, inferior results or damage to the printers. Always make sure that anyone who uses the 3D printer knows and understands the contents of the manual to make the most out of the SLASH 2 PLUS printer.

The conditions or methods used for assembling, handling, storage, use or disposal of the device are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, injuries, damage, or expense arising out of or in any way connected with the assembly, handling, storage, use or disposal of the product. The information in this document was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness.

Intended use

SLASH Series 3D printers are designed and built for liquid crystal display (LCD) based on Stereo lithography Appearance (SLA) modeling for various high quality photopolymer resins within a commercial/business environment. The combination of precision and speed makes the SLASH Series 3D printers the perfect machines for concept models, functional prototypes and also the production of small series.

UNIZ does not warrant that the operation of the Hardware Product will be uninterrupted or error-free. UNIZ is not responsible for damage arising from failure to follow instructions relating to the Hardware Product's use.

UNIZ's warranty does not apply: a) to damage caused by use with non-UNIZ products including third-party resins; b) to damage caused by accident, abuse, misuse, flood, fire, earthquake, or other external causes; c) to damage caused by operating the Hardware Product outside the permitted or intended uses described by UNIZ; d) to damage caused by service (including upgrades and expansions) performed by anyone who is not a representative of UNIZ; e) to a Hardware Product or part that has been modified to alter functionality or capability without the written permission of UNIZ; f) to consumable parts, unless damage has occurred due to a defect in materials or workmanship; g) to cosmetic damage, including but not limited to scratches, dents; or h) if any UNIZ serial number has been removed or defaced. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE OR COUNTRY TO COUNTRY. UNIZ's RESPONSIBILITY FOR HARDWARE DEFECTS IS LIMITED TO REPAIR OR REPLACEMENT SERVICE AS DETERMINED BY UNIZ IN ITS SOLE DISCRETION.

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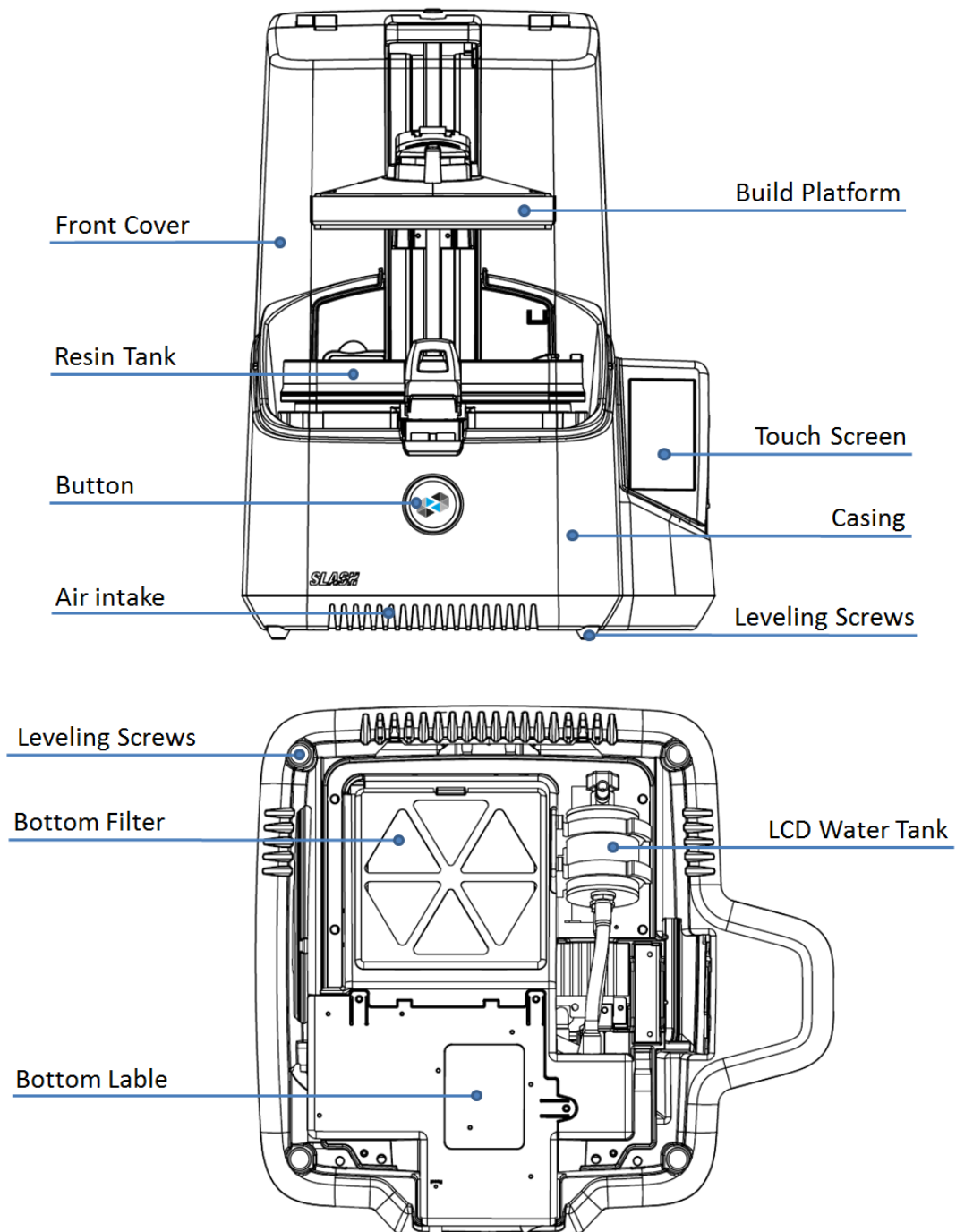
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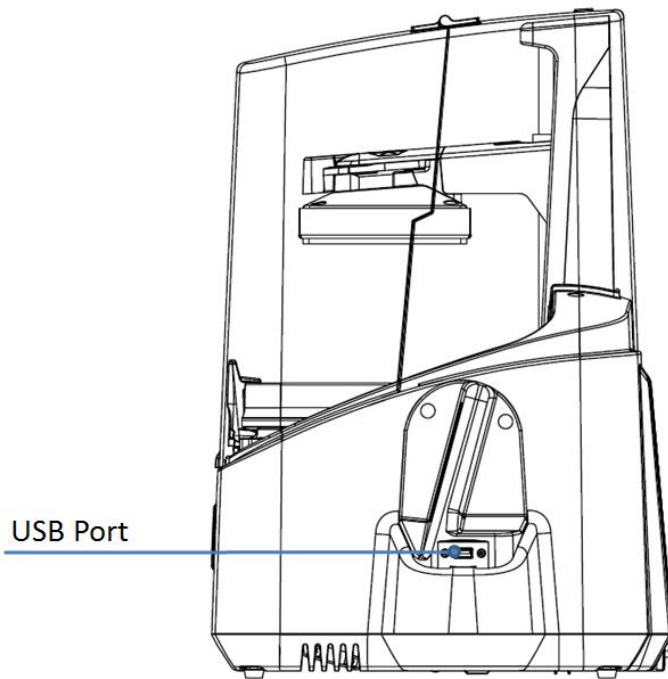
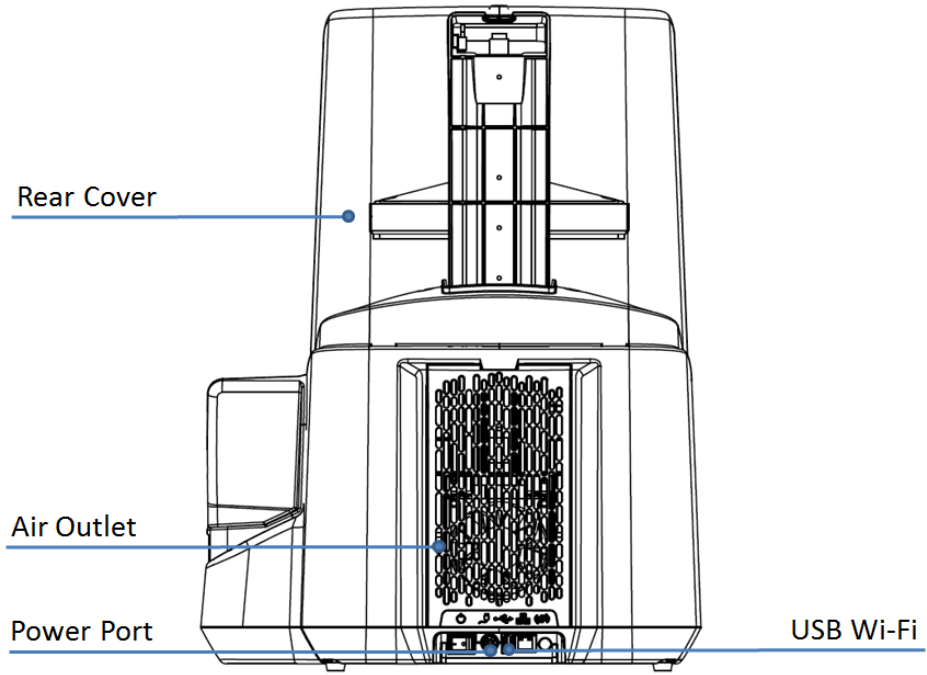
A SLASH 2 PLUS 3D PRINTER

This user manual is designed to help you start your **SLASH 2 PLUS** printer experience. Learn everything about using your 3D printer by following the instructions in this user manual and experience how easy it is to produce great quality prints.

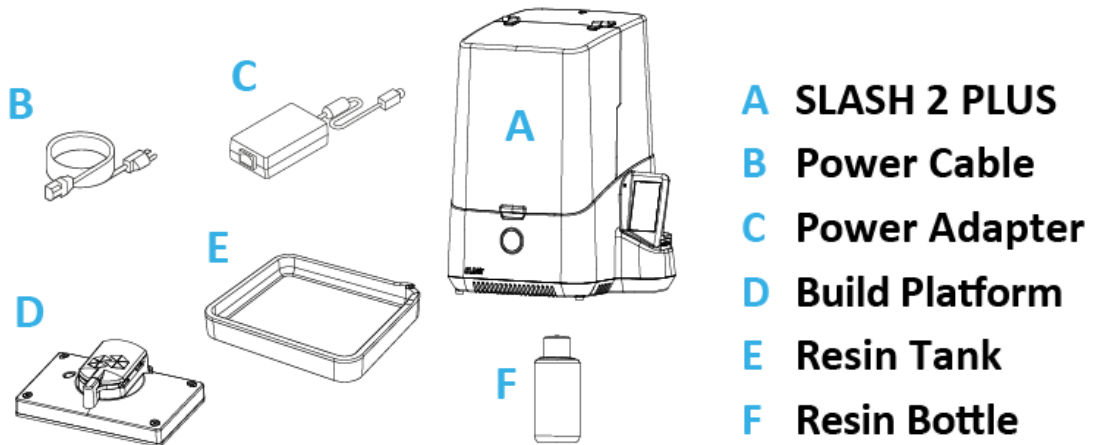
You might be familiar with other types of 3D printers. Regardless, it is still essential that you read this manual carefully in order to make the most out of your 3D printer.

MEET THE PRINTER





SLASH 2 PLUS 3D PRINTING SYSTEM



FRONT BUTTON COLOR GUIDE



Blinking red

Starting up/Z axis moving while print finished.



Green

Printer is ready for a command.



Blinking green

Paused, wait for a resume confirmation./Z axis moving while print start.



Progressing green

Printing in progress.

SPECIFICATIONS

<i>SLASH 2 PLUS</i>		
PRINTING	Printing Technology	LCD Stereo lithography
	Build Volume	192 × 120 × 200mm 7.5" × 4.7" × 7.9"
	XY Resolution	49.8μm
	Maximum Accuracy*	±10μm
	Layer Thickness (Z resolution)	10-200μm(25, 50, 100μm recommended)
	Separation Mechanism	Polymer film natural peel
	Support	Uniz smart support technology
	Printing Speed**	Up to 250 mm/hr.
HARDWARE	Dimension/Weight	350 × 400 × 530 mm [W×H×D] 14" × 16" × 21", 15KG/33LB
	Operating Temperature	18–28° C (64–82° F)
	Power Requirement	100-240V 6A 50/60Hz
	Optical System	UNIZ's Patented LED Array Light Engine
	Mechanical	Cast Aluminum & CNC, Injection Molding
	Connectivity	USB Flash drive, Wi-Fi, Ethernet
	Control Pannel	4.3" Touch Screen
SOFTWARE	System Requirement	Windows 7 and up (64-bit only), Mac OS X 10.7 and up (64-bit only), 16GB RAM, OpenGL 2.1, Discrete Graphics
	Advanced Features	Built-in advanced model repair, Ultra large file support (1GB+)
	Compatible Format	STL, OBJ, AMF, 3MF, ZPRJ

* Maximum accuracy only achievable at integer multiples of smallest pixel sizes.

**Result comes from specific speed testing model, others may be different

B GET STARTED

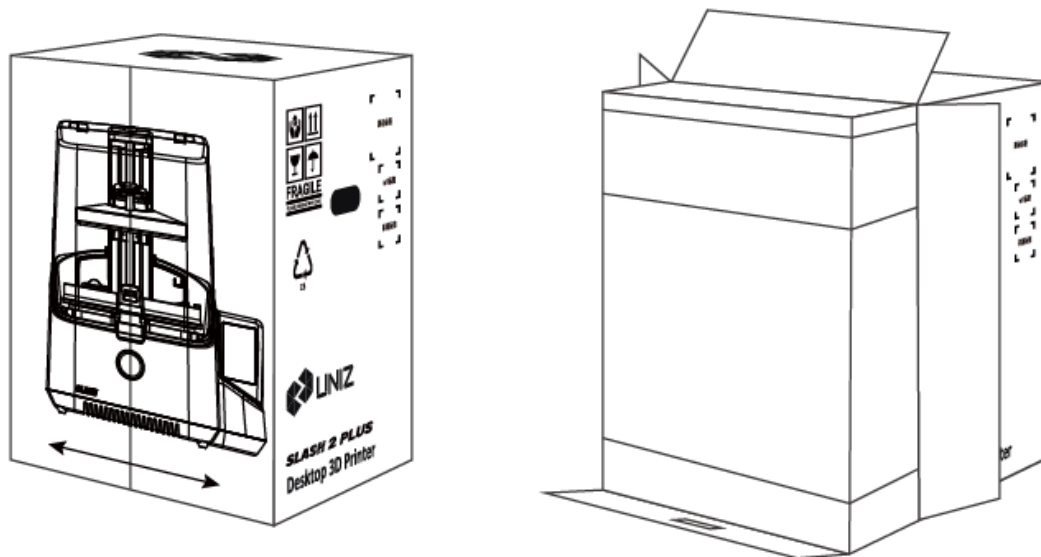
Now your SLASH 2 PLUS printer has arrived. You're ready to unpack it and set it up! Carefully unpack your printer and set it up according to the following instructions.

UNBOXING

The SLASH 2 PLUS comes in reusable, durable packaging that has been specially designed to protect your printer in transport. To properly unpack your printer, please follow the steps described below.

START UNBOXING

Start unpacking by correctly orienting the cardboard box, and then slide the foam packaging out of the box by pulling the cardboard handle beneath the printer while holding the box.



You can scan the QR code to get the SN number of your printer.

To get SN number of this printer quickly, please scan the QR code:

(Sample)



S/N: 12345678912345678912345678912345

OPEN IT UP

On the foam packaging, you will find the Quick Start Guide and accessories. Please insert the USB Wi-Fi into the USB port behind your printer.

REMOVE THE FOAM PACKAGING

On the top foam part, you will find all accessories of your SLASH 2 PLUS. Take these out and put them aside. Open up the package by removing the foam wrap at the middle. Now you may take out the printer and place it on your desk. Make sure you hold it by the aluminum casing while carrying it.

REMOVING PROTECTION WRAP

Remove the protection wrap around the machine and your SLASH 2 PLUS is ready to use!

SOFTWARE PREPARATION

Open web browser, open <https://www.uniz.com/software>.

Choose the software according to your corresponding system and download UNIZ DENTAL installation file.

INSTALLATION

Windows

UNIZ DENTAL supports Windows 7 and above. Please use the following steps:

1. Double click the installation program.
2. Check the user agreement, and then follow the prompts to finish the installation.

Mac

UNIZ DENTAL supports Mac OS X 10.7 and above. Please use the following steps:

1. Double click the installation program.
2. Agree to the user agreement.
3. Drag UNIZ to your Applications folder.

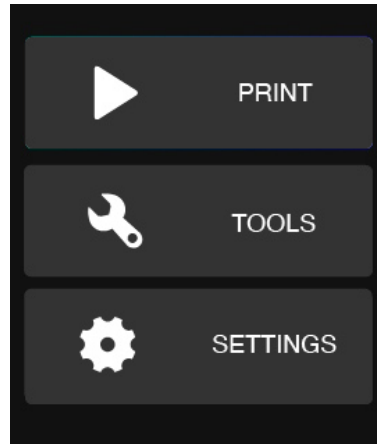
Note: Once your computer is connected to the Internet, UNIZ DENTAL will detect new versions automatically and prompt whether you wish to update.

C INTERFACE INFORMATION

You may check device information, control the printer, and start printing projects using the touch screen on the right side of SLASH 2 PLUS.

MAIN INTERFACE

There are three main functions:
Print /Tools/Settings.

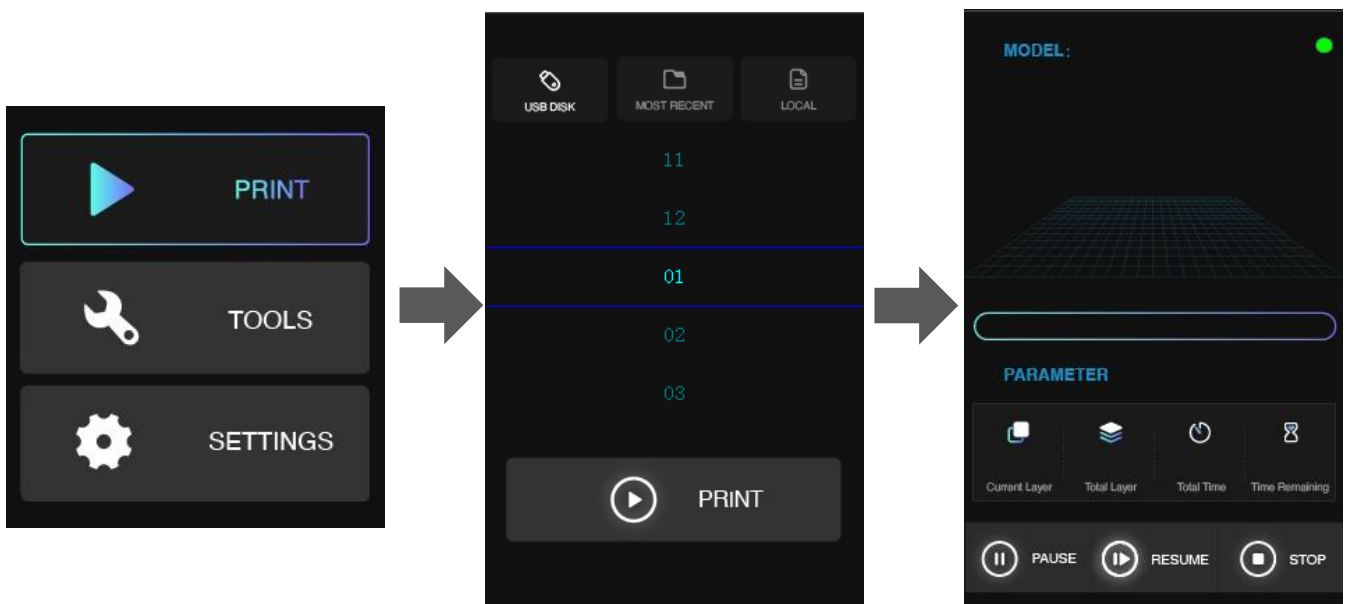


Note: Some functions have 1~3 pages to introduce the details. Please read carefully and follow the instructions.

PRINT

PRINT WITH USB FLASH DRIVE

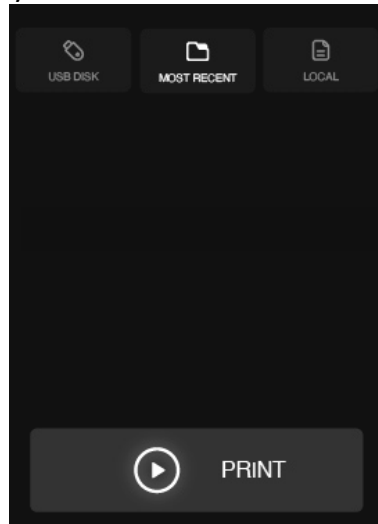
Insert a Flash Drive to the USB port at right side of printer. Click PRINT menu, then click USB DISK icon. You will see a list of slice files in flash drive. Choose and click a slice file you want to print and click PRINT button, the printer will step into normal printing program.



In this interface, you may check the preview and printing parameters of the print. Also you may pause/resume or stop the printing program by click the buttons at bottom.

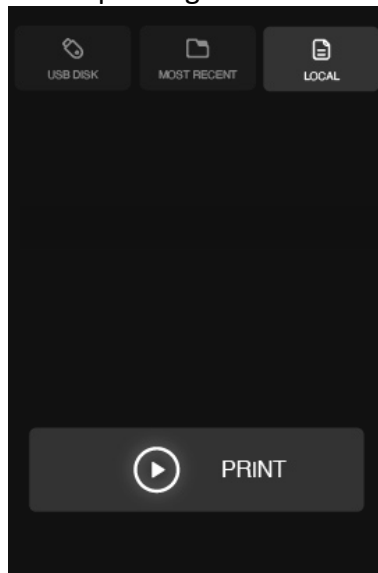
PRINT RECALL

The last file printed on the printer will be shown in the MOST RECENT interface. You may print a model second time very expediently with this function.



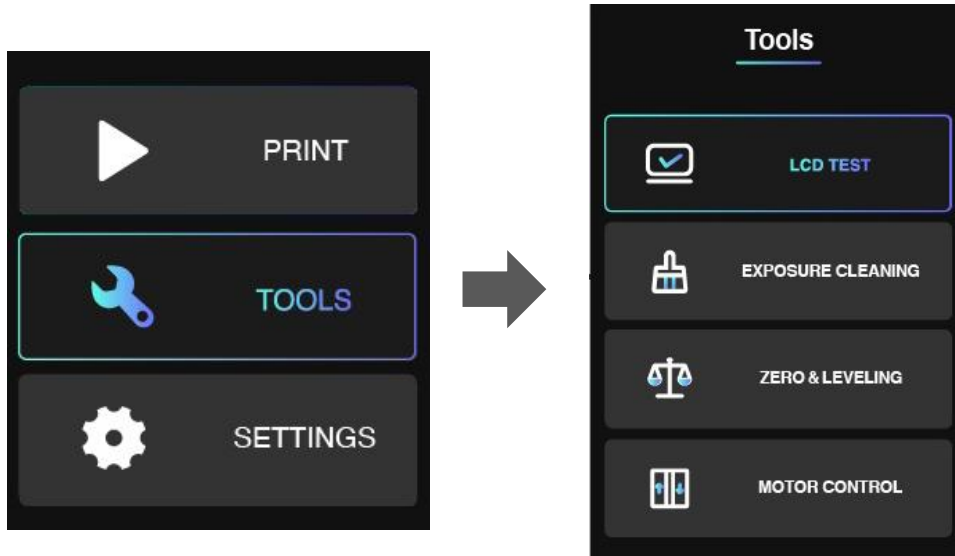
PRINT LOCAL FILES

SLASH 2 PLUS can receive the sliced files from PC via Wi-Fi and store in local memory. You can find the file in LOCAL menu (Note: it can only memory one slice file). Choose the file in this interface and click PRINT button to start printing.

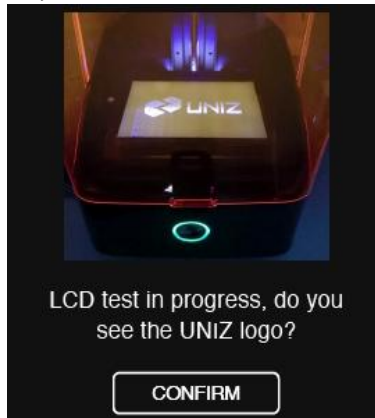


TOOLS

LCD TEST

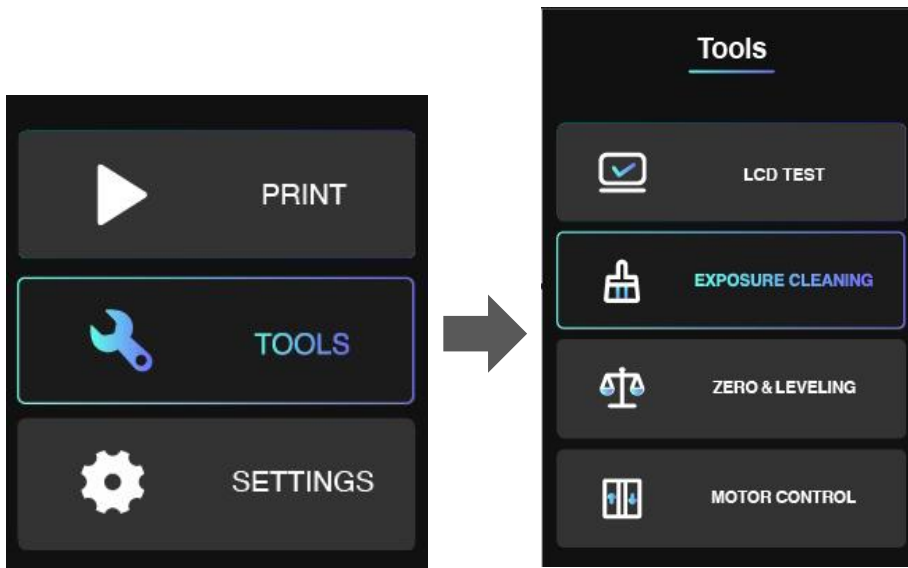


Click *LCD TEST* you will see the UNIZ Logo appears on the LCD screen. If the logo can be shown completely and there is no any flicker, that means the LCD screen is in good condition.



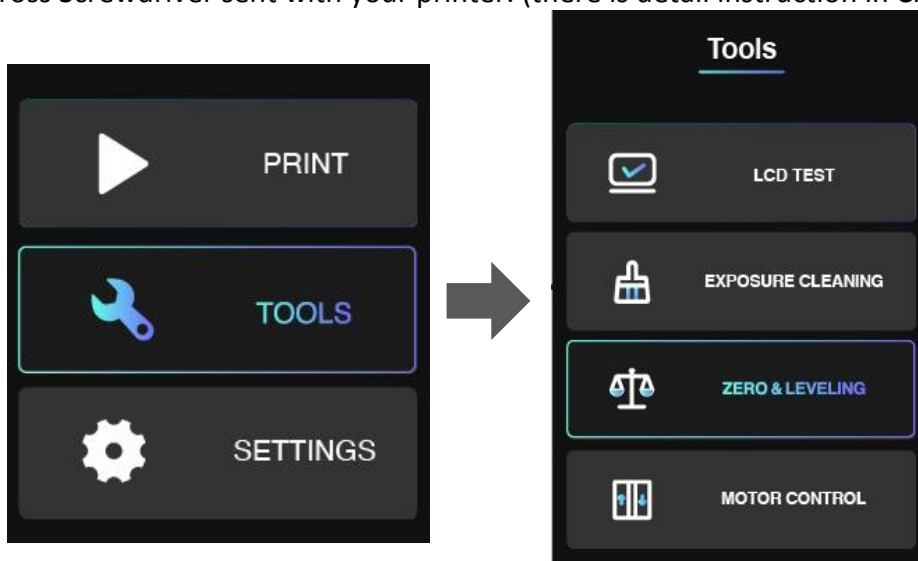
EXPOSURE CLEANING

When a failed print occurs and there are some residues left in the bottom of Resin Tank. You could use EXPOSURE CLEANING function to clean the residues. The printer will cure the whole screen and make residues adhere on solidified piece. After that, please wear nitrile gloves and take the solidified piece out.



RESET Z-AXIS ZERO POSITION AND LEVELING BUILD PLATFORM

If you change for a new Build Platform or the printing model may not stick onto the Platform, please reset z-axis zero position and leveling the Build platform. You could use an A4 paper and the Cross Screwdriver sent with your printer. (there is detail instruction in Chapter D)



After leveling, please put the A4 paper under Build Platform and reset again. It finishes if you may feel the frictional force between Platform and A4 paper.

MOTOR CONTROL

If you want to control Build Platform to move upwards manually, you could enter MOTOR CONTROL menu. Choose a distance (10/30/50mm) first, and then click the Arrow. Please do not click too fast and take an eye to watch the distance between Platform and top position.

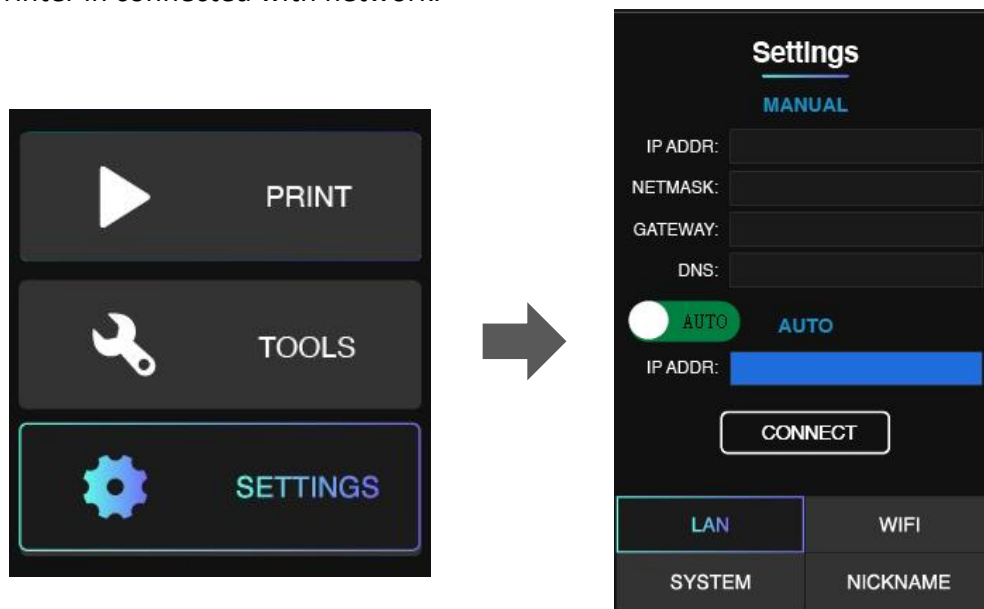


SETTINGS

SET LAN

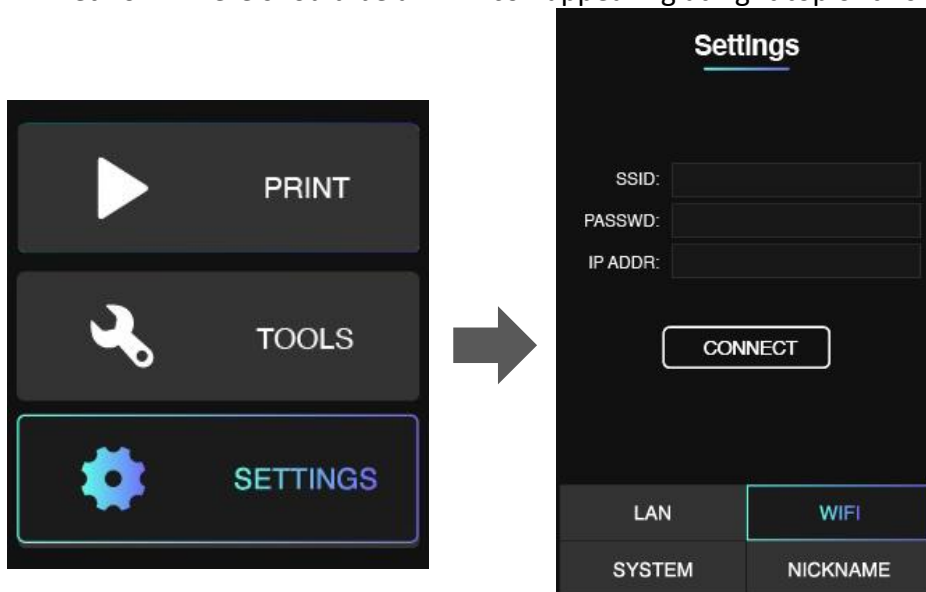
You could connect the printer with your router via Ethernet cable. Go the SETTINGS menu. Click LAN button. Set to AUTO mode on. The printer will get IP address automatically. Click CONNECT button.

If you set AUTO mode off, you need to type IP address, Netmask, Gateway, DNS manually. Then click CONNECT button. When you could see the Ethernet icon at right top of interface, it means the printer in connected with network.



SET WIFI

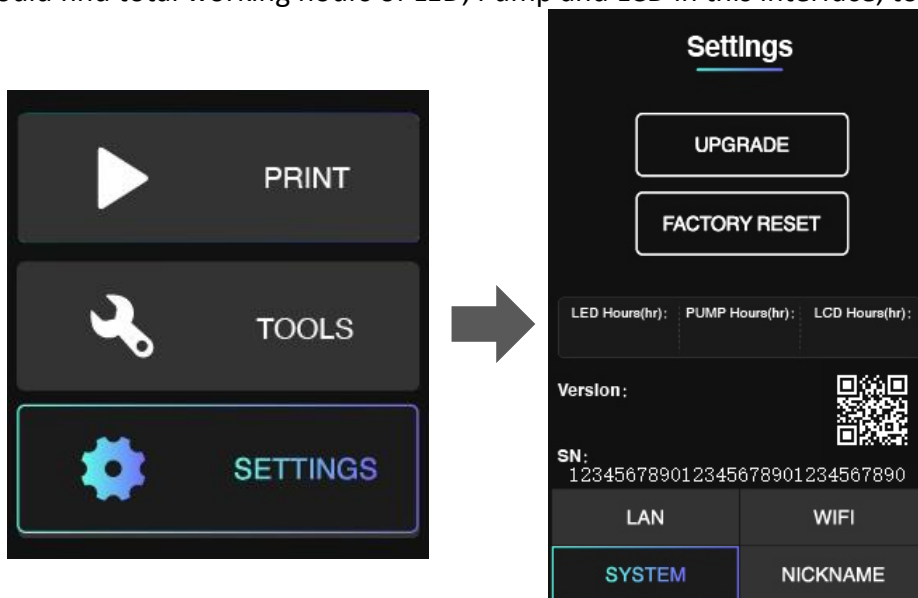
You could connect the printer with your router via WiFi. Go the SETTINGS menu. Click WiFi button. Click SSID, there will be a list of available WiFi. Choose the WiFi network and enter password. Click CONNECT button. When you see the IP address is shown, it means the printer is connected well with WiFi network. There should be a WiFi icon appearing at right top of this interface.



UPGRADE FIRMWARE OR FACTORY RESET

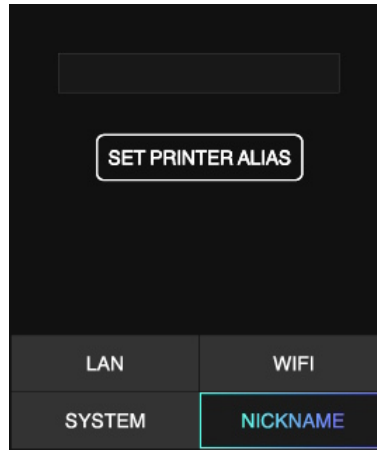
Enter SETTINGS menu and click SYSTEM button, you will find the SN number. You could scan the QR coder to get SN number as well.

You could find total working hours of LED, Pump and LCD in this interface, too.



SET PRINTER NICKNAME

Enter SETTINGS menu and click NICKNAME button, you could set your own printer alias here.



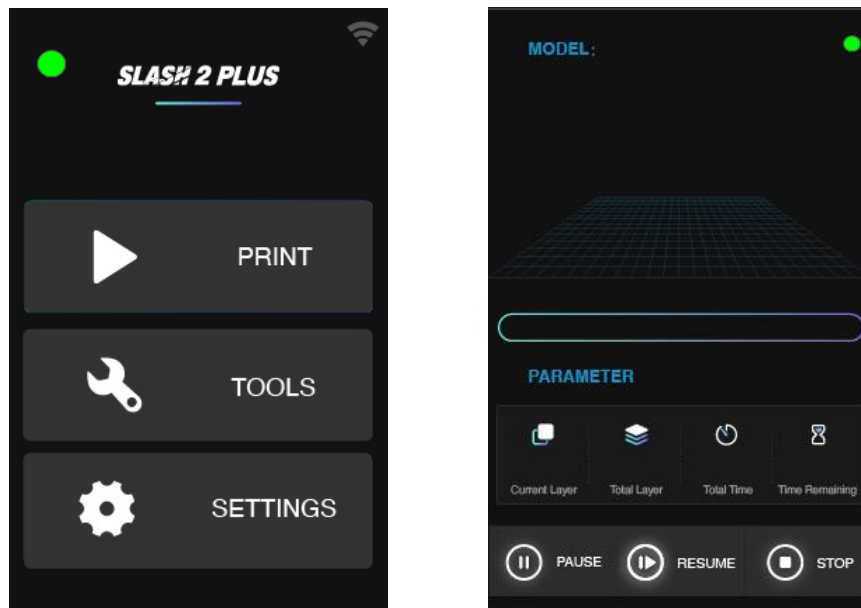
MORE DETAILS

1. There is an indicator light on the main interface and printing interface.

Staying in green means the printer is ready for printing.

Blinking in green means the print is in progress.

Blinking in red means the print program is stopping and the platform is moving upwards.



2. While the printer is connected with internet through Wi-Fi, the icon on the right-up side will turn to highlighted state.



No connection

Connected through WIFI

Abnormal WIFI connection (when connect with WIFI)

Connected through Ethernet.

Abnormal Ethernet connection (when connect with Ethernet)

D USAGE AND MAINTENANCE

In order to have a smoothly working SLASH 2 PLUS printer, it is important to maintain it correctly. In this chapter the most important maintenance tips are described. It is recommended to read them carefully in order to achieve the best results with your printer.

PRINTER PLACEMENT AND LEVELING

1. Put the printer on a stable desktop to keep the printer steady during printing to effectively guarantee the model quality.
2. The level of printer is maintained by four level screws underneath. After placing the printer on a flat surface, adjust the four screws to restore the levelness of the printer.



BUILD PLATFORM

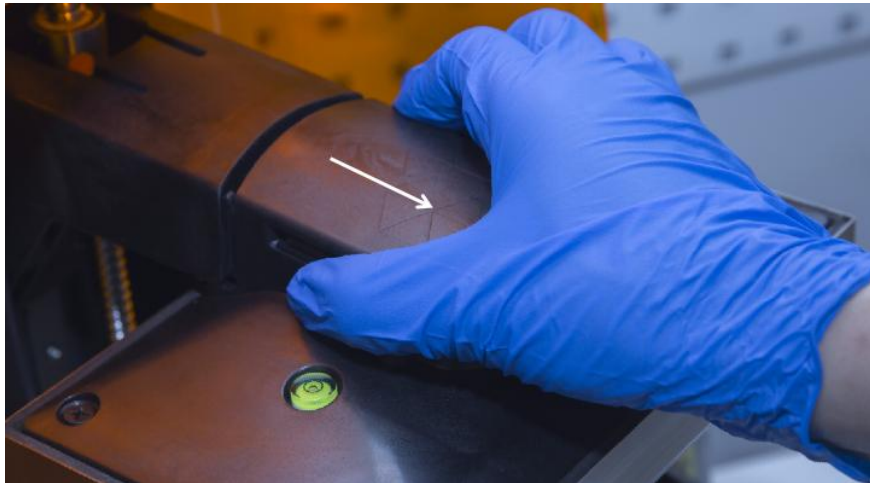
The Build Platform is the platform where the first layer of the model burns-in to, its levelness and roughness are crucial to successful prints.

INSTALLATION AND REMOVAL OF BUILD PLATFORM

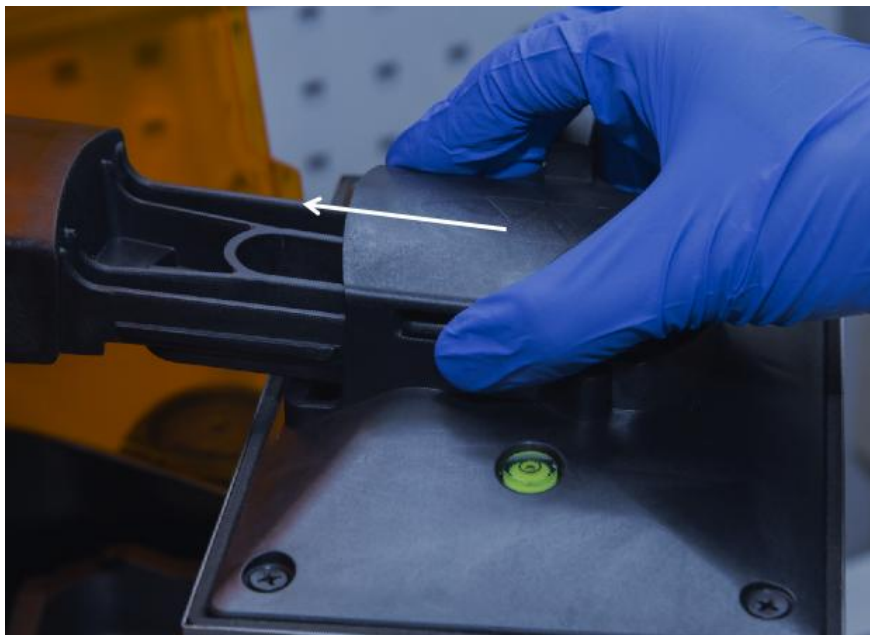
1. Turn the platform locking arm clockwise to lock.
2. Turn the platform locking arm anti-clockwise to unlock.



3. Pull back to take off the platform.



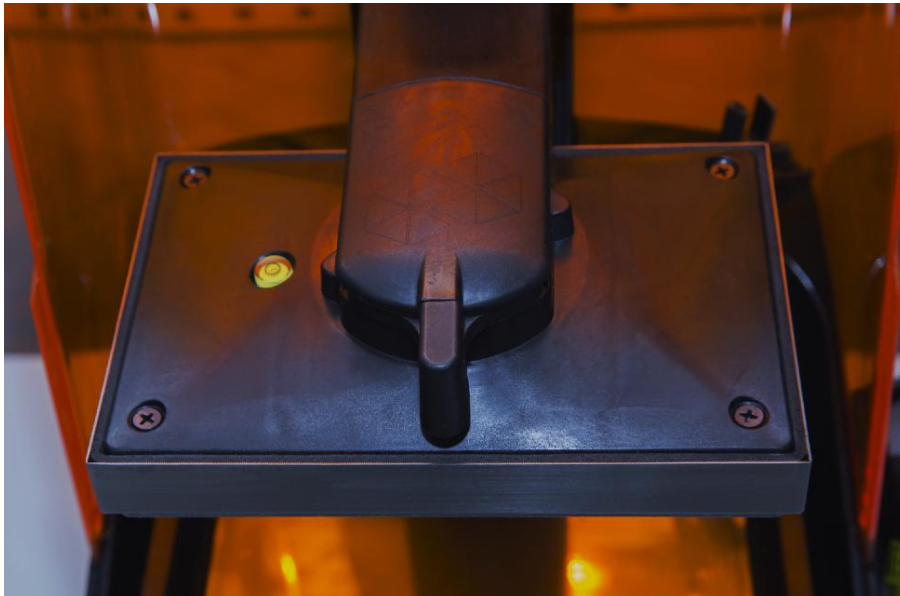
4. Push forward to put on the platform when it is in unlocked status.



5. Turn the arm clockwise to lock.



6. Installation is completed.

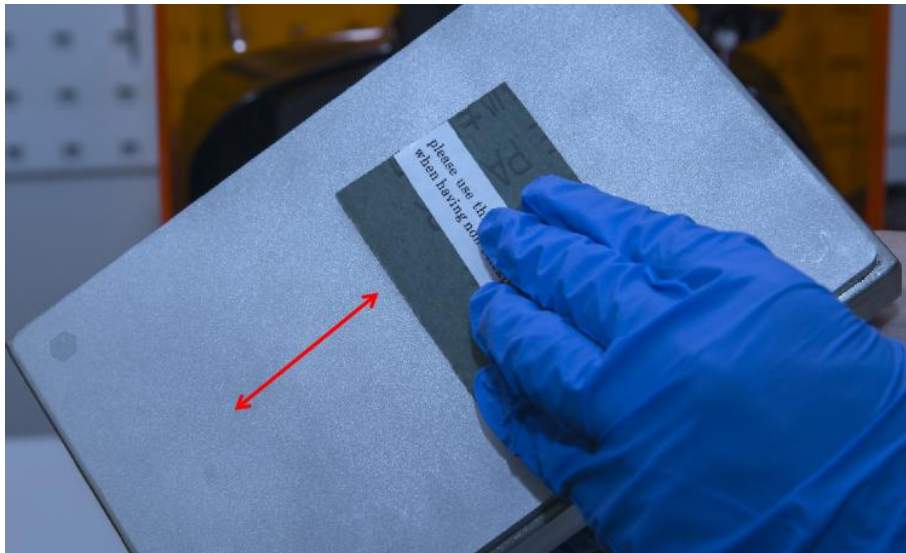


Notes: If it is tight to take off the platform, shake the platform left and right when pull it back.

SANDING BUILD PLATFORM

After the platform has been used for a long time, its surface will become smooth which leads to poor model adhesion and increases the printing failure rate. To deal with this problem, users need to sand the platform.

1. Clean the platform surface with alcohol.
2. Grind the surface into a grid shape with the sand sandpaper delivered with the machine.



3. Clean the platform with alcohol again to make sure there is no residue left.

4. Calibrate the Z-axis zero position.

CLEANING PLATFORM

Use the scraper delivered with the printer to remove the residues (please deal with solidified materials and waste resin properly).

Notes: After removal of model, please clean Build Platform thoroughly, any leftover bits may damage the Resin Tank or LCD.

RESET Z-AXIS ZERO POSITION AND LEVELING BUILD PLATFORM

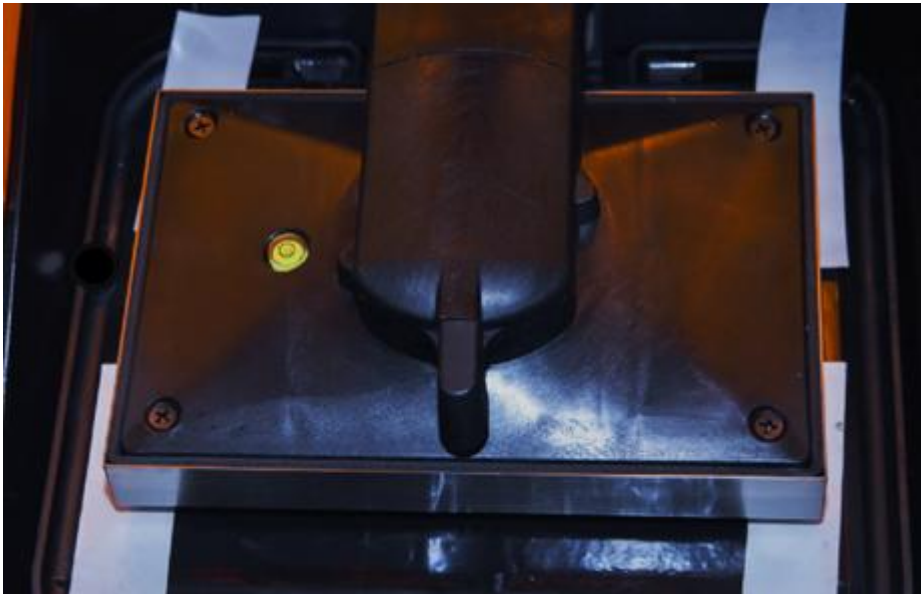
1. Prepare four pieces of paper and a cross screwdriver.
2. Tighten four screws with cross screwdriver by turning clockwise.



3. Push the Build Platform down until it comes into contact with the LCD.



4. Place four pieces of paper under four corners of Build Platform then push down Build Platform to touch LCD screen. At this time, there is at least one pieces of paper is pressed between Build Platform and LCD screen (which means this corner is in good position).



5. Select a corner where the paper is loose. Use screwdriver to loosen screw by turning anti-clockwise and pull and push paper. When the paper cannot be pulled, it means this corner touch the screen closely and in good position. Use the same method to adjust other corners and ensure all corners are pressed firmly.



6. Click **NEXT** to calibrate the Z-axis zero position.

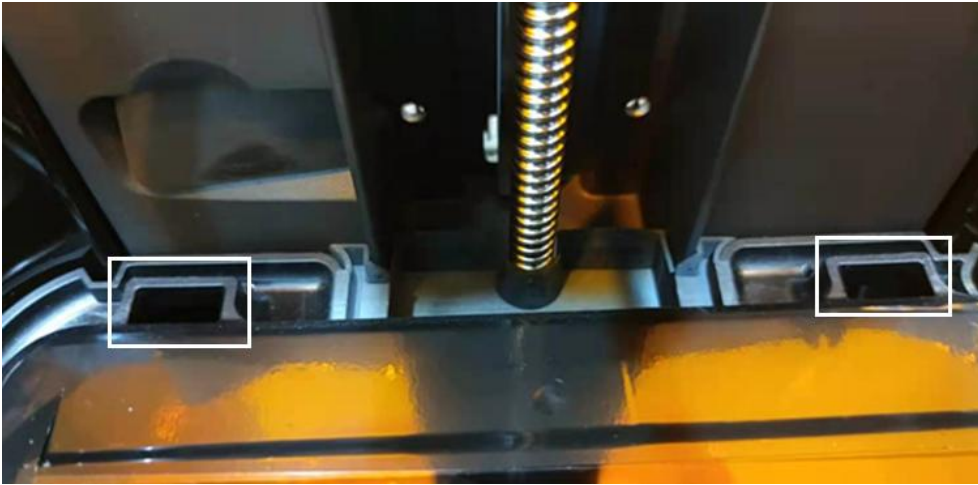


RESIN TANK

The Resin Tank is a crucial part for a successful print job, and requires constant maintenance and regular replacement.

INSTALLATION

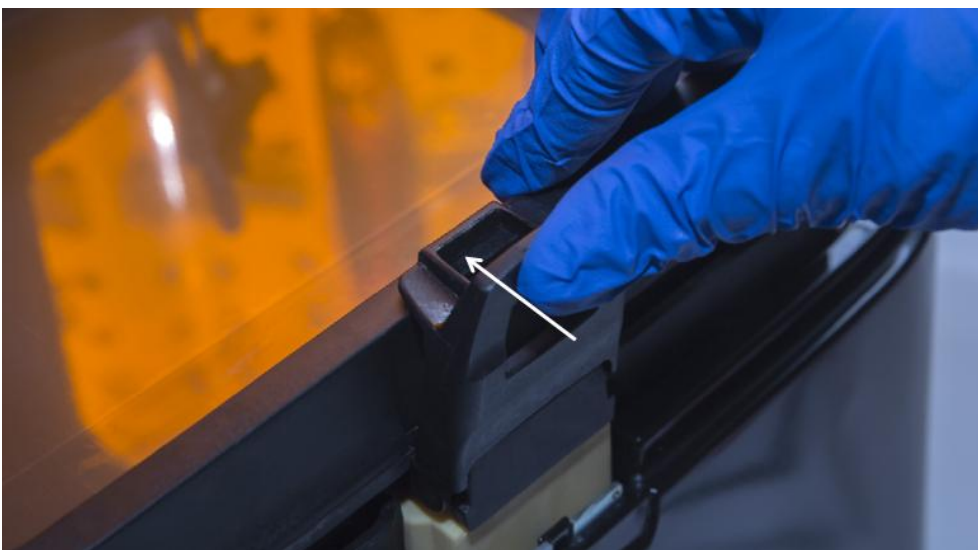
1. Find the two fitting slots.



2. Insert the Resin Tank to the slots by 10 degrees and put the tank down onto the screen.



3. Put inward the hatch to lock the Resin Tank.



4. Make sure the Resin Tank is stably locked and repeat the above steps if the tank shakes.

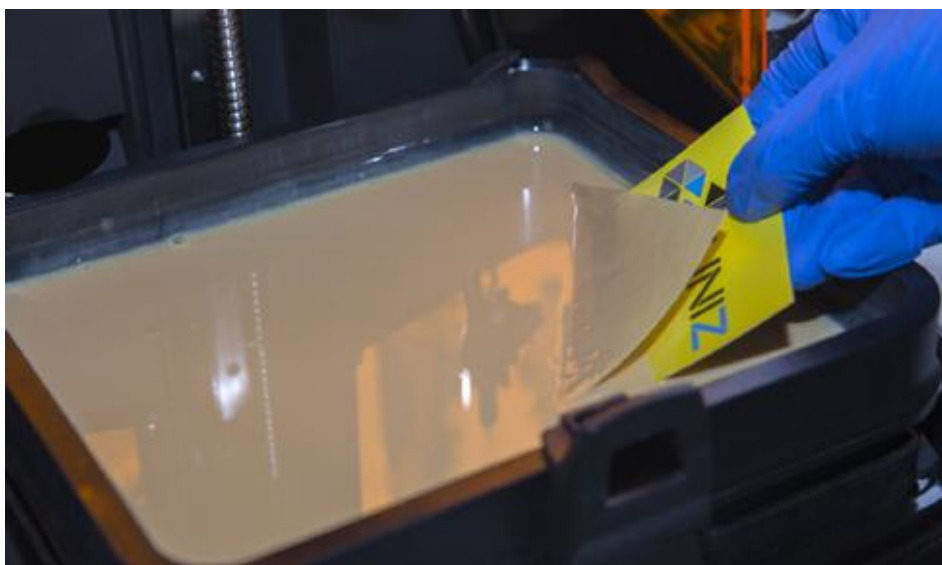


Notes: If there is some resin in the Tank, please be carefully while install it.

CLEANING RESIN TANK

When printing fails, there may be residues on the platform and in the Resin Tank which needs to be cleaned in time to avoid damage to the screen.

When residues are small in number and big in volume, use the cards delivered with the machine to clean; when residues are big in number and small in volume, it is recommended to use the EXPOSURE CLEANING function in the software: remove the platform and click on the button. After the exposure is over, gently scrape off the whole piece of cured resin from corner.



Notes: 1. Don't use metal scraper to clean solidified piece. It will harm resin tank film.

2. Refer to Page 9 of this manual for operation steps

CHANGE LCD PROTECTIVE FILM

There is a protective film on the LCD of SLASH 2 PLUS. If the film is scratched or dirty with cured resin, you should change for a new one.

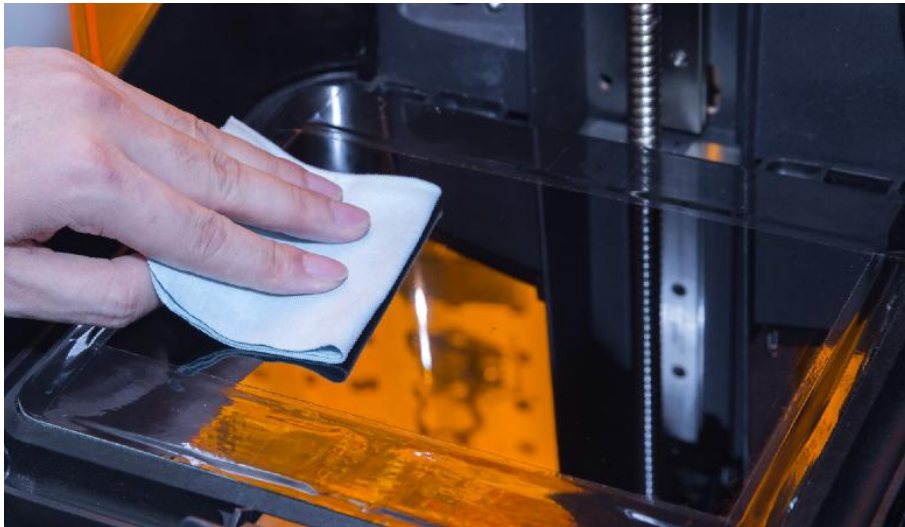
1. Peel off the old film.



2. Take out a new one.



3. Clean the surface of LCD and make sure there is no dust and residue left.



4. Peel off the cover film marked '①'.



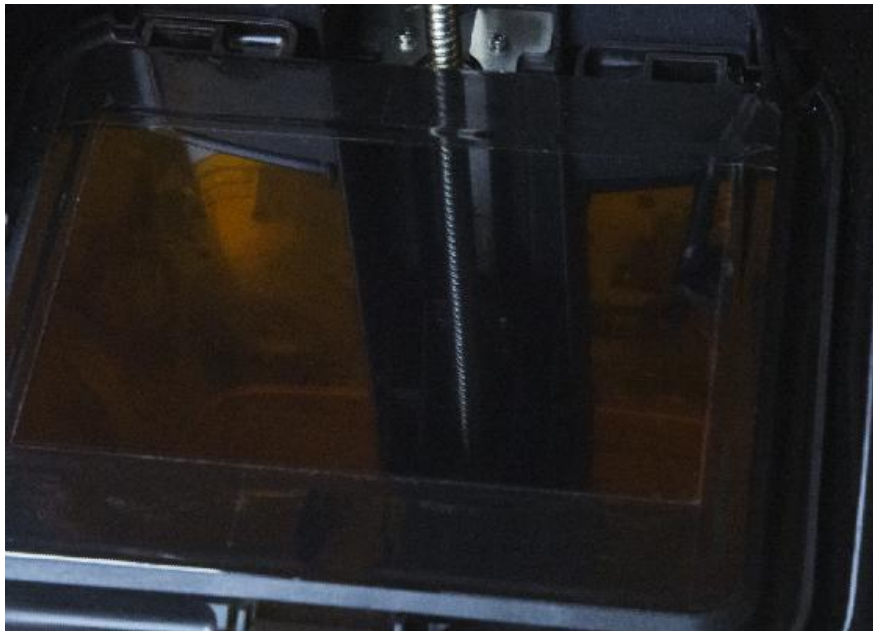
5. Using a card and cloth to paste the film onto the surface of LCD.



6. Peel off the cover film marked '②'.



7. All done. The bubble between film and LCD will get out automatically in a period of time.



RESIN STORAGE

1. For long-term storage, it is recommended to redraw resin back to the Resin Bottle to avoid curing.
2. For short-term storage, it is recommended to cover Resin Tank with Resin Tank cover which matches the tank to avoid resin curing by contacting light.
Resin Tank Cover as shown in the photo and press tightly and store away from light.

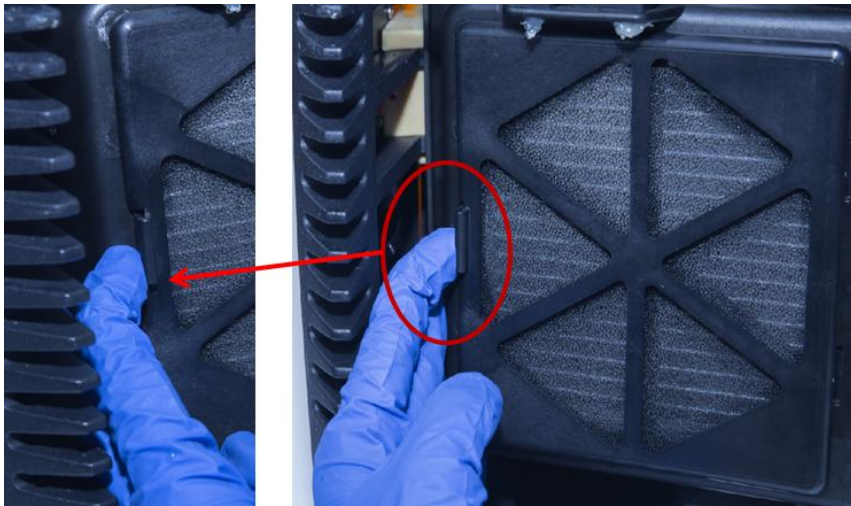


CHANGE BOTTOM FILTER

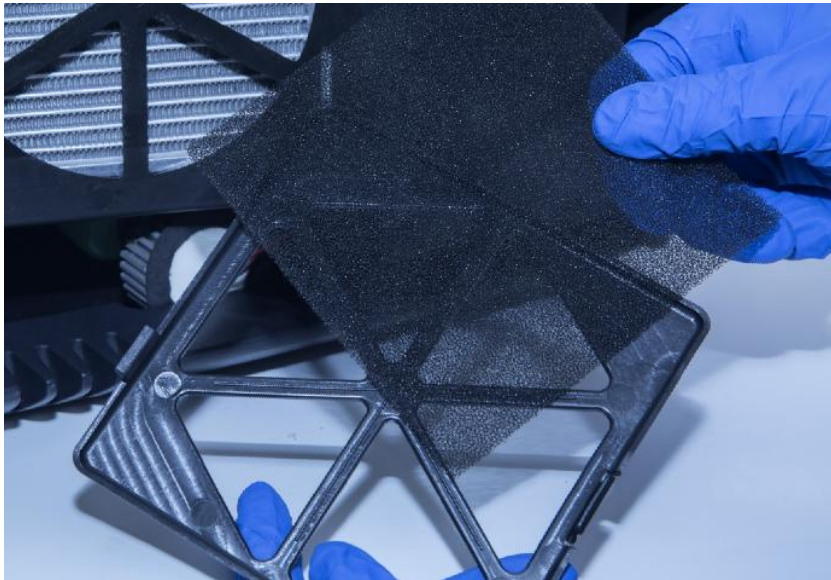
1. Put printer sideways like the picture shows. Lay protections to prevent possible damage to the printer cover.



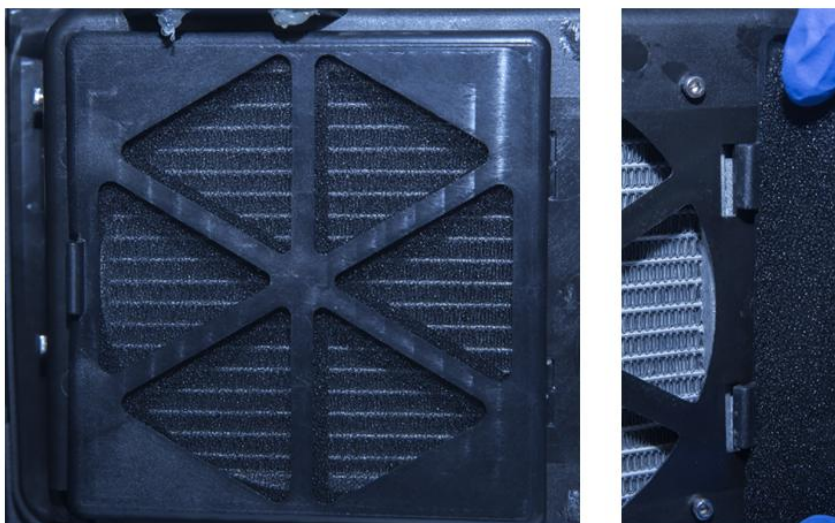
2. Take off the bottom filter holder.



3. Change for a new filter.



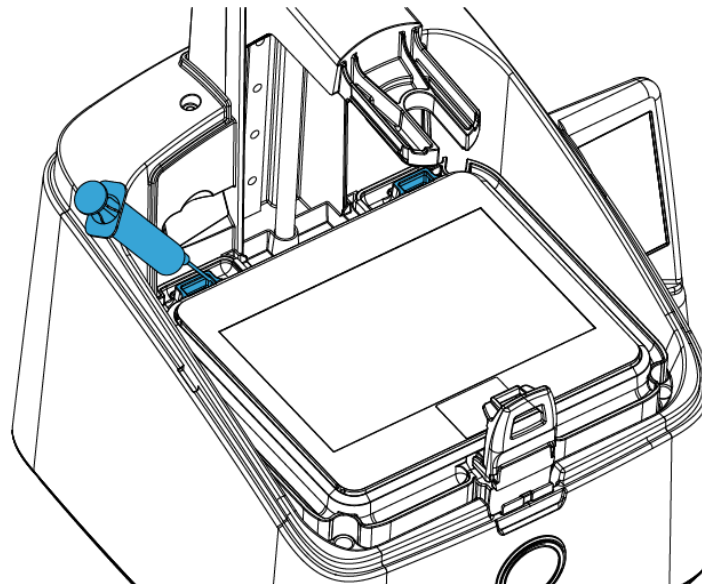
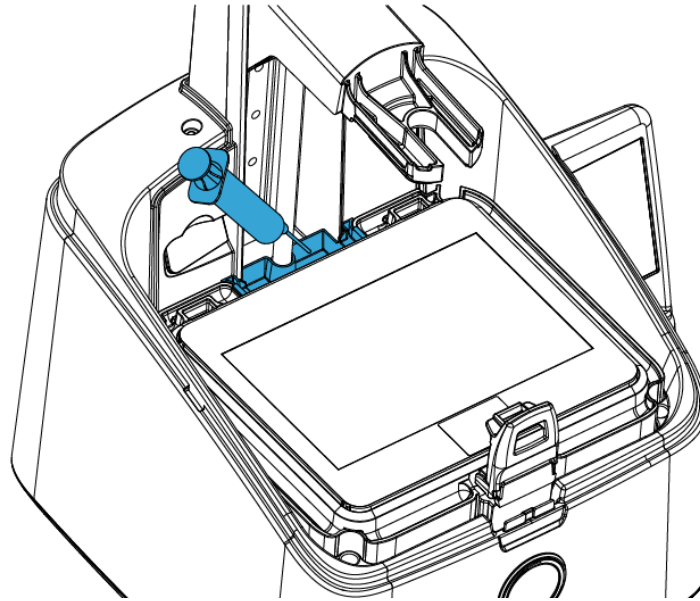
4. Lock the holder back.



CLEAN THE LEAKED RESIN

Compared with previous types, SLASH 2 PLUS series products have added some new parts between the Base Column and the Tank Platform. These parts are used to contain the overflowed or leaked resin from the Resin Tank and prevent the resin from entering the printer and causing damage.

If resin overflow or leak does occur, please use the injector with flat-headed needle in accessory of printer to draw out the resin near the Column and the buckle hole of the Resin Tank in time and avoid the resin entering the printer.



SUGGESTION

Things we recommend

1. After taking off resin tank, please place it on a clean table to avoid scratch.
2. When you slice a file by UNIZ Dental software, we recommend saving the sliced file to a solid state drive (SSD) for faster storage speed.
3. Check whether there is dross left on Build Platform or at bottom of resin tank before each printing. If there is dross left on Build Platform, clean it with a scraper. If there is dross left in resin tank, you could use Exposure Cleaning function to cure and clean.
4. Well mix the resin in resin tank by stirring with a hard cardboard like business card before each printing.
5. Place the printer on a smooth desk, adjust 4 leveling screws to keep the printer stable to avoid disturbing while printing.
6. Keep the Cover in position while printing.
7. Check and clean the Build Platform and Resin Tank after each print.
8. Clean resin dropped incidentally on LCD screen, cover immediately.
9. Drill a hole at the side of the bottom of a model if it is a closed hollowed model.
10. Keep the printer and resin tank in a ventilated place, avoiding straight sunlight.
11. Use 80~200 mesh filter to filter the resin when put it back to bottle for storage.
12. Do NOT move printer when there is resin left in resin tank to avoid spilling.
13. Do Not let child close or operate the printer to avoid harm to child or damage to printer.
14. Do NOT gaze LCD screen when doing test print without Resin Tank and Build Platform.
15. Do NOT leave resin in resin tank for more than 24 hours if not print.

E CONTACT US

FOR MORE INFORMATION

uniz.com/support

Our website has extensive documentation and troubleshooting information to solve issues quickly on you own.

support@uniz.com

If you ever need help resolving an issue, please send an email to the address above to contact our Support Team.

STORE

uniz.com/store

To learn about other UNIZ products, including UNIZ resins, please visit our online store.

sales@uniz.com

If you have additional questions about any UNIZ product, please email our Sales Team at the address above.



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