

AccuFab-L4D



V3.3.20



General

The user manual (hereinafter referred to as "the manual") introduces the functions, installation, operation and maintenance of the AccuFab-L4D printer (hereinafter referred to as "the printer").

- AccuWare is the data preparation software for AccuFab printers.
- Fab Cure is the curing unit for AccuFab printers
- FabWare is the operating software for AccuFab printers.
- Please use original consumables and spare parts. Any change to the printer without the manufacturer's permission will result in printer failure and will invalidate warranty.

Safety Instructions



Additional information Improper actions or conditions that may damage the product or result in personal injuries, and consequently void your warranty or service contract or lose the data.

Revision History

No.	Version Revision	Content	Release Date
1	V3.3.20	 Update network connection features. Update FabWare snapshots and features. 	December, 2021

FCC Regulations

Please note that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



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 exposure statement

The user manual (hereinafter referred to as "the manual") introduces the functions, installation, operation and maintenance of the AccuFab-L4D printer (hereinafter referred to as "the printer").

- This equipment complies with radio frequency exposure limits set forth by the FCC for an uncontrolled environment.
- This device must not be co-located or operating in conjunction with any other antenna or transmitter.
- This equipment should be installed and operated with a minimum distance of 20 cm between the device and the user or bystanders.

About the User Manual

The Manual is related to your safety, lawful rights and responsibilities. Please read it carefully before installing and using the product.

- Shining 3D Tech Co., Ltd. (hereinafter referred to as "the Company") owns complete intellectual property rights of the Manual. No part of the Manual may be reproduced, transmitted, distributed, adapted, compiled or translated in any form or by any means without the prior written consent of the Company.
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1.1 Material Contact

The printing material of AccuFab printer is photo-polymerized resin material independently developed by SHINING 3D. The resin is stable, safe, and no substances harmful to the human body found in the test, but direct contact with skin may cause adverse irritating reactions. Operators should follow the Material Safety Data Sheet (MSDS) instructions. And operators should wear nitrile disposable gloves when in contact with material.

- Skin contact: Take off contaminated clothing and wash the skin area thoroughly with soap and water.
- Eye contact: Flash the eye with water for at least 15mins.And seek medical attention.
- Ingestion: Induce vomiting and seek medical attention.



Note: Do not touch the liquid material by hand. Please refer to the latest Material Safety Data Sheet (MSDS) or call local authorities for the material handling hazard and treatment.



Warning:No smoking, eating, or drinking in the workplace. Keep the material properly and keep away from the children.

1.2 Ultraviolet Light

- During the printer and Fab-cure operation, Ultraviolet light with a wavelength of 405 nm will be emitted, which is may bring damage to your eyes. Please avoid direct contact.
- A safety interlock is enabled to avoid printing when the cover is open.

1.3 Ethanol

- Ethanol is a flammable and explosive chemical. Please store in a cool and ventilated environment and keep the bottle cap of the container closed. Keep away from children.
- Ethanol is recommended to clean printed part (Alcohol concentration of 75% or above)
- Wear disposable gloves when clean part surface with ethanol. Avoid direct contact.

1.4 Sharp Tools

AccuFab 3D printer equipped with a set of accessories including sharp tools such as flat-headed tweezers, cleaning shovels, and utility knives. Personal safety protection is required when using these tools.

1.5 Electromagnetic Interference

Electromagnetic, produced by AccuFab printer and Fab Cure during operation, has passed CE/FCC standard test and is complied with Class A digital device limits, which will not cause harm to the human body.

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2 Operation Environment



2.1 Site Requirements

Power Supply	100-240V/360W
Temperature	20°C-35°C
Humidity	30%-70%
Environment	Dust free, Ultraviolet light avoided, Ventilated
Frequency Range	2400–2483.5MHz
Maximum Output Power	18dBm



Note: Ignoring the requirement of the environment may lead to print failure or part accuracy issue

Fab Cure Post-Curing Unit	t i i i i i i i i i i i i i i i i i i i
Power Supply	100-240V
Temperature	20°C-30°C
Humidity	40%-60%
Environment	Dust free, Ventilated

2.2 Material Storage

Resin Materials	
Temperature	10°C-30°C
Storage Conditions	In a cool and ventilated room and avoid direct sunlight.



fire sources	
me sources.	

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3 Product Overview



3.1 AccuFab L4D



3 Product Overview



3.2 Accessories



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Printer Setup





Precaution: Do not plug in the printer before the unpacking process is complete. Or the initialization action may cause stuck of the filling materials inside printer

4.1 Unpacking



Take out the printer from the package.



4

Remove the package and place the printer on the table. Remove the fixing foam **1**.

3

-5-

Take out accessory box (2) from fixing foam (1).





Connect the power supply ③ and press the power button ④ on right side of the printer. During printer initialization. Platform will go to the top position. Remove resin tank **5**. Remove the foam for fixing.





4 Printer Setup



4.2 Install the Printer



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4 Printer Setup



4.3 Add Material

The resin material is a mixture, and it is likely to form a small amount of sediment after placing for long time. Please shake the bottle well before adding to the resin tank.



Use scraper to stir resin in the tank to avoid sediment.





Note:
You can also add resin during printing without pausing.
Resin level should be at between the minimum and maximum.
Please keep the cover closed during printing to ensure the print quality

Printer is ready to print!

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FabWare is the operating software for the printer, which controls the printer operation and some manual settings can be done by user.

Home

The home page shows the printer status . Idle, printing or printer finished.

Also the build environment info is displayedfor reference. On the bottom right side we can see the resin tank setting of material and layers printed by this resin tank.



Queue

Queue page shows the pending files to be printed and also the history files.

And customer can import the file by the flash drive button if flash drive that stores the sliced file is inserted.



Settings

The settings page are all the software and hardware settings of the printers. Customer can setup the language or network, manual control of axis etc.

Setti	ings	冎
	Network Settings	
	Hardware Settings	
	Software Settings	
0	Advanced Settings	
	About Printer	vmware >



Note:
 If you see that the printer is not activated. Please insert the flash drive in the accessory box and activate. The activation steps are explained in <Quick start guide>

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FabWare



5.1 **Connecting to Network**

If you want to send the print file after slicing through network. Then you need to connect the printer to the network first, to LAN network or wireless network.

5.1.1 LAN Network



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Connect the Ethernet cable 🕖 to the network port (8).





Go to the FabWare. Go to settings and then choose Network Settings.

Setti	ngs	Ē	A Network Settings A Settings Setting Settings Setting Settings Setting Setting	۳
	Notwork Cottings	<u>_</u>	Wireless Network:	
	Network Settings			
:=	Hardware Settings	>	LAN Network:	
	Software Settings	>		
\odot	Advanced Settings	>		
	About Printer	vmware >		



Enable LAN Network

etwork Settings	Network Settings	
work:	Wireless Network:	
DNS Configuration:	Select Wi-Fi:	
dress:	Auto IP/DNS Configuration:	
Mask:	IP Address:	
Address:	Subnet Mask:	
5:	Gateway Address:	
ess:	DNS Address:	

LAN network settings, you can choose auto way or manual way: ■Auto Way: Enable Auto IP/DNS Configuration (enabled by default).

Manual Way: Disable Auto IP/DNS Configuration and configure manually.

5.1.2 Wireless Network



2

4

Under Network Settings, enable the Wireless Network.

Select available network in the dropdown list.

Network Settings	Ē
Wireless Network:	
Select Wi-Fi:	•
Auto IP/DNS Configuration:	
IP Address:	
Subnet Mask:	
Gateway Address:	
DNS Address:	

Note: Choose the same network AccuWare connected. Or it's not possible to send sliced file.

FabWare

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5.2 FabWare Update

There are two ways of updating FabWare. Online and Offline.

5.2.1 **Online Update**



5

Open About Printer.



Update Software.

< About	Đ 🖱
Basic Information	
Update Software	
Activate License	
Operation	



5

Select Network Update.

Update Software			e ۳	
	Network Update		Flash Drive Update	
odate Log				
dev				



2

Click Update to update the software or material profile.

Network Update	0 8
Software version:	
New software version:	already the latest version
Material profile version:	0.0.0.0
New material profile version:	2021.12.29.0
For D1s and C1 supdate DM12-0.05、DM12-0.075、 DM11-0.1 . For L4K and L4D and L4K add [NextDen	DM12-0.1、DM11-0.05、DM11-0.075、 t]Denture 3D-0.05.
	Lindate

Reboot

When new FabWare versions is available, a prompted window will indicate user to update. You can choose update directly.

When material match error found with sliced file, you can try to update the material profile. Which must be updated online.

5.2.2 **Offline Update**

Insert the flash drive with the downloaded software to apply the offline update.



5

Open Update Software.

Select Flash Drive Update.

Choose the downloaded software

Click Next to update FabWare.

Reboot printer.

< Update Software	e ال
ہ Network Update	Flash Drive Update
Update Log	

6 Print



6.1 Workflow



AccuWare

Detailed information please refer to AccuWare User Manual.

6.2 Resin Tank Setting

The FabWare displays the current material setting for the resin tank and the layers have been printed with the current resin tank. You can click on the setting to change the setting.

You can choose the brand and material for the current print or just to choose others to set for other materials.



FabWare will check the setting of the resin tank and compare it with the setting of sliced file. Please change the setting accordingly if an error of mismatch of setting detected.

Print

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1



6.3 Platform level (Optional)

Platform level is crucial to successful print.Please install the clean platform and remove the resin tank before the level process.

First, place a piece of A4 paper on the LCD screen,please make sure that the A4 paper is clean and has no excessive wrinkle.

Loosen four screws on the build platform to ensure that the build platform can be moved freely.



In the control panel, find "Settings---Hardware Settings---Motor Settings ---move to Zero Position" and tap.

Wait for the build platform to move to the bottom and try to pull out A4 paper.

If A4 paper cannot be pulled out, the printing platform leveling is basically successful.

If not, move the platform down with different step distance. Until it is ready. Try small steps to avoid damage to the screen.



〈 Set Zero Position	A
Set Zero Position	
Z Axis Offset: 5.210mm	0.01mm 🔻
Tine-tuning Up	V Fine-tuning Down
3	Cancel





3

4

2



6.4 Clean Resin Tank (Optional)

Print

6

1

2

3

4

Clean Resin tank is a function that can be used after a print failure. To clean some residue the failed print left in the resin tank.

Place the resin tank cleaner in the corner.



On the FabWare main interface, tap resin tank area to enter the Resin Tank Information.	Resin Tank Information
Click on Cure Resin close to proceed.	Brand Shining3D Type DC11 Clean Residue
	2 sin Tank Serial Number: N/A
Select curing time and tap Next. Change the curing time if the default time is not sufficient.	Clean up the residue This operation will cure the material at the bottom of the resin tank to remove the residue. After curing, please use special tools to take out the cured resin. Curing Time - 10 s +
After curing materials, remove the cured material with resin tank cleaner. DO NOT use sharp tools or it may damage the film and lead to material leakage.	3 Cancel Next

Print



6.5 **Choose printing file**

Files can be sent to the printer with flash drive or through network.



6

To ensure the model printing quality, keep the chamber door closed when the Printer is printing or just finished printing. Do not touch the model, resin tank, build platform or any other Printer parts.

6.5.1 Local Printing

Choose the print file stored in the printer to start printing in the queue.





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Print

6

6.6 **Printing Status**

In the printing page, you can check the printing progress as well as pausing and cancelling the current printing.

Print Detail 1				۳
	der	no_12271406.slp4		
	0	Printing		
	Ö	[Shining3D]DM12-0.05		
COOR.	2≋	1/416		
Contraction of the second	3 Ō	00:00:00 / 01:40:57		5 6
	4		0 %	$(\otimes$
		• •		

	Name	Description
1	Print detail	Tap to return to the previous step.
2	Print layer	Printed layers/Total layers.
3	Time	Time elapsed/Total time
4	Percentage bar	Printing progress
5	Pause	Tap to pause the printing and tap again to resume.
6	Cancel	Tap to cancel printing.



7 Post Processing

7.1 Remove Model

A few tools in the accessory box are for the cleaning of platform. Please avoid protrusion of the platform surface. As it would press the resin tank film during printing process. And may damage the film or even the screen.

1

2

3

After the printing finishes, leave the part there for a few minutes before removing.



Remove the platform carefully and place it to the cleaning platform



Remove the part with the tool and be caution when using sharp tools.



7 Post Processing

7.2 Cleaning

7.2.1 Clean Model

Put the printed parts into the bath of alcohol (concentration of 75% or above). And clean manually for about 30 seconds. You can use cleaning machine as well.



.....



2

3

Optional: Dry the model with high-pressure air.

7.2.2 Clean Build Platform

A few tools in the accessory box are for the cleaning of platform. Please avoid protrusion of the platform surface. As it would press the resin tank film during printing process. And may damage the film or even the screen.

1 Use the putty knife to clean up the model residue on the build platform.

Use the brush with wet alcohol to clean up the residual resin on the surface of the build platform if necessary.

Dry the surface of the build platform with a paper towel, and dry in a ventilated place before reuse.



7 Post Processing

7.3 **Post Cure**

It is necessary to place the green part for a post cure process. To enhance the performance and also to cure the uncured surface of the model. Models after post cure can be handled without gloves.

1

Place the model into the curing box. And close the chamber door.



3

Set curing time

Rotate the knob to set the curing time and press it for 1s to start.







Post cure process

DO NOT open the chamber door during the post cure process or it will interrupt the process.

Materials	Recommended curing time
DM12	5 mins per side
OD01	5 mins per side
DC12	3 mins per side
SG01	5 mins per side
GM11	3 mins per side
TR01	3 mins per side





7.4

Take out the model when finished.

Note: Keep the plate clean for future use. More detailed information please see Fabcure User Manual.

Remove Support

Remove support by hand or with tools.





Note:
Be careful to prevent scratches when using sharp tools such as utility knives.
Remove the build platform before replacing the resin tank to avoid resin dropping.
The exposure time of different printing materials are different.

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