Read the product instructions before installation and use.

Please keep this manual safe for future reference.

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YUCERA

YRC-P100 3D Printer

Product Manual

Contents

01/ Introduction

1.1 Direction

Dear Customer: Thank you very much for purchasing the YRC-P100 3D Printer, which is designed for photopolymer resin printing.

Incorrect operation may damage the equipment and could potentially cause harm to individuals. Please adhere to the safety instructions provided in the manual and carefully read the operating guidelines. We hope you are satisfied with your YRC-P100.

1.2 Operation Precautions

Printer model:YRC-P100 3D Printer

Use objects:Denture factory technician

This manual can help you use the YRC-P100 3D Printer accurately, safely and economically. When using, in order to avoid pollution, fire and other safety accidents, please be sure to pay attention to the following basic safety measures.

a. Please read this manual carefully before using YRC-P100, and place the manual next to YRC-P100. To view at any time.

b. YRC-P100 must use a power socket with reliable protective grounding.

c. The YRC-P100 is heavy and needs to be placed on a solid and stable work surface to prevent accidents.

d. YRC-P100 should be kept away from children, and children must not be allowed to play with or use accessories.

e. No objects can be placed on the top of the YRC-P100, and no liquid is allowed to enter the interior.

f. YRC-P100 smells when used, so the surrounding area should be well ventilated. Do not work in a humid environment to avoid abnormal accidents.

g. When using the YRC-P100, you should pay attention to the operating status, and any fault pop-ups must be resolved in time.

h. When cleaning and maintaining the YRC-P100, the power must be cut off and not be carried out while the power is on. If you lose the manual, you can contact YUCERA Technical Support to obtain it for free.

02/ Product Description

2.1 Component

The YRC-P100 3D printer is a device suitable for printing and molding photosensitive resins. It uses UV light to solidify the resin material layer by layer to achieve printing. Controlling the illumination and Z-axis up and down movement are all implemented by a CNC system.

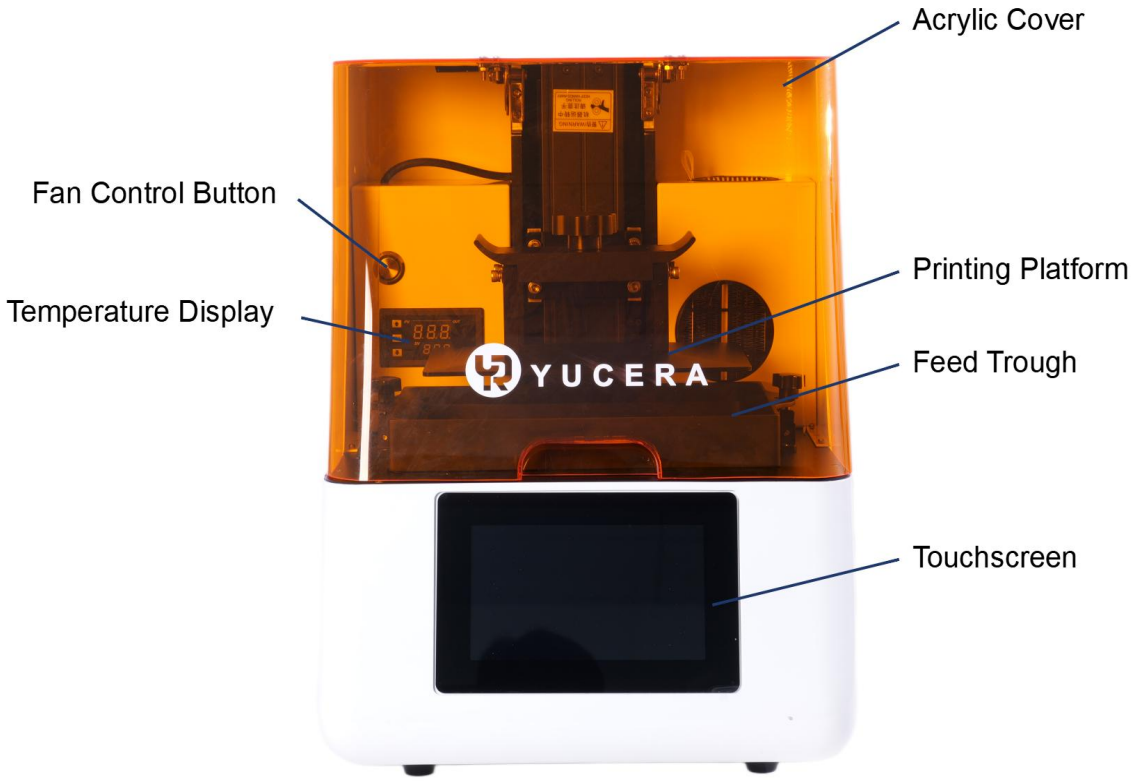
YRC-P100 3D printer contains the following components :

2.2 Danger Area

The dangerous areas of the YRC-P100 3D printer are shown in the table below:

Danger area	Hazard type
Parts inside the printer	Electric shock hazard
Lifting area	Crush hazard

03/ Product Hardware



04/ Function List

Function Type	Function Name	Description
Device Support	U-disk storage	Can detect the insertion and work of the U disk, and dynamically adjust the status bar and related information according to the current state of the U disk.
	Local storage	Can support 4G and above capacity on-board storage.
	Cloud storage	With networking on the main board, you can remotely access the computer/server side of the file and download the file to the main board.
	Camera support	Up to 1080P camera can be supported.
	USB Wi-Fi module support	Has supported a variety of Wi-Fi modules, and can support specific Wi-Fi modules according to customer needs.
	USB-Hub module support	Multiple USB devices can be accessed.
Leveling Control	Motion control	Control of four movements of the Z-axis: upward, downward, reset/zero, and stop, including movement speed, acceleration, direction, etc.
	Point-and-shoot (coarse adjustment)	Directly operate the Z-axis platform to move to the specified height by sliding bar.
	Step control (fine adjustment)	The distance of the Z-axis movement triggered by each user click. Can support travel distance of any value between [0.01, machine height].
	Zero-point-setting	Customize the logical zero point of Z-axis (or Z-axis zero point offset).
File system management	File/folder list management	Files/folders can be filtered, sorted, and displayed in a list based on file name, modification time, file type, and other information.
	File/Folder search	Retrieve all files/folders with target keywords in their file names within all storage devices.
	Batch operation	Batch operations on multiple files, such as batch delete, batch copy, batch move, etc.
	File printing	Can identify and print only relevant/target type files, and reject non-relevant files (or error files).
	File information	Can read information about the slice file, including model thumbnail, target model, resolution, resin model, slice parameters, etc.
Print management	Print check	(File check) Check the data of the slice file before printing to determine whether the file has broken, lost, or confused data, etc.
		(Life check) Cross comparison with the slice file to determine if the remaining life of the equipment (light source, screen, FEP film, etc.) can complete the current printing needs.
		(Environment check) Based on the feedback from the temperature sensor, determine whether the current environment is suitable for printing.
	Printing parameters Information display	Real-time display of current slice image, print height, number of layers, print progress, and remaining print time, etc.
	Print parameter Setting (built-into this machine)	Manufacturers/users can set up a set, or more than one set of printing parameters inside the main board as needed, and before printing, select the corresponding parameters for printing.
	Print parameter setting (dynamic adjustment)	During the printing process, the user can always adjust the single/multiple parameters according to the print status/model condition.

Print management	Print control	General control of the printing process such as start/pause/stop
	Print lift settings	The lifting distance of the forming platform can be set according to the height of the model and the printing situation (finish/stop/pause).
	Print exception alert	Abnormality alerting by light and sound through external indicator, or self-contained buzzer.
	Print parameter collection	Statistics and collection of the information generated during the printing process, including the number of prints, print success rate, print efficiency, material usage, etc.
	Device statistics	Record the service life and times of the core equipment, mainly recording FEP film, light source and printing screen.
Network settings	Wireless network connection	Multiple models of USB Wi-Fi modules can be supported.
	Wired network connection	Conventional wired network port (LAN) connection and data transmission.
	Network management	Support network switching, disconnection and reconnection, signal detection, connection status detection, and other conventional functions.
	File sharing	Computers and main boards are able to access each other's stored files and bi-directional transmission.
Information management	Machine information	Record the name, model number, serial number, factory time, usage time, etc. of the machine.
	Device information	Record the basic information and usage information of the core equipment, such as the number of times the print screen, light source, FEP film has been used, etc.
	Print history	Record the printing of each model/document, including the name of the document, printing status (successful/abnormal), printing time, etc
Other functions	Power-on animation	Static pictures, as well as animations with dynamic effects, can be displayed each time the power is turned on.
	Equipment test	For each device such as fan, light source, endstop, motor, etc., individual switching and usage tests can be performed to judge the working condition of the device.
	Status indication	Through the status bar, the current working condition of the device is displayed, including U disk, network, temperature, camera, remote connection, password, etc.
	Standby settings	For a certain period of time, without user operation, the machine will enter standby mode, displaying a specific screen or turning off the screen.

05/ Function Description

5.1 Descriptions of Key Features and Related Pages

5.1.1 Home Screen (Home Page)

Home page wake up:
Click it to jump to the main page.

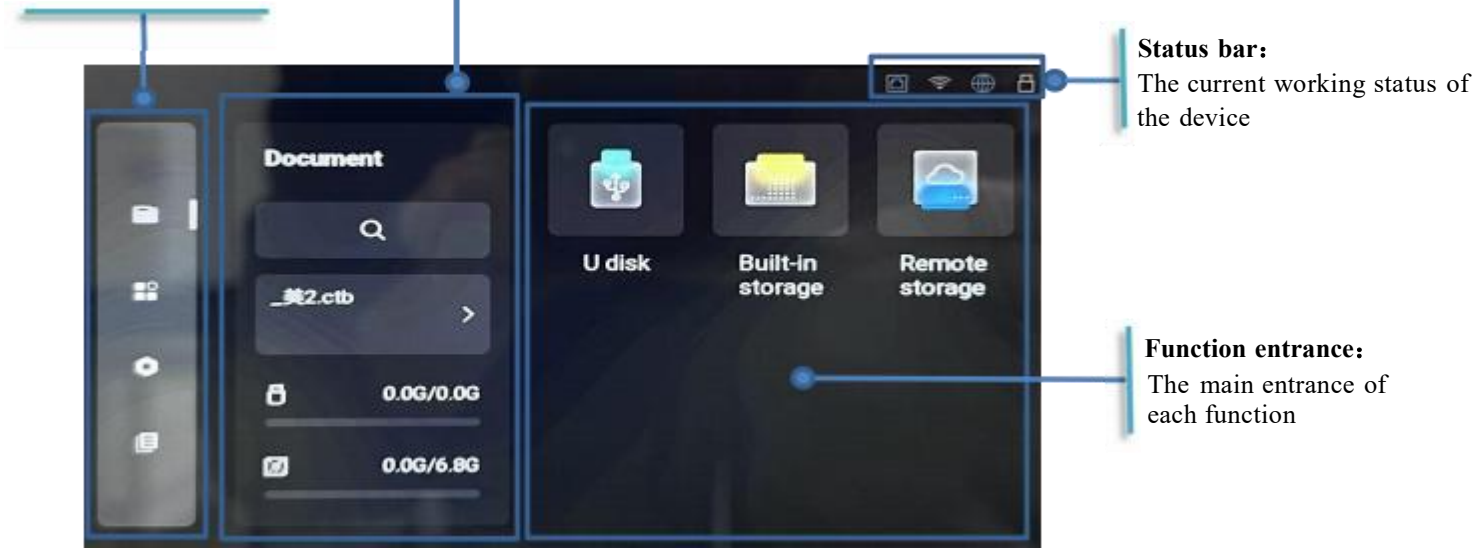
5.1.2 Main Page

The top is the resident status bar.

The core area, from left to right, consists of: the side menu bar, the function panel, and the function access area.

Function panel:
Information related to the current module.

Quick Sidebar:
Quick Access to Target Modules.



Status bar:
The current working status of the device

Function entrance:
The main entrance of each function

5.1.3 File Module

It can support various storage devices, such as U disk, local storage (eMMC) and cloud disk.

The local storage (eMMC) can support 4G and above capacity.

File Search :

Retrieve all files/folders within all storage media that contain the target keyword in the file name.

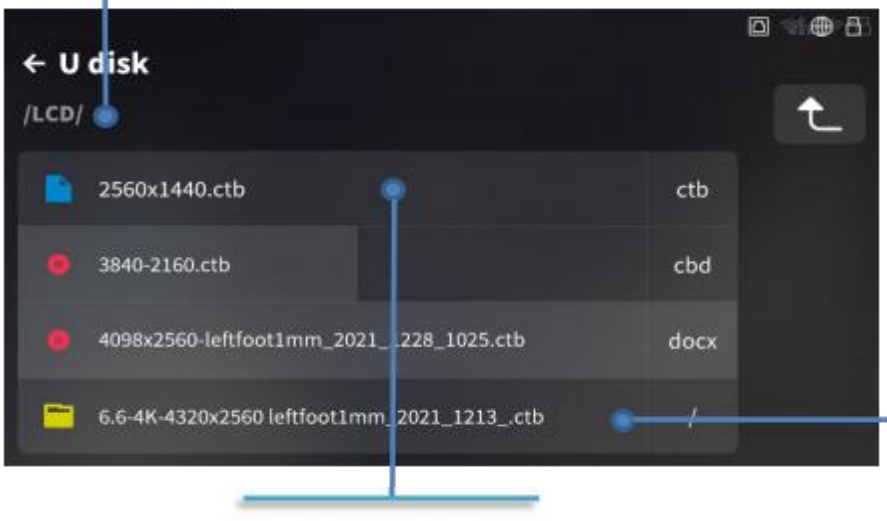
Storage device support:
Multiple storage devices can be supported.

Storage space showcase:
Remaining space/total space of U disk/native storage.

5.1.4 File List

You can view, edit, and print the relevant files on the storage device.

File path:
enables to clearly know the current position even under multi-level.

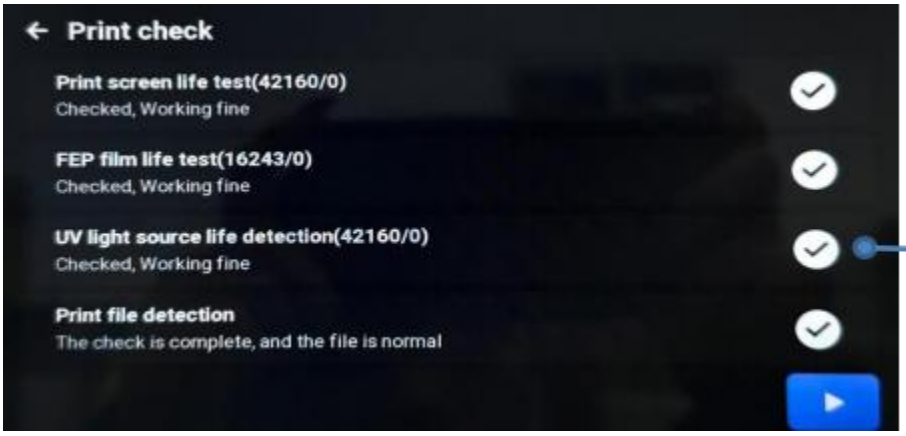


File type:
Enables quick retrieval and determination of target files.

File name:
With a length capacity of about 200 characters, the complete file name can be visualized at once.

5.1.5 Print Check

Before starting printing, check data, device life, ambient temperature, etc. for sliced files.

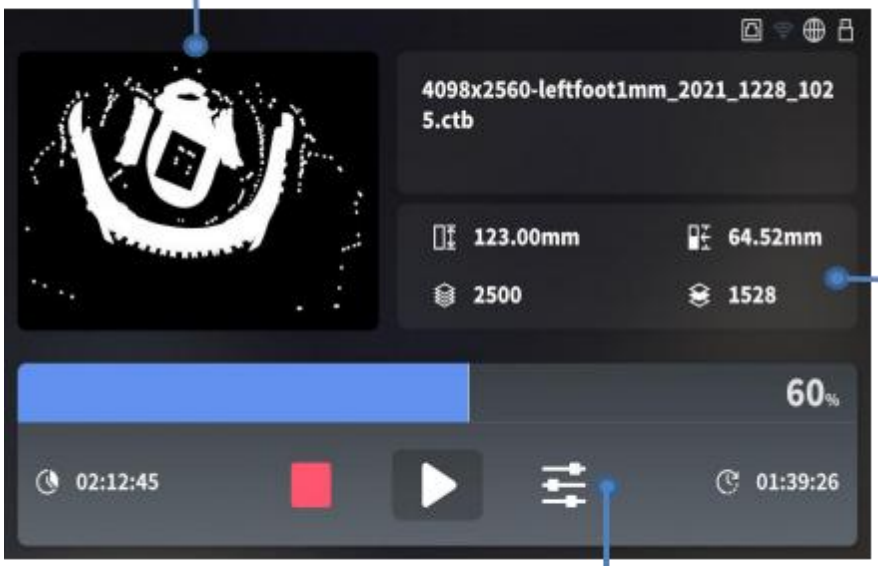


Print check:
Cross-reference with sliced files determine if the remaining life of the device can meet current printing needs.

5.1.6 Printing Process

The page when the model file is printed, you can view the exposure picture of the current layer and dynamically adjust the printing parameters.

Image display :
Can display the current layer exposure image, and model preview image, by manually switching.

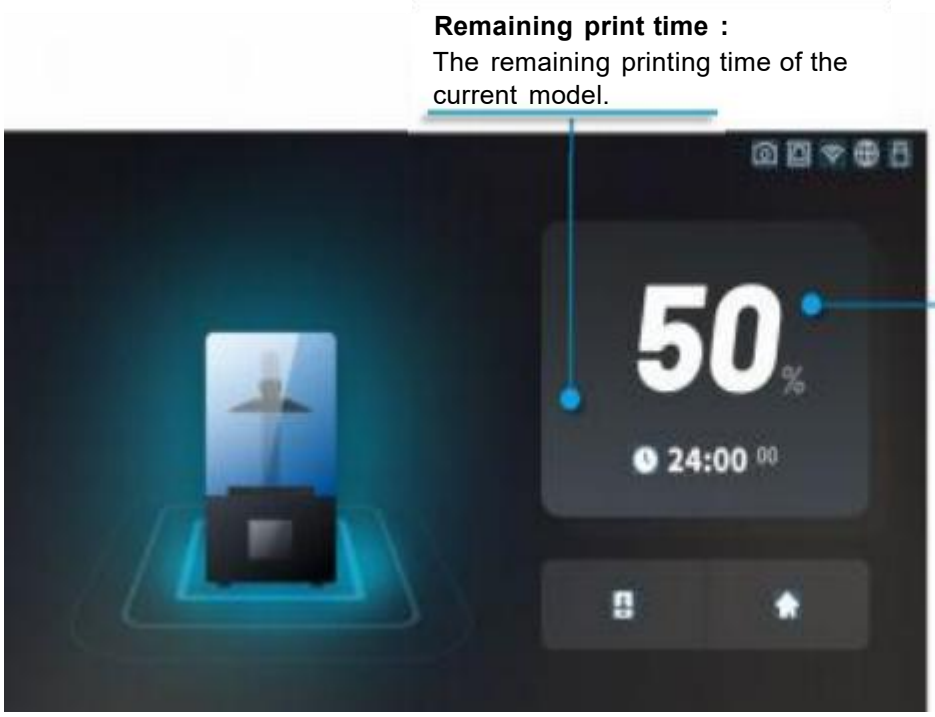


Printing process parameters:
Left: Total print height; Right: Current print height.
Left: Total number of layers to print; Right: Number of layers printed so far.

Printing parameters setting :
The user can adjust single/multiple parameters at any time according to the printing status.

5.1.7 The Printing Process (standby state)

When no one operates the screen for a long time, it will enter the standby state of the printing process.



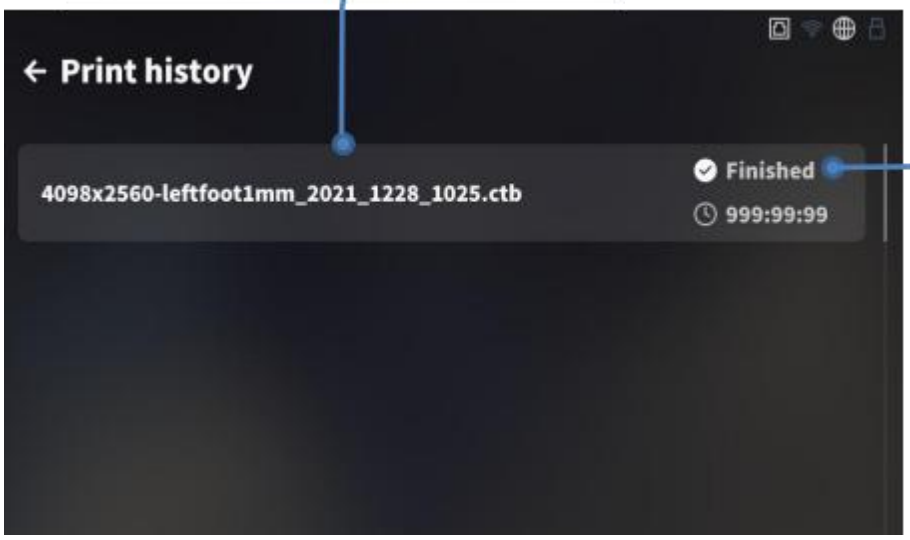
Remaining print time :
The remaining printing time of the current model.

Print progress :
Print progress of the current model.

5.1.8 Print History

The main board will record the status of each print, including the file name, path, results, etc.

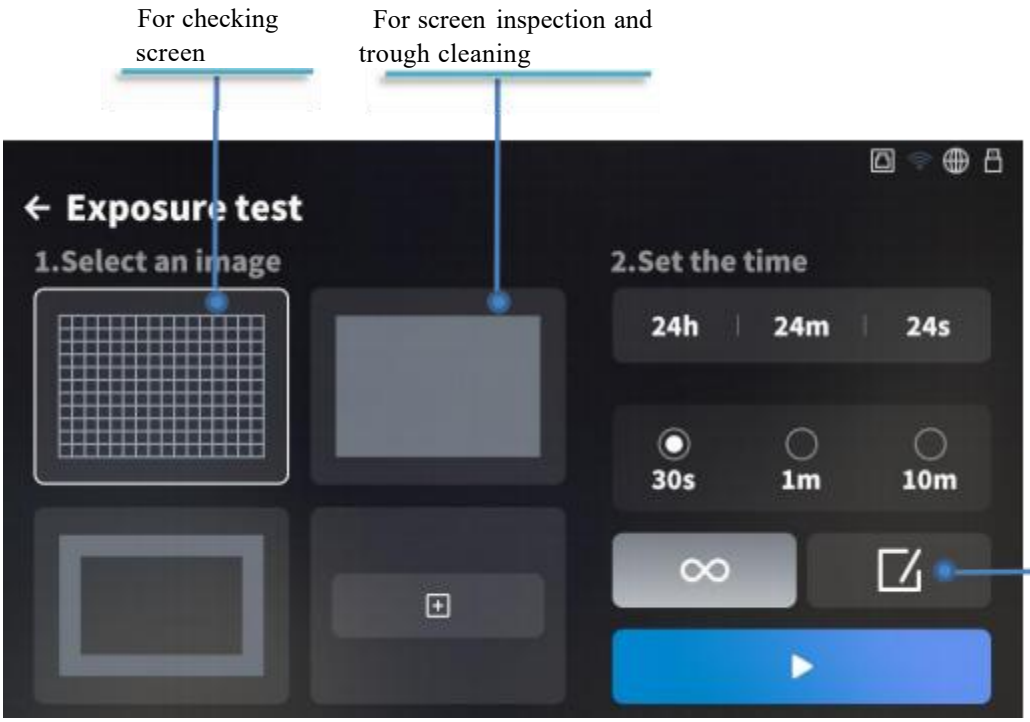
History file & Repeat print:
The number of history records that need to be saved can be defined according to customer requirements. Also, repeat printing can be done directly when the history file path is normal.



Printing status:
The model printing is done in three main states: completed, abnormal and canceled

5.1.9 Exposure Test

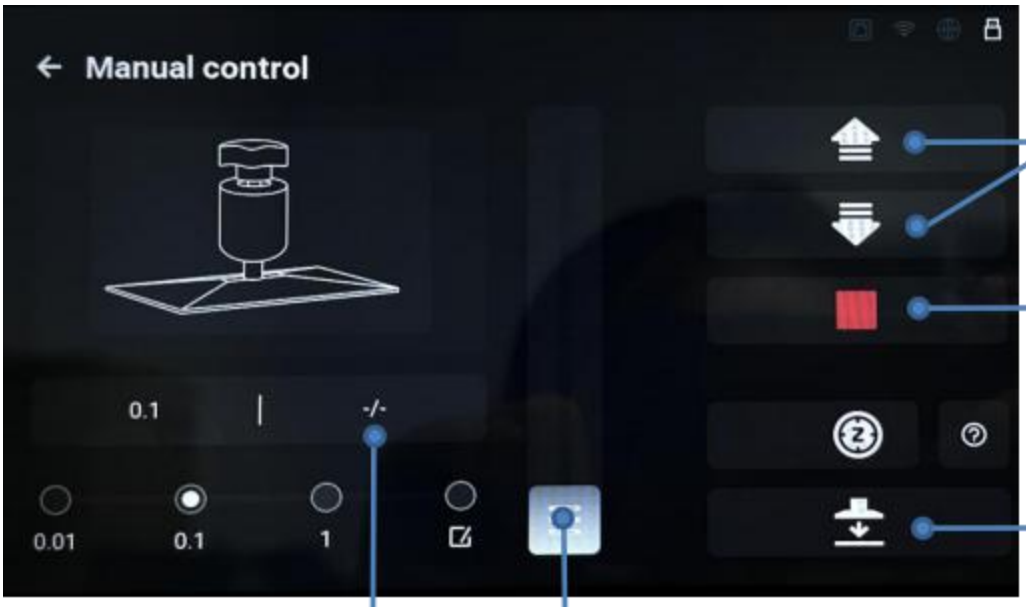
Users can customize the exposure image and time to test the screen, light source.



Custom exposure time
Can be exposed all the time, for screen aging and other tests.

5.1.10 Z-axis Control

Operation and testing of the Z-axis, such as motion control, zero point settings, etc.



Step control (fine adjustment)

Termination key: Terminate or end platform movement

Zero-point setting

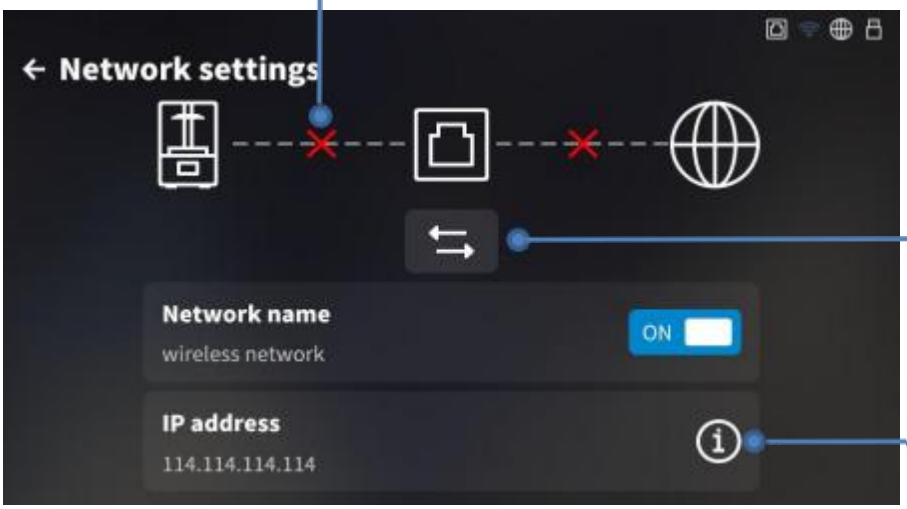
Current height value : You can visualize the height position where the forming platform is currently located.

Point-and-Shoot : Directly move the Z -axis platform to the specified height using the slider.

5.1.11 Network Setting

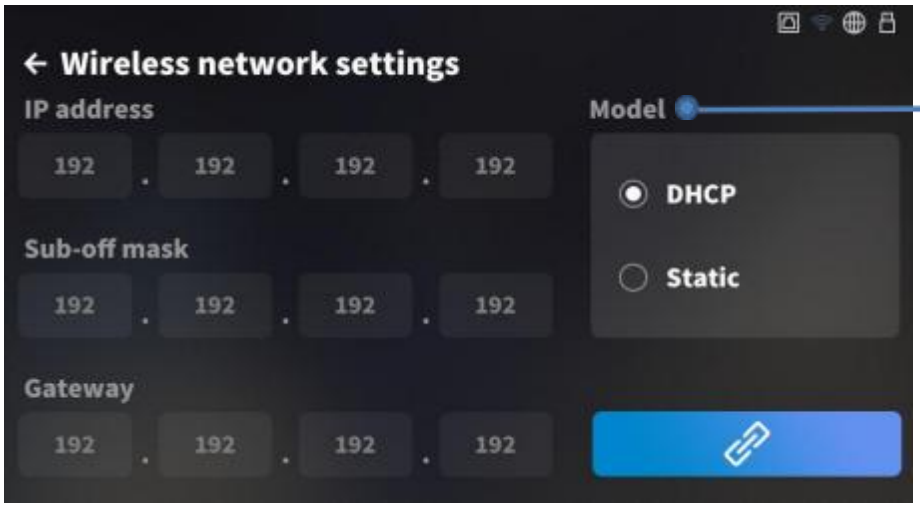
Support both wired and wireless network, and support static IP setting for cluster management.

Network connection status ：
Real-time display of the current network connection status.



Network switching ：
Switch wired network / wireless network.

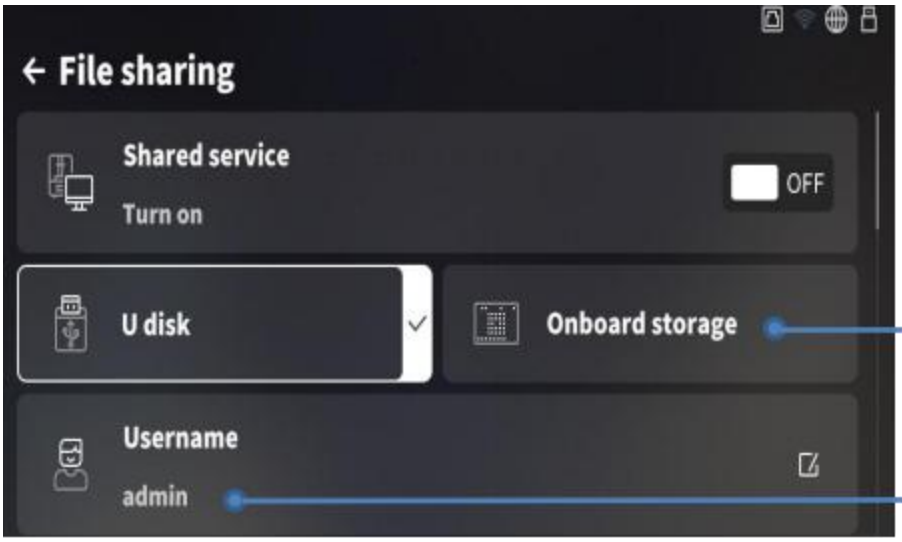
Network settings ：
Make connections, IP address settings, etc., for the current network.



Network mode ：
For multiple / batch device application scenarios, static IP address settings can be set for each printer individually.

5.1.12 Sharing Settings

Through sharing settings, computers (or servers, etc.) can access and read files on the printer directly by IP address/machine name.



Storage device：
You can decide the storage device you need to share by yourself.

Shared address：
Users can access the motherboard directly from other devices, by machine name, or IP address.

5.1.13 Machine Parameters

All core parameters of the machine can be edited visually.

Shortcut Sidebar：
Contains all devices.

Parameter settings:
All parameters of each device can be adjusted.

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