

da Vinci Jr. 1.0 3in1 Quick Guide

The purpose of this user manual is to help users understand and use the da Vinci Jr. 1.0 3-in-1 3D printer correctly. It contains the operating instructions, maintenance information and application skills of the da Vinci Jr. 1.0 3in1 3D printer. To learn more about the latest news of the da Vinci Jr. 1.0 3in1 3D printer, please contact local dealers or visit the official website of XYZprinting: <http://www.xyzprinting.com>

Trademarks

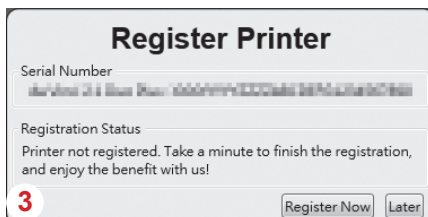
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Print History

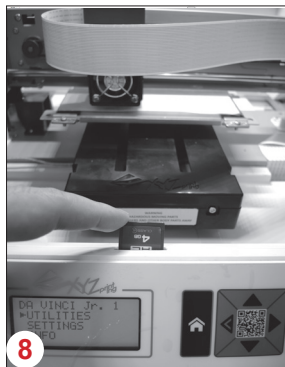
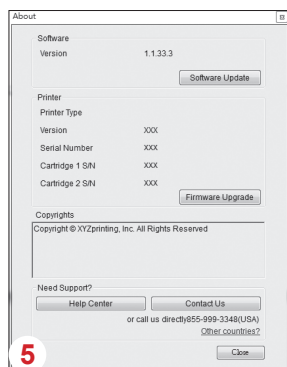
New editions of this manual incorporate new and changed material different from previous editions. Minor corrections and updates may be incorporated into reprints of the current edition without releasing additional announcements or documentation regarding the updated version. The User Manual is for user reference only. If you need to obtain the latest information, you are welcomed to visit the XYZprinting website: www.xyzprinting.com



- 1 Before using this printer, please first remove the fixed materials from the printing module and printing bed. Switching on the printer's power without removing these fixed materials may damage the machine.

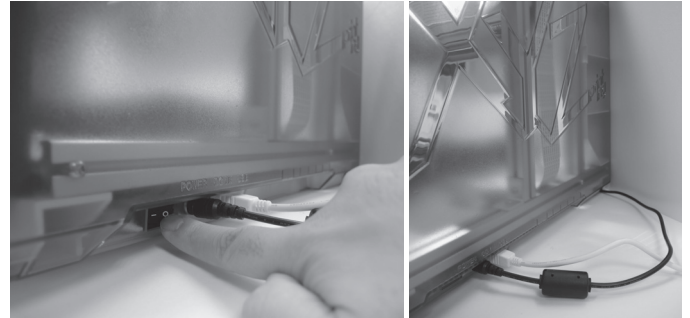


- 3 Registration via XYZware before your first print is strongly recommended. When registered with XYZprinting, you will receive latest technical supports and updates. To register, simply click "Register Now" to begin.

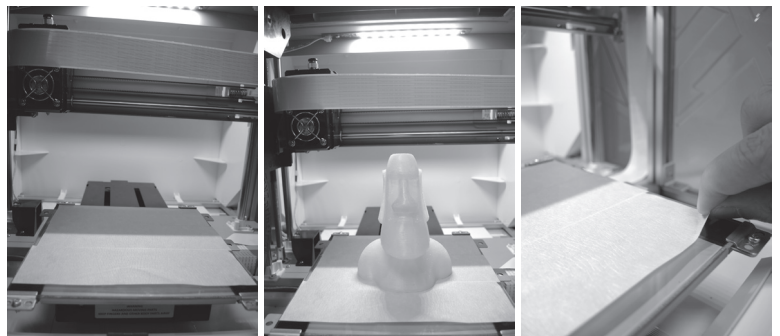


5

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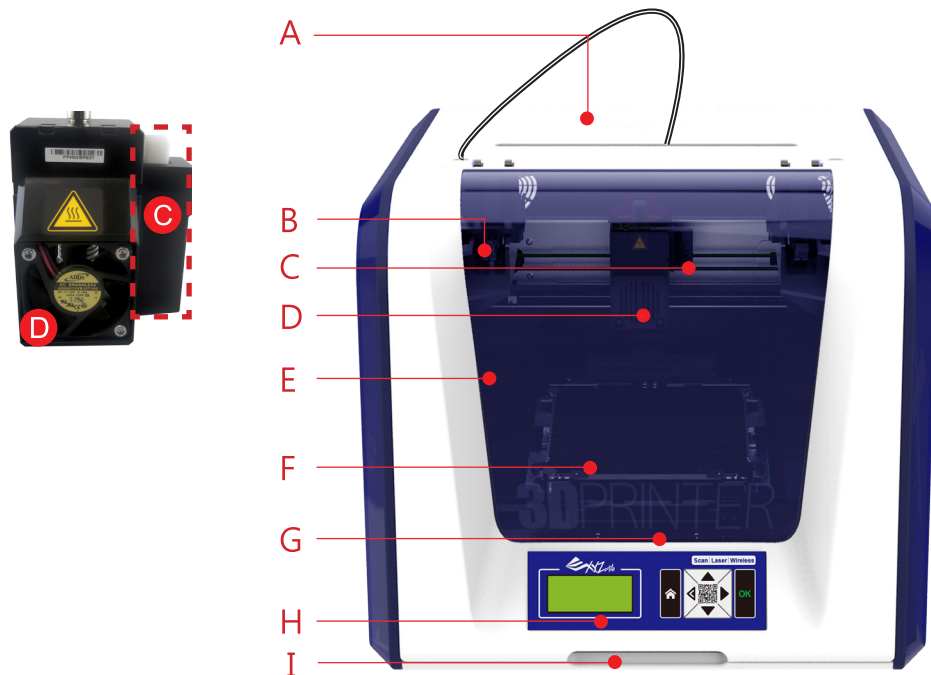


- 2 Before launching XYZware, connect the PC to with printer using the USB cable. For a better user experience, it is strongly advised to follow the proper procedure for using the product.



- 4 Before you start printing, please affix the bed tape on the print bed. The bed tape may be removed after printing is complete. (Bed tape can be reused.)
- 5 You may use XYZware to initiate manual updates to the printer firmware and software. When using the printer for the first time, we recommend connecting to the Internet and performing manual update once to obtain the latest resources.
- 6 The optimal room temperature for printing is 15-32 °C (60-90 °F). Printing quality may be affected if room temperature is higher or lower.
- 7 If you need more detailed technical support and program resources, visit the website: http://support.xyzprinting.com/global_en/Support
- 8 Before operating the printer, insert the SD card in the SD card port to make sure that the printing program is able to run properly.
- 9 For da Vinci Jr. 1.0 3in1 3D printer, when placing the printer, avoid exposing the scan modules inside the printer to direct sunlight or lighting apparatus for better scanning performance.

Please carefully read the contents of the product instruction manual before using this product.



A: Filament movement area

B: Feed module

C: Detector

D: Extruder

E: Filament

F: Print bed

G: SD card port
(Storage format: FAT32)

H: Control and display panel

I: Front cover

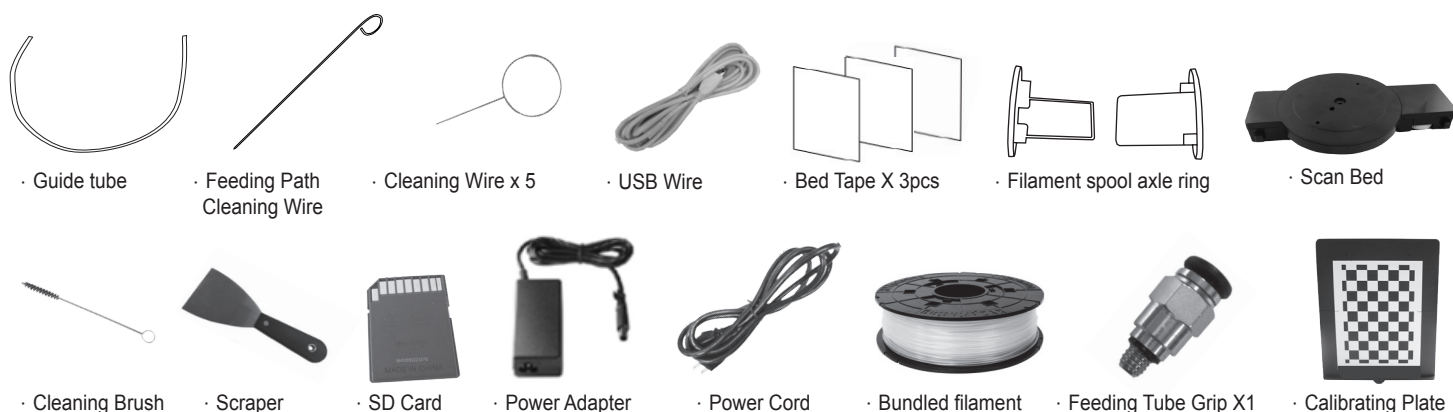


USB Port

Power Connector

Power Switch

Accessory Checklist



Important Safety Instruction for Use of Maintenance Tools



- The maintenance tools provided should be only handled by an adult. Please keep the tools away from children.



- Store the gear cleaning brush properly. This tool shall only be used to clean the specified parts of the machine and should not be used for the cleaning of other parts to prevent damaging the machine.



- The scraper is used to remove the object from the print bed when printing has finished. The bed tape is reusable and it can be replaced when it has worn out.

Important Safety Instruction

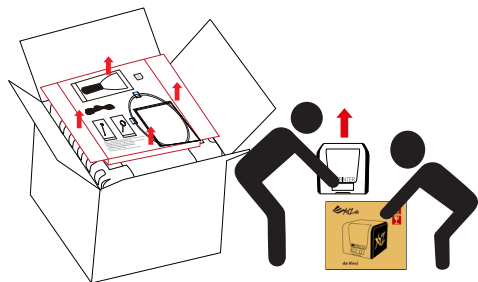


- Do not place the printer in humid or dusty environment such as bathrooms and high traffic areas.
- Do not place the printer on a rickety surface and/or inclined position. Printer may fall down/or tumble and it may cause serious injury.

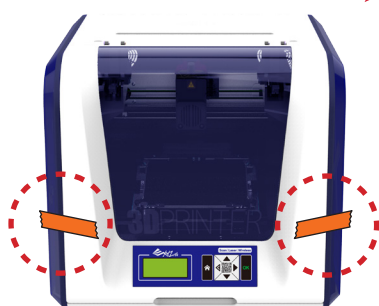
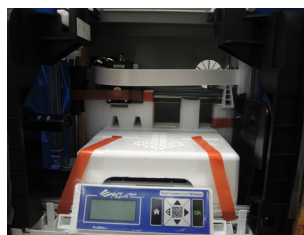


- Please keep the front door closed during printing to avoid injury.
- Do not touch the interior of the printer while printing. As it may be hot and include moving parts.

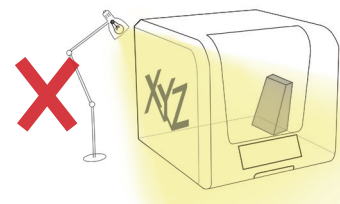
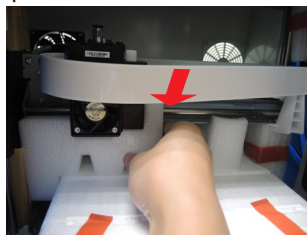
Product Overview



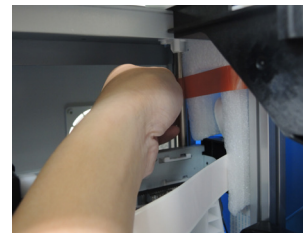
- 1** Open the box and remove the accessories and cushions.



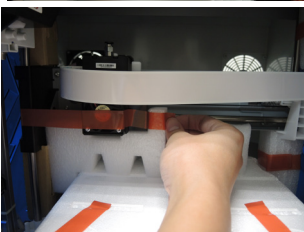
- 2** Remove the plastic bag and the tapes.



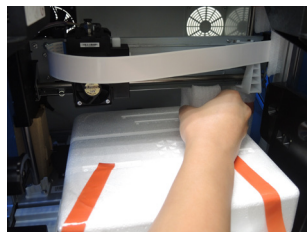
- 3** For better scanning result, when placing the printer, avoid exposing the scanning modules to direct sunlight or lighting apparatus.



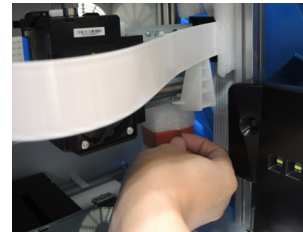
- 4** Please removal all fixed materials before turning on the printer to prevent the machine from damage.



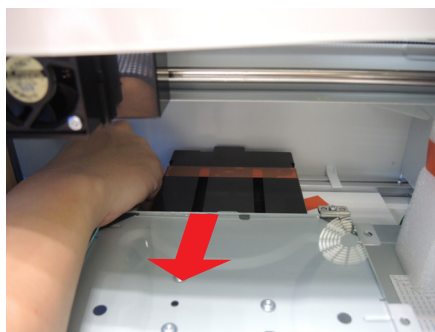
- 5** Remove all fixing tapes and the cushion between print bed and extruder module.



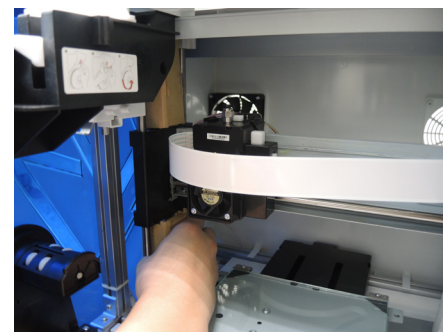
- 6** Be sure to remove the fixing cushion from the axis.



- 7** Remove the securing styrofoam and fixing tapes on the print bed.



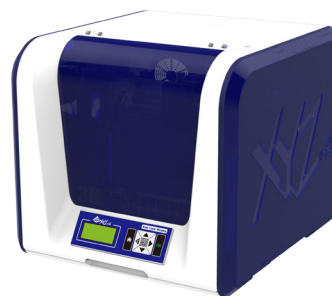
- 8** Be sure to remove the fixing tapes at the back of the print bed.



- 9** Be sure to remove the paper cardboard near the Y-axis.



- 9** Insert the SD card that came with the printer into your computer or download the latest XYZware from the official Website and install it on the computer.



- 10** Use the USB cable to connect the printer to PC. Connect the power cord to the printer then turn on the power switch.

Note: please use the original power adapter and power cord along with the printer in order to prevent product damage or safety hazards caused by differences in voltage specifications.

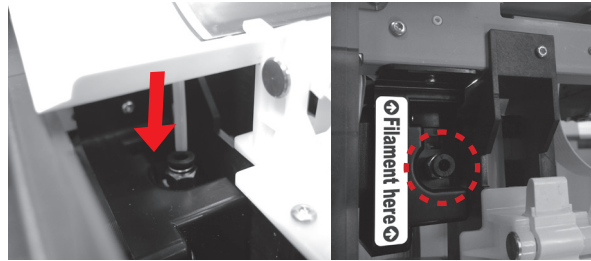
Unpacking the Product

⚠ Note: Please follow these steps and ensure that the guide tube is properly installed before starting the "LOAD FILAMENT" function. Failure to install the guide tube may disrupt filament feed.

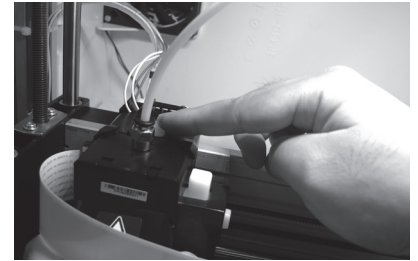
Install the filament guide tube



1 Direct the guide tube from the tube movement area out of the machine and then insert the other end of the filament tube into the feed module tube port.



2 Ensure that the guide tube has been tightly inserted into the feeding hole.



3 **Remove the extruder**
Press the white button at the back of the extruder to release it.



4 **Install the filament guide tube to the extruder**
Insert the guide tube into the feed hole all the way down and install the extruder back to the printer.



5 **Install the extruder**
Align the extruder with the bracket and press the extruder to attach it to the socket.



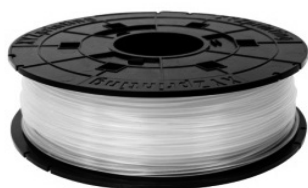
↑ Filament here ↑

Reminder: If you are not sure where the feed module tube port is, you may open the casing of the machine to see the indication label.

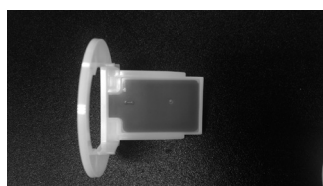


Installing the Accessories

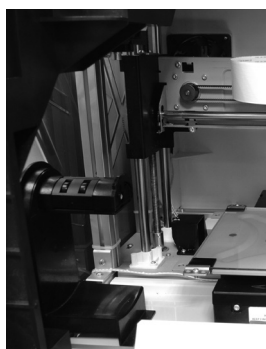
CHANGE SPOOL



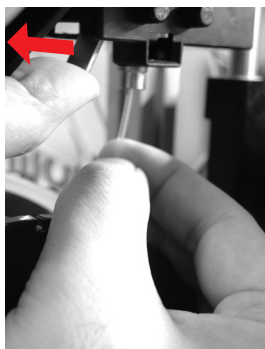
- 1 First retrieve filament spool to install the filament spool axle ring.



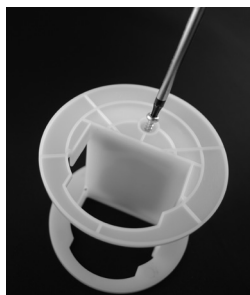
- 3 Install the sensor chip. Please pay attention to the position of the installation holes on the chip.



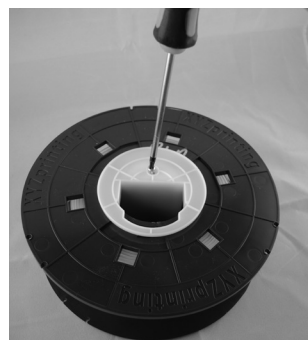
- 5 Place the assembled filament spool (with the spool axle rings) on the filament holder on the left side of the printer.



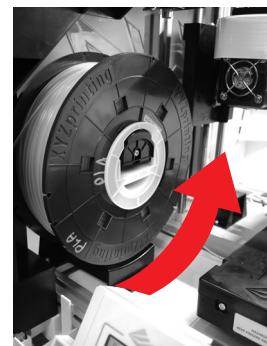
- 7 Open the release arm and push the filament all the way to the bottom so that the front end of the filament is completely inserted into the feed module.



- 2 Take out and separate the filament spool axle ring into its two components.



- 4 Insert the filament spool axle ring components to either side of the filament spool, and use a cruciform screwdriver to tighten and secure the rings to the axle to complete the installation of the filament spool axle rings.



- 6 Pull out a section of the filament and insert it into the feed port.

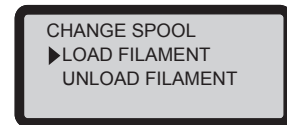
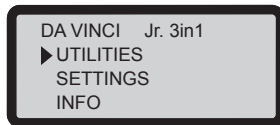
Caution: Pay attention to the direction the filament is being pulled out and ensure that the filament spool axle is being rotated in the correct manner.

Note : Before pushing the filament into the guide hole, please cut the tip of the filament off at a 45°

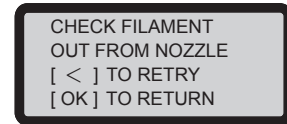
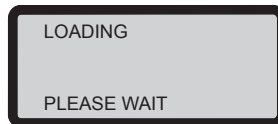
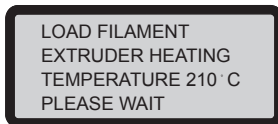
Load Filament

LOAD FILAMENT

Then load filament using the control panel on the printer...



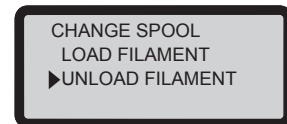
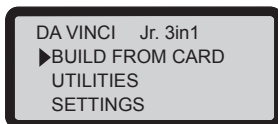
- 1 Select "UTILITIES" > "CHANGE SPOOL" > "LOAD FILAMENT".



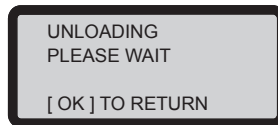
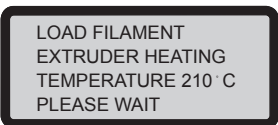
- 2 Wait for the extruder to heat up and load filament.
- 3 Check if the nozzle outputs filament and press "OK" to go back to main menu.

UNLOAD FILAMENT

First unload filament using the control panel on the printer...

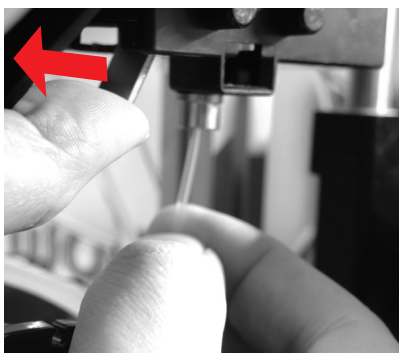


- 1 Select "UTILITIES" > "CHANGE SPOOL" > "UNLOAD FILAMENT".



- 2 Wait for the extruder to heat up and unload filament. Press "OK" to pull out filament.

When finishing "UNLOAD FILAMENT"



First open the release arm and then pull out the filament with spool axle rings. Arrange it properly for later use.

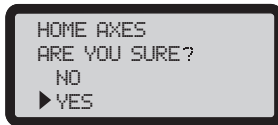
Note: Always implement the "UNLOAD FILAMENT" function when replacing the Spool in order to ensure proper removal of the filament. Cutting filament too closely to the Extruder Module may result in residual filament blocking and causing damage to your Extruder Module.

Unload Filament

HOME AXES

"HOME AXES" moves the extruder to the lower left corner.

To home axes:



Select "YES" to proceed.

JOG MODE





"JOG MODE" is used to manually move the extruder and the print bed.

To move the extruder:



1. Select "X-AXIS" (to move right and left) and "Z-AXIS" (to move up and down). Execute "Home Axes" function first to move "Z-AXIS". "Y-AXIS" (to move print bed backwards and forwards).

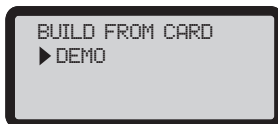


2. Select desired increment of travel with  and  buttons, and press (or hold)  or  button for desired direction to move the extruder.

BUILD FROM CARD

3 sample models are built into the printer. You may begin your first 3D prints with the samples.

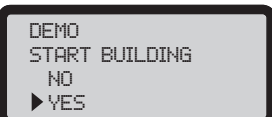
To print a sample:



1. Select a sample to print



2. Put the bed tape on the print bed.



3. Select "YES" to start printing



4. Remove the printed object when the printing has finished and the print bed has descended. The bed tape is reusable and it can be replaced when it's worn.

UTILITIES

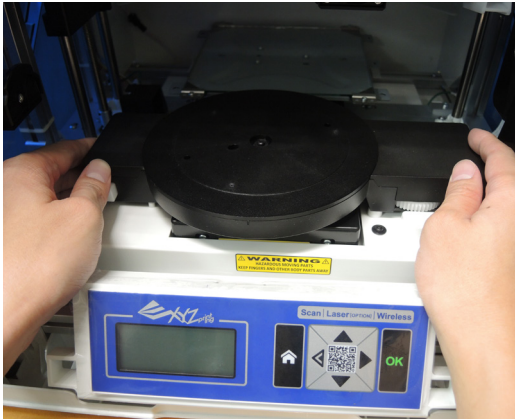
Install Scan Bed and Devices Calibration



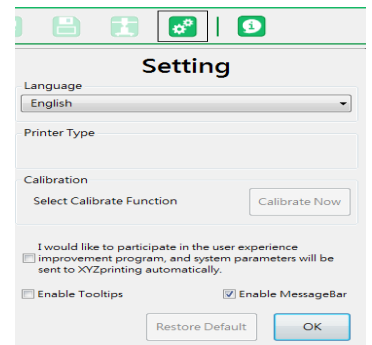
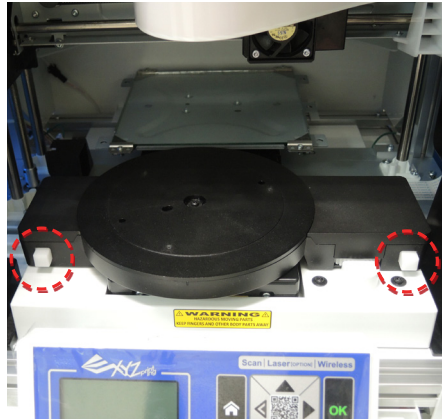
Original model

Scanning result
before calibrationScanning result
after calibration

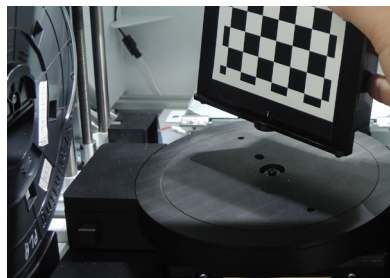
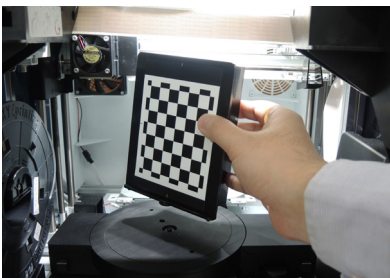
When you find inaccurate scan results, please follow the steps for scanning devices calibration:



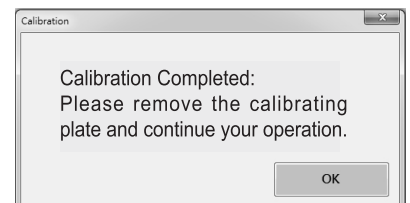
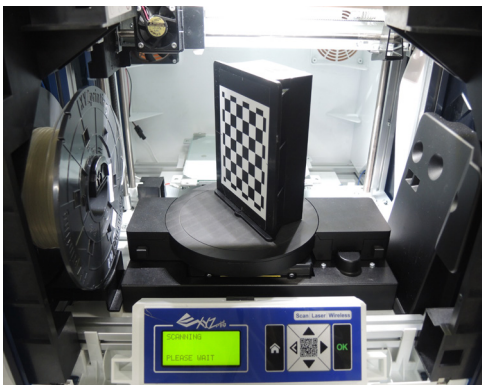
- 1** Push the print bed to proper position then install the Scan Bed.
Note: Please always press the button of Scan Bed before attach or remove it.



- 2** In XYZscan, select "Setting"> "Calibrate Now"



- 3** Wait until XYZscan shows the instructions of calibrating plate placement, place the plate at the center of the turntable (with chessboard pattern facing the left and insert the tab at the bottom of the calibrating plate into the hole at the center of the turntable), then click "Calibrate now" button.



- 4** Wait until XYZscan and the printer finish calibration (for approx. 7 minutes)
- 5** When XYZscan prompts of calibration completed, remove the calibrating plate, and click "OK" to finish. You may begin to scan.

SCANNING

CALIBRATE

Calibration is enabled for this new extruder module. Please update printer firmware via XYZware before using the new extruder.

1. Active print bed calibration by selecting "UTILITIES" > "CALIBRATE" > "YES" on the screen.
2. Press the detection head on the right side of the print head according to the instruction of screen message, followed by pressing OK.

PRESS DETECTOR
NEXT TO EXTRUDER
[OK] TO CONTINUE

3. Wait for detecting.

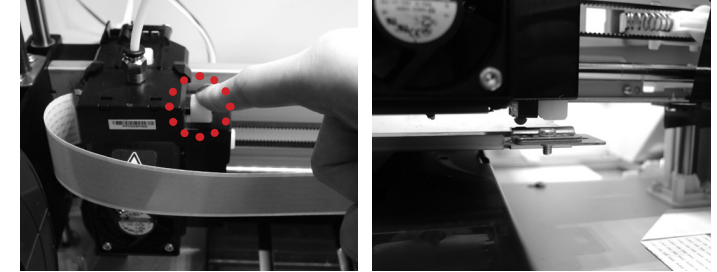
4-1A. If "SUCCESS" is shown for the detection result, and "AUTO LEVEL OFF" is shown on the third row on the screen, it indicates good platform levelness. Press "OK" to exit and print.

CALIBRATE
:SUCCESS:
AUTO LEVEL OFF
[OK] TO RETURN

4-2A. If the detecting result is shown as "FAIL", press "OK" to go to next page, and press "OK" again to exit.

CALIBRATE
:FAIL:
AUTO LEVEL ON
[OK] TO CONTINUE

PLEASE CONTACT
CUSTOMER SERVICE
[OK] TO RETURN



4-1B. If you see "AUTO LEVEL ON" under "SUCCESS", this indicates that the print bed is slightly unlevelled. The printer will adjust the configuration based on the detecting result automatically while "AUTO LEVEL" is enabled. The printing mode helps to improve printing quality with slower printing speed. You may switch off the function under "Settings".

CALIBRATE
:SUCCESS:
AUTO LEVEL ON
[OK] TO RETURN

4-2B. And check the detecting result by going to "INFO" > "LEVELING INFO". Contact customer service for the issue and provide the details of leveling information.

A 0317 0320 0313
B 0318 0323 0308
C 0312 0300 0440
[OK] TO RETURN

⚠ Note:

1. The dirt on the detection pin and the top of Extruder module will influence detection result. Make sure that the dirt is cleaned before calibration.
2. If the residues are on the top of the Extruder module, the detection result will be shown as follows. Clean the dirt before recalibration.

A 0000 0000 0000
B 0000 0000 0000
C 0000 0000 0000
[OK] TO RETURN

3. The printer may enable or disable auto-level based on the result of calibration. You may switch off the function manually under "Settings".

CALIBRATE

⚠ Note: The machine can be turned off only when the cooling fan of the print head stops running after the print is completed. Turning off the power directly may clog the print head.



References:
Please refer to
UTILITIES>CLEAN NOZZLE
to remove the blocks out of the print head.

This section describes how to clean the feed module. After heavy use of printer, if feeding of material becomes difficult or impossible, please follow these steps.

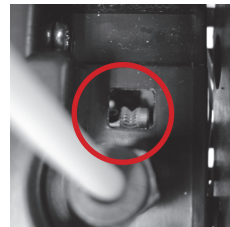
Preparation of Tools



A. Cleaning brush that comes with the printer

B. Screwdriver (T10) for standard cleaning procedure

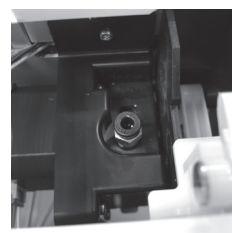
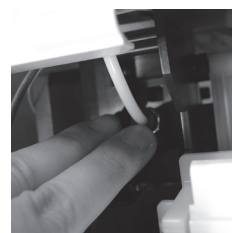
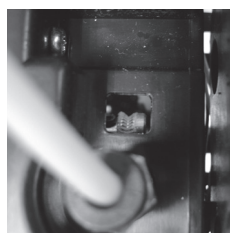
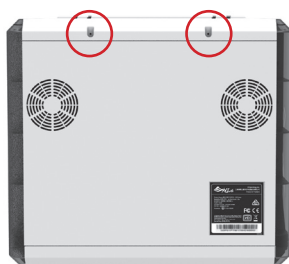
A. Quick Cleaning



1 Use the "UNLOAD FILAMENT" function to loosen and remove the filament.

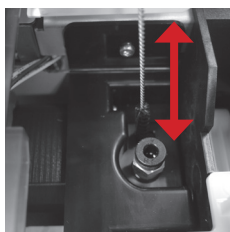
2 Use the cleaning brush to scrub the feed gear back and forth to remove the chips of filament out of the gear. Replace the wire after the cleaning is completed.

B. Standard Cleaning



1 Use the screwdriver to remove the screw and open the top cover.

2 Press the black rubber fixer on top of hole and pull the guide tube out.



3 Use the cleaning brush to scrub the gear; after removing residues of filament on the gear, you can insert the guide tube and put the cover back and then enjoy printing again.

Clean Instruction

Wireless printing

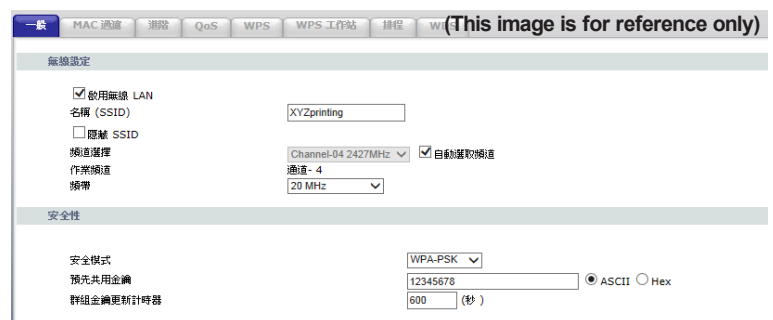
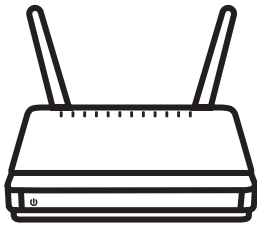
This chapter introduces how to carry out the setting correctly and to operate the wireless printing function. To understand if your product is designed with wireless printing function, please refer to the table below.

- da Vinci 1.1 Plus
- da Vinci Jr 1.0 3in1

Pre-setting preparation

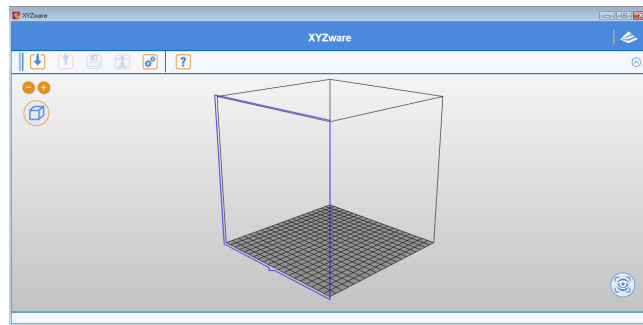
1. The network printing function is mainly provided for the Intranet. Please set the printer and the computer in same network domain, i.e. connecting to the same Wireless Access Point.
2. Before connecting the printer, adjust the set value of the connected Wireless Access Point. For details of setting method, please refer to the Production Operation Manual or the information provided by the original factory.
3. The Channel Width that can be used by the wireless printing function is **20MHz**. Please refer to the Operation Manual compiled by the original factory for the Wireless Access Point to understand the adjusting method.
4. Please maintain the wireless network function in open status.
5. This machine can support the following connection safety mode. When setting the printer in online status, it is required to input the Public Key related information.

- WEP
- WPA
- WPA2

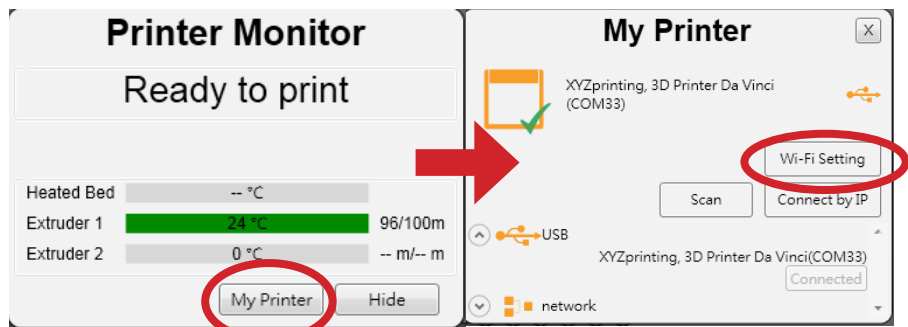
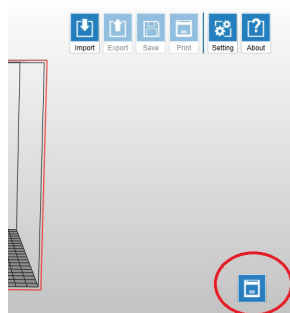


Start the setting

1. Please make sure the connection between computer and printer properly. After completing the connection, activate the XYZware.



2. Click on the printer monitoring function to open the printer-related information and then click "My Printer" > "Use Wi-Fi" to access the Wireless Printing Set page.



Wi-Fi Printing

3. Please enter the printer name and then press “SCAN” to scroll down the menu for obtaining the exact Wireless Access Point related information. The description sample will use XYZprinting as the name of Wireless Access Point. After obtaining the desired information, enter the Public Key password and then press “Use Wi-Fi” and XYZware will update the online setting value of printer through USB connecting wire.



Note: Please naming printer and Wireless Access Point in English.

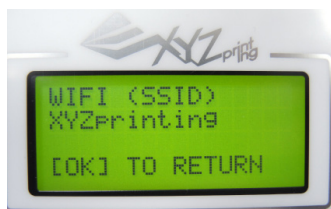
Note: If the printer cannot complete the connection with the Access Point within 90 seconds, then XYZware will discontinue the detection. In this case, please check the operation steps and the network are set correctly.

Note: For the password of Public Key, please refer to the information indicated on the Wireless Access Point setting page, and the length of the password will vary.

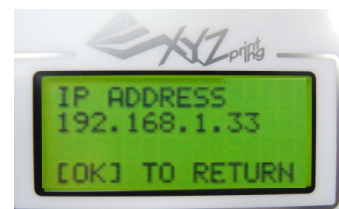
4. After completing the printing, please press the “X” key at upper right corner to leave. To reset the wireless network connection, press “STOP WIRELESS NETWORK/CHANGE SETTING” function keys to clear the value set before.



INFO>WIFI(SSID)



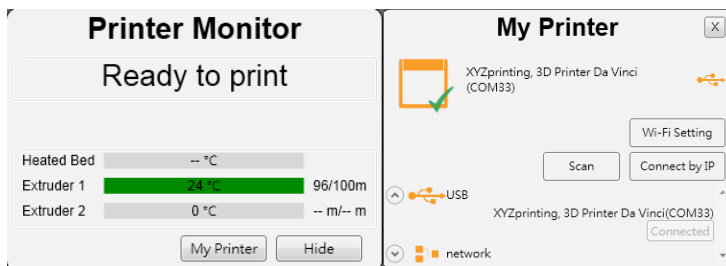
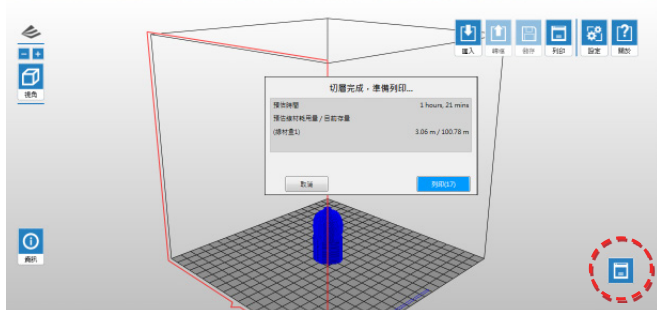
INFO>IP ADDRESS



XYZware secures the IP address of the printer and the connection is successful.

At this time, confirm the connection is completed through the information displayed on the printer.

5. Remove the USB connecting wire and then restart XYZware and the machine is ready for online printing again.



The monitoring function of printer can be used to confirm the on-line status and the IP information of the connected printer.

! Note: After restarting the printer, IP information will be erased. Please setting again.
 Note: The performance of wireless network may be affected due to various environment and power of machine. For detailed information, please contact the wireless equipment provider or refer to the original factory's manual. XYZprinting cannot provide tested data for specific equipment.

Wi-Fi Printing

da Vinci Jr. 1.0 3-in-1 3D Printer

Model Name	da Vinci Jr. 1.0 3-in-1 3D Printer
Dimensions	16.54 x 16.93 x 14.96 inches (420 x 430 x 380 mm)
Weight	26.46 lbs (12kg)
Display	2.6" FSTN LCM
Language	Multi language
Connection method	USB Wire / SD Card / WiFi
Print Technology	FFF (Fused Filament Fabrication)
Build Volume	5.9 x 5.9 x 5.9 inches (15 x15x15cm)
Print resolution	100 - 400 microns
Print module	Single Nozzle
Nozzle diameter	0.4 mm
Filament diameter	1.75 mm
Files supported	.stl , XYZ Format(.3w)
Operating system	Windows 7 - 8 above (for PC) Mac OSX 10.8 64-bit above (for Mac)
Hardware requirement	X86 32/64-bit compatible PCs with 2GB+ DRAM (for PC) X86 64-bit compatible Macs with 2GB+ DRAM (for Mac)

3D Scan

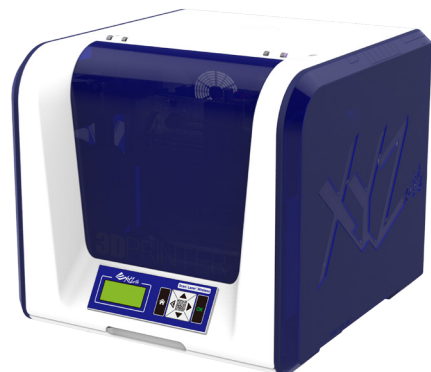
Scan Technology	Slit Laser Triangulation
Scan Resolution (Diameter x H)	3 x 3 cm – 12 x 12 cm 1.18" x 1.18"- 4.72" x 4.72"
Turntable payload	≤ 3 Kg/6.6lbs
Scan Accuracy	0.25mm
Scan Software	XYZscan

Environmentally friendly materials-PLA

PLA filaments are made using polymerized lactic acid, which is extracted from corn, sugarcane or other sugar-containing crops, and is regarded as the most environmentally friendly 3D printing material. Unwanted PLA printed objects can be simply discarded in the soil where it will naturally decompose.

PLA materials printed at low temperatures are not only suitable for family settings, its bright texture also makes it a favorite amongst our clients. You may observe the characteristics of PLA during printing.

- Despite their harmlessness, PLA placed in an environment or water bath exceeding 50 °C (122 °F) will soften and deform.
- Hence, overly humid areas are not suitable storage environments for PLA. We recommend properly sealing and stashing away unused PLA filaments.
- A sugary smell is often generated when printing with PLA filaments, giving yet another attractive feature.



Specifications