da Vinci Mini Series

User Manual

English

3DPRINTER

Product Overview

1 Guide tube		**6** Print bed	
2 Feed module		**7** Filament holder	
3 Filament		**8** Power connector	
4 Function button / status indicator		**9** USB port	
5 Extruder module		**10** Power switch	

Specification

Dimensions	400 x 336 x 362 mm
Weight	8 KG
Print Technology	Fuse Filament Fabrication (FFF)
Print Material	PLA
Filament Diameter	1.75 mm
Nozzle Diameter	0.4 mm
Print Dimension	150 x 150 x 150 mm
Print Resolution	0.1/0.2/0.3/0.4mm
Connectivity	USB 2.0 (da Vinci miniMaker)
	USB 2.0/ WiFi (da Vinci Mini w)
Print Software	XYZware
File Format	STL / 3W

Button and Indicator light

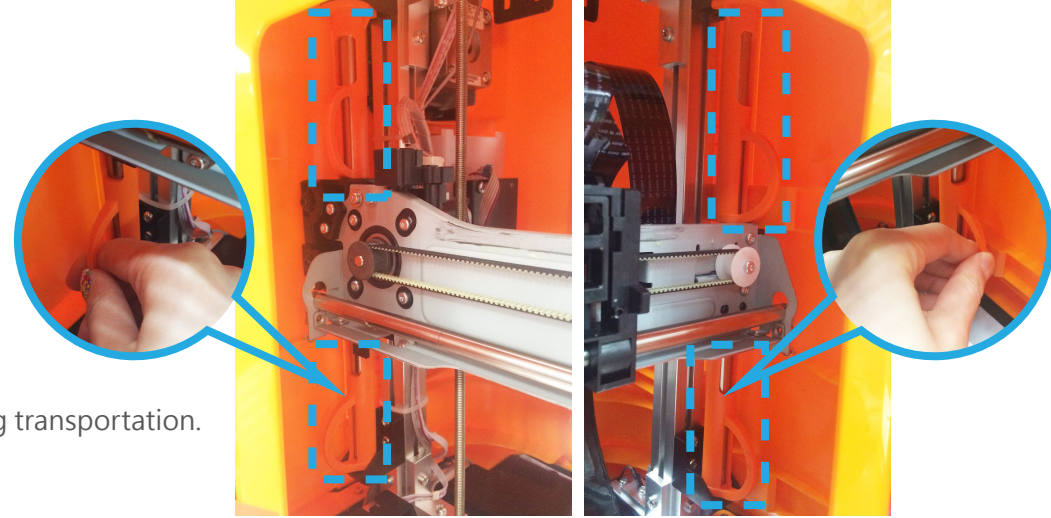| Indicator signals	Status	Action
Solid green	Standby/Ready to print	-
Flashing green	Receiving data	-
Solid red	General error	Press the button to return to printing status, refer to instructions in software to fix the issue.
Flashing red	Critical error	Refer to instructions in the software to solve the issue or reboot the Mini.
Solid orange	Printing	To pause the print, press the button once. To cancel the print, press and hold the button for 5 seconds.
Flashing orange	Paused	To resume the print, press the button once.
Pulsing orange	Job complete (printing complete / printing cancellation complete)	To return to **Ready to print**, press the button once.

If the printer encounters issues, please refer to the XYZware screen troubleshooting instruction to fix the issues.

Unpacking

- Before using this printer, remove all fixed materials from the extruder module and print bed. Switching on the printer without removing these fixed materials may damage the machine.
- Be sure to remove the 4 clips from the shafts as illustrated on the right.

Notes

Keep original packaging materials in case you need to send your unit back for repair during the warranty period.
If other packing materials are used instead, the printer may become damaged during transportation.
In such a situation, XYZprinting reserves the right to charge a repair fee.

Accessory Checklist

| 1. Quick Guide, Warranty Card	2. Power Adapter	3. Power Cord	4. USB Wire	5. Extruder Module
6. Scraper	7. Guide Tube	8. Bundled Filament	9. Filament Spool Ring (installed on the filament spool)	10. Bed Tape X 3pcs (Only replace the reusable tape when it is worn.)
11. Cleaning Brush 12. Feeding Path Cleaning Wire	13. Cleaning Wire x 5	14. Leveling tool	15. PET Protection cover	16. Feeding Tube Grip X1 (For replacing and installing the Feeding Tube Grip, please watch the tutorial video on XYZprinting official website)

Important Safety Notes

- Do not use the printer in dusty high humidity or outdoor environments.
- Place the printer on a stable and even surface to avoid it falling and causing serious injury.
- Do not put your hand into the machine during operation to avoid collision risk due to movement of the machine or to avoid burn due to high temperature.

Installing the Extruder module
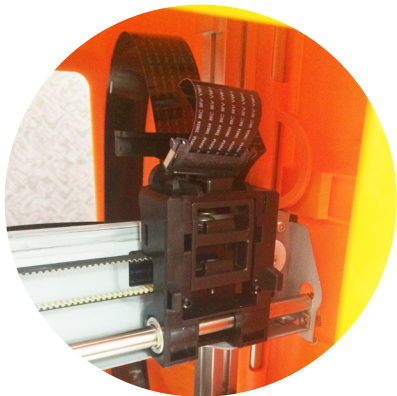
1 Make sure that the printer is powered off. Place the extruder module that the fitting pin is secured the proper location.

2 Insert the black ribbon connector to complete the installation.

NOTE: To unload the extruder module, first detach the heating bus and press the black disengage button.

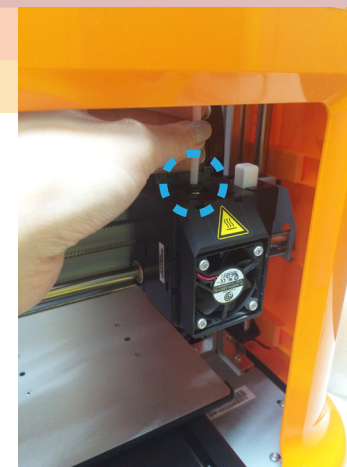## Installing the Accessories

1. Install the guide tube

1 Ensure that the guide tube has been tightly inserted into the port.

2 Feed the guide tube through the slot at the top of the printer to the extruder module.

3 Ensure that the guide tube is properly inserted into the feed port of the extruder module to complete the installation.

2.Installing the Filament spool ring

(please refer to this step if the axle ring is not installed on the spool)
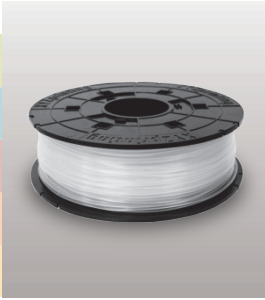
1

Use a phillips screwdriver to loosen the securing screws of the filament spool ring.
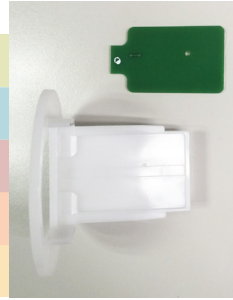
2

Separate the spool ring from both sides of the spool.

3

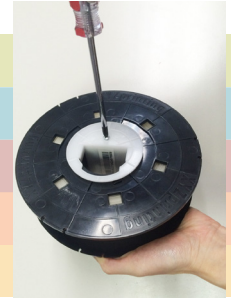Retrieve the filament spool and chip.

4

Install the sensor chip. Note the orientation of the sensor chip on the spool ring.
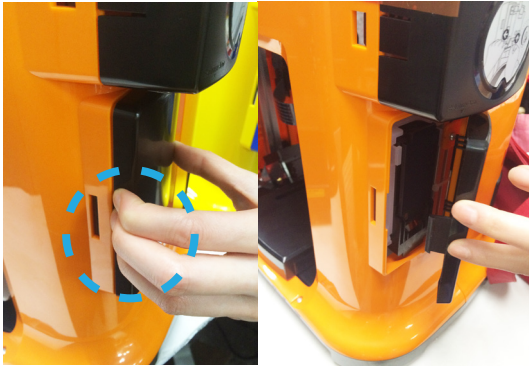
5

Feed both parts of the spool ring through the center hole of the spool and assemble them together.

6

Use a phillips screwdriver to tighten and secure the spool ring to complete the installation.

3.Installing the filament

1 Remove the side cover by pressing down firmly at the center on the left side of the cover and pushing aside the cover. (pay attention to where you apply your force to ensure proper dismantling) Keep the side cover securely for future use.
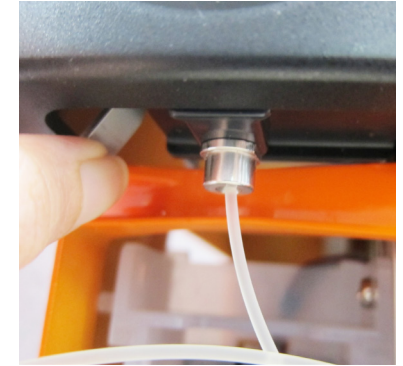
2 Lower the filament spool holder on the left side of the printer until horizontal.

3 Place the assembled filament spool (with the spool ring) on the spool holder.
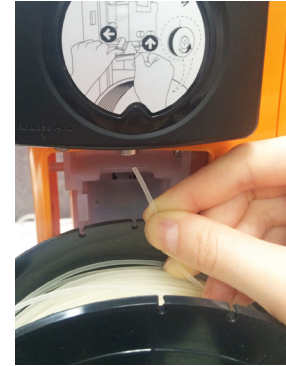
4 Take the tip of the filament and insert it into the feeding hole.

5 Press 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 extruder module.

Handy tips

- The filament will load better when the tip of the filament is cut at a 45° angle.
- When the printer is not in use, raise the filament spool holder and close the side cover.

XYZware operation

After completing the hardware installation, download XYZware from the XYZprinting official website and install it on your computer.

Before launching XYZware, connect the printer to your computer using the supplied USB cable and turn it on. For an optimal user experience, we recommend following the instructions below:

Print

Handy tips

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"**.

Before you start printing, please attach the bed tape to the print bed. The print bed tape is reusable, and can be replaced worn.

If the room you are printing in is below 25 ℃/ 77 ℉, for greater adhesion, apply glue to the bed tape.

After printing has started, check if the first layer is stuck to the print bed. Good base layer is one of the keys to successful printing.
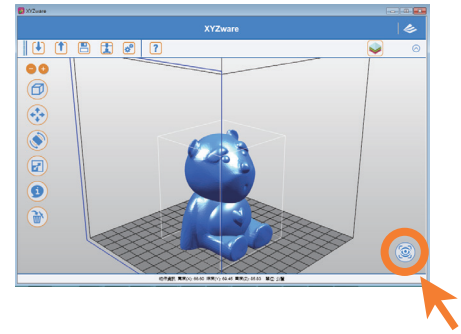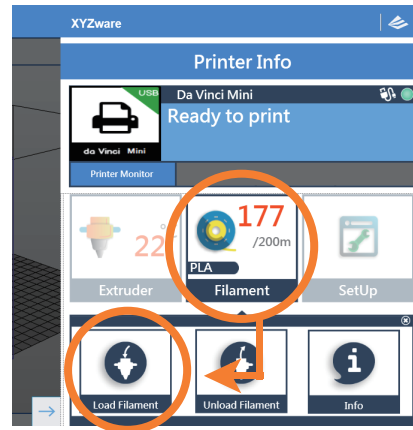
1 Open **XYZware**

2 Import 3D file
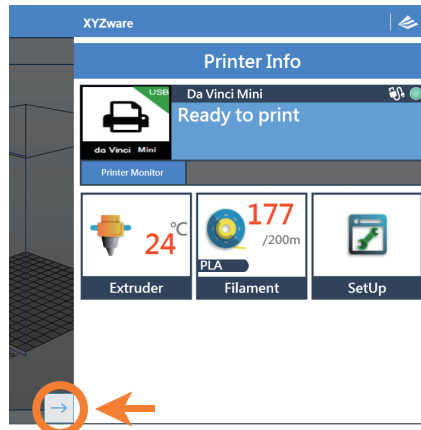Click **Import** and select the file to print.

3 Open Functions panel

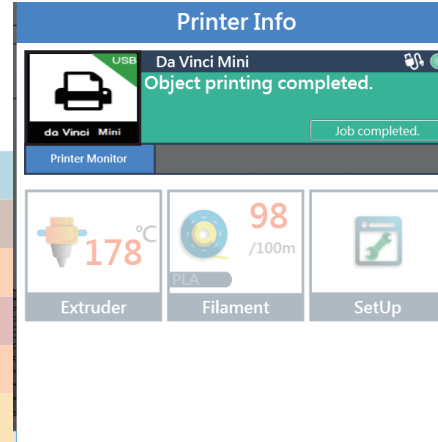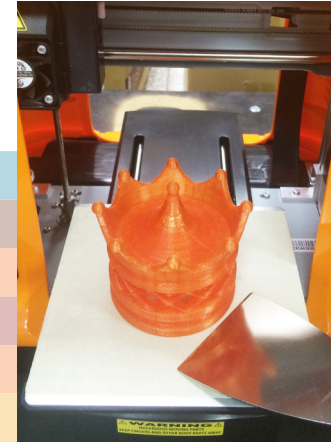**4** Load filament

5 Close Functions panel

6 Print

7 The printing status, including the printing progress, elapsed time, and remaining time, will be shown while printing. You can pause or cancel the printing task in this window.

**8** When done, **"Printing Complete"** will be shown on screen.

9 After the print has finished, use a scraper to remove the printed object.

Wi-Fi setup (da Vinci Mini w only)

●Pre-setup

1. The network printing function is only available when the printer and the computer are both connected to the same wireless network.
2. Before connecting the printer, your wireless network settings need to be adjusted. For more information, refer to the instruction manual of your wireless router.
3. The wireless network's channel width needs to be set to 20 MHz for the printer to connect to it wirelessly. Refer to the vendor instruction manual for more information.
4. The Mini supports WEP, WPA, and WPA2 security encryption standards. Wireless pass word information will be requested when setting up the printer connection.

• WEP • WPA • WPA2
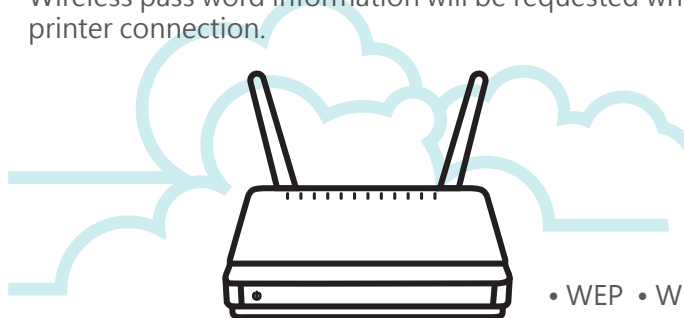
●Setting up Wi-Fi

1 Connect the printer to your computer with the USB cable, and open **"XYZware"**.

2 Click the **"Printer Monitor"** button on the lower right corner on the screen, open **"Operation Function"**.

3 Select the **"Printer Monitor"** icon to open the Wi-Fi connection settings.
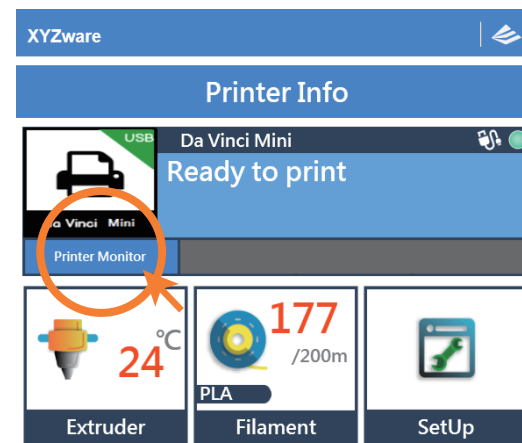
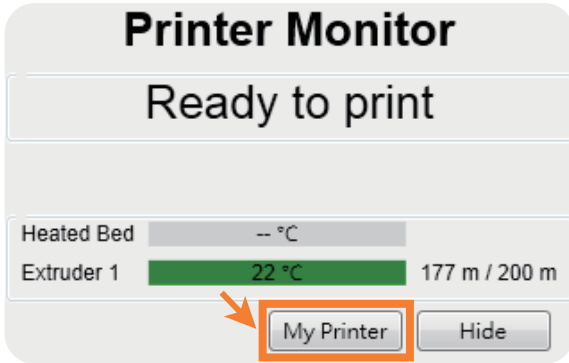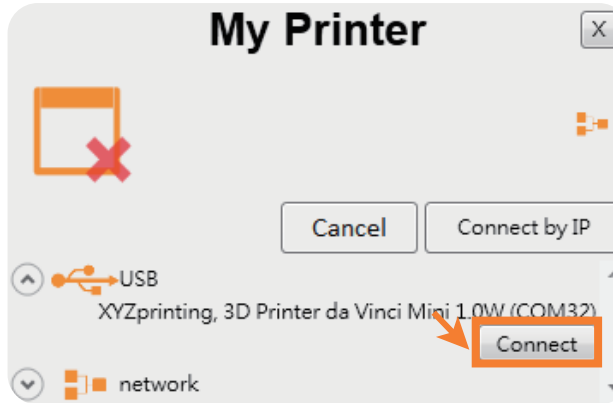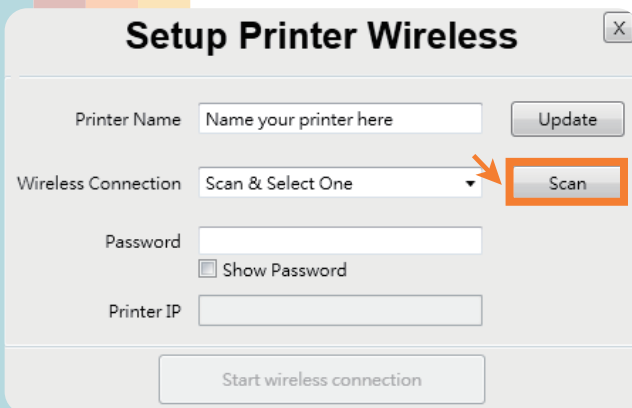④ In the **"Printer Monitor"** window, select **My Printer** > **Scan** to search for the connected printer.

Printer Monitor

Ready to print

| Heated Bed | -- °C | |
| Extruder 1 | 22 °C | 177 m / 200 m |

My Printer   Hide

My Printer   X

USB

network

Scan   Connect by IP

⑤ Select the USB COM port, click **Connect** > **Establish printer connection**.

My Printer   X

Cancel   Connect by IP

USB
XYZprinting, 3D Printer da Vinci Mini 1.0W (COM32)   Connect

network

⑥ Click **"Wireless Setting"** to view wireless print settings.

My Printer   X

XYZprinting, 3D Printer da Vinci Mini 1.0W(COM32)

Wireless Setting

Scan   Connect by IP

USB
XYZprinting, 3D Printer da Vinci Mini 1.0W (COM32)   Connected

network

⑦ Enter the printer name, then press the **Scan** button.

Setup Printer Wireless   X

Printer Name   Name your printer here   Update

Wireless Connection   Scan & Select One   Scan

Password
☐ Show Password

Printer IP

Start wireless connection

⑧ Use the pull-down menu to view a list of Wi-Fi connections available in the area, and select the Wi-Fi connection that you wish to connect to.

Setup Printer Wireless   X

Printer Name   Name your printer here   Update

Wireless Connection   ▾   Scan

Password
XYZ_Cloud
Hero Chen_HTC
batisZF6
MIS_CLOUD_TEAM_DEV_2.4G

Printer IP

Start wireless connection
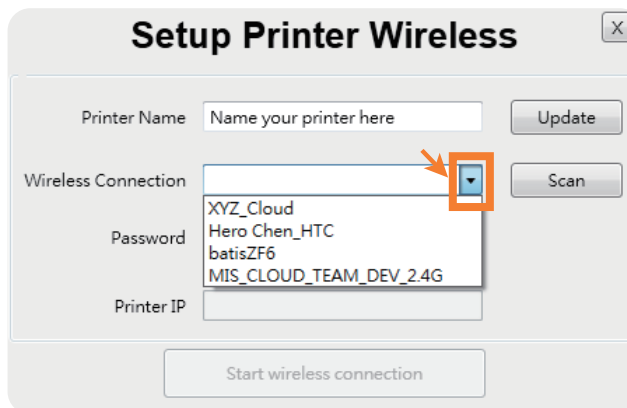
⑨ Wait for the printer to obtain the correct information, provide the wireless password and press **Start wireless connection**.
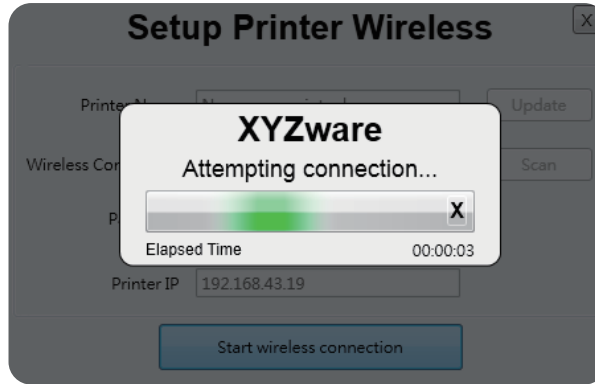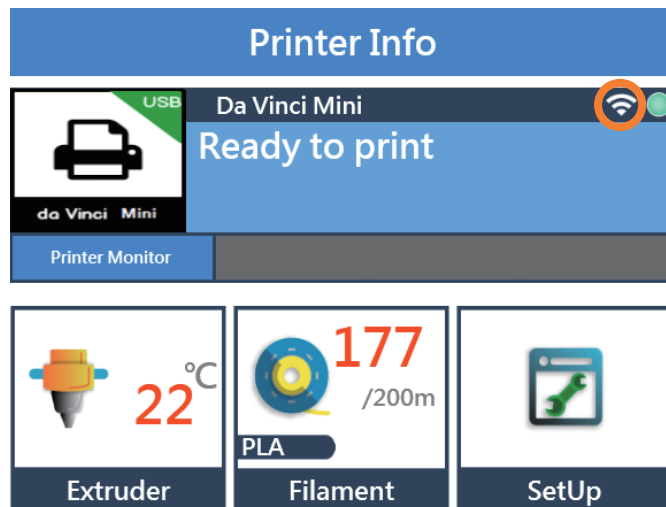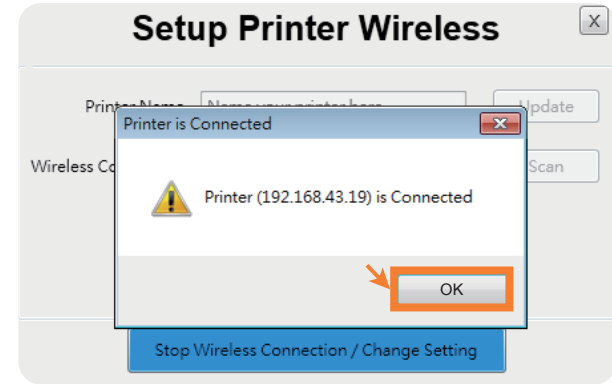
Setup Printer Wireless   X

Printer Name   Name your printer here   Update

Wireless Connection   batisZF6   Scan

Password   ••••••••
☐ Show Password

Printer IP

Start wireless connection

10 Update the printer connection method.

Setup Printer Wireless [X]

| Printer Name | deVinci Mini 1w | Update |

Smart Wireless Connection [⌧]

❓ Connect to the printer through wireless connection now?

[是(Y)] [否(N)]

Stop Wireless Connection / Change Setting

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11 XYZware will use the USB connection to update the printer settings.

Setup Printer Wireless [X]

| Printer N... | | Update |
| Wireless Co... | | Scan |

XYZware
Attempting connection...

[▬▬▬▬▬ X]

Elapsed Time   00:00:03

| Printer IP | 192.168.43.19 |

Start wireless connection

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12 Once the connection method has been changed from USB to Wi-Fi, you can unplug the USB cable and continue with the printing process.

Setup Printer Wireless [X]

| Printer Name | Name your printer here | Update |
| Wireless C... | | Scan |

Printer is Connected [⌧]

⚠️ Printer (192.168.43.19) is Connected

[OK]

Stop Wireless Connection / Change Setting

Printer Info

USB | Da Vinci Mini 📶 🟢
Ready to print

da Vinci Mini

Printer Monitor

🔧 Extruder 22°C | PLA 177 /200m Filament | SetUp

Note:

- Name the printer and wireless network with the alphanumeric characters only.
- If no connection is detected within 90 seconds, the printer will time-out. If this is the case, check that the configuration process is correct and try again.
- Confirm your wireless network's security key on the router's wireless settings page.

When using the software to operate the printer, one must first place filament spool ring pre-loaded with the filament at the axis to activate XYZware.
Click on the Printer Monitoring function at the lower right corner to activate the operating function.
Then select the **Printer Monitoring** function icon to activate the USB connection (this step would be similar to Wi-Fi setup steps 1 to 5).
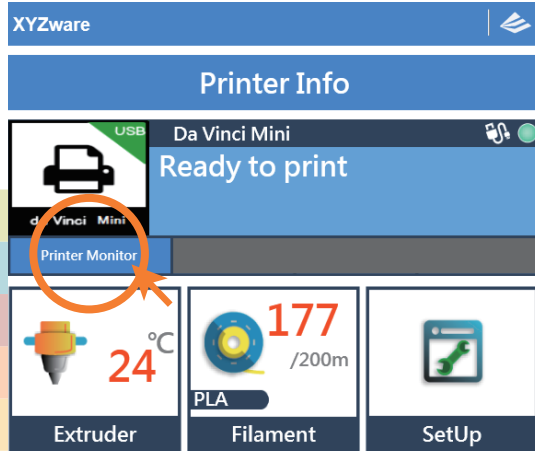
The USB cable can be removed once the printing file has been transferred. To monitor printing status, please re-connect the printer and computer with the USB cable and re-activate ⊙ the Printer Monitoring (function).
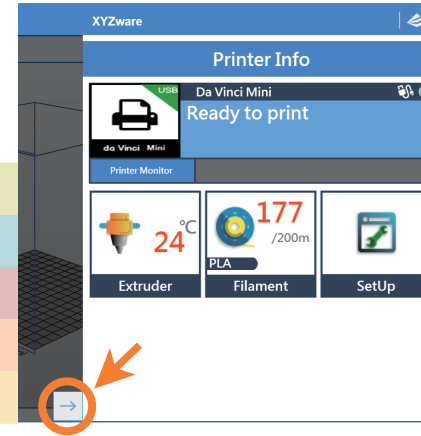
If information shown on-screen is not updated accordingly, you may switch off the operation function screen and then switch it on again. (Reload)

Operating the printer with XYZware

A Import: Import .stl, .3w files
B Export: Convert to .3w file
C Save: Save .stl file
D Print: Set print preference, transfer print file
E Setting: Set software display language, preview color, Printer Type
F About: Query, update software and firmware versions, open link to official website
G Adjust display scale
H View: Switch preview angle rapidly
I Move: Move location of the model
J Rotate: Change angle of the model
K Scale: Adjust size of the model
L Info: Display information about the model
M Remove: Delete the model from the virtual platform
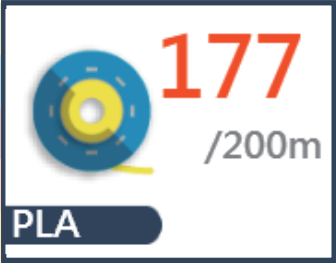N Printer Monitor: Open functio
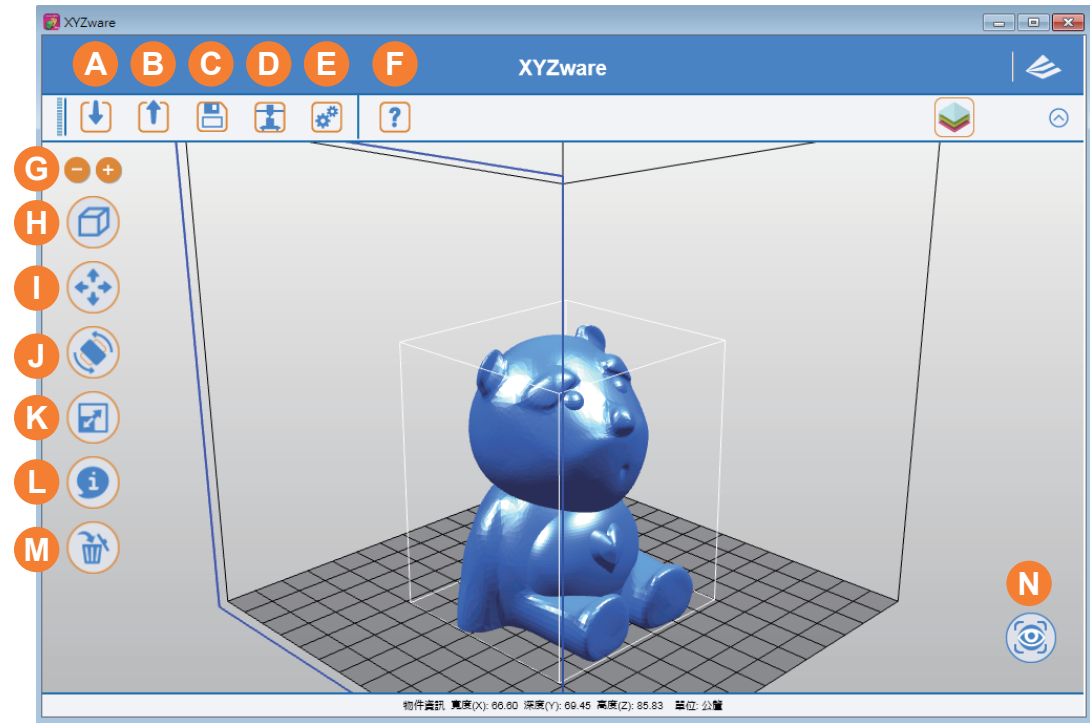
Functional descriptions

① Extruder

② Filament

Clean Nozzle

Once this function is selected, the nozzle will heat up automatically and move the nozzle to a proper location where you can easily clear away all residual filaments in the nozzle.

Info

The extruder module information, including Temperature, Nozzle Diameter, Total Print Time, and Serial Number.

噴頭	
類型	列印噴頭
溫度	58 °C
噴頭直徑	0.4 mm
總使用時間	0m
產品序號	GB00020000TH61L0006

Load Filament

Please follow the on-screen instructions.

The printing module will automatically move to the working position. The nozzle will then heat up to the operating temperature. Please wait for the extrusion process to finish. Verify that the nozzle is capable of extruding the filaments to demonstrate proper loading of the filaments. If not, please repeat the filament loading process.

Info

Information related to filament use

線材	
列印用材料	PLA
顏色	Gold
材料剩餘量	100 m/100 m (100 %)
產品序號	GBP3OCA64N0017

Unload Filament

Please follow the on-screen instructions.

The printing module will automatically move to the working position. The nozzle will then heat up to the operating temperature. Please wait for the unload filamentprocess to finish.

Note: The end tip of the ejected filament may exhibit some residual effects. This is considered a normal phenomenon.
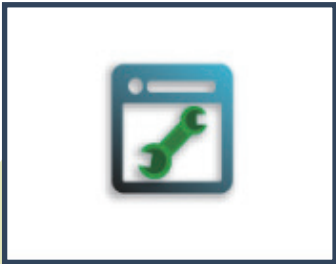
❸ SetUp

1. Jog Mode 2. Calibrate 3. Z-Offset 4. Others 5. Info

1. Jog Mode

Manually adjust the movement of X/Y/Z Axis for printer maintenance.

First click on [Home Axes]. The printing device will be returned to the initial axis position at the lower left corner of the printing area. Then adjust the positions of the printing module (X-AXIS), printing platform (Y-AXIS), and printing axes (Z-AXIS).

Select "X-AXIS" to move extruder rightwards and leftwards.
Select "Y-AXIS" to move print bed forwards and backwards.
Select "Z-AXIS" to move the print axis (Z-AXIS) upwards and downwards.

The user may manually enter the adjustment value:
Range: 1 to 150; step: 1 mm

2. Calibrate

Platform calibration may be implemented before the printing process.

The printing device may move to the lower left corner of the printing area. Please refer to the platform calibration instructions provided in the software.

Before calibration, press **Button A** of the printing module. After calibration, press **Button B** on the printing module in order to retract the sensor device.

If calibration was faild, please make sure that **Button A** (detector) has been pressed before restarting the calibration process.
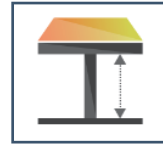

Button A

Button B

①

②

③

④
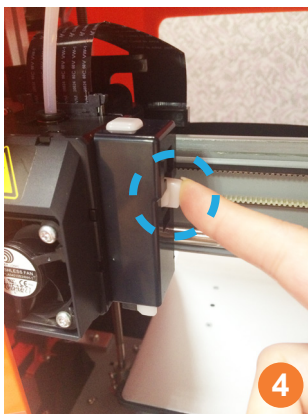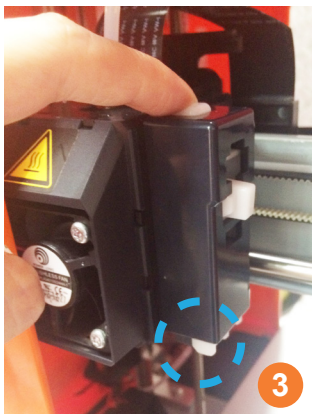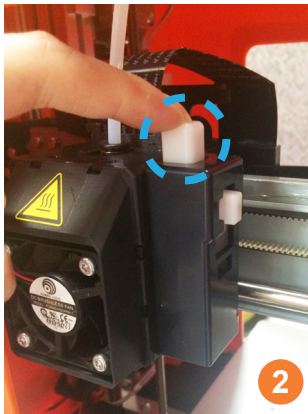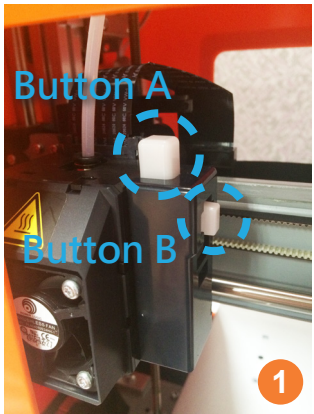
3. Z-Offset

Upwards and downwards to adjust the printing distance between the bed and printing module.

Each adjust has a step of 0.05 mm.

If the first layer distance is too high (too large) or too low (too close), we recommend you using z-offset to adjust the printing distance.

4. Others

● Automatic horizontal calibration
Automatic horizontal calibration may either be ON or OFF. Default: ON. The software would automatically implement horizontal calibration and compensation accordingly.
Printing speed may be improved if automatic horizontal calibration has been switched OFF. However, this may affect printing quality.

● Buzzer
Buzzer is turned on by default, you can select "OFF" to change the setting.
When the buzzer is turned on, the printer will output an audible signal when a button is pressed, receiving data, print job is finished, or issue is detected.

● Restore Default
Clicks "Restore Default" all settings will be reset to factory default.
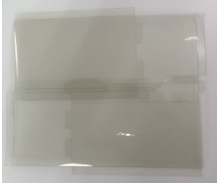
5. Info

Printer Info	Connection Info	Calibrate Info
Printer Name and Printer Type	Connection Type	Calibrate Value
Serial Number	Printer IP	
Firmware Version	WiFi MAC Address	
Total Print Time	SSID	
Last Time	WiFIi Signal Strength	

Using the accessory tools

Accessory tools can be used only in an environment with guidance or monitoring by adult. Do not allow children to obtain maintenance tools in unfamiliar situations in order to avoid danger.

Maintenance Tools	Usage	Application method
Scraper	Taken off the printing object	After print is finished, the printing object may be taken off with Scraper.
PET Protection cover	Keep your hands away from the printing and operations area when the machine is printing.	Once the PET protective casing has been assembled, apply double sided tape at the specified locations. Check that the adhesion areas on the printer are clean. Peel away the carrier film and apply slight pressure to attach the PET casing to the front of the printer. Instructions for re-using the double-sided tape of the PET shielding: Pieces of tape can be re-used if they were kept clean and properly maintained. However, multiple use or dirt on the tape may reduce the strength of adhesion. Please gently remove the PET shielding from the printer and then slowly peel away the double-sided tape from the PET shielding. Do not pull at the tape directly. Stickiness may be restored by cleaning it with soap water and then drying it.

Filament should be unloaded from the extruder before cleaning the feeding path.
Care should be taken during the operation to avoid potential burn injuries.

Cleaning Tools	Usage	Application method
Feeding Path Cleaning Wire	Clean Nozzle In order to prevent print quality from impact due to residual and accumulated filament, which results in poor discharge.	we recommend you to clean nozzle for every 25 hours of print. Please clamp the nozzle cleaning wire with needle-nosed pliers to insert it into the opening of the nozzle carefully for cleaning.
Cleaning Brush	Clean gearwheel After long periods of use, the automatic feed system may have experience unstable extrusion of the filaments due to buildup of residual materials within the filament channels.	The printer filament feed module should be cleaned after cleaning the nozzle. To do this, please switch off the power first. Open the feed module cover and clean the gears using a gear cleaning brush.
Cleaning Wire	Clean Feeding Path If the cleaning cycle does not unclog the extruder, try cleaning the feeding path by useing the feeding path cleaning wire.	1. Switch on the power and activate the "Clean Nozzle" function by using the software. 2. Release the extruder module (don't remove the heating cable at the side). 3. Insert the thick cleaning wire into the feeding path all the way down and "floss" the inside of the nozzle to push the residue out. 4. After cleaning the feeding path, reinstall the extruder module.

Print Bed Adjustment

Tools to prepare:

1 Leveling tool

2 T10 screw drivers

At least 10 cm

Within 1-cm diameter
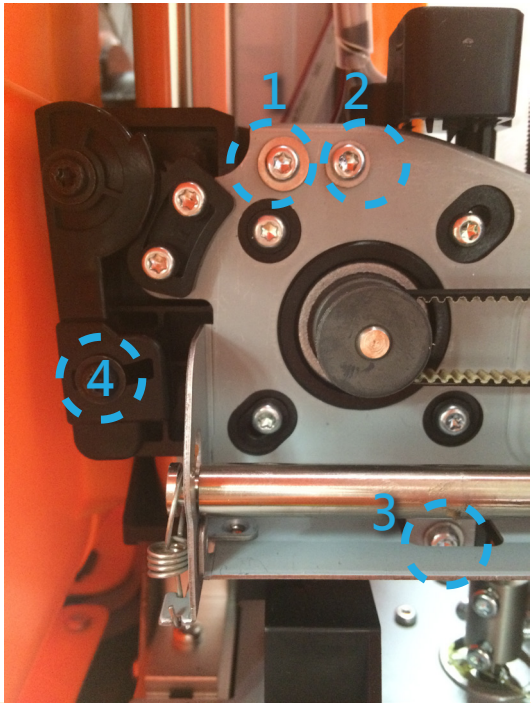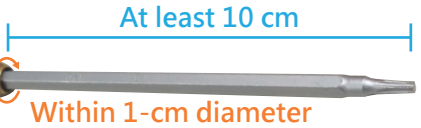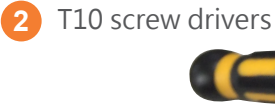
1 Use Jog Mode and Home Axes functions to move the Z-AXIS to its original position at the bottom.

2 Open the cover in front of the left side.

3 Use Jog Mode and move the Z-AXIS upwards by 10 mm.

4 Manually move the printing module to the right side to prevent affecting its calibrated position.

5 Place the adjustment tool on the platform directly below the X-AXIS support.

6 Loosen the 4 screws shown on the diagram. Do not loosen any of the other screws. (Note: You only need to loosen the screws, not remove them completely).

7 Use the Jog Mode and move the Z-AXIS downwards 1 mm at a time until it is completely aligned with the X-AXIS support and calibration tool.

8 Check that the calibration tool and X-AXIS support are in full-contact with each other, then tighten the 4 loosened screws.

1cm diameter of the circle
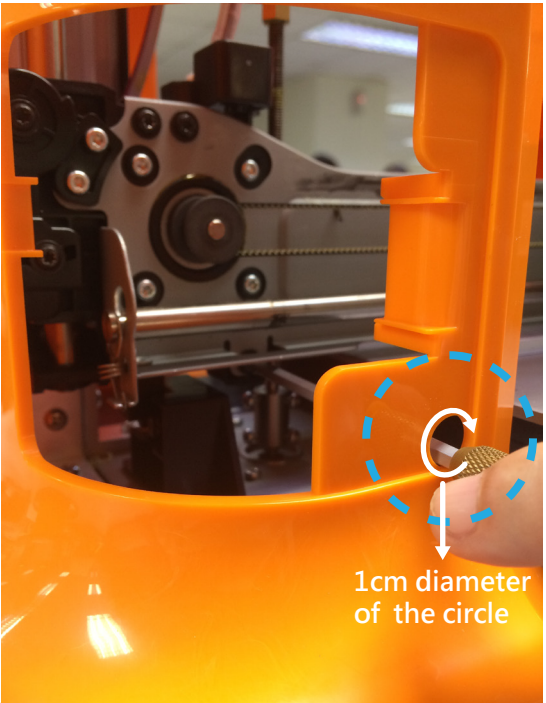
Support Details

As the printer encounters issues, please refer to the following troubleshooting instruction to fix the issues. If the issue cannot be removed, please contact customer service center.

Maintenance and Service

Keep original packaging material in the event of sending your unit back for repair. If other packing materials are used instead, the printer may be damaged during the transportation process.. In such situation, the XYZprinting the right to charge repair fee.

Error message and Action

In the event of problems, related service code will be shown on the software interface. Please refer to the description table of the service code for preliminary examination.

Error Code No.	Software interface	Action
0007	Cartridge 1 Error. Please remove cartridge and install again. If errors exist, please contact service center for support.	Reinstall or replace the filament cartridge.
0008	Cartridge 1 Error. Please remove cartridge and install again. If errors exist, please contact service center for support.	Reinstall or replace the filament cartridge.
0011	Heating Error. Please turn off the printer and contact service center for support.	Check whether the connections are connected properly and restart as required.
0014	Heating Error. Please turn off the printer and contact service center for support.	Check whether the connections are connected properly and restart as required.
0016	Cartridge 1 not installed properly. Please reinstall Cartridge 1 ("Unload Filament" then "Load Filament") on your printer. If error persists, please contact service center for further support.	Reinstall the filament cartridge.
0028	Cartridge 1 can not be found. Please install one.	Reload or replace the filament.
0029	There is no filament left in Cartridge 1. Please replace Cartridge 1 before printing.	Replace filament immediately.
0030	Printer motor Error(X-Axis) If errors exist, please contact service center for support.	Check motor/sensor connections. Check sensor position.
0031	Printer motor Error(Y-Axis) If errors exist, please contact service center for support.	Check motor/sensor connections. Check sensor position.
0032	Printer motor Error(Z-Axis) If errors exist, please contact service center for support.	Check motor/sensor connections. Check sensor position.
0051	Flash ram cannot be read/written.	Reboot the printer.
0052	Memory in the extruder cannot be read/written.	Replace the nozzle.
0054	Incompatible Nozzle	Turn off printer and reinstall compatible nozzle, then turn your printer back on. If this error persists, please contact service center.
0201	Computer and printer connection issues.	Re-connect the computer with the printer. Alternatively, you may use hot plugging of the USB cable to connect the computer with the printer.
020D	File is printable by: da Vinci XXX	This shows that this file type is not supported. Please select a proper printer model instead.