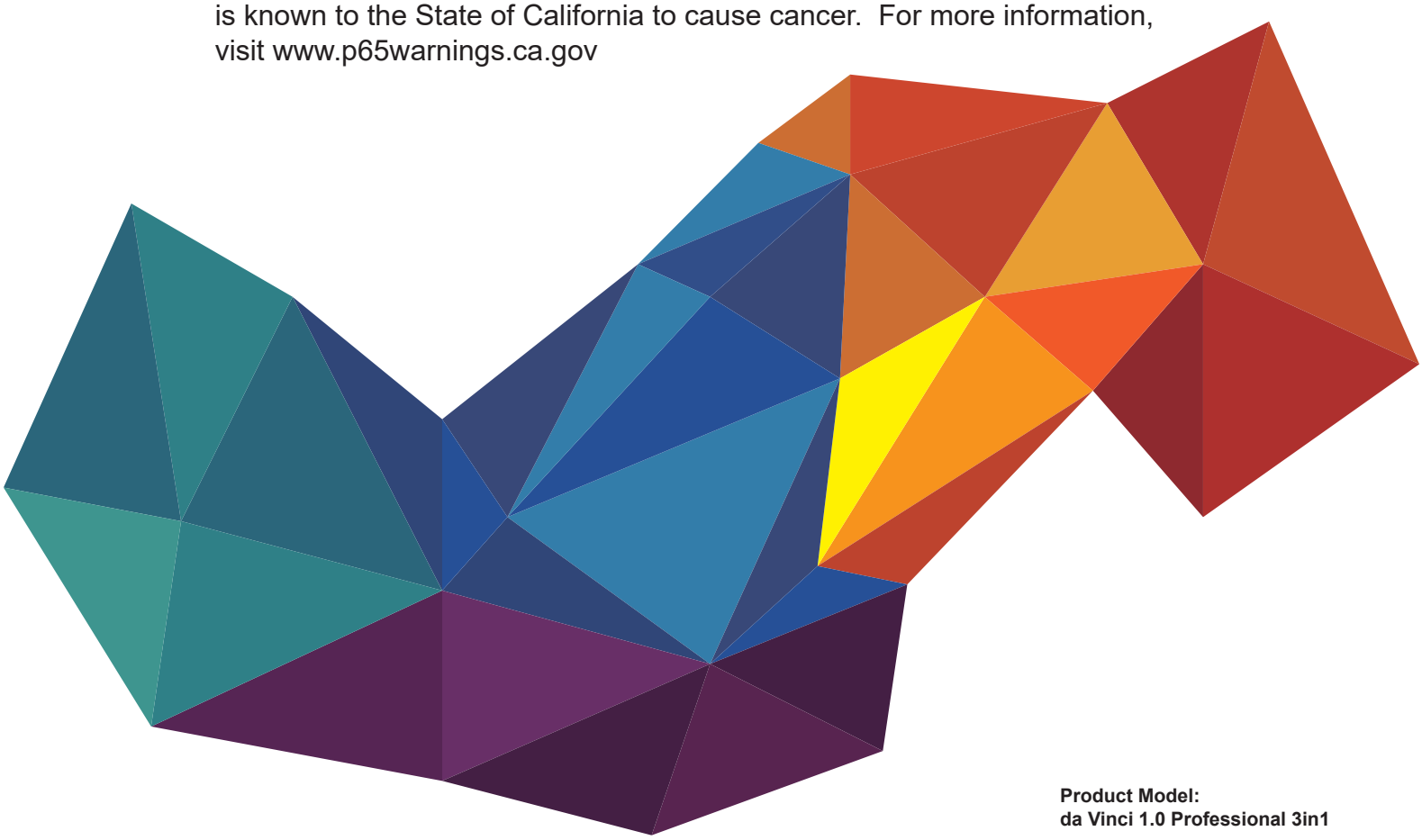
ENG

da Vinci 1.0 Pro 3in1
User Manual

- **Product Safety**
- **Product Description**
- **Printer screen menu, functions and messages**
- **Functional operations and descriptions**
- **Print**
- **Scan**
- **Optional module**
- **Support Details**

WARNING: This 3D Printer - when used with a styrene filament (ABS / HIPS / or PC-ABS) can expose you to chemicals, including Styrene, which is known to the State of California to cause cancer. For more information, visit www.p65warnings.ca.gov



Product Model:
da Vinci 1.0 Professional 3in1

The purpose of this user manual is to help users understand and use the da Vinci 1.0 Professional 3in1 3D printer correctly. It contains the operating instructions, maintenance information and application skills of the da Vinci 1.0 Professional 3in1 3D printer.

For the latest information about da Vinci 1.0 Professional 3in1 3D printer and XYZprinting products, please contact your sales representative or visit XYZprinting website:http://www.xyzprinting.com

Product Safety

- **Safety and Compliance**

  Before you use, operate the product, change or remove any parts, components or materials of the product, or maintain the printer, please ensure that you carefully read this User Manual and the safety instructions described below, and strictly follow the instructions of such safety information. The following warnings and attention notices are a best effort attempt to cover all scenarios; unfortunately it is not possible to do so in the case of performing maintenance procedures that are not described in this manual the burden of safety falls to the customer side.

- **Important Safety Information**


  - Do not place the printer in humid or dusty environment such as bathrooms and high traffic areas.
  - Do not place the printer on an unbalanced or unstable surface. Printer may fall or tumble causing harm and /or injury.
  - Do not let children operate this device without adult supervision. Moving parts can cause serious injury.
  - Please use the grounded power cord supplied with the printer to prevent a possible electrical shock.
  - Do not place any objects on top of the printer. Liquids and objects that fall into the printer can lead to printer damage or safety risks.
  - Do not use flammable chemicals or alcohol wipes to clean this device.
  - Make sure to set the power switch to the off position and remove the power cord before transporting the device.
  - Do not touch the interior of the print while printing as it may be hot and include moving parts.
  - Do not touch the interior of the print while printing as it may be hot and include moving parts.
  - Some components of the printer are moving during operation. Do not attempt to touch or change anything inside before power off the printer.
  - The process of heating the filament will produce a light non-toxic odor. Having a well ventilated area will ensure a more comfortable environment.
  - Do not attempt to service the printer beyond the instructions specified in this document. In the case of irrecoverable problem, contact XYZprinting service center or your sales representative.

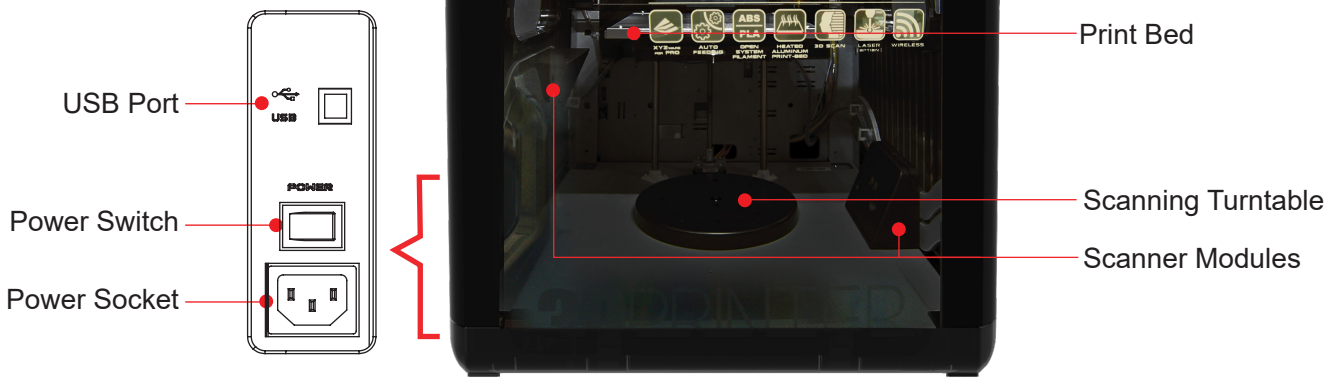
- **Trademarks**

  All trademarks and registered trademarks are the property of their respective owners.

Product Description

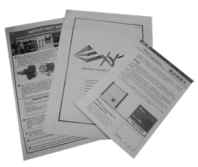
Product Overview

Auto Feed System



⚠ Levelness of the Print Bed may be susceptible to vibration during transportation, which may influence print quality. Please adjust the bed with reference to「Print Bed Adjustment」 before printing.

Accessory Checklist



· Quick Guide, Warranty Card

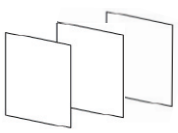
· Filament Cartridge

· Cartridge Locker

· Power Cord

· Software CD

· Side Cover Plate x2



· Bed Tape X 3 pcs
(The bed tape is reusable and it can be replaced when it's worn.)

· USB Cable

Maintenance Tools

· Scraper

· Copper Brush

· Cleaning Brush

· Feeding Path Cleaning Wire

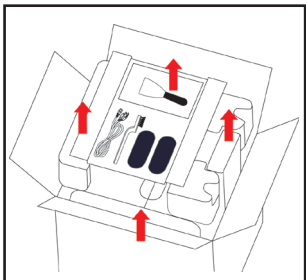
· Cleaning wire x 5

· Calibrating Plate
(See P. 22 for instructions)

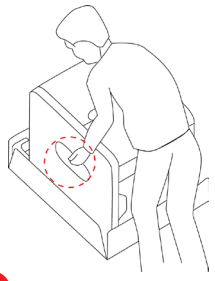
Product Description

Open the box

Note: Please removal all fixed materials before turning on the printer to prevent the machine from damage

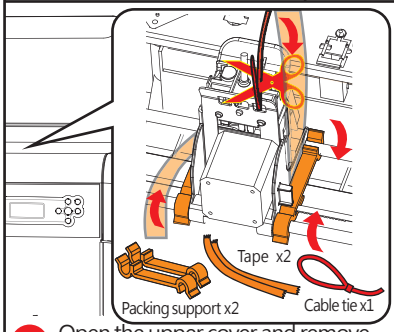


1 Open the box and remove the accessories and the cushion

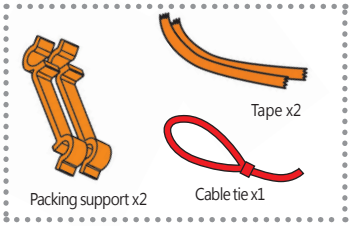


2 Use the grip to take off the machine

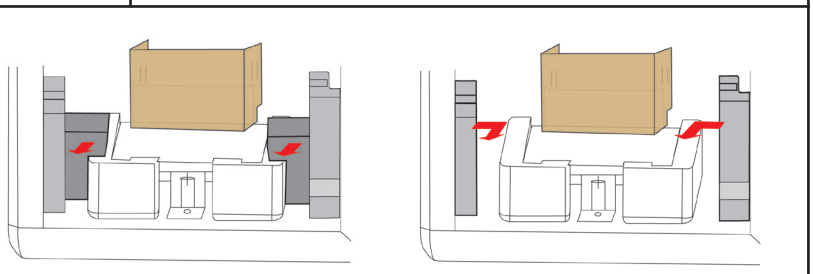
3 Remove all fixing tapes and the packing bag



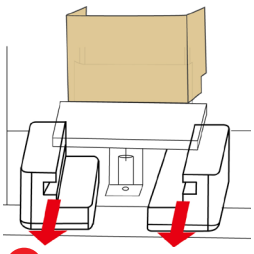
4 Open the upper cover and remove fixities listed above



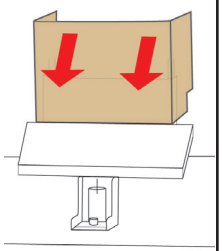
⚠ Pay attention particularly to actual paperboard removal of the fixities listed above except step 11.



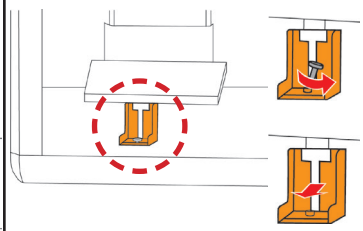
5 Remove 2 foams at the front of the cardboard



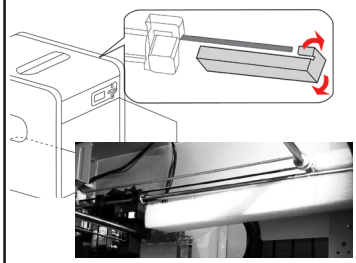
6 Remove the fixing styrofoam beside the bed



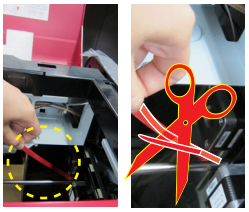
7 Remove fixing paperboard



8 Remove bottom screw and the fixing screw on the bottom of the bed



9 Be sure to remove the fixing foam from the axis



10 Be sure to remove the cable tie as illustrated above

11 Do not cut this white cable tie.

12 Insert the bundled software CD into the computer and install the software according to instruction

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

Important Safety Notes

- Do not use the printer in dust rich, highly humid or outdoor environments.
- Do not use the printer on a soft or tilt table to prevent the machine from falling, which may result in damage or personal 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.

Notes and Description for Use of Maintenance Tools

•The following 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.
• Please make sure to maintain the printer as the bed is cooled.

•After print is finished and the print bed is cooled to room temperature, the printing object may be taken off with Scraper.

•In order to prevent print quality from impact due to residual and accumulated filament, which results in poor discharge, after long-term use of print nozzle, it is recommended to enable the "CLEAN NOZZLE" (nozzle cleaning) function of the printer every 25 hours of print to clear residuals with nozzle cleaning wire or feeding path cleaning wire. (Filament should be unloaded from the extruder before cleaning the feeding path.).

•Filament residuals produced during print may also attach onto nozzle and gear of print module to influence print quality, printer operation, as well as measurement result of bed. For such situation, please use cooper brush to clean the print module.

- **Maintenance and Service**

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

Display and Control Panel

Direction Up / Increase the value

Back to pervious menu / Adjust the value /Move to the preview item

Go to the next menu / Adjust the value /Move to the next item

Direction Down / Decrease the value

OK Select / Confirm setting / Confirm and exit

Home menu

Product Specification

Print			
Print Technology	Fused Filament Fabrication (FFF)	Weight	27.5 KG
Print Dimension (L x W x H)	20 x 20 x 19 cm	Print Material	ABS / PLA
Print Resolution	0.1 / 0.2 / 0.3 / 0.4 mm	Filament Diameter	1.75 mm
Display Screen	2.6" LCM	Nozzle Diameter	0.4 mm
Connection Method	USB 2.0 / WiFi	Operating System	Win 7 and above Mac O SX10.8 and above
Print Software	XYZware Pro	File Format	3w / stl / 3mf
Scan			
Scan Technology	Slit Laser Triangulation	Turntable payload	≦ 3 Kg/6.6lbs
Scan Resolution (Diameter x H)	3 x 3 cm – 15 x 15 cm/ 1.18 x 1.18"- 5.9x5.9"	Scan Resolution	2140 points/cm2 (13900 points/inch2)
Scan Software	XYZscan		

Printer screen menu, functions and messages

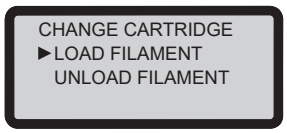
UTILITIES

Installation and removal of filament, calibration of the printing bed and printing settings, including:

- CHANGE CART
- HOME AXES
- Z OFFSET
- JOG MODE
- CALIBRATE
- BUILD SAMPLE
- CLEAN NOZZLE

CHANGE CART

Load, unload filament and view the information about the filament. Using XYZprinting filament to ensure smooth operation of the machine is recommended.



Refer to P.14 for Load filament

- **UNLOAD FILAMENT**

In unloading filament, activating the filament unloading function on the control panel of the printer.

1. Wait for the extruder to heat up to operating temperature and unload the filament.
2. As "PULLOUT FILAMENT" is displayed on the screen, press the release arm and pull out the filament.

HOME AXES

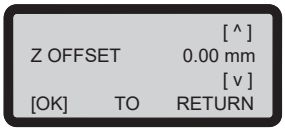
Use the function to move the extruder to upper right corner of printing space and the print bed to the top.

Extruder homing:

Select “YES” to return the extruder to the preset position.

Z OFFSET

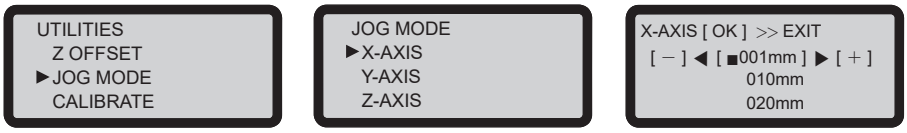
Use the function to adjust the print bed upwards and downwards, and the printing distance between the bed and printing module. The function will also record the setting value.



JOG MODE

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

How to move the extruder:



① Select a target to move:

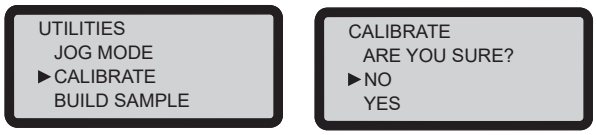
- **Select "X-AXIS" to move extruder rightwards and leftwards**
- **Select "Y-AXIS" to move extruder forwards and backwards**
- **Select "Z-AXIS" to move the print bed (Conduct " Home AXES " function first and then to adjust " Z-AXIS " print bed.)**

② Adjust the distance

- **Use "UP" and "DOWN" buttons to select the moving distance. Then, select "-" based on the desired distance and press the "TO THE LEFT" button or select "+" and press the "TO THE RIGHT" button to adjust the moving distance.**
- **Press the "TO THE LEFT" button: The extruder will be adjusted rightwards/ backwards or closer to the print bed.**
- **Press the "TO THERIGHT" button: The extruder will be adjusted leftwards/forwards or away from the print bed.**

CALIBRATE

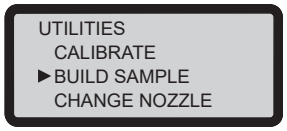
Use the function to adjust the print bed and make adjustment based on the reference value. The printing quality will be affected by the levelness of the print bed. If you want to confirm the levelness of the print bed, turn on the function to measure and check recommended adjustment.



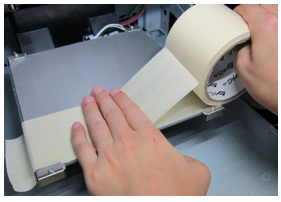
Refer to P.16 for CALIBRATE

BUILD SAMPLE

3 built-in samples are stored in the printer. You can learn to use the printer through building samples.



① Stick the bed tape onto the print bed before printing



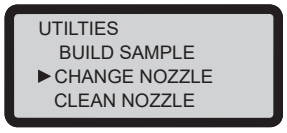
② **Select the built-in sample to be printed**

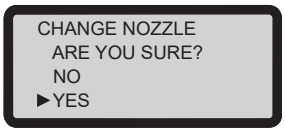
③ **Select "YES" and press "OK"**

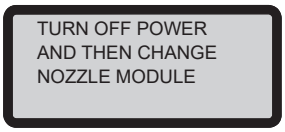
④ **After completion of print, take off the print product. The print bed patch is reusable. Replace the patch when it is worn out.**

Note: Stick the bed tape onto the print bed before printing or apply some glue stick on the bed tape for objects with special structures to make the tape more adhesive and the object more difficult to come loose.

CHANGE NOZZLE







Turn off the printer after the printing device and print bed automatically move to their positions and change the printing module.

Levelness of the Print Bed may be susceptible to vibration during transportation, which may influence print quality. Please adjust the bed with reference to「Print Bed Adjustment」 before printing.(P.16)

Printer screen menu, functions and messages

Printer Maintenance

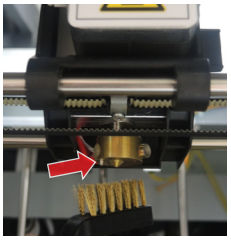
●UTILITIES > CLEAN NOZZLE

Regular cleaning of the print nozzle facilitates to not only extending service life of the printer, but also improves print quality.
Enable "CLEAN NOZZLE" (nozzle cleaning) function. Clean the nozzle after the nozzle is heated up, the bed has been lowered and the extruder has been moved to the front end, and "READY FOR CLEAN" is displayed on screen.

1

Clean the detecting pin with Copper Brush

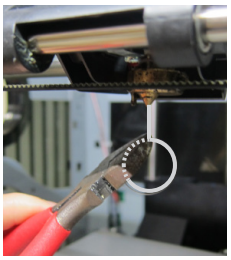
Filament residues produced during printing may become attached to the nozzle and gear of print module to influence print quality, operation of the printer, and measurement result of the bed. If such a situation is encountered, please use a copper brush to clean the print module by brushing off residue and dirt on the detecting pin.



2

Clean Nozzle with Nozzle Cleaning Wire

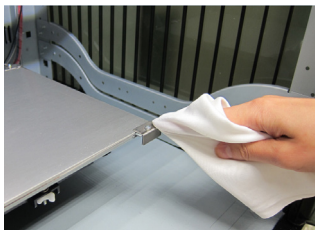
With increased print frequency, the carbon accumulation and dirt in the nozzle might affect print quality. Thus, we recommend you to clean nozzle for every 25 hours of print. Please clamp the nozzle cleaning wire with needle-nosed pliers to insert it into the opening of the nozzle carefully for cleaning. (Filament should be unloaded from the extruder before cleaning the feeding path.)



3

Wipe Measurement Points

After the bed is lowered, please switch off power to cool the bed, followed by wiping 4 measurement points with damp cloth.



SETTINGS

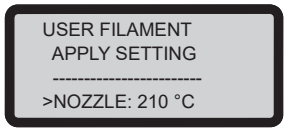
The basic settings of the machine, functions, selection and adjustment of printing values, including:

- USER FILAMENT
- BUZZER
- AUTO HEAT
- LANGUAGE
- ENERGY SAVE
- RESTORE DEFAULT

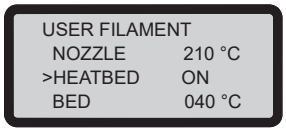
USER FILAMENT

The user can customize the temperature of the extruder, print bed and unload filament based on the requirements of filament and designing objects.

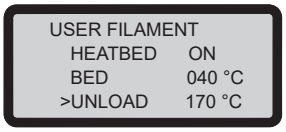
A NOZZLE



B Print Bed



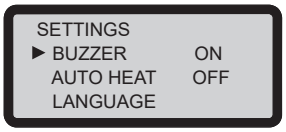
C Filament Unloading



Refer to P.15 for Temperature Setting

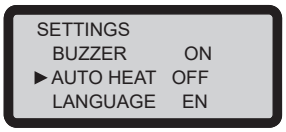
BUZZER

When the buzzer is turned on, the printer will output an audible signal when a button is pressed, print job is finished, or issue is detected.



- Buzzer is turned on by default, you can select “OFF” and press “OK” to change the setting.

AUTO HEAT

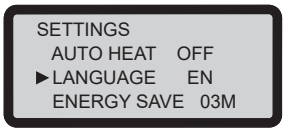


- “AUTO HEAT” is off by default. you can select ”ON” and “OK” to change the setting.
- When “AUTO HEAT” is turned on, the printer heats up the extruder and the print bed after powered on. This helps to shorten the idle time that is necessary to heat up the printer before printing.

LANGUAGE

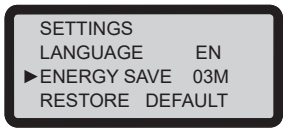
We suggest setting the language shown on the printer screen before use. The user can switch among English, Japanese, French, German, Italian and Spanish. English is the preset language. For other languages:

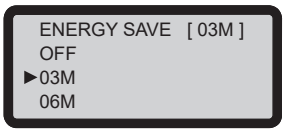
Use “UP” and “DOWN” buttons to select the desired language and press “OK” to change setting.



ENERGY SAVE

LED luminaries are installed in the printing chamber. To save energy consumed, the lighting will go off after idling for 3 minutes (shown as 03M on the display) by default.

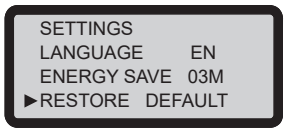




Select “06M” (for auto off after 6 minutes) or “OFF” (for never turn off the LED) and press “OK” to change the setting.

RESTORE DEFAULT

All settings can be reset to factory default with a few clicks.



Select "YES" and press "OK" to reset all settings.

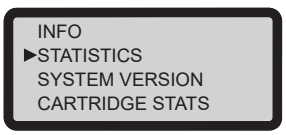
INFO

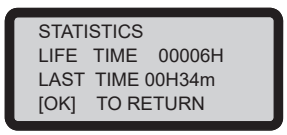
The firmware and printer statistical information, including:

◆ STATISTICS ◆ SYSTEM VERSION ◆ CARTRIDGE STATS ◆ WIFI INFO ◆ NOZZLE INFO ◆ HELP

STATISTICS

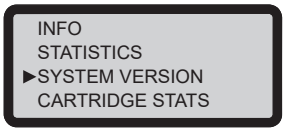
Show the accumulated printing time and the last printing time. If you want to exit, press “OK”.

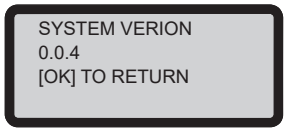




SYSTEM VERSION

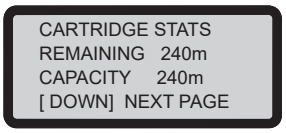
Show the version information of the current firmware. We suggest upgrading printer firmware to the latest version to ensure steady quality. To check whether latest version of firmware is available, use XYZware. If you want to exit, press “OK”.

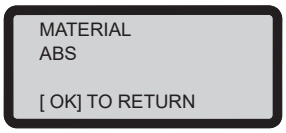




CARTRIDGE STATS

Show the remaining amount of filament (such as "REMAINING" for length information), volume of spool, color of filament and material information. Press to skip the page and press "OK" to exit.

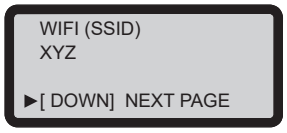


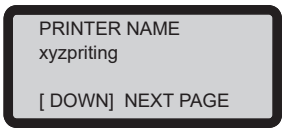


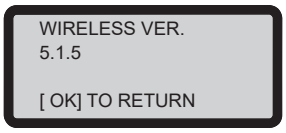
WIFI INFO

It shows the current situation of the WiFi connection of the printer.
Refer to P.17 for "XYZware Pro" WiFi Setting

If there is connection, SSID of connected Wi-Fi, IP address, name of the connected printer and connection version will be shown. Press "OK" key.



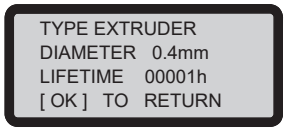




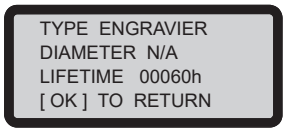
NOZZLE INFO

It shows the information of current installed module.

Extruder Module message

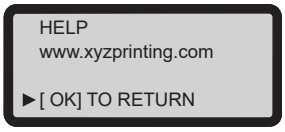


Laser engraver Module message (optional module)



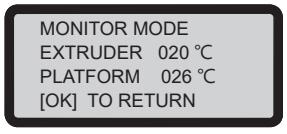
HELP

You may go to the website for the latest information, product documents, tutorial video and more. If you want to exit, press OK.



MONITOR MODE

This option can monitor temperature conditions, including:

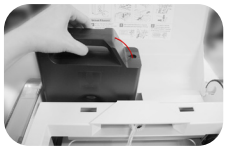


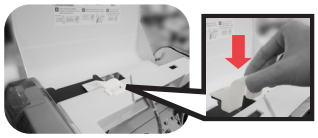
Functional operations and descriptions

Install and Load Filament UTILITIES > CHANGE CART > LOAD FILAMENT

● Install Filament Cartridge from XYZprinting

◆ Remove the filament stopper and tape and install the filament cartridge into the empty slot.





◆ Place and push to click the cartridge locker

● Install Compatible filament

* Print quality cannot be guaranteed if filaments from other brands are used instead.
* The warranty does not cover stuck filaments, product failure, damage, or defects resulting from the use of filaments from other brands or other human errors.

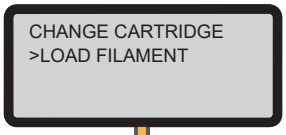
Hang the spool on the filament spool holder prepared by yourself

◆ **Remove the cartridge from the cartridge slot if any to use your own filament**

◆ Insert filament into the guide hole until the printer starts to load filament.
◆ Press the release arm to open the feeding path while inserting the filament
◆ Then, activate LOAD FILAMENT function on the printer

*Recommend using a clips and other tools to cut the tips of the filaments to generate a tapered tip of 45 degrees, and to straighten the filaments to facilitate the filament loading process.

Activate LOAD FILAMENT function on the control panel



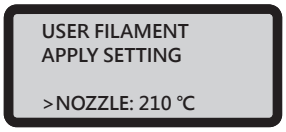
● To use XYZprinting filament and apply the recommended temperature settings,select "YES"

A. Wait for the extruder to heat up

B. As the temperature reaches operating setting the printer loads automatically the filament, and filament loading is completed

C. Check if the filament flows out from the nozzle. If the filament has flowed out, please press "OK" to complete the loading process

● Select "NO" if filaments of other brands are used.



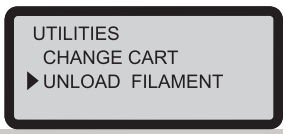
※ To specify your own temperature settings:
Select the printer component using the new settings. To set the heating temperature, please refer to instructions provided for "Temperature Settings" function Select "APPLY SETTING" to start applying your specified temperature settings. The process on the left will start and the printing component will start to heat up.
※ To use pre-defined temperature settings:
Select "APPLY SETTING" directly to enter the workflow shown on the left.

Remarks: The temperature setting in this procedure is applicable only to 3D Builder application software developed by Microsoft. For more information about 3D Builder, please visit the Microsoft website

◆ Filament loading is completed

Functional operations and descriptions

Unloading Filament



● UTILITIES > CHANGE CART > UNLOAD FILAMENT

In unloading filament, activating the filament unloading function on the control panel of the printer

1. Wait for the extruder to heat up to operating temperature and unload the filament.
2. As "PULLOUT FILAMENT" is displayed on the screen, press the release arm and pull out the filament.

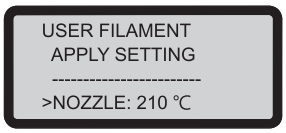
Temperature Setting

● SETTINGS > USER FILAMENT

The user may customize nozzle temperature, print bed temperature and filament unloading temperature in accordance with requirements of different filaments and design objects:

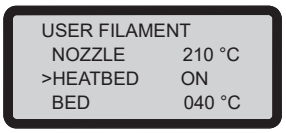
1 Select the item for temperature setting

A Nozzle



Press "OK" to enter temperature setting for nozzle

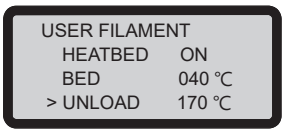
B Print Bed



The HEATBED will heat up by default. To adjust the operating temperature of the print bed, select BED and press "OK".

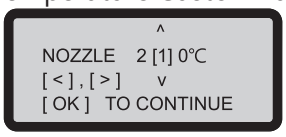
Select "ON" or "OFF" to turn the print bed's heating function on or off. Once turned on the heating function, press "OK" to adjust the temperature setting for the print bed

C Filament Unloading



Press "OK" to enter temperature setting for filament unloading

2 Temperature Customization:



- Use "left key", "right key" to select the digit (single, tens, hundreds) for the temperature to be adjusted.
- Use "up key", "down key" to adjust the value.. The up key is for increasing value, and the down key is for decreasing value. Press "OK" key to apply setting.
- If your customized temperature exceeds allowable setting range, press "OK" and a setting range alert will be displayed.
- Once parameter settings are complete, return to the previous page and select "APPLY SETTING" to save and apply the settings that you have specified.

3 ⚠ Constraints of Customized Temperature Range

NOZZLE	Warming up of the nozzle of the extruder in feeding and printing: 170℃ ~ 240℃
BED(ON)	Temperature elevation range of the print bed: 41℃ ~90℃
UNLOAD	Temperature elevation range of the extruder in unloading: 170℃ ~240℃

Remarks: The temperature setting in this procedure is applicable only to 3D Builder application software developed by Microsoft. For more information about 3D Builder, please visit the Microsoft website

- If the temperature for print bed is specified as [OFF], room temperature printing will be enabled and the print bed will not be heated.
- Excessively low extruder temperature may result in poor filament feeding, result in poor filament feeding that prevents proper extrusion of the filament through the nozzle. Hence, please adjust the operating temperature of the extruder first.

Functional operations and descriptions

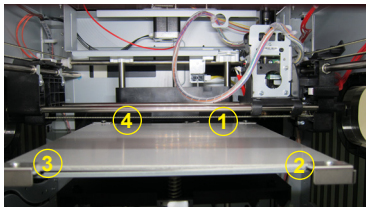
Print Bed Adjustment

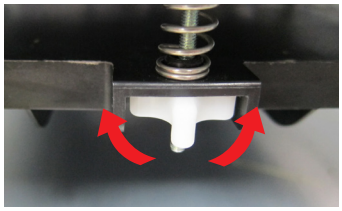
UTILITIES
▶CALIBRATE

Before first printing, please calibrate the bed to guarantee an appropriate levelness of the bed for printing.

- UTILITIES > CALIBRATE

  After the printer is heated up to an appropriate temperature, the distances between measurement points on bed edge ①, ②, ③, ④ and probes are measured automatically to determine levelness of the bed.

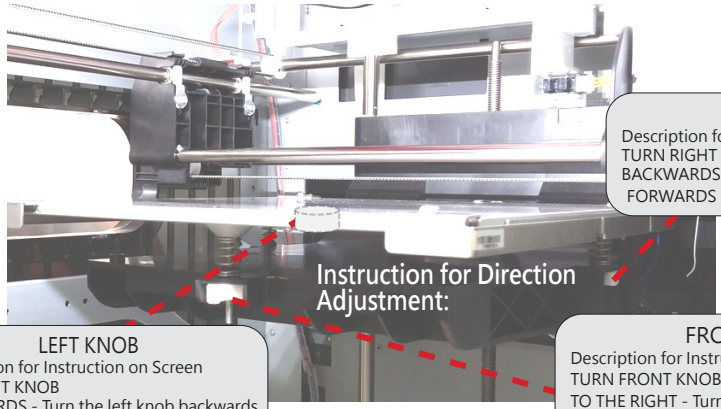




PERFECT
ADJUST MORE ?
> YES
NO

- If the automatic detection function determines that there is no need to adjust levelness of the bed, "PERFECT" will be displayed on screen. At this moment, press "NO" to exit.
  If you see "UNLEVEL BED" in the detection results, you will have to adjust the bed levelness. A prompt window for initiating the calibration process should appear.

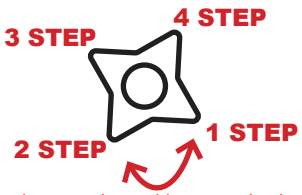
- Calibration Instruction



RIGHT KNOB
Description for Instruction on Screen
TURN RIGHT KNOB
BACKWARDS - Turn the right knob backwards
FORWARDS - Turn the right knob forwards

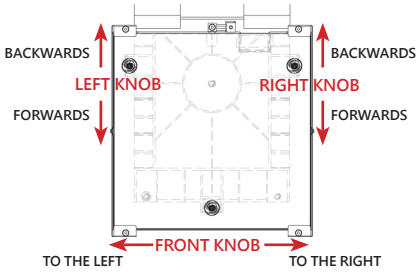
LEFT KNOB
Description for Instruction on Screen
TURN LEFT KNOB
BACKWARDS - Turn the left knob backwards
FORWARDS - Turn the left knob forwards

FRONT KNOB
Description for Instruction on Screen
TURN FRONT KNOB
TO THE RIGHT - Turn the front knob rightwards
TO THE LEFT - Turn the front knob leftwards



(There are three white 4-step knobs under the bed. Each step of turning indicates 90 degrees of rotation and 4 steps of flick indicate a complete circle of rotation of the knob.)

Knob Location and Adjustment Direction



TIPS FOR TURNING
1 STEP=90 DEGREE
4 STEPS=1 CIRCLE
[OK] TO CONTINUE

There are three white 4-step knobs under the bed. Each step of turning indicates 90 degrees of rotation, and 4 steps of flick indicate a complete circle of rotation of the knob as shown in the messages on screen. Press "OK" key to continue viewing adjustment instructions.

TURN FRONT KNOB
TO THE RIGHT :
8.7 STEPS
[OK] TO NEXT

Knobs corresponding to this procedure
Turning direction
Number of turning steps (each step indicates 1 tick/90 degrees of rotation)
After flicking knob in accordance with prompt, press "OK" key to continue

After executing calibration of platform, please make Z-OFFSET vertical calibration, in order to guarantee that the nozzle can print material on platform smoothly.
1. Move the extruder to the center of platform. The distance between nozzle and platform is suggested to enable two piece of A4 paper to be pulled out smoothly.
2. Distance between nozzle and platform is changed positively with the value.
3. After adjustment, press OK to save settings.

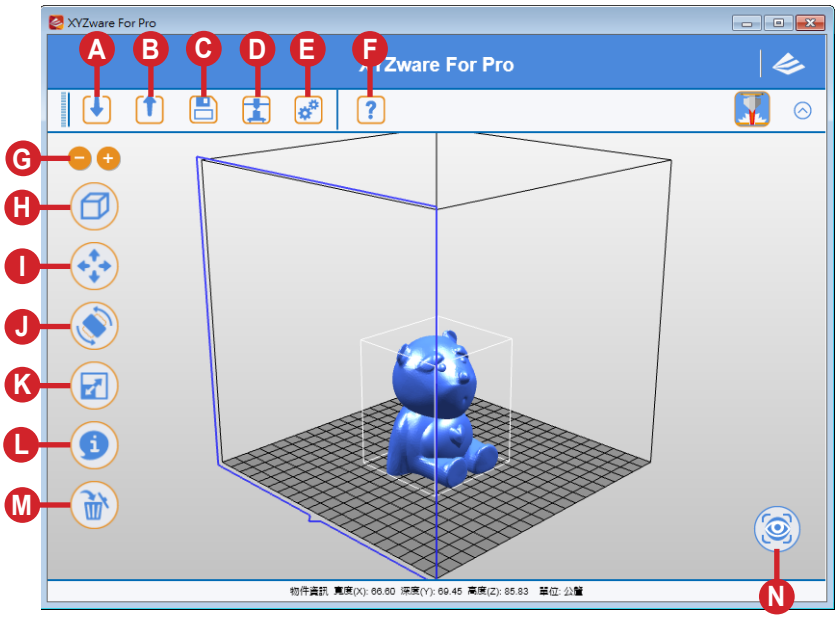
UTILITIES
CHANGE CART
HOME AXES
▶Z OFFSET

Calibration fail will be caused, in case of any smudginess at the measurement points on platform, or too long or short of the distance between platform and nozzle. Please adjust as follows: 1. clean platform and nozzle 2. adjust the detection distance between platform and nozzle
Please execute "CALIBRATION" again after each operation step is completed, until the detection result displays "perfect".
*Please refer to the tutorial video provided on the official website, for detail operation process of calibration.

Print

Transfer print file through computer software "XYZware Pro"

Connect the printer and the computer with USB cable and install "XYZware Pro" in the computer to transfer print file.



- A — Import .stl, .3w files
- B — Convert to .3w file
- C — Save .stl file
- D — Set print preference, transfer print file
- E — Set software display language, preview color
- F — Query, update software and firmware versions, open link to official website
- G — Adjust display scale
- H — Switch preview angle rapidly
- I — Move location of the model
- J — Change angle of the model
- K — Adjust size of the model
- L — Display information about the model
- M — Delete the model from the virtual platform
- N — Check printer temperature, filament information and print progress

"XYZware Pro" may run in Windows 7 and above and Mac OS 10.8 and above operating systems. You may install it from the bundled CD or download the installation file from the XYZprinting official website.

● Basic Operation Flow

After opening the software, click "Import" to select the model file you desire to print and load it. The user may change relevant settings through "File Conversion" function to satisfy adjustment of print speed and effect.
After setting up the model at the desired size, location and placement, you can also adjust the printing preferences, such as print speed and layer height by clicking the "Export" icon. Click the "Export" button to slice the file.
When the model is sliced, click on the "Print" button to send the file for printing.

For more information on software update, operation instructions and technical supports, please visit the XYZprinting official website: http://www.xyzprinting.com/

Print

WiFi Connection

The printer supports Wi-Fi connection printing.
Install "XYZware Pro" , and activate Wi-Fi setting of the printer in accordance with the following instruction to switch the printer to wireless control mode, such that the print file may be subsequently transferred wirelessly.

●Preparation Prior to Setting

1. The network print function is provided mainly for Intranet application. Please set the printer and the computer in the same domain, that is, link them to the same wireless base station (Access Point).
2. Before linking the printer, settings would be adjusted for the connected wireless base station. For detailed setting way, please refer to the operation instruction of the product or original vendor relevant information.
3. Channel Width may be set to 20 MHz for use of wireless print function. Please refer to original vendor operating instruction of wireless base station to understand adjustment way.
4. Please keep the wireless network function in the on state.
5. The machine supports the following link security modes. Public key information would be requested to enter in setting printer connection.

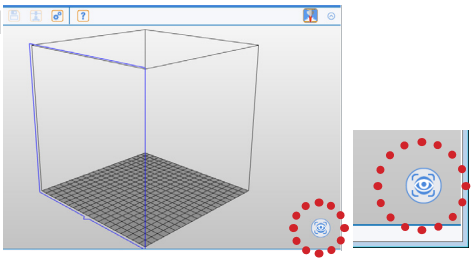
◆ WEP ◆ WPA ◆ WPA2

●WiFi Settings

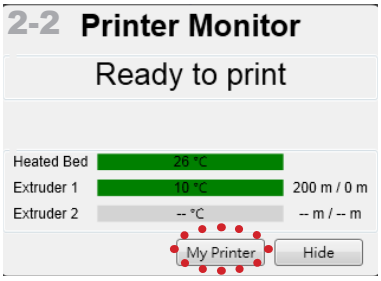
1 Please use a USB cable to link the computer and the printer, and open "XYZware Pro".

2 Click the "Printer Monitoring" function icon on the lower right corner on the screen, open "Printer Monitoring" window, click "My Printer" > "Scan" to enter the page for printer search, and click "Wireless Network Settings" to enter the page for wireless print settings.

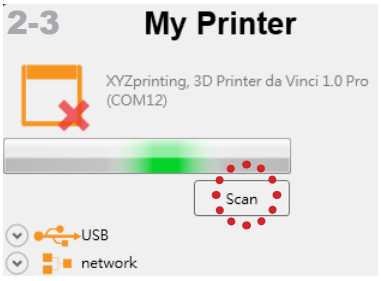
2-1



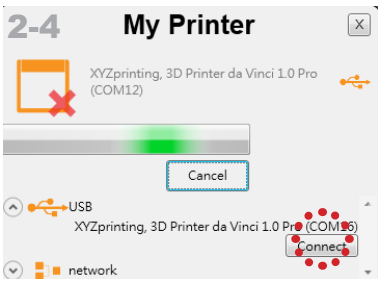
2-2



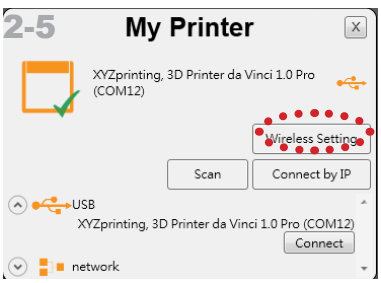
2-3



2-4



2-5



Print

WiFi Connection

3 Please enter printer name (either English or numeric name), press "Scan" function to obtain wireless base station information with dropdown menu, and select the name of the wireless network you desire to connect.

4 After successful connection, Wi-Fi name will be displayed on screen of the printer.

5 At this moment, USB cable may be taken off to continue the print process.

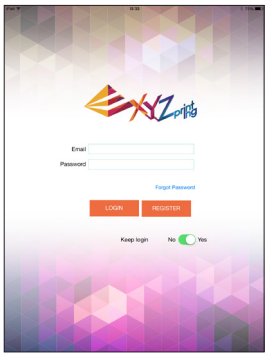
6 If connection is to be disconnected, please connect USB back between the computer and the printer, and open XYZware Pro again.

Print From A Mobile Application

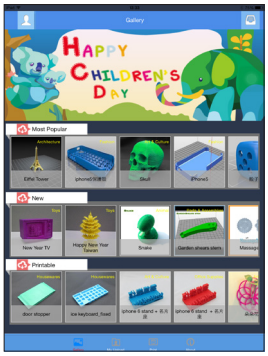
1.The mobile device needs to support wireless printing.
2.Install XYZprinting App from Android or iOS system.

●Step

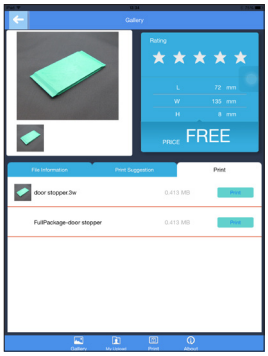
1 Open the Play Store from your Android browser or App store of iOS system to search "XYZgallery" and download the application to your device.



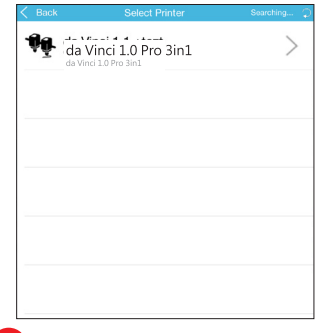
2 Please register an account at XYZprinting official website before logging in.

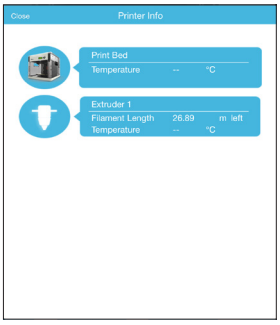


3 After log in, you will see ” most popular”, "new" and "printable*" three folders for you to choose.



4 Select the object you want to print.





5 Select the printer and confirm the printer information, tap "Confirm to print", the file will be sent to the printer and ready to print.

Note:

1.Ensure the mobile device and the printer are connected on the same wireless network.
2.Transferring a print fi le over a wireless network may take more time than transferring a print file from a USB mass storage device.
3.When a .3w file with incompatible slicing is selected, the message of “Printer Type does not match”will be displayed.
We suggest selecting other files or downloading .stl to slice before printing.

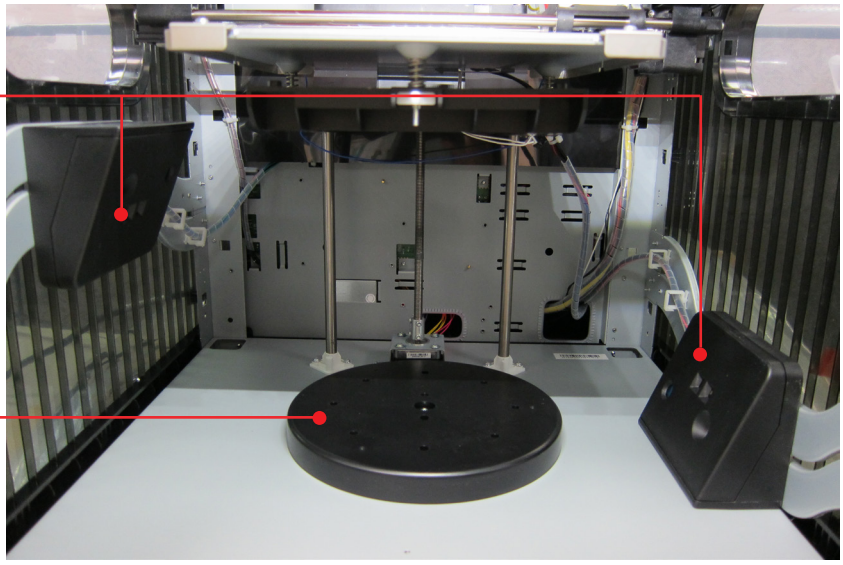
*The printable file is .3w format which can print from App directly. Some prints are.stl files that need to export into .3w format via XYZware before printing. If the fi le requires payment, please follow the payment instruction.

Scanning

Scanning takes around 5 minutes. During scanning, the object on the turntable revolves in a clockwise direction. Throughout the process, the laser modules projects linear beam at the object while the camera on the module fi lms a complete image sequence of the rotating object. When scan is fi nished, XYZscan then converts the images captured into a triangulated mesh.

3D laser scanner at the left and right sides

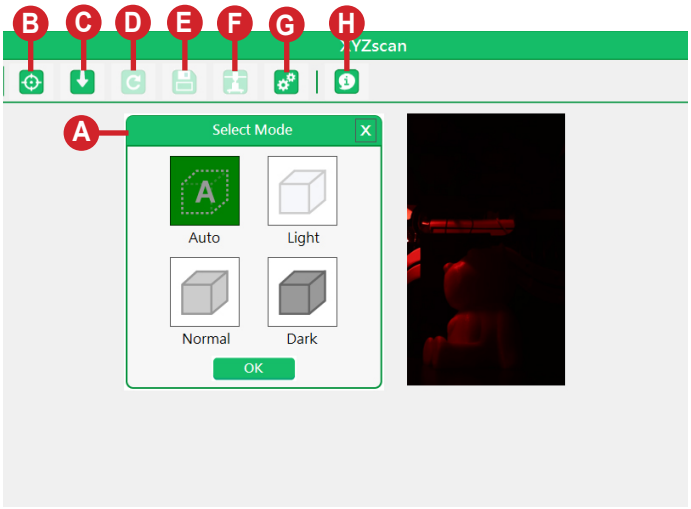
360 degrees automatic rotating platform for scanning



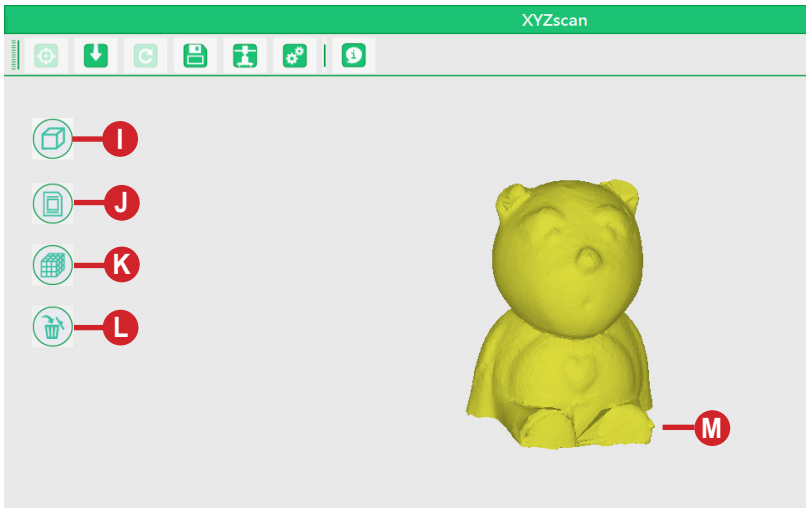
Scan with XYZscan

●XYZscan

Install XYZscan on the PC before scanning. Installer can be found in bundled Software CD and at XYZprinting website: http://support.xyzprinting.com/en/Support/download
Scanning is always activated with XYZscan. With the software, you may also edit/save the scan and send the object for printing.



- A — Set scan mode based on the color of the object.
  Light: for light-shaded (e.g. white) objects
  Normal: for objects with colors that are not easily classified
  Dark: for dark-shaded (e.g. brown) objects
- B — Start to scan: Activate scanning
- C — Import 3D model files: Import .das fi le for editing or import ".stl".
- D — Scan again with current setting: Re-scan with the same settings.
- E — Select model quality and save to file :Save the scan as .das/.stl.
- F — Print model: Send the scan to XYZware for printing.
- G — Adjust XYZscan settings:Language setup/Calibration.
- H — Information abour XYZscan:Info/Software and firmware updates.



I — Viewpoints
J — Model information
K — The quality of a model is defined by the number of facet. Generally more facet could result in better quality.
L — Delete model
M — Scanning view

Basic workflow

1 Select a scan mode based on the shade of the object to be scanned. → A → 2 Press “Scan”. → B → 3 Edit your scan (Optional). → I ~ M → 4 Press “Print” to activate XYZware. (Be sure to remove the object from the turntable before printing!)

●Suggested Configuration for Scanning

- Place the printer on a leveled and stable surface AND in a dark place without sunlight or other light sourcing shining directly to the scanner modules for better scan performance.
- Scannable object size (diameter x height): 3x3cm to 15x15cm/1.18x1.18" to 5.9x5.9"
- Scannable object weight: ≦ 3kg/6.6lbs
- Objects with the following features scan better:
  - ◆ Stationary objects ◆ Non-translucent objects ◆ Objects with light-shaded surface, especially white surfaced objects
  - ◆ Cylinder-like objects, objects with round curves
- Moving/living objects may not be scanned
- Objects with very fi ne spikes, sharp or pointed tip or fur-covered objects may be diffi cult to scan.

●Object Placement

Place the object to be scanned at the center of the turntable, and adjust the placement to make sure that as much of the object is in the line of sight of the scanners.

●Tips for Improving Scanning Quality

Due to the limitation of the laws of physics, objects with some features may not scan well. If scanning with the correct scan mode setting doesn't help, follw the suggestion below may help to improve the scanning quality.

For objects with high contrast/glossy/fuzzy/translucent/dark, especially black, dark green and dark blue, surface, you may try to apply rubber coating (white coating works the best) on the surface. (The coating can be peeled off easily when dry)


Scanning result of a translucent object


Apply rubber coating on the translucent object


Scanning result of the rubber spray-coated object

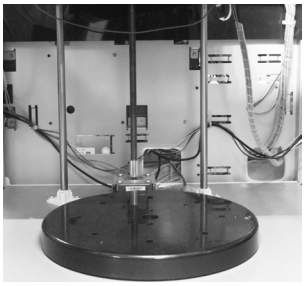
• Scanning Devices Calibration

Original model

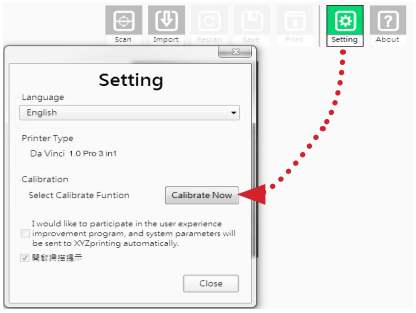
Scanning result
before calibration

Scanning result
after calibration

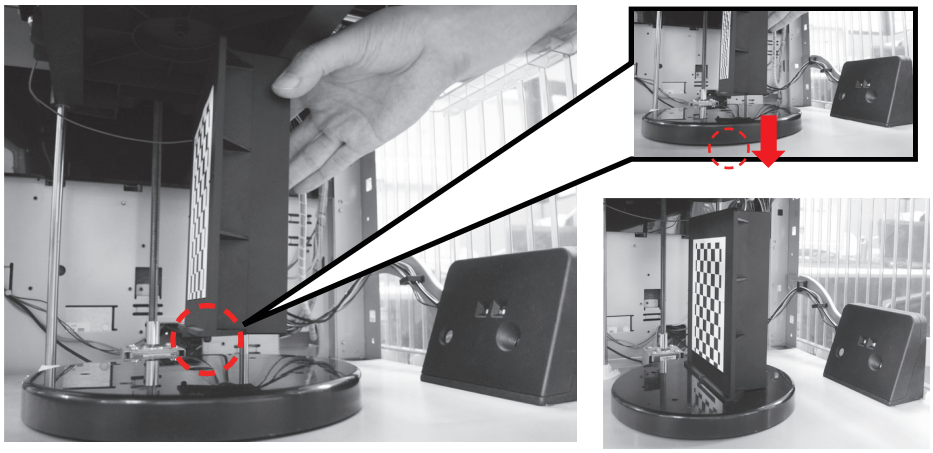
When you find inaccurate scan results, please follow the steps for scanning devices calibration.



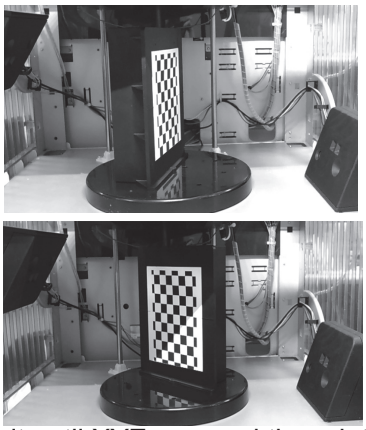
1 Remove the object from the tumtable



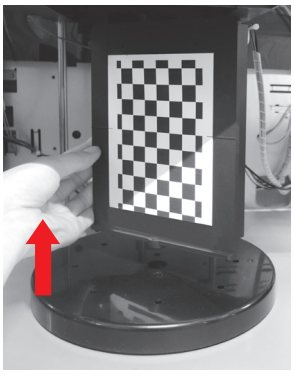
2 In XYZscan, select "Setting" > "Calibrate Now"

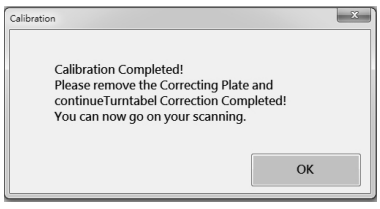


3 Wait until XYZscan shows the instructions of calibrating plate placement, place the plate at the center of the turntable (with chessboard pattern facing the left scanner and insert the tab at the bottom of the calibrating plate into the hole at the center of the turntable), then click “Calibrate now”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



4 Wait until XYZscan and the printer finish calibration (for approx. 7 minutes)



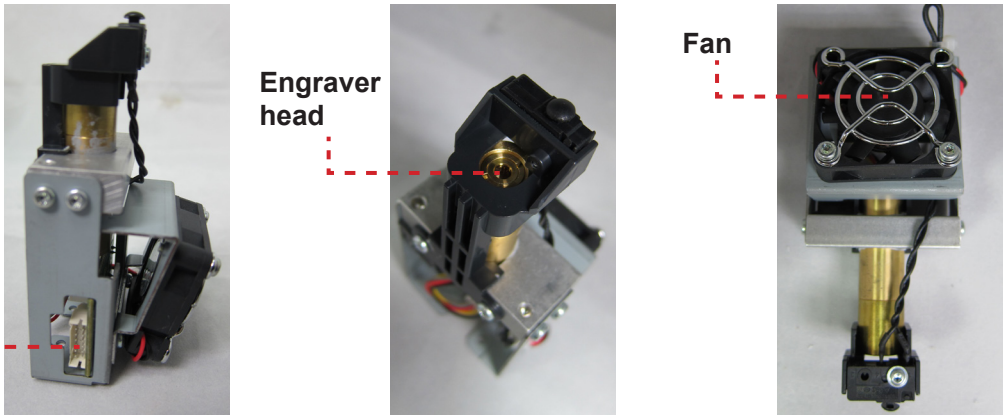


5 When XYZscan prompts of calibration completed, remove the calibrating plate, and click “OK” to fi nish. You may begin to scan.

Select module

Laser engraver module must be purchased separately.Please read through this manual and all safety reminders carefully before using, operating, dismantling,replacing, or removing this product. Please also comply with relevant safety reminders and instructions.

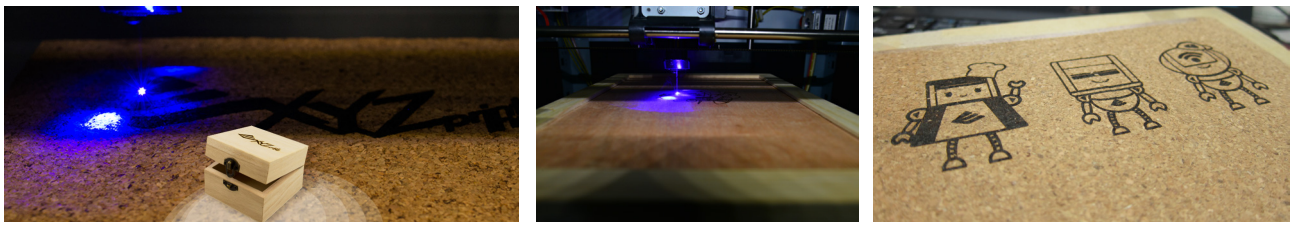
• Product Overview



• Recommended laser engraving material:

◆ Paper ◆ Cardboard ◆ Leather ◆ Wood ◆ Plastic

Note: Avoid using materials that are light colored, white, or have glossy surfaces for laser engraving. Achieve the best engraving results with gray colored or dark colored materials.
Plastic materials (such as PP / ABS / PE) may be engraved. However, please avoid using materials that are transparent, white, or lightly colored.
The engraving module is only capable of engraving planar objects. The target should thus be placed flatly on the panel. Avoid engraving warped or curved objects that are not completely flat.



• Replace and Installing the laser engraving module:

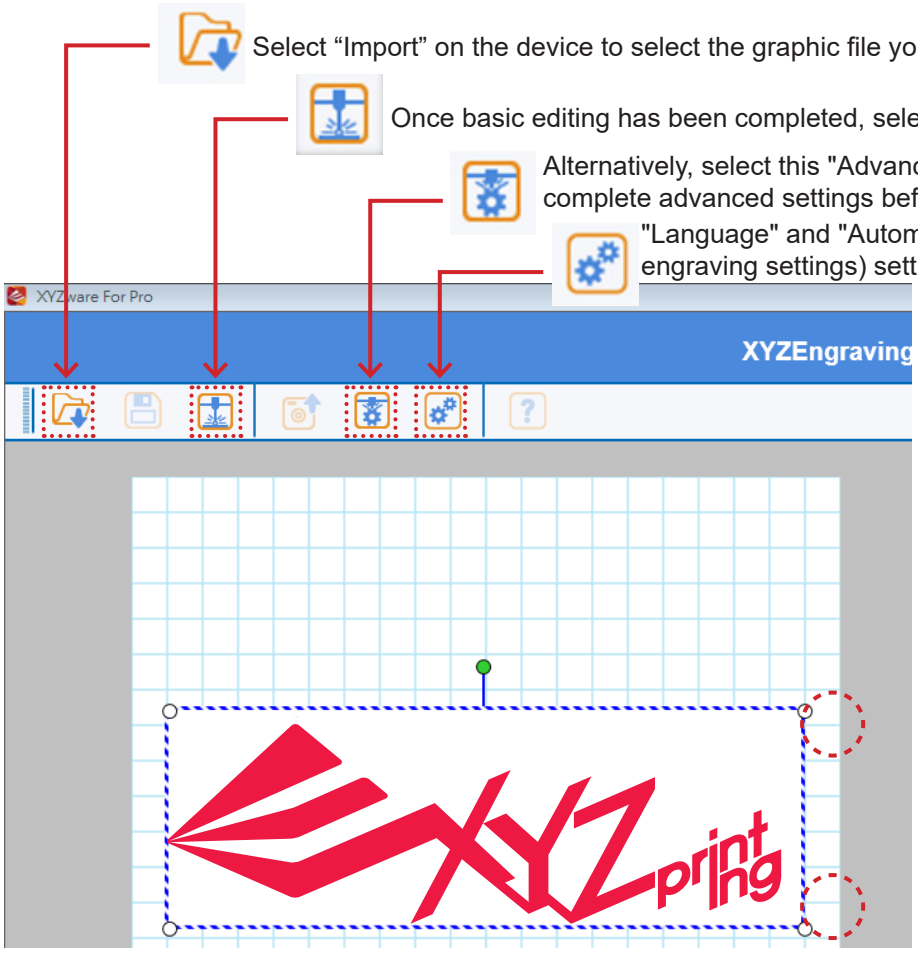
Before replacing the extruder module with the laser engraving module, check if there are remaining filaments in the nozzle and remove them accordingly. After removing the filament, please select [CHANGE NOZZLE].

◆ Wait for the panel to display the message that allows you to switch off the power to replace the printing module before switching off the power.
◆ Unplug the heating bus at the side of the extruder module.
◆ Pull open the quick-detachment lock to release the extruder module. Tilt the module and remove it from the slot.
◆ Install the laser engraver module. Please ensure that the module has been oriented in the correct direction, then connect the heating bus cables.
◆ Pull the quick-detachment button. Tilt the laser engraving module and insert it into the installation slot.
◆ Press the quick-detachment button and ensure that the module is secured by the locking lever at the correct position to complete the installation.
◆ Installation / detachment of the laser engraving module completed. Provide proper safekeeping of the extruder.

• Functions of the laser engraving software:

Once the laser engraver module has been installed, open the “XYZware Pro” software. Select the laser engraving function located at the upper right of the toolbar. Import the picture file to be engraved, edit and set laser engraving effects, and initiate the engraving process.

• Function Description:




Click once to hide the imported file.
Click on this icon again to show it.


Delete the imported file.

- **Select "Edit". The software screen shall display the laser engraver settings.**

The user may choose between Vector / Pixel engraving modes (default software setting is Vector mode).
Set engraving speed, number of engraving layers, contour detection sensitivity, or color depth detection sensitivity.

- **Pause and cancel the laser sculpting**

PAUSE:Select “PAUSE” to pause the laser engraving process.
RESUME:To cancel the pause and resume the printing, select “RESUME”.A screen will appear to confi rm whether to resume the engraving process. Select “YES” to continue the laser engraving process.
CANCEL: To cancel the laser engraving job, select “CANCEL” . A screen will appear to confirm whether to cancel the engraving process. Select “YES” to cancel the laser engraving process.

- **Laser Specification**

Laser Wavelength	450nm+5nm/-10nm InGaN	Laser Power	350mW ± 10%
Laser Power for Classifi cation	Class 3B	Beam Diameter	≦ 1mm
Engraving area	20 x 20 cm	File Types	JPG / PNG / GIF / BMP
Mode of Operation	CW (Continuous Wave)		

For more details on laser engraving settings and methods, please refer to the "Laser Engraving Module User Manual".

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.

Error message and Action

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

Service Code	Symptom	Action
0 0 0 3(software)	Print bed heating problem	Confirm whether the heater works normally and whether the senor and heating rod are installed correctly or work normally. Problems may occur when the printer works under 25 °C. Please move the printer to the environment at proper temperature.
0 0 0 7(software)	“UNIDENTIFIED CARTRIDGE” shown on the printer screen indicates filament chip anomaly.	Reinstall or replace the filament cartridge.
0 0 0 8(software)	“UNIDENTIFIED CARTRIDGE” shown on the printer screen indicates filament chip anomaly.	Reinstall or replace the filament cartridge.
0 0 1 0	Print bed heating problem	Confirm whether the heater works normally and whether the senor and heating rod are installed correctly or work normally. Problems may occur when the printer works under 25 °C. Please move theprinter to the environment at proper temperature.
0 0 1 1	Extruder heating problem	Confirm whether the nozzle works normally and whether the senor and heating rod are installed correctly or work normally. Problems may occur when the printer works under 25 °C. Please move the printer to the environment at proper temperature.
0 0 1 3	Print bed heating problem	Confirm whether the heater works normally and whether the senor and heating rod are installed correctly or work normally. Problems may occur when the printer works under 25 °C. Please move theprinter to the environment at proper temperature.
0 0 1 4	Extruder heating problem	Confirm whether the nozzle works normally and whether the senor and heating rod are installed correctly or work normally. Problems may occur when the printer works under 25 °C. Please move the printer to the environment at proper temperature.
0 0 2 8(software)	NO CARTRIDGE (Filament is not installed correctly)	Reload or replace the filament
0 0 2 9(software)	CARTRIDGE EMPTY	Replace filament immediately
0 0 3 0	X-axis movement abnormalities	Check motor/sensor connections. Check sensor position.
0 0 3 1	Y-axis movement abnormalities	Check motor/sensor connections. Check sensor position.
0 0 3 2	Z-axis movement abnormalities	Check motor/sensor connections. Check sensor position.
0 0 3 3	Internal storage error	Please contact our Customer Service center
0 0 5 0	Turntable Operating Abnormal	Reboot the printer
0 0 5 1	flash ram access error	Reboot the printer
0 0 5 2	Nozzle internal memory error	Please contact our Customer Service center

Support Details

Error Status	Recommended Process Ways
Printer is busy	Try again after current task is completed, and examine the information displayed on screen of the printer.
Firmware of the printer cannot be updated	Check internet connection / Update firmware later.
Nozzle is clogged	Unload the filament to clean the nozzle, and then reload the filament.
Filament cannot be loaded	Unload and reload the filament
NO CARTRIDGE Filament is not installed correctly	Reload or replace the filament
CARTRIDGE EMPTY Filament ran out prior to a print:remain 0%	Replace filament immediately
FILAMENT LOW Filament residual is low: remain 30%	Replace filament if necessary
FILAMENT END Filament ran out while printing:remain 0%	Replace filament immediately

Maintenance and Service

Keep original packaging material in the event of sending your unit back for repair during the warranty period. 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.

Federal Communications Commission (FCC) Statement

You are cautioned that changes or modifications not expressly approved by the part 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.

XYZprinting is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and it also complies with Part 15 of the FCC RF Rules. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and consider removing the nocollocation statement.