**XYZprinting**

**da Vinci 1.0**

HD23DP010N6

# Product Manual

Cartridge Slot

Remove the packaging supports

Control Panel

Display Panel

Extruder Module

Z-Axis Rod

USB Port

Power Switch

Power Connector

Front Door

Print Bed

Remove the heated bed fixing screws and printing module fixers
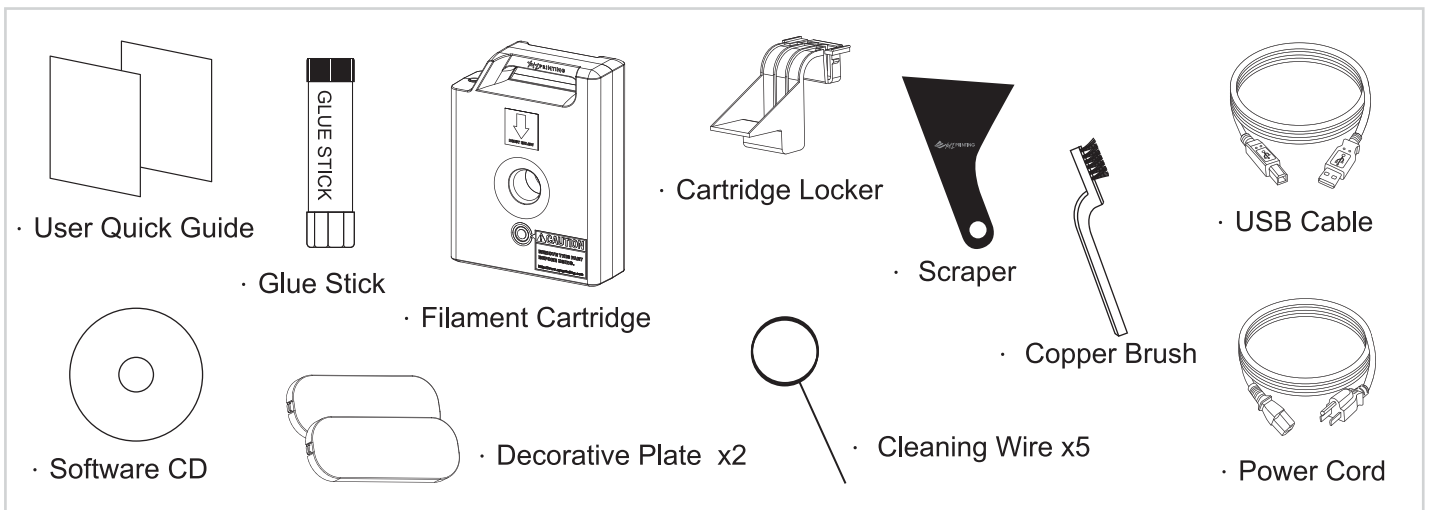
## Overview

This guide provides details on how to start off your da Vinci 1.0 3D printer correctly. Before you can begin printing, there are some easy procedures you need to become familiar with:

● How to open the box safely
● How to load filament
● Getting to know XYZware software

· User Quick Guide

· Glue Stick

GLUE STICK

· Filament Cartridge

· Cartridge Locker

· Scraper

· Copper Brush

· USB Cable

· Software CD

· Decorative Plate  x2

· Cleaning Wire x5

· Power Cord

## Important Safety Instruction

● Do not place the printer in humid or dusty environments such as bathrooms and high traffic areas.
● Do not place the printer on a rickety surface and/or inclined position. Printer may fall down or tumble and it may cause serious injury.
● Do not touch the interior of the printer while printing, as it may be hot and include moving parts. Please keep the front door closed during printing to avoid injury.

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## Open the box

**1** Open the box and remove the accessories and the layer of foam.

**2** Take out the printer by holding the grip holds.

**3** Remove plastic bag and tapes.

**4** Remove the cardboard.

Packing supports x2

tapes x3

**5** Open the top door, then remove packaging supports and tapes.

**6** Remove the print bed fixing tapes and foam.

**7** Remove the screw and the plastic piece from print bed.

**8** Remove the drip tray fixing tapes.

A
B

**9** Connect the printer to your PC first using a USB cable then turn on the power switch.

## Install Cartridge
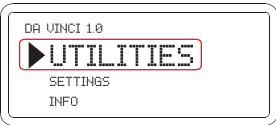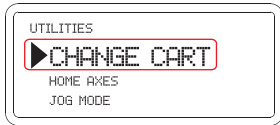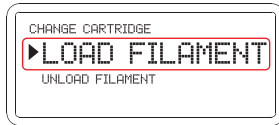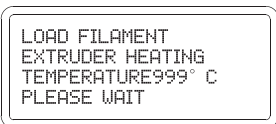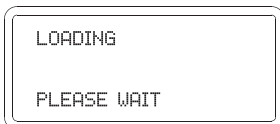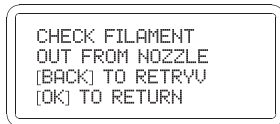
**1** Please remove the filament stopper.

**2** Install the new filament cartridge into the empty slot.

**3** Place and push to click the cartridge locker into the slot.

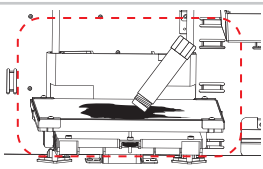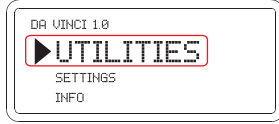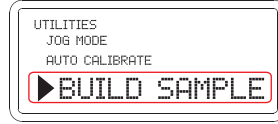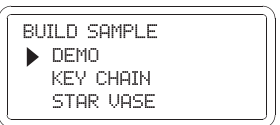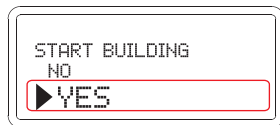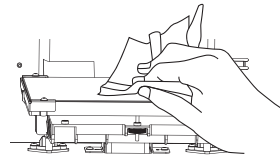**4** Push the filament through the filament guide tube to the hole of the extruder and press "LOAD FILAMENT" function on the display menu.

Tips:Grasping the release arms while the installation, it will be easier to push filament into the extruder.

# Product Manual

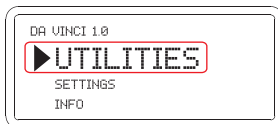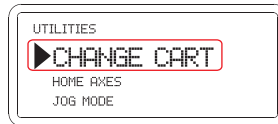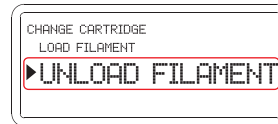## Load filament

```
DA VINCI 1.0
▶UTILITIES
  SETTINGS
  INFO
```
**1** Choose"UTILITIES" and press"OK" to continue.

```
UTILITIES
▶CHANGE CART
  HOME AXES
  JOG MODE
```
**2** Choose "CHANGE CART" and press "OK".

```
CHANGE CARTRIDGE
▶LOAD FILAMENT
  UNLOAD FILAMENT
```
**3** Choose "LOAD FILAMENT" and press "OK".

```
LOAD FILAMENT
EXTRUDER HEATING
TEMPERATURE999° C
PLEASE WAIT
```
**4** Please wait for extruder to reach working temperature.

```
LOADING

PLEASE WAIT
```
**5** Please wait for completion of filament loading.

```
CHECK FILAMENT
OUT FROM NOZZLE
[BACK] TO RETRYV
[OK] TO RETURN
```
**6** Check if the nozzle outputs filament and press "OK" to go back to main menu.

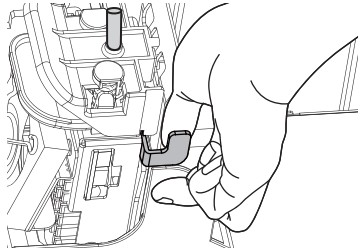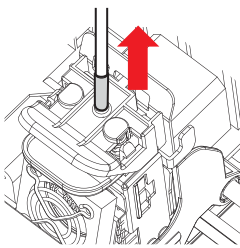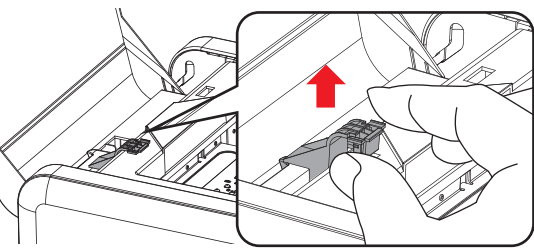## Sample print

Apply glue to print bed before printing. Glued area depends on the measurement of the object(s) to be printed.

```
DA VINCI 1.0
▶UTILITIES
  SETTINGS
  INFO
```
**1** Choose "UTILITIES" and press "OK" to continue.

```
UTILITIES
  JOG MODE
  AUTO CALIBRATE
▶BUILD SAMPLE
```
**2** Choose "BUILD SAMPLE" and press "OK" to continue.

```
BUILD SAMPLE
▶ DEMO
  KEY CHAIN
  STAR VASE
```
**3** Select one of the samples.

```
START BUILDING
  NO
▶YES
```
**4** Select "YES" and press "OK" to start printing.

**5** After printing is complete, power off the printer. Once the da Vinci has cooled use a damp cloth to clean the print bed.

## Unload filament

Note: Please always complete the procedure for "FILAMENT UNLOADING" before changing a new cartridge. Never cut off the filament from the extruder to prevent the extruder from clogged.

```
DA VINCI 1.0
▶UTILITIES
  SETTINGS
  INFO
```
**1** Choose "UTILITIES" and press "OK" to continue.

```
UTILITIES
▶CHANGE CART
  HOME AXES
  JOG MODE
```
**2** Choose "CHANGE CART" and press "OK".

```
CHANGE CARTRIDGE
  LOAD FILAMENT
▶UNLOAD FILAMENT
```
**3** Choose "UNLOAD FILAMENT" and press "OK".

**3** Remove filament when printer has reached working temperature as instructed. Then remove cartridge locker and the cartridge unloaded.

Note: Before pushing the filament into the guide tube, it is advised to cut the tip of the filament off at a 45° angle with a cutting pliers, filament loading will be easier.

# Maintenance Tools

## Important Safety Instruction

⚠️ The maintenance tools provided should only be handled by an adult. Please keep the tools away from children.  Incorrect handling or maintenance of the printer may cause damage to the product or personal injury.

## Information and usage of the advanced maintenance tools

### ▌ Scraper
Scraper is used to remove printed object from print bed when printing finished.
(Caution: do not remove the printed object while the print bed is hot.)

### ▌ Cleaning Wire
Cleaning wire is used to remove the filament left in the path inside the clogged nozzle when the molten filament has affect printing quality.
(Caution: Print bed may be hot during cleaning, please keep away from the platform to avoid personal injury.)
When cleaning the printer nozzle, gears or filament path please ensure to keep hands clear of the print bed which may be hot.

### ▌ Copper Brush
Copper brush is used to clean and remove molten filament left on the tip or surface of the extruder and inside the drive gear. When the printer fails to "Calibrate" consistently, please use the copper brush to clean and remove the filament pieces from the extruder.

## Specifications

| FEATURES | da Vinci 1.0 3D Printer | FEATURES | da Vinci 1.0 3D Printer |
|---|---|---|---|
| Print Technology | Fused Filament Fabrication(FFF) | Nozzle Diameter | 0.4 mm |
| Printer Head | Single Head | AC Input | 100-240V, 50~60Hz |
| Build Volume(W x D x H) | 20 x 20 x 20 cm | Connectivity | USB 2.0 x 1 |
| Layer Resolution Settings | Standard     200 microns | Display | FSTN LCM (16 Characters x 4) |
| | Speed        300 microns | Control Method | Key x 6 |
| | Ultra fast    400 microns | Indicator | Buzzer |
| | Custom       100-400microns | Lighting | LED |
| Filament Diameter | 1.75 mm | Weight | 26 Kg |

## Know about XYZware
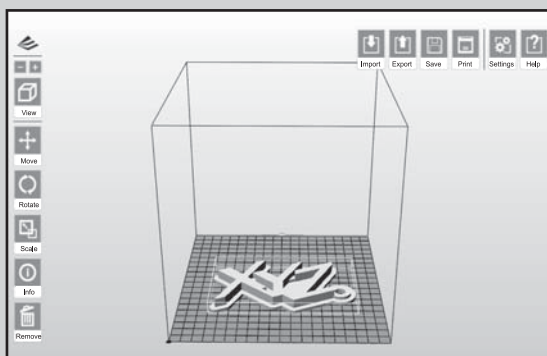
**For Mac OS and Windows8/8.1 user or software related topics, please visit following webpage for further information and download the proper XYZware version:**
**http://support.xyzprinting.com/downloads**

「XYZware」 is developed by XYZprinting Inc. It is designed for everyone, with or without modeling skill. You can view the model in various perspectives by importing (*.stl) file to it. It is also used to print objects from da Vinci 3D printer.XYZware can be found in the bundle software CD. To check our latest software updates and further information,
please go to:

http://support.xyzprinting.com/manuals

(Notice: Some instructions and video tutorials might require online registration to obtain authorization.)

# Print Bed Adjustment Instructions

⚠️ **This print bed has been calibrated by our professional technician before shipment. Do not make adjustments yourself, or contact our Technical Consulting.**

## Print bed adjustment flow chart

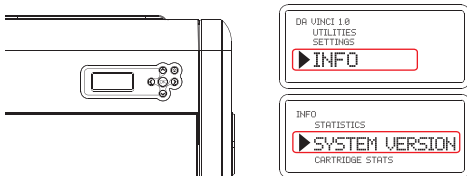| Step 1 | Step 2 | Step 3 | Step 4 | Step 5 |

Perform again!
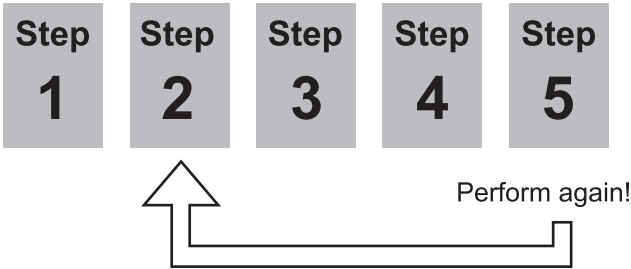
To clean the molted filament from nozzle thoroughly, it is recommended to activate "UNLOAD FILAMENT" function to keep heating the extruder for better cleaning.

## Print bed adjustment steps

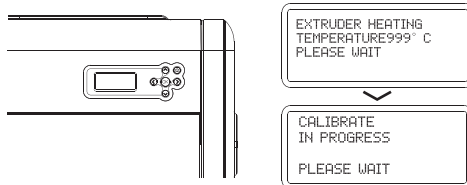1. Click "INFO>SYSTEM VERSION" using the function keys to make sure your firmware is the latest.

```
DA VINCI 1.0
    UTILITIES
    SETTINGS
  ▶INFO
```

```
INFO
    STATISTICS
  ▶SYSTEM VERSION
    CARTRIDGE STATS
```

2. Click "UTILITIES>CALIBRATE" using the function keys and select "Yes" to perform calibration.

```
DA VINCI 1.0
  ▶UTILITIES
    SETTINGS
    INFO
```

```
UTILITIES
    JOG MODE
  ▶CALIBRATE
    BUILD SAMPLE
```
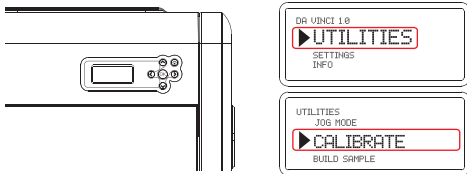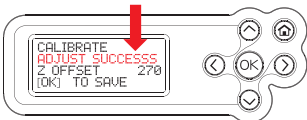
3. The printer starts automatic measurement. Wait for 2~3 minutes and verify the data shown.

⚠️ **Note: During the measurement process, the print bed and print module will be heated. Care should be taken during operation!**
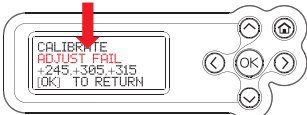
```
EXTRUDER HEATING
TEMPERATURE999° C
PLEASE WAIT
```

```
CALIBRATE
IN PROGRESS

PLEASE WAIT
```

Ⅰ. If **ADJUST SUCCESS** is shown.

```
CALIBRATE
ADJUST SUCCESSS
Z OFFSET     270
[OK] TO SAVE
```

→The printer does not need adjustment and press **OK** to exit.

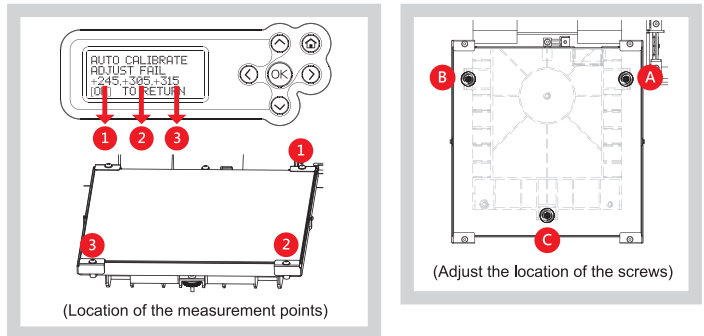Ⅱ. If **ADJUST FAIL** is shown.

```
CALIBRATE
ADJUST FAIL
+245,+305,+315
[OK] TO RETURN
```

→The printer needs adjustment, refer to the values shown.

4. Refer to the values for adjustment:

Step-by-step adjustment

Ⅰ. Adjust the screw at Point A to reduce the difference between the 1st and the 2nd measurements.
Ⅱ. Adjust the screw at Point B based on your evaluation of the results obtained from the previous steps.
Ⅲ. Finally, adjust the screw at Point C to reduce the difference between all measurements.

```
AUTO CALIBRATE
ADJUST FAIL
+245,+305,+315
[OK]  TO RETURN
```

(Location of the measurement points)

(Adjust the location of the screws)

View the printer from the front when making adjustment

Rotate the screw to the left to raise the bed (value increases)
Rotate the screw to the right to lower the bed (value decreases)
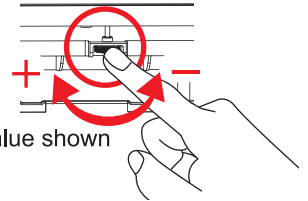
Each turn leads to a change of 50 to the value shown

5. After the adjustment is finished, perform step 2. Wait until **ADJUST SUCCESS** is shown and press **OK** to complete calibration.

```
CALIBRATE
ADJUST SUCCESSS
Z OFFSET     270
[OK] TO SAVE
```
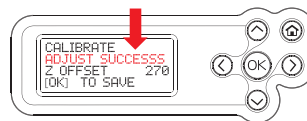
※ **Reminder**

If the value shown is always **999,999,999**, follow the steps below to clean.
A. Clean the surface of the print head using the copper brush.
(Clean the contact point between the print head and print bed)
B. Wipe and clean the measurement points in reference with Figure 4.
C. Perform the calibration process again.

```
CALIBRATE
ADJUST FAIL
+999,+999,+999
[OK] TO RETURN
```

# Service Code Informations

For further information and instruction of the service code, please refer to XYZprinting website (http://support.xyzprinting.com/) or contact service center for help.

| Service Code | Display Panel Description |
|---|---|
| 0 0 1 0 | Extruder or print bed higher/lower than maximum/minimum temperature during printing |
| 0 0 1 1 | Extruder or print bed cannot heat to the specified temperature |
| 0 0 1 3 | The temperature of print bed reach to warning range limited |
| 0 0 1 4 | The temperature of extruder reach to warning range limited |
| 0 0 3 0 | X axis motor failed results moving failed or X axis home sensor failed results home detect failed |
| 0 0 3 1 | Y axis motor failed results moving failed or Y axis home sensor failed results home detect failed |
| 0 0 3 2 | Z axis motor failed results moving failed or Z axis home sensor failed results home detect failed |
| 0 0 4 0 | Memory storage cannot read/write |
| 0 0 5 0 | Flashrom cannot read/write |

## Note

Please retain all original packaging material and please ship your product with the original packaging for warranty purpose. Shipping without original packaging material may cause product damaged during the shipment and may cause chargeable service fees.