



XYZscan User Manual

Declaration

Limitation of Liability Clause

Although we try to ensure that the manual and product functions are correct and stable, in no event shall XYZprinting be liable for any direct, special, indirect, incidental, or consequential damage to computer data or operational activities. It is strongly recommended that important data be backed up or moved before using this software to prevent data loss and corruption due to contingent or unavoidable factors.

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Print History

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

Announcement

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XYZprinting online resources : <http://www.xyzprinting.com>

Edition	Month	Year	Software
1	9	2014	Beta

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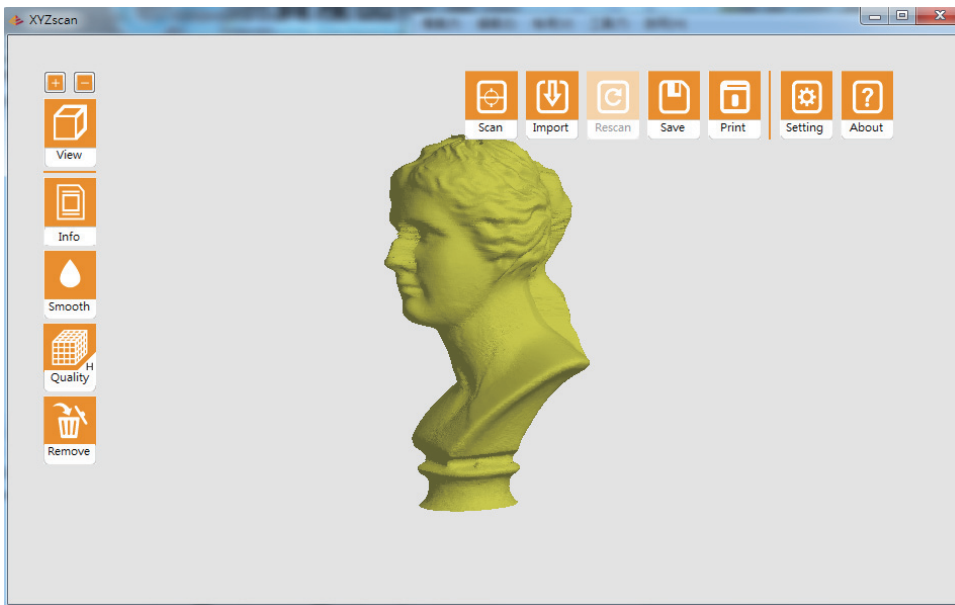
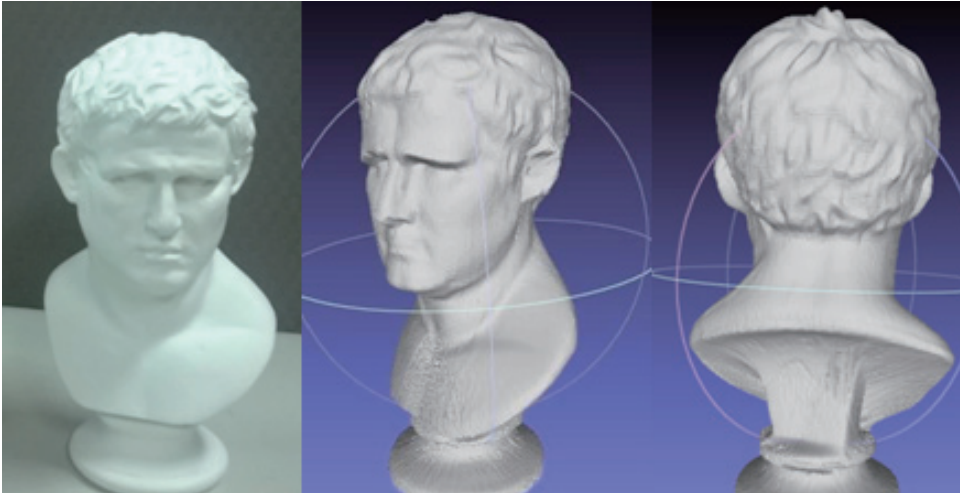
1

Brief introduction to XYZscan

1. Brief introduction to XYZscan



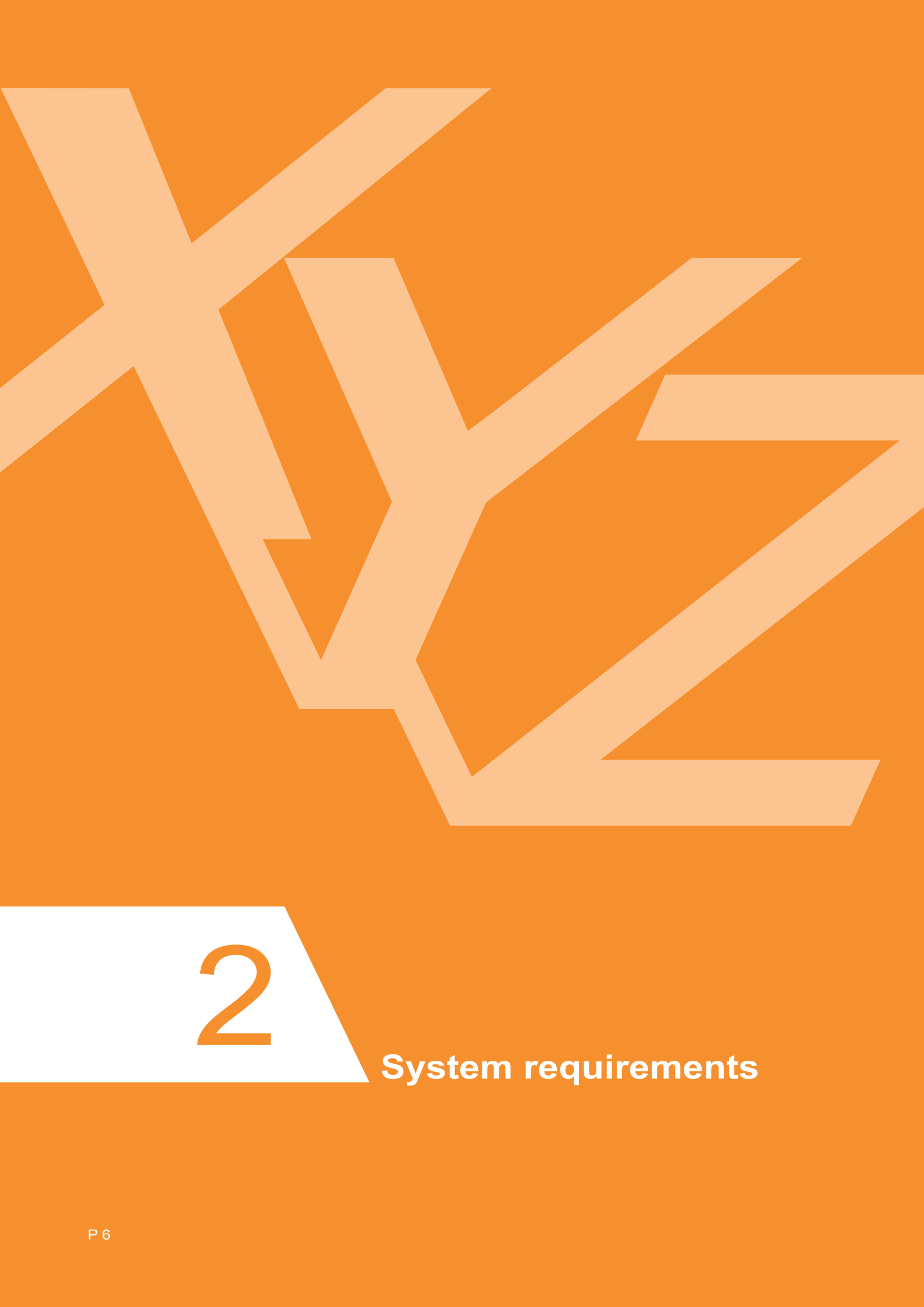
"XYZscan" is a 3D-object scanner assistant software designed exclusively for da Vinci. It can work with AiO (All in One) series models to conduct 3D scans, provide instant pre-views of files and output files into a copy work via "XYZware." Thanks to the integration of "XYZscan" with the XYZprinting AiO series models, the technical threshold of the 3D image file creation is largely reduced, and the requirements for the consumer to "scan + print" are met at the same time.



About Mac OS users

If a Mac OS environment is used, compatible software programs may be acquired from the official website or the disc that comes with the printer. For information on the latest edition and technical support, go to the XYZprinting website for further details.

URL: <http://support.xyzprinting.com>



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System requirements

2. System requirements

Before using "XYZscan," please acquire this application software from the original disc that comes with the printer. In addition, for relevant edition update information and technical support, refer to XYZprinting online support: <http://www.xyzprinting.com>.

Before using the product, please check to see if the following recommended requirements are in line with the operating environment of the system:

Software	Operating System	PC: Windows 7 / Windows 8 Mac: OS X 10.8 (Mountain Lion) OS X 10.9 (Mavericks)
Hardware	Hardware Requirements	Processor: 64-bit processor with two cores RAM: 4 GB Hard disk space: 5 GB or more Graphics card: OpenGL 2.1 compatible Display: 1024 x 768 pixels or higher

Other firmware and third party programs

Graphics card driver must be able to support OpenGL 2.1 and above.

Note: The standard VGA driver in the operating system or a graphics card that cannot support OpenGL 2.1 and above may cause XYZscan to generate unknown errors during operation.

About .Net Framework

In a Windows operating system environment, XYZscan enhances the stability and smoothness of the execution using the installed .Net Framework in the system. According to feedback from the development and testing of the software, earlier versions of .Net Framework may result in abnormal execution of the XYZscan or make installation impossible. Therefore, before installing this software, please confirm that the operating system is installed and upgraded to .Net Framework 4.0 or above. For more descriptions about .Net Framework, please refer to the website of the manufacturer: <http://www.microsoft.com>. The trademark and copyright are the properties of the website owner.



3

Installation instructions

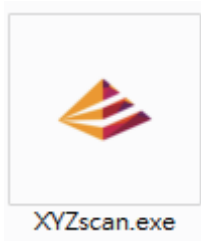
3. Installation instructions



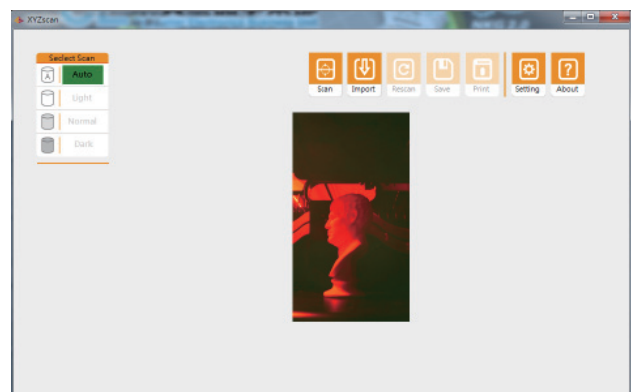
Please insert the manufacturer's disc that comes with the printer into the disc drive and the installation start program will appear on your screen (as shown in the figure below). Then click "Install XYZscan."



You can also open Explorer and look for the following file in the disc drive folder. Double click to activate XYZscan Setup.



Congratulations! You have completed setup! You may activate XYZscan from the desktop. XYZscan is ready to use.

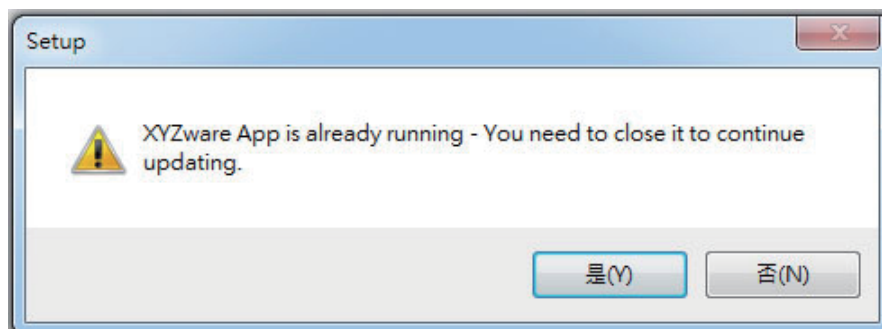


3. Installation instructions



Setup troubleshooting

If the following screen appears during the setup of the software, it indicates that the XYZware software has been running in the operating system. Shut XYZscan down and install the software again. If this problem continues, it is recommended that you reboot your computer for installation.



According to user experience feedback, during the setup of the software, the detection mechanisms of some antivirus software may report false virus alerts due to excessive sensitivity settings. As a result, the setup may be interrupted or incomplete. It is recommended that you modify the safety mechanism of the relevant antivirus software before setup.

Friendly reminder

Inquiry	Description
File format support	*.das (may be reedited via XYZscan) *.stl
Maximum weight load of the scanning platform	3Kg
Average object scanning time	about 288 s
Rotation method and time of the scanning platform	Clockwise rotation, 144 s/turn
Safety precautions	Close the front door before starting the scanning function. Keep the front door closed while the machine is scanning.

Basic workflow

- 1 Select a scan mode based on the color of the object to be scanned.
Bright: for objects with lighter color (e.g. white)
Normal: for objects with colors that are not easily classified.
Dark: for objects with darker color (e.g. brown)
- 2 Press "Scan".
- 3 Edit your scan (Optional).
- 4 Press "Print" to activate XYZware.
Be sure to remove the object from the turntable before printing!



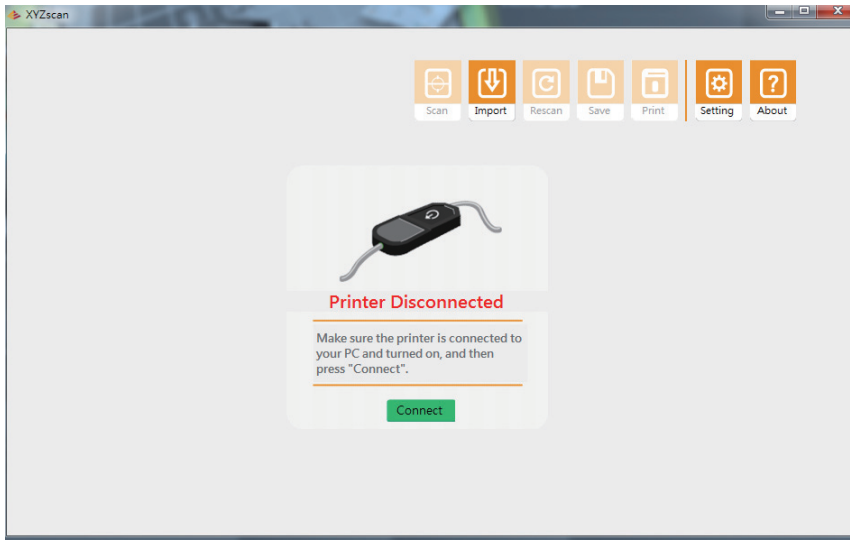
4

Getting started

4. Getting started

The relevant operations described in this document must be conducted together with da Vinci "AiO" series 3D printing products (hereinafter referred to as the "Printer"). Before using the software, it is recommended that you connect a da Vinci "AiO" series 3D printer for complete access to the functions.

Before activating XYZscan, check to see if the Printer is connected to the computer and turned on. If not, the following dialogue box will appear. Connect the USB signal line of the Printer to the computer and click Connect to acquire complete scanning functions.

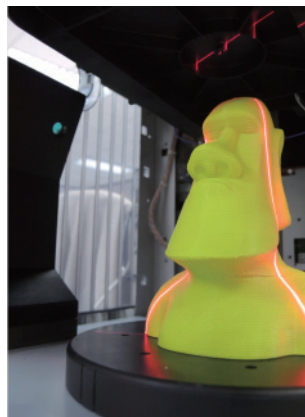
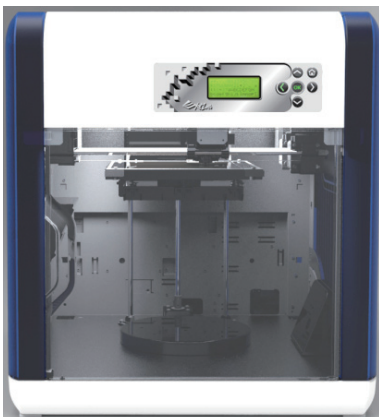


! Note:

Note: When the scanning functions are ready for use, no object shall be left on top of the printing platform. After XYZscan is activated, the printing platform will rise automatically. An object not removed from the top of the printing platform may hit parts of the machine and cause damage to the Printer.

! Note:

When activating XYZware or before clicking "Print" for XYZscan, no objects shall be placed on top of the printing platform. When the printing function is activated, the printing platform will go down automatically. Any object not removed from the top of the printing platform may hit parts of the machine and bring about damage to the printer.



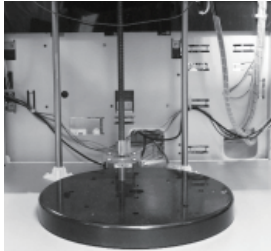
The scanning function is activated.
The printing platform rises automatically to the designated position.

4. Getting started

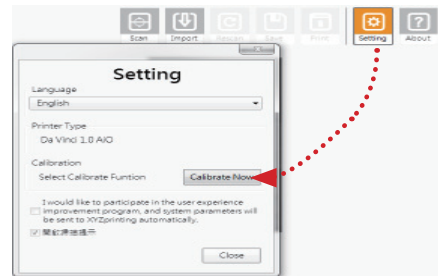


Scanning device calibration

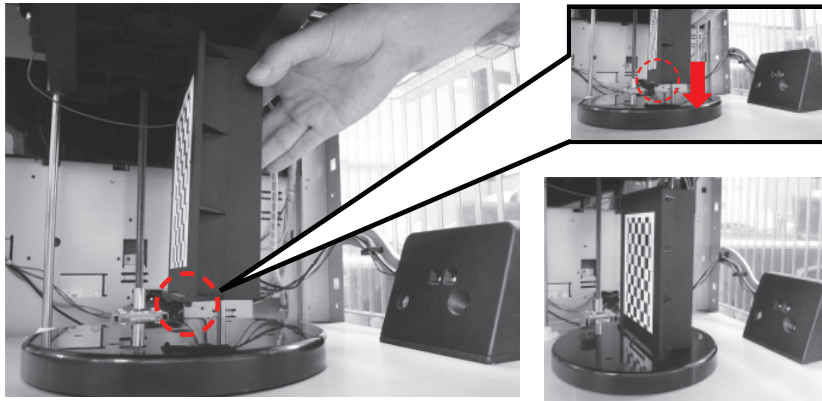
If you found that the scanning result is not accurate enough, calibrate the scanning device following the steps below:



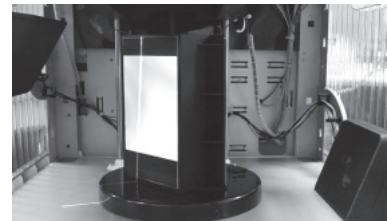
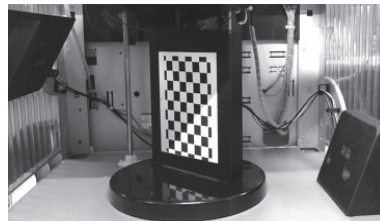
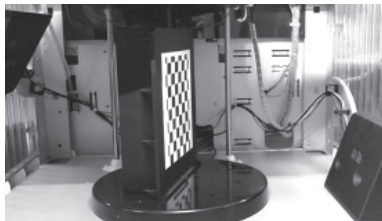
1 Remove the object from the turntable



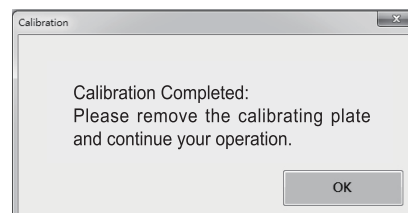
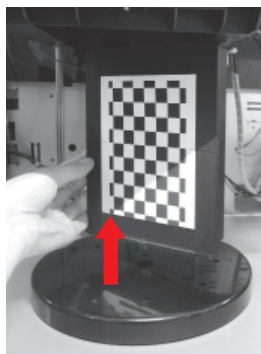
2 In XYZscan, select "Settings"> "Calibrate"



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 the click "Calibrate now" button.



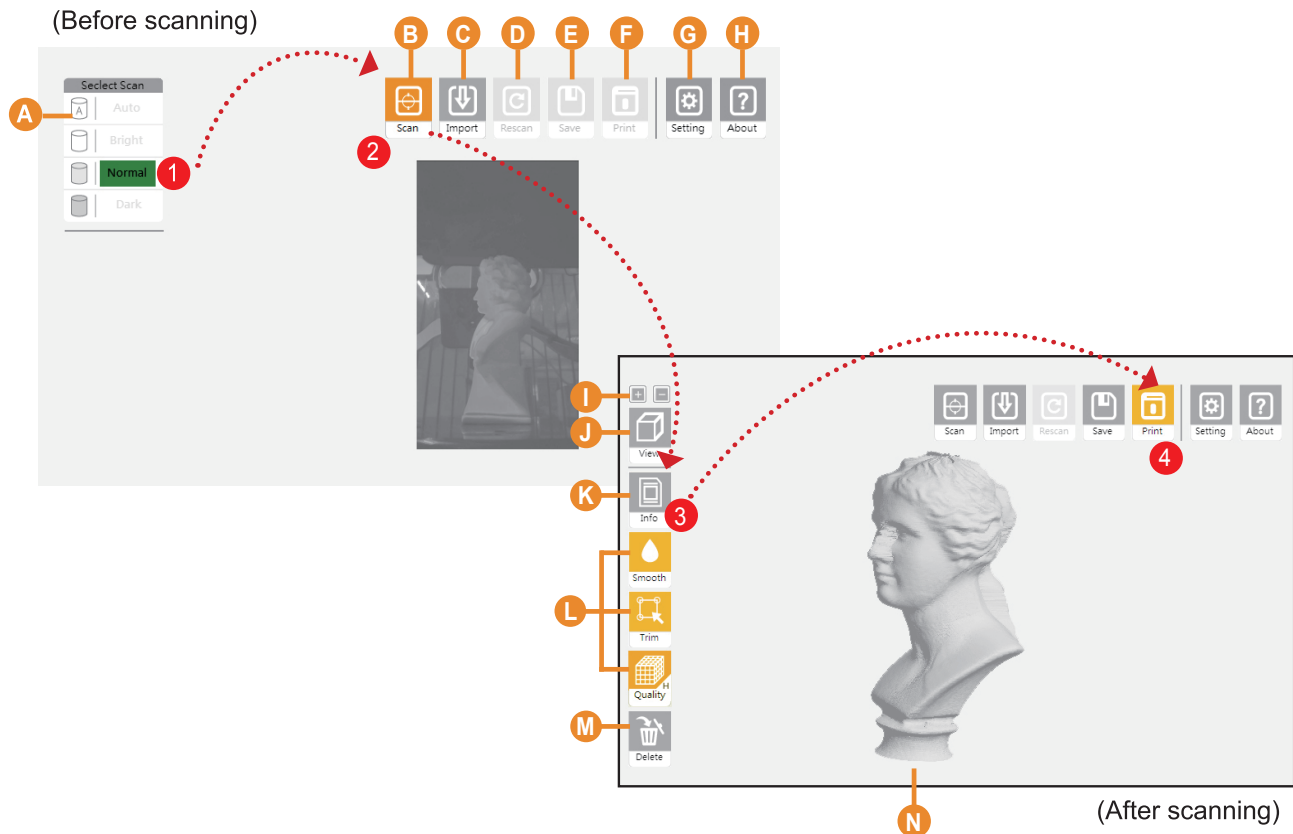
4 Wait until XYZscan and the printer finish calibration (for approx. 7 minutes)



5 When XYZscan prompts of calibration completed, remove the calibrating plate, and click "OK" to finish. You may begin to scan.

4. Getting started

Operations screen description



- A** Scanning mode selection (A): Select the scanning mode according to the object color. Refer to "5.1 Scanning mode Selection" for details.
- B** Scan (B): Activate the scanning function. Refer to "5.2 Scanning" for details.
- C** Import (C): Import the editable .das or .stl files.
- D** Rescan (D): Rescan with the same settings.
- E** Save (E): Save the scanning file in .das/.stl formats.
- F** Print (F): Send the scanning file to the XYZware printing software. Refer to "5.3 Printing function" for details.
- G** Setting (G): Set interface language/scanning calibration. Refer to "5.4 Settings".
- H** About (H): Version information/software and firmware update. Refer to "5.5 About" for details.
- I** Zoom (I): Zoom in/zoom out on the object preview screen.
- J** View (J): Switch the viewable angle of the object.
- K** Info (K): It shows information regarding the volume and size of the object.
- L** Edit (L): Smooth and Quality, refer to "6 Details" for more information.
- M** Delete (M): Delete the object.
- N** Scanning view (N): It shows the imaging graph of the object.



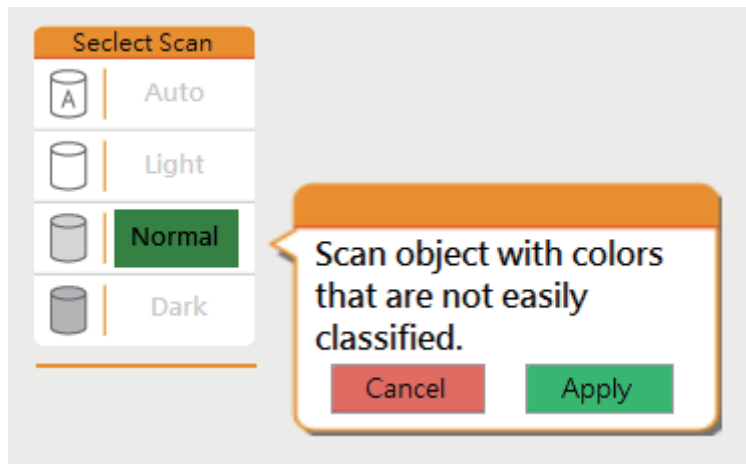
5

Advanced function description

5. Advanced function description

5.1 Scanning mode selection

The "Scanning Mode Selection" at the left side of the screen allows the user to modify the scanning mode according to the surface of the object. An appropriate mode selection may enhance the imaging quality of the object.

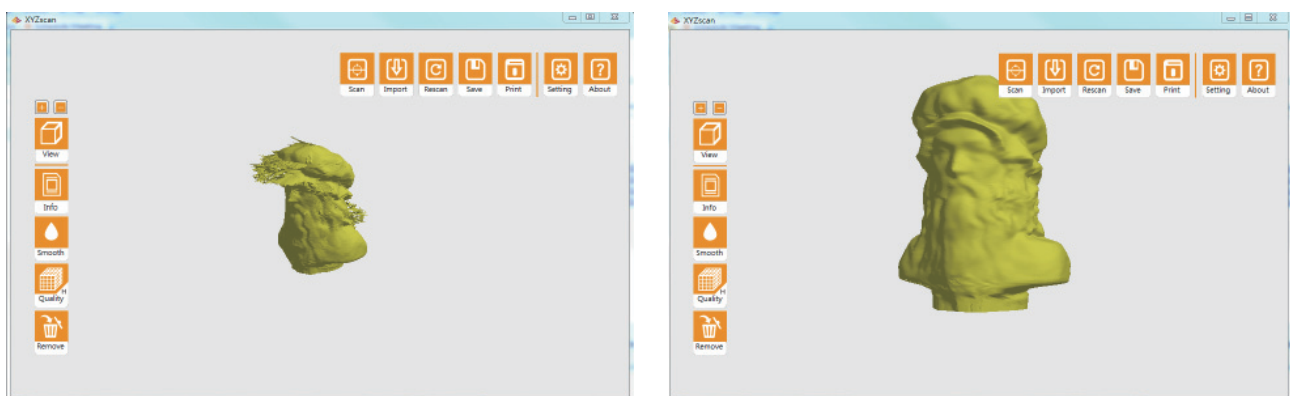


This function provides "Auto," "Light," "Normal," and "Gray" options. The default is "Normal.."

If "Auto" is selected, the system will automatically detect and scan the object and choose the best mode for the operation.

Functionalities	Description
Light	This function is applicable to objects with light colors, e.g. white.
Normal	This function is the system standard value. There is no complement or modification for specific colors.
Gray	This function is applicable to objects with dark colors, e.g. black.
Auto	The system automatically detects ambient light and selects the best mode.

Reminder: When the scanning procedure is activated, the highlight may impact imaging quality. It is recommended that you turn ambient light down to an appropriate degree for better quality.

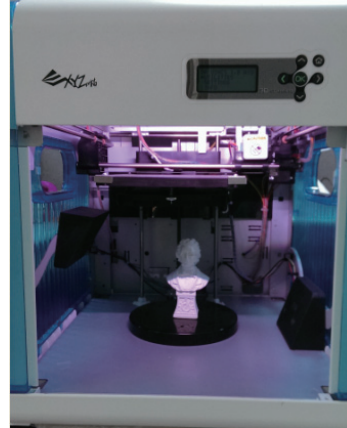
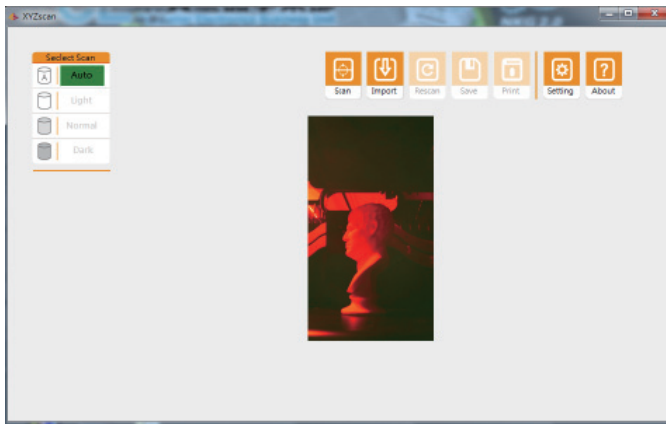


(The figure on the left shows the imaging graphic affected by the light. The figure on the right shows the imaging graph that is scanned normally.)

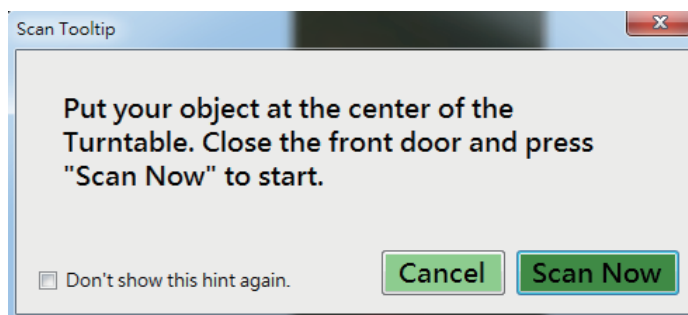
5. Advanced function description

5.2 Scan

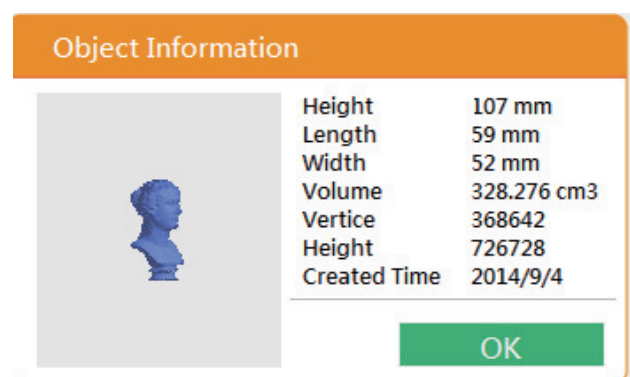
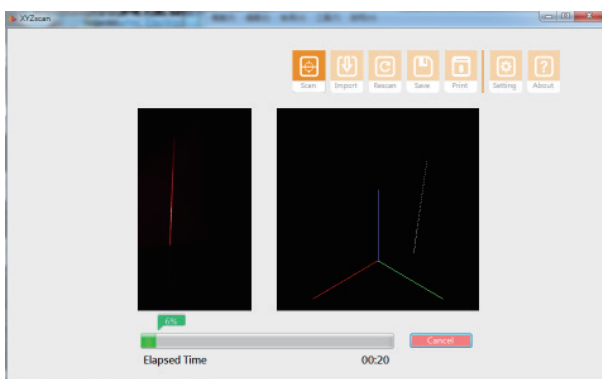
Prior to scanning, place the object to be scanned in the center of the black turntable below and close the front door.



(The preview image of this model shows on the screen [as shown in the above figure]). After pressing "Scan," the dialogue box appears (as shown in the figure below). Make sure the front door is closed and press "Scan Now."

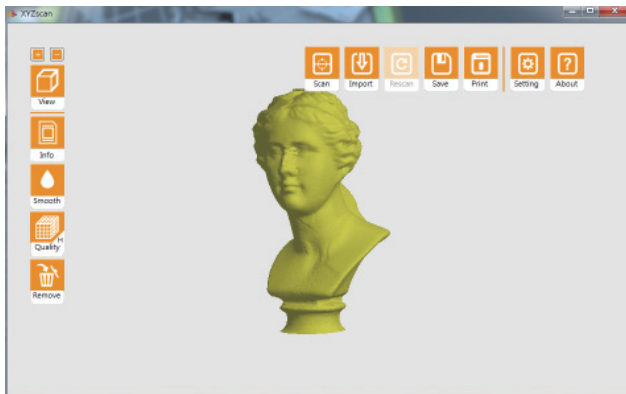


The scanning time and progress percentage are displayed now. Please wait patiently for the scanner to complete scanning this object. Press "Cancel" if you need to cancel. When scanning is complete. The information for this model is displayed.



5. Advanced function description

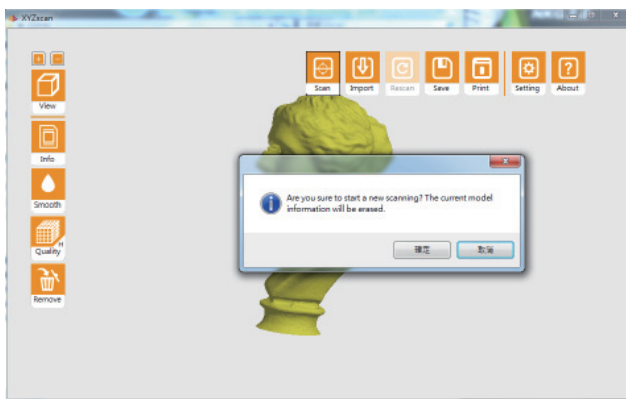
Press the OK button to return to the main screen. The 3D model diagram of this object appears.



Place the cursor over the surface of the model and click the left button of the mouse to rotate the model.

(For the object imaging diagram, the user may modify the file or click "Print" to enter XYZware for output.)

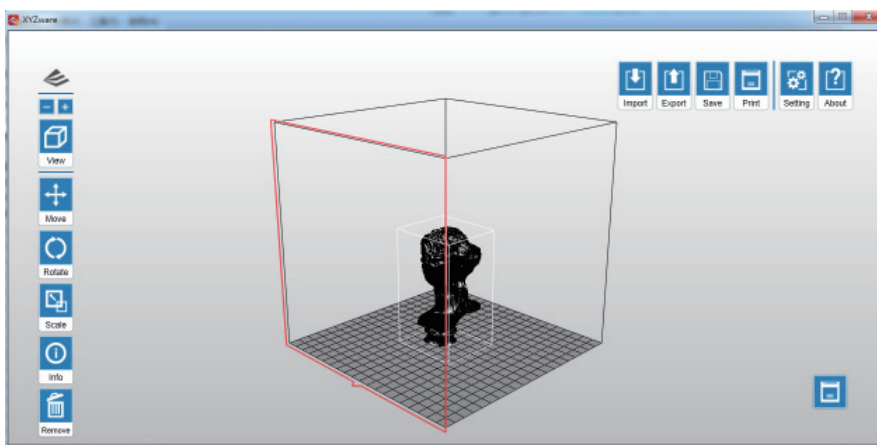
If there is a need to rescan or import new objects, a message may be displayed for the current object to confirm whether to override the current file.



5.3 Printing function

Hint: The user must confirm that XYZware has been set up before entering the printing function.

Once "Print" is pressed, the system activates XYZware and loads this model for pre-print preparation (as shown in the following figure);



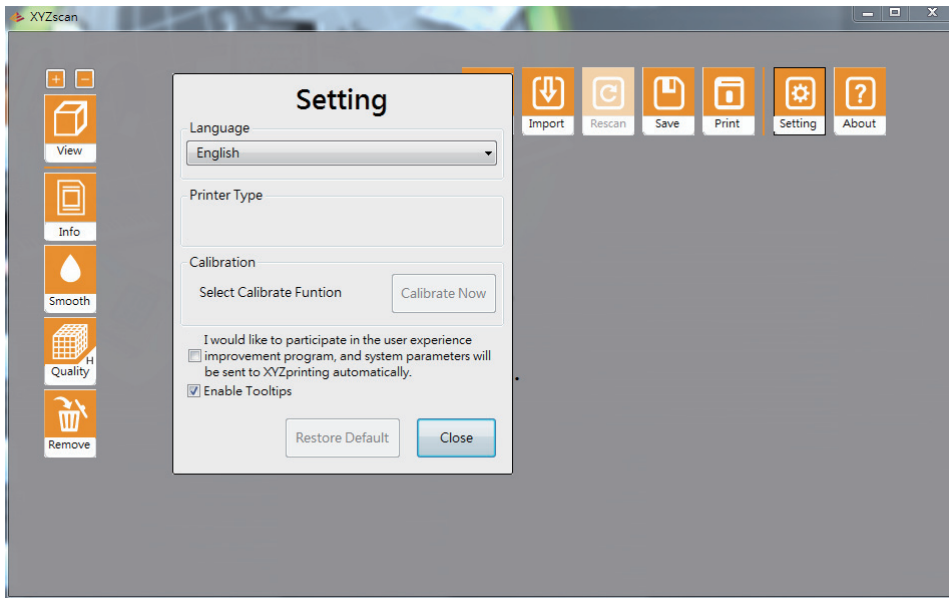
After "Print" is selected, the printer enters the nozzle warming mode. This mode will continue to heat the print head to operational temperature and then start printing. The product may be taken out after the printing is completed.

5. Advanced function description

Hint: The editing function for the relevant objects is only operable on XYZscan. XYZware only provides the printing output function. For more operating information on XYZware, refer to the "XYZware software description."

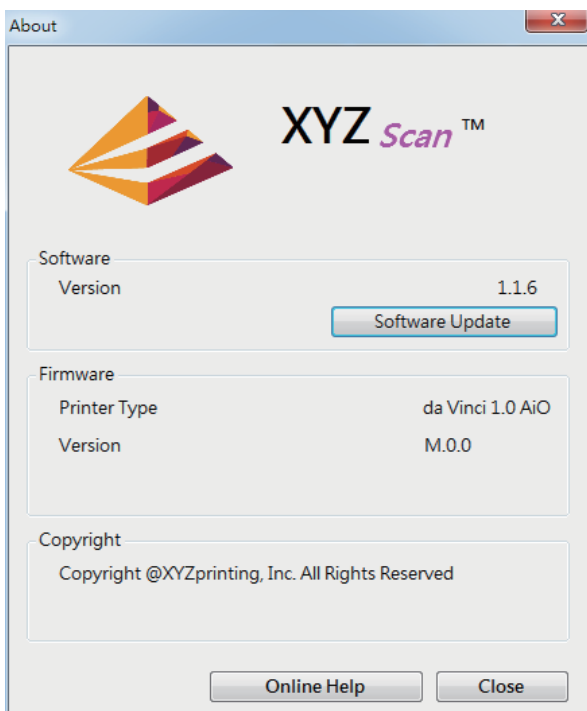
5.4 Settings

After the user presses "Settings," the following dialogue box appears and the user may click to enter the scanning calibration procedure.



5.5 About

XYZscan offers automatic/manual software update services. If need the latest version, please click "Software Update" button or click "Online Help" for more assistance.



If relevant software/firmware update services are required, you may need to register the machine via XYZprinting and become an online member. For more information, refer to the official XYZprinting website.



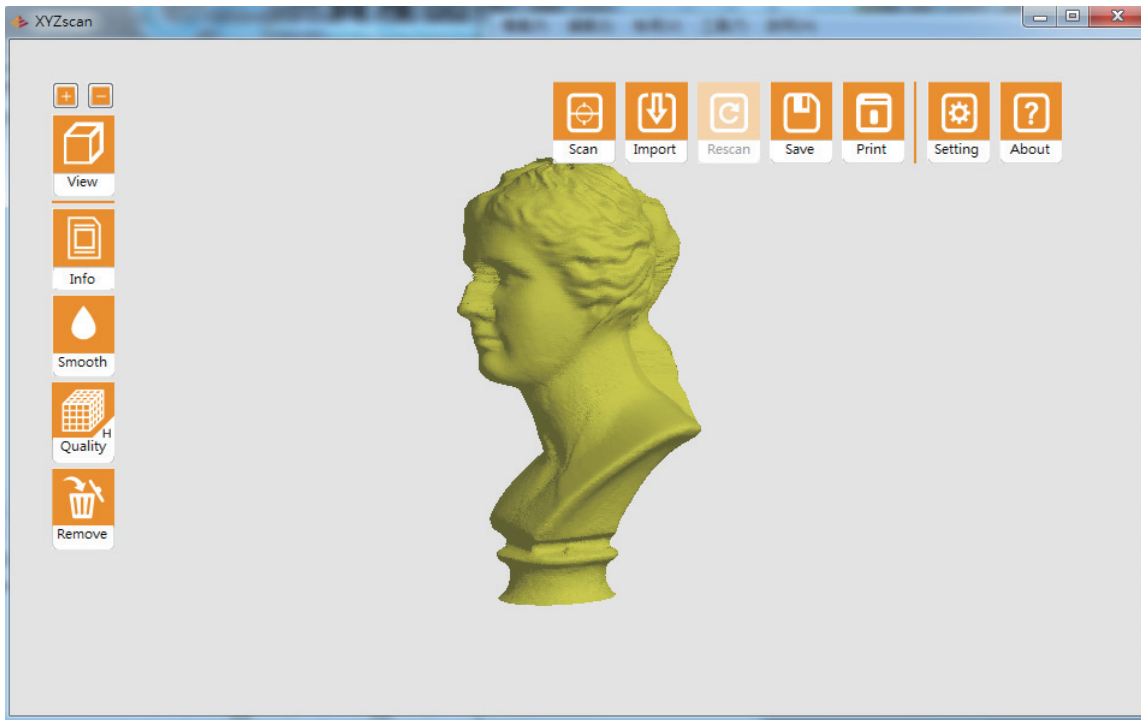
6

Details

6. Details

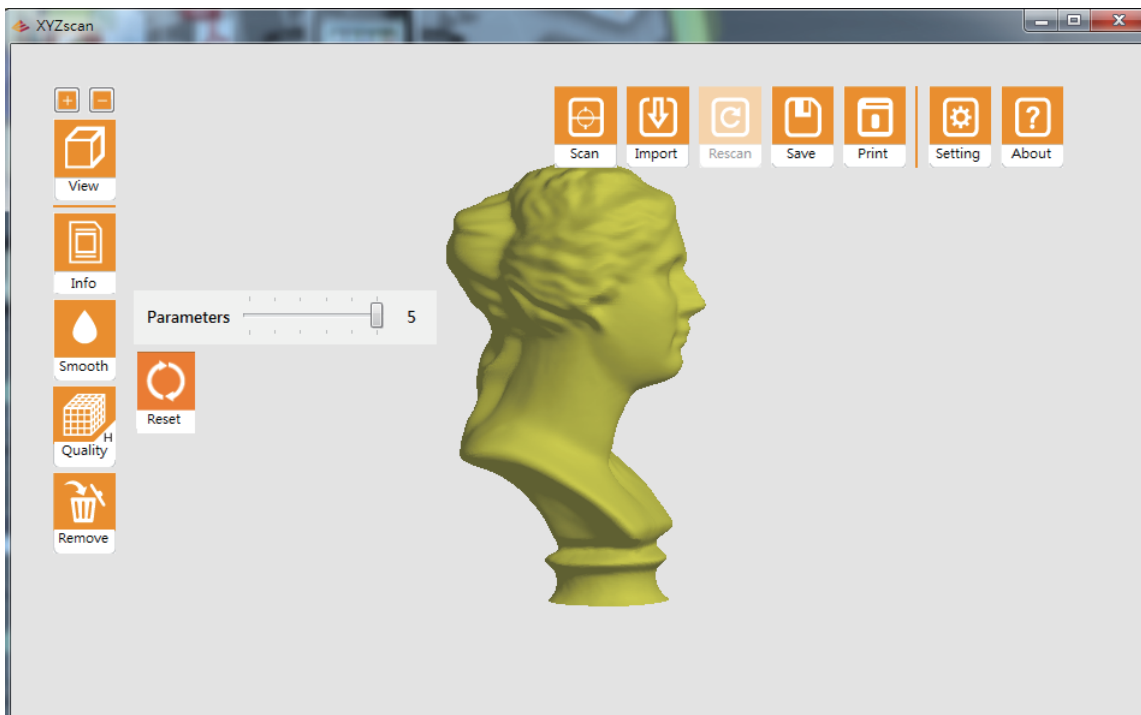


This chapter explains the toolbar on the left side of the screen.



6.1. Smooth

Click "Smooth" on the left side and the following dialogue box appears:



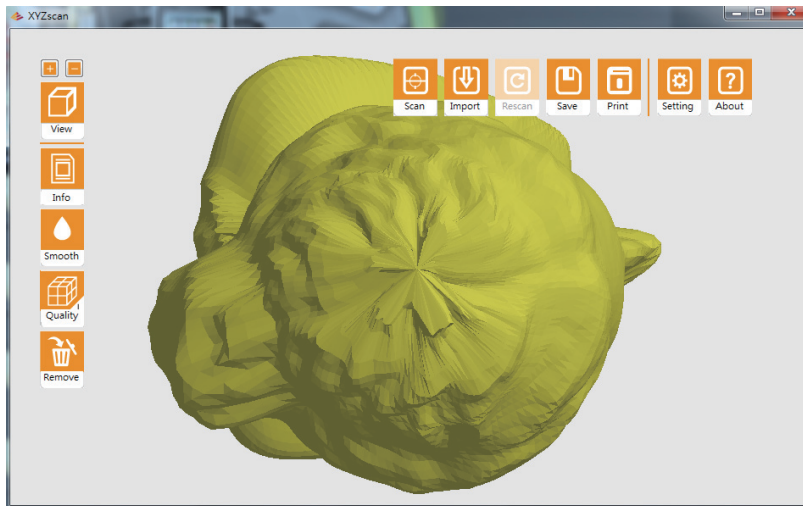
The parameter value can be adjusted and the adjusted value may display on the screen immediately. When "Restore" is clicked, the screen is restored to its original status. In this example, the parameter value is adjusted to 5.

6. Details

6.2 Quality

The user may save the file according to the quality setting. The quality setting is related to file saving. It takes less space to store low quality files but the quality may be rough; It takes more space to store high quality files but the model looks finer.

Click "Quality" on the left side and the following options appear:



The "Quality" option may optimize the mellowness of the object's surface. The screen will immediately show the graphic of its quality option. The upper figure shows "Low" quality and the lower figure shows "High" quality.

