[Step 1——Connection]

Power on / off

Start / Pause

100-240V/60W

NVIDIA as main GPU + Window 10

1.

[Step 2——Camera Calibration]

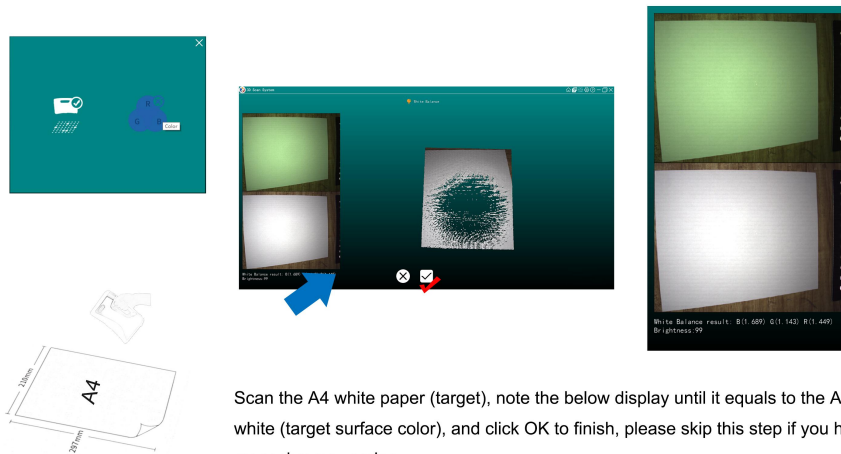Step 1   Step 2   Step 3   Step 4   Step 5
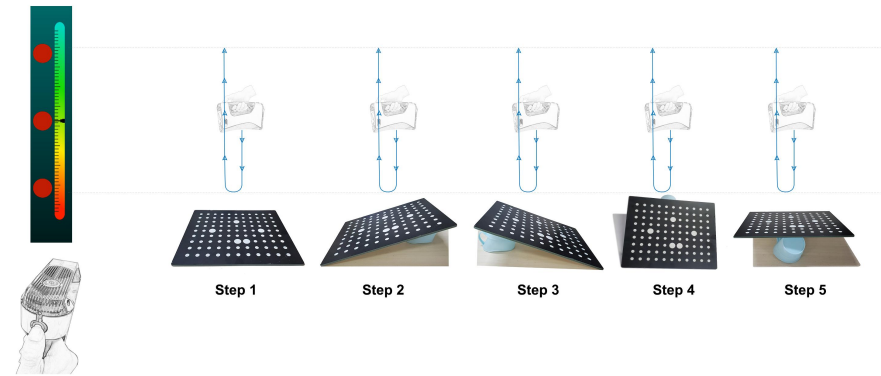
Instruction: 1. Please calibrate under standard mode (larger FOV)；

2. Start, keep the 2 laser points overlap, and vertically downward slowly to tick 425, then upward slowly to tick 575, pause, then procced next step;

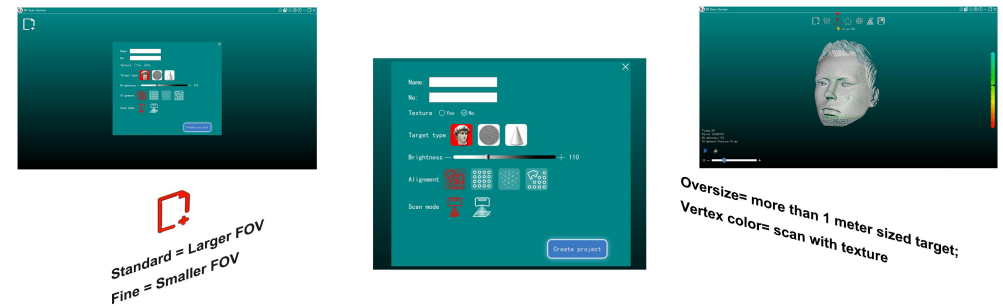3. Suggest 30° angle against the horizon

2.

[Step 3——Color Calibration]

White Balance result: B(1.689) G(1.143) R(1.449)
Brightness:99

Scan the A4 white paper (target), note the below display until it equals to the A4 paper white (target surface color), and click OK to finish, please skip this step if you have the monochrome version.
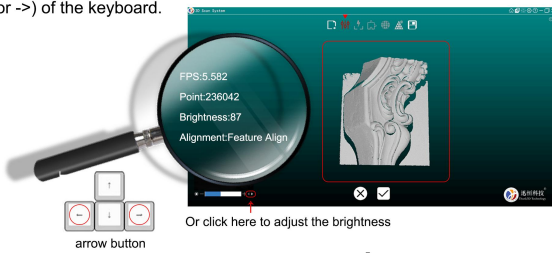
A4

3.

[Step 4——New a project]

Standard = Larger FOV
Fine = Smaller FOV

Oversize= more than 1 meter sized target;
Vertex color= scan with texture

Feature align——geomatrical align, for carvings / face / statue / teeth / bust / ect;

Mark align——require mark sticker, for smooth surface / impeller / symmetric / standard primitives / car house;

Mix-align—— hybrid between feature and mark align, to save mark stickers;

Frame align——fast mark align to build GMF, then fine mark align to fill in, for over 1.5m sized targets;

4.

[Step 5——Scan Tips]

Tips to scan more efficiently

1. Keep adjacent images more than 15% overlap feature, or more than 5 public mark stickers；

2. Start from the middle of the object and follow a spider path towards the edges to reduce the risk of tracking loss
   (for larger sized objects).

3. If you tracking lost, back to the richer geomatrical parts will help re-align more faster;

4. To get a better volume accuracy, fast mark align to get a txt coordinate and fill in to complete.
   plese refer: https://youtu.be/mSj08U0AkvU;

5. To scan completly one time may accumulate more images, then result in heavier load for CPU,you could create groups
   for different positions and merge them together;

6. Test mode adjust the brightness value by pressing the arrow
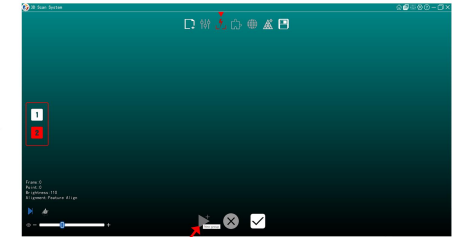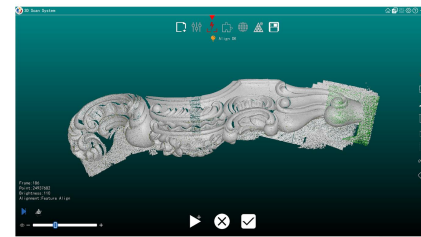   button （ <- or ->） of the keyboard.

FPS:5.582
Point:236042
Brightness:87
Alignment:Feature Align

arrow button

Or click here to adjust the brightness

Best result with right brightness value
for wood carving.

5.

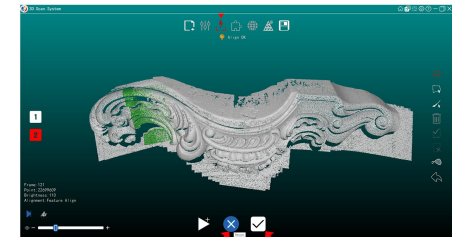# [Step 6——Hot Key]

New group

Rescan   Complete

Mouse operation
Left mouse: Select   Middle mouse: Rotate
Ctrl + mid mouse: Drag   Right mouse: Edit selection
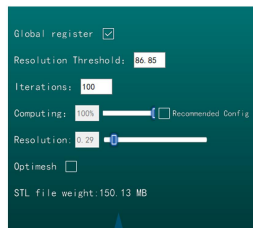Scroll up and down: zoom in / out

Keyboard operation:
Ctrl + Z: Undo the last image
Delete: delete the selection
Left/Right errow: lightness up and down

6.

[Step 7——Para Settings]

Global register ☑
Resolution Threshold: 86.85
Iterations: 100
Computing: 100%   Recommended Config
Resolution: 0.29
Optimesh ☐
STL file weight:150.13 MB

Resolution: 0.29
Fragment filter ☐ 50   Number of triangular faces
Curvature fill ☐
Smoothen 0
Decimate 100.00%
STL file weight:150.13 MB

Language   English
Directory D:/Thunk3Data
Test before scan   ○Yes ◉No
Display the last frame ◉Yes ○No
Scale   1.00000
View distance   -280.72
Music Silent
Laser ☑
Mark Radius 0.5
Color brightness 100

OK   Cancel
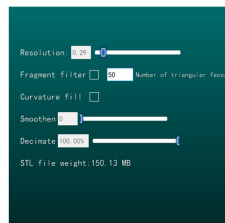
Tips:
To choose the priority order, please note:
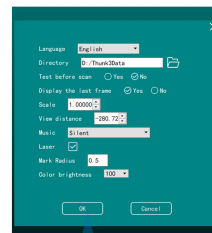the better accuracy, the better resolution,
the weighter STL, the slower meshing.
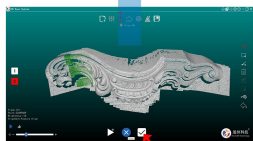
Tips:
Collapse boundary means clearing the extras
of the cavature filling, if set it as 7.5, system
will not fill the holes boundary.

Filter radius mean to the mark sticker, the lower
the value, the smaller the holes left.
Untick the "laser" could shut off the 2 laser points.

Mesh after scan

Remesh after mesh

Settings before scan

7.

[F A Q]

1. Why my scanner failed being detected T02 (Imaging devices)?
Usually, it's your PC failed installing the drive, please check software,
find the exe file in "Thunk3D setup > Excutalbe > driver_setup_x64",
double click to intall and try again,if still not work,please contact us.

2. Why my scanner was detected T02 but can't start?
Check your PC if it's power by battery, if so, shift to AC power.

3. Why my scanner suddenly project slower?
The main reason is that the USB 3.0 was detected as USB 2.0, you must
ensure your USB 3.0 port has stable supply.

4. Why I can't open software after connecting?
1. If it's your first time operating, check if your setup file installed
in the U-disk but now pulled out?
2. If your PC version is below CUDA10, the software will
pop-up instruction for you to follow and download.
3. If you had updated the software, make sure uninstall the
previous version firstly.

5. Why my graphic card is not compatible with the device?
Our software is only optimized for Nvidia graphic cards, please refer the
Nvidia official website, any cards above the 3.0 hashrate will do.
https://developer.nvidia.com/cuda-gpus#compute

6. Can the device scan human hair?
Some matt and short hair could work, others should be styled as still,
hard, it's troublesome, we usually do after process in Z-brush.

7. How can I turn off the two laser points?
Open the software > setting, untick the "laser".

8. How large/small the object can I scan with the device?
Depend on the ROV(eg: 40cm*32cm), we suggest the target,
L+W+H size less than 15 multiple of 40cm as 200cm*200cm *200cm,
and more than 1 multiple of 40cm as 15cm*15cm*15cm.

9. Can the device scan dark/black object?
Try the maximum lightness by left and right errow key during scanning,
if the images still not satisfied, spray then scan.

10 . How can I contact you if I have doubts on the device?
You could contact us via: service@thunk3d.com, tell your dongle
number (software> Help>80****), we will contact you back with 12 hours,
resolve your problem by Zoom/Teamviewer ect.

8.