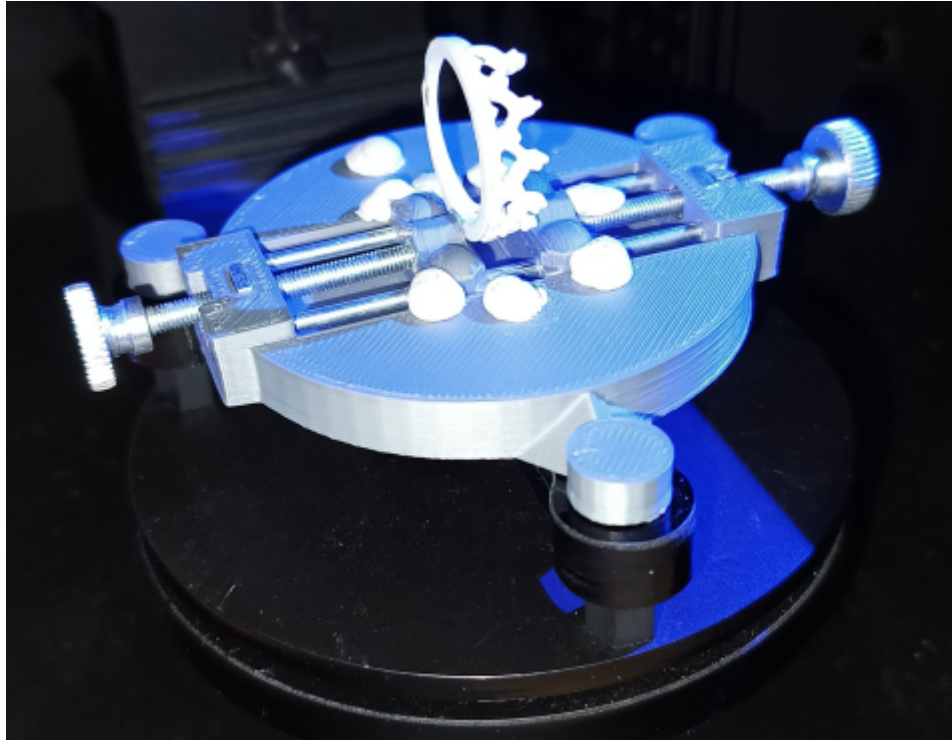


1). Spray the ring matt white.

2). Put in the mini-vice, and use the 16mm extender.

It will hold it at the centre of the scan area. Also, the scanner will just pick up the base of the mini-vice which will help the alignment algorithms to work more accurately.



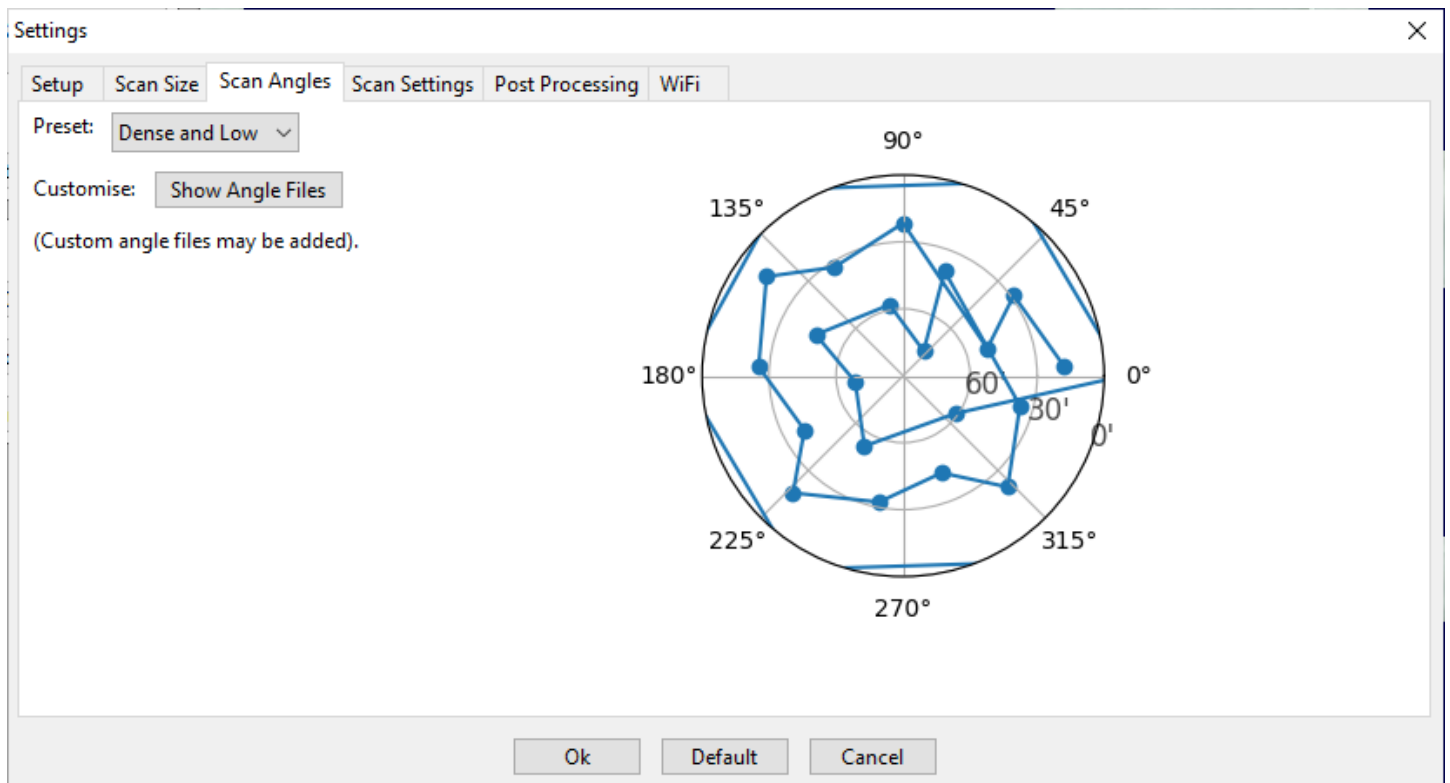
3). Settings (v2.08 software):

Auto-save: Enable - "Raw pointcloud (_PC.PLY)".

Merging from raw point clouds will give the best quality. It will keep all the data from each scan, and simplify into a mesh only when generating the 360 model.

Scan size: Small or Medium - as necessary.

Scan Angles:

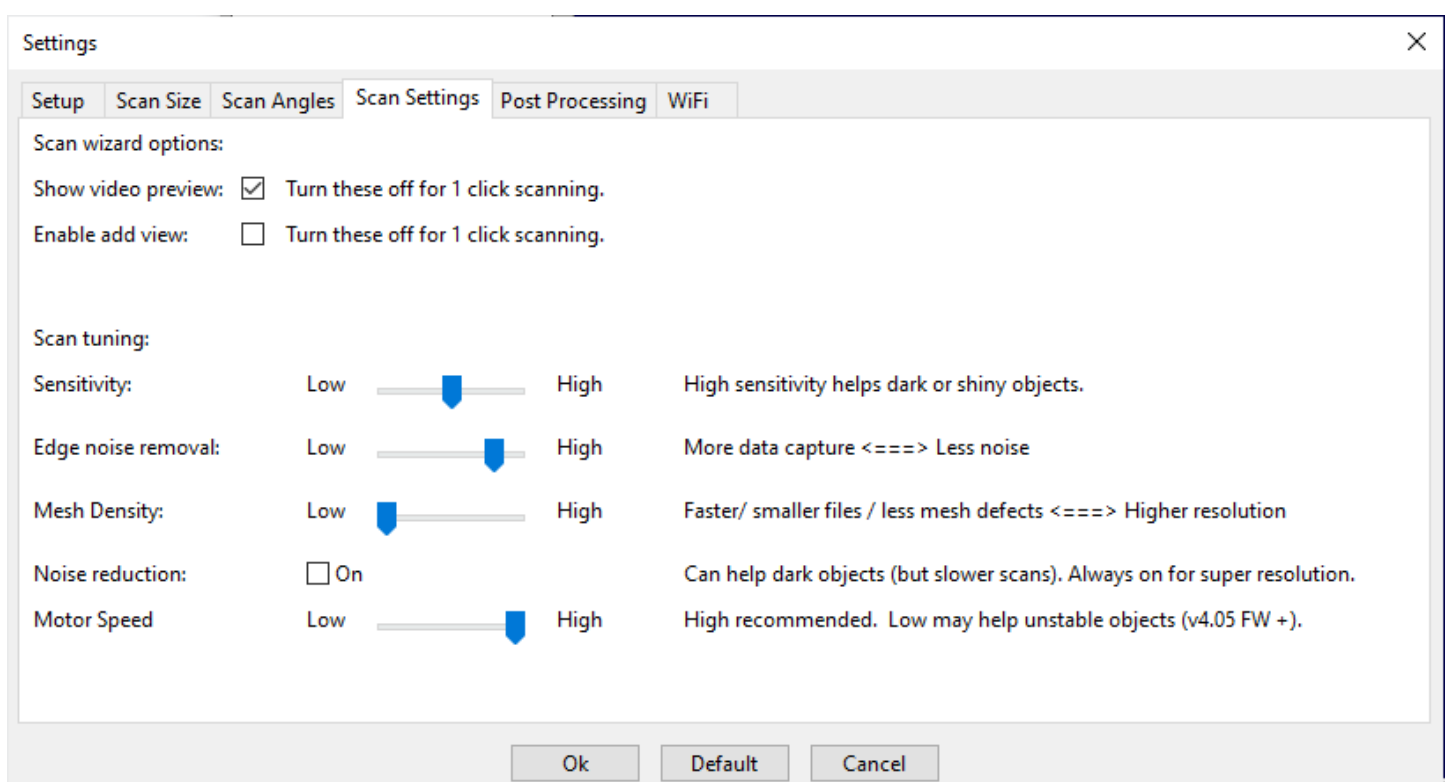


Probably use “Dense and Low” scan angles. This will capture “upshots” from a low angle, to get as much of the underside of the ring as possible. Probably we only need to merge 2 ring scans like this.

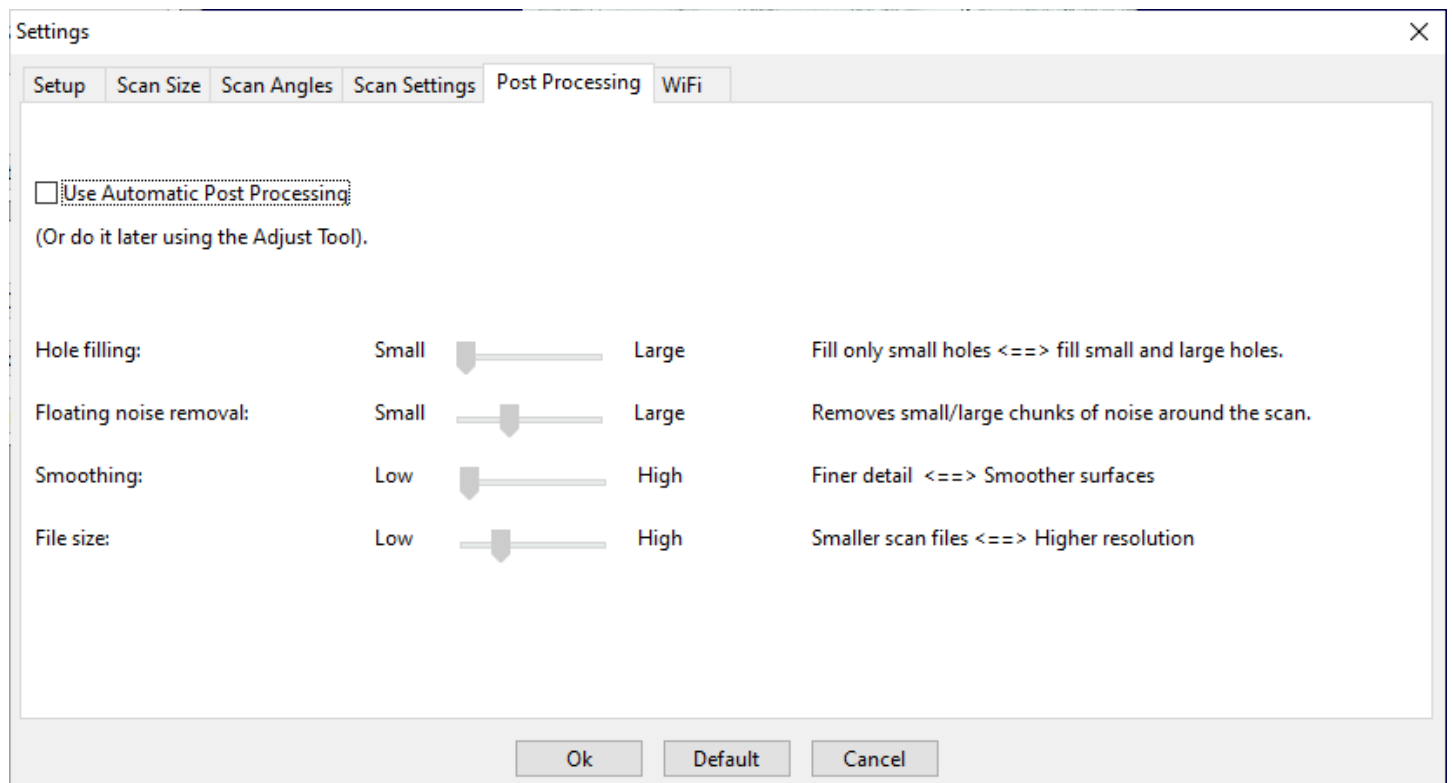
“Dense and Low” could cause alignment failure as it depends upon the scan object being easily alignable (the base will be out of shot). If this happens use “Dense” angles instead, and scan the ring in 3 positions.

Use “Very Dense and Low” to capture more crevices if necessary.

Scan Settings:



These are the basic settings for a ring with scan spray. With Post processing switched off - it's faster and we don't want hole filling etc. before a merge.



4). Scanning:

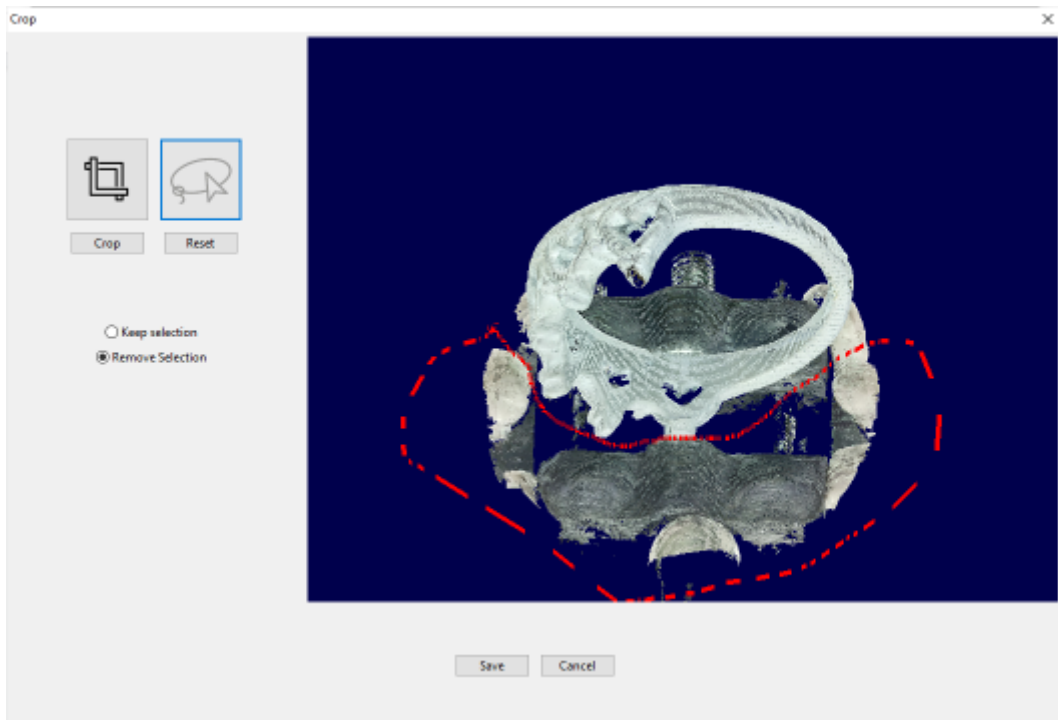
2 position scan: Scan ring position 1, rotate ring in holder approx 180 degrees, scan position 2.

3 position scan: Scan ring position 1, rotate somewhere between ~90 and 120 degrees for scan positions 2 and 3.

5). Cropping

Be sure to crop the _PC.ply point cloud files. You need to load these into the Tupel 3D software after the scan has finished.

Crop only the holder off, leave as much ring data as possible.



It's best to keep an entire perimeter of the ring, this can allow a good merge with only 2 scan positions.

6) Aligning (v2.08)

Open the scans you wish to align.

Then do a coarse alignment, either with the automatic "Coarse Align" button, or by highlighting one of the scans and using mouse dragging.

Finally, click "Fine Align" to get a highly precise alignment of the scans.

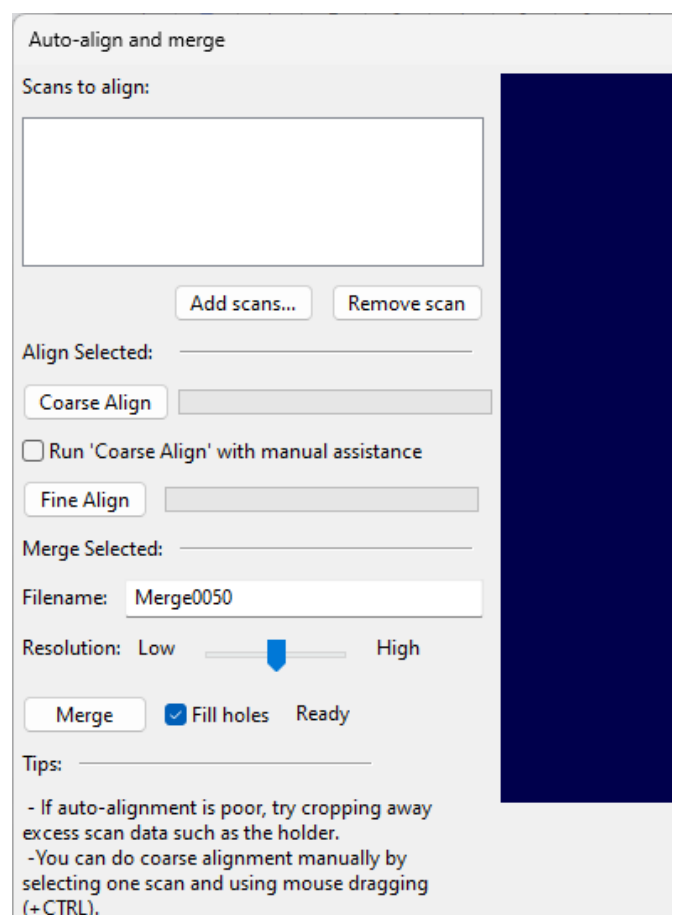
7). Merging

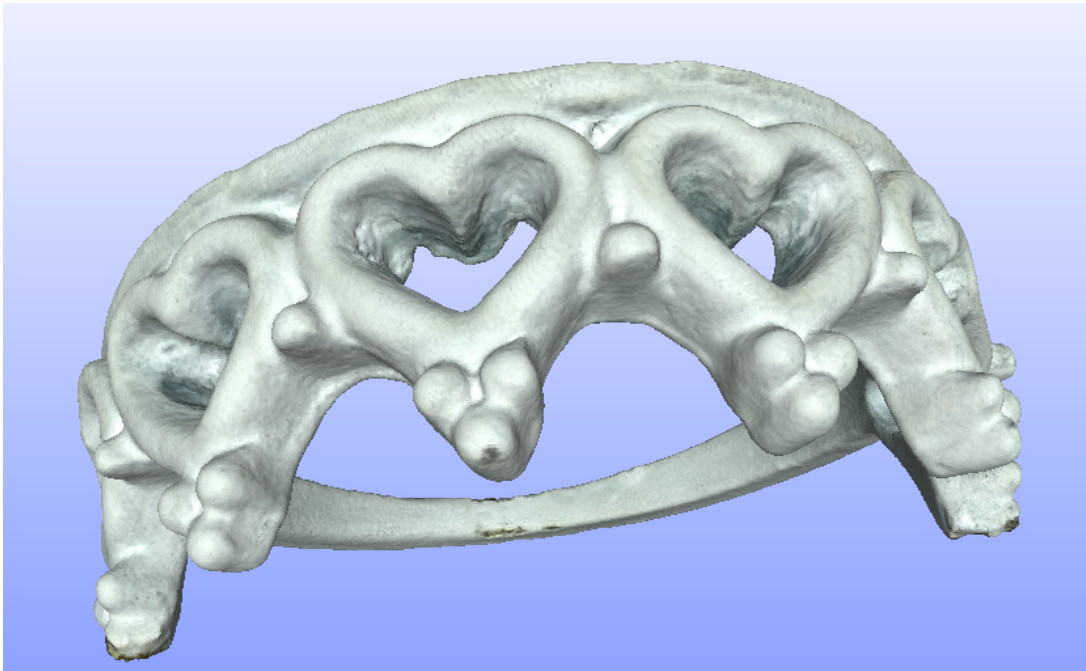
Use the "Merge" button to merge separate scans into one.

The "Resolution" slider is helpful to get a good quality merge.

Low resolution merges will have less merge artefacts/glitches.

High resolution merges will maintain more resolution.





Example 2 position 360 scan result.