

We have been using StackShot mounted to a copy stand for about 20 months now and have been pleased with the simplicity and utility of the unit. In order to increase the utility of StackShot, we decided to experiment with reversing part of the process and have a try at getting StackShot to move a mounted specimen instead of the camera. At high magnifications ($>20\times$), we have had to slow StackShot to 4 seconds a shot with the default 0.5 second “settle” time. We have produced 3-D printed “stage” with one part to hold StackShot and one part as a stage (2 parts total). Early results show I can reduce image acquisition by 3.5 seconds (0.5 seconds between shots and 0.5 second “settle”), so 1 shot per second, nearly as fast as I can save images from the camera (Canon EOS D5 Mark III on USB2). If anyone is interested, the files with the plans are at

<http://sketchup.google.com/3dwarehouse/details?mid=63bb091473549abe520693977acea63e&prevstart=0>

and

<http://sketchup.google.com/3dwarehouse/details?mid=6778558dd7d43111520693977acea63e&prevstart=0>

and are called “Focus Stacking Stand”.

These plans should also be on Thingiverse soon.

The printing tool less than 1 spool of PLA (1 spool = ~ \$45.00). This is a prototype and can be modified with different stage configurations to hold various objects. Also, this is a very robust printed stand, the hexagon support walls can be made thinner to decrease printing times.