

Course challenge exercise

Complete all parts of the tablet stand body and leg components

In this challenge you will create the remaining operations for the tablet stand body (**Tablet stand body challenge.f3d**) by adding a second setup to the project. You will also extend the course material to create a new CAM project from start to finish for the tablet stand leg (**Tablet stand leg challenge.f3d**).

Complete the required activities:

- Using the supplied dataset file, create a second setup for the Tablet Stand Body and set it up for facing and chamfering toolpaths.
- Create a first setup of the Tablet Stand Leg for cutting most of the part to size, similar in technique to Setup 1 for the Tablet Stand Body.
- Create a second setup on the Tablet Stand Leg and set it up for facing and chamfering toolpaths.

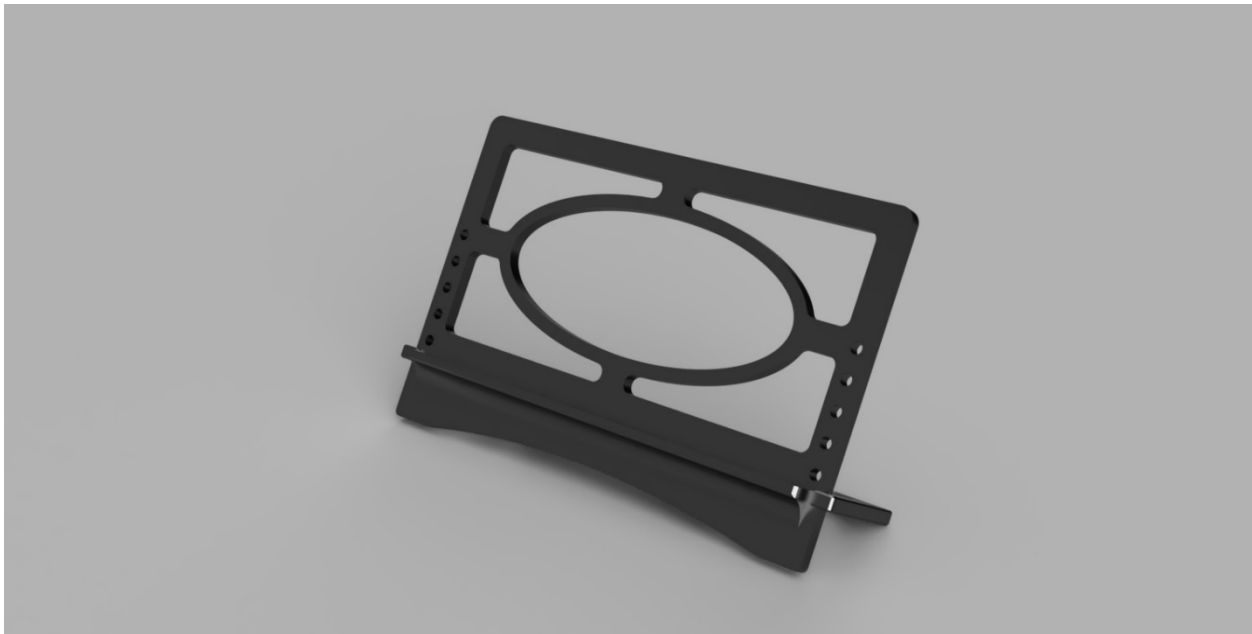


Figure 1. When completed, both parts slide together to form a tablet stand.

Note: If a particular standing angle is sought regularly for this product, two M6x1 set screws can be inserted into the threaded holes on either side of the body to create a locking stop point for the project.

1. Begin by creating a second setup In the Tablet Stand Body (**Tablet stand body challenge.f3d**), essentially oriented upside-down in relation to the original setup.

You can hold this part in the machine if you are careful using a standard machinist's vise. Toolpaths are more limited in this setup. One facing operation and some chamfering to deburr the back of the tablet stand body are all that is required to complete this part.

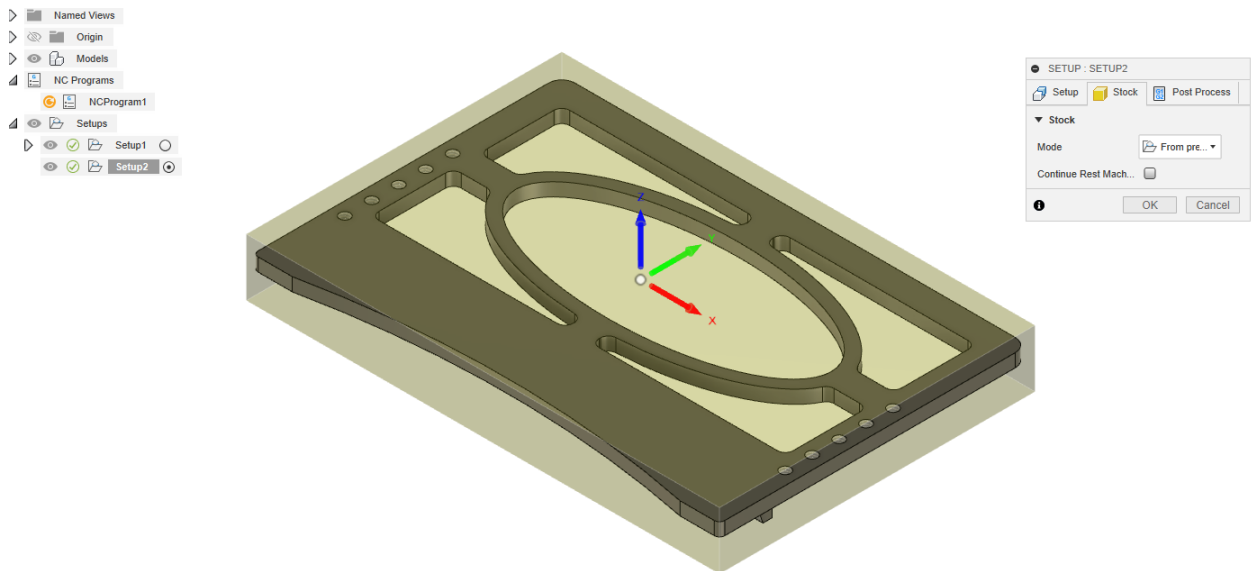


Figure 2. Recommended WCS orientation for setup 2.

2. After the Tablet Stand body is complete, open the Tablet Stand leg file (**Tablet stand leg challenge.f3d**) and begin creating setup 1.

This part is intended to be made using 60.325 mm by 12.7 mm rectangular bar stock.

There are only a few toolpaths needed to complete this part: facing, adaptive clearing, contours, and chamfering.

The process can follow a similar workflow to setup 1 on the Tablet Stand Body but omitting any unneeded toolpaths.

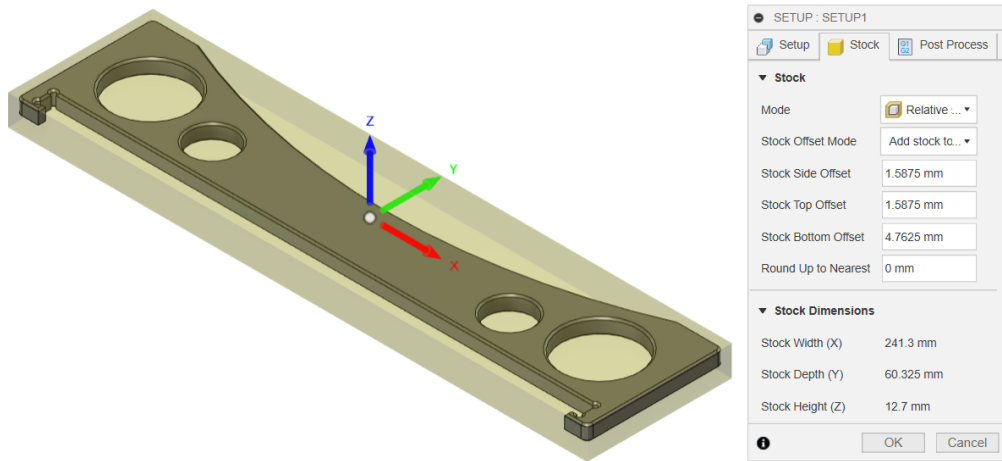


Figure 3. Setup 1 of the Tablet Stand Leg.

3. Add a second setup to the Tablet Stand leg with the part flipped over, similar to what is shown in figure 2. You can also hold this part in a standard machine.

Toolpaths are more limited in this setup. One facing operation and some chamfering to deburr the back of the tablet stand leg are all that is required to complete this part.

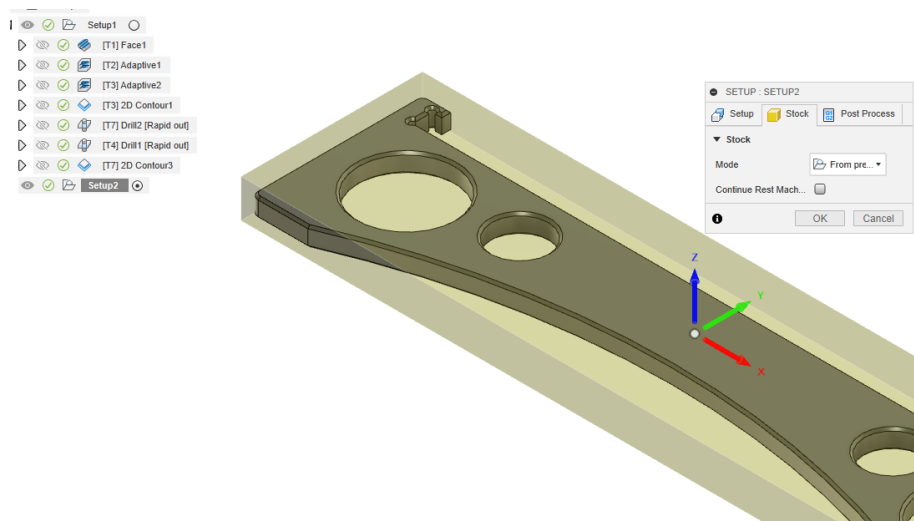


Figure 4. Setup 2 for the Table Stand Leg

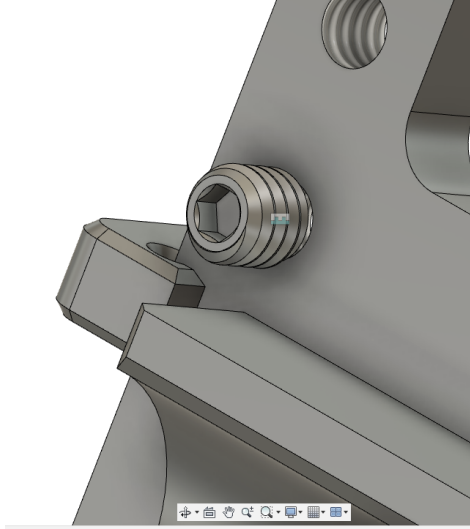


Figure 5. Tablet stand assembly fasteners.

Slide the leg onto the body, and if desired, insert a pair of M6x1 long set screws to provide a repeatable stop point for the two parts to connect. Note that in the figure above the set screw has yet to be screwed into place.