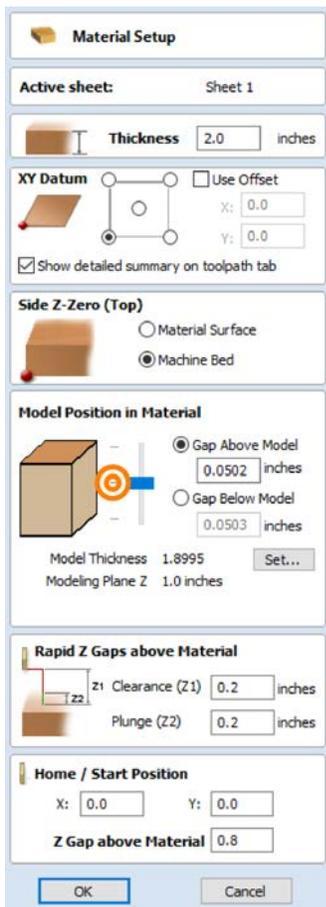


# How to Flip

## Double-sided Machining Guide

### STEP 1: Material Setup

On the right side of the screen, under Material Setup, select “Set” to open the Material Setup menu.



### Model Position in Material

For most cases, you’ll want to position your model in the middle of the material. To do so, double click the middle line to the left of the slider.

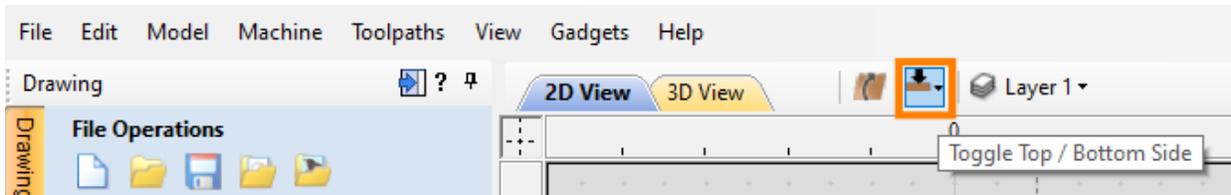
When you have a flat-bottomed model though, you would usually want to place it at the bottom of your material.

## STEP 2: Set Up Toolpaths (Side 1)

Set up your toolpaths. Refer to the other How-To's for assistance.

## STEP 3: Toggle Between Top/Bottom Side

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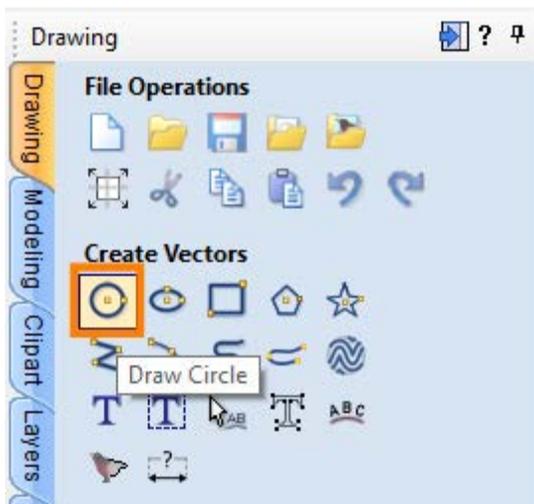
Towards the top of the screen, locate the “Toggle Top/Bottom Side” icon and switch to the 2nd side.

## STEP 4: Set Up Toolpaths (Side 2)

Repeat step 2, but for the 2nd side.

Note: Depending on your file and how it was imported, your 1st machining side might **not** necessarily be the top side. However, the final profile that **cuts out** your model should always be on the **2nd machined side**.

## STEP 5: Add Registration Pins

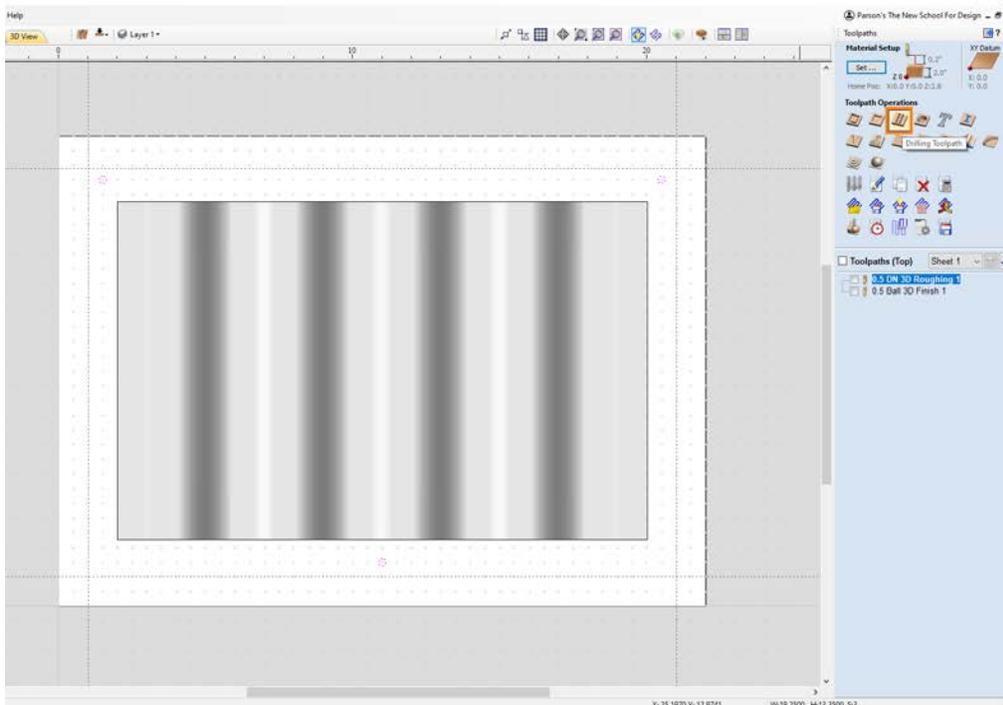
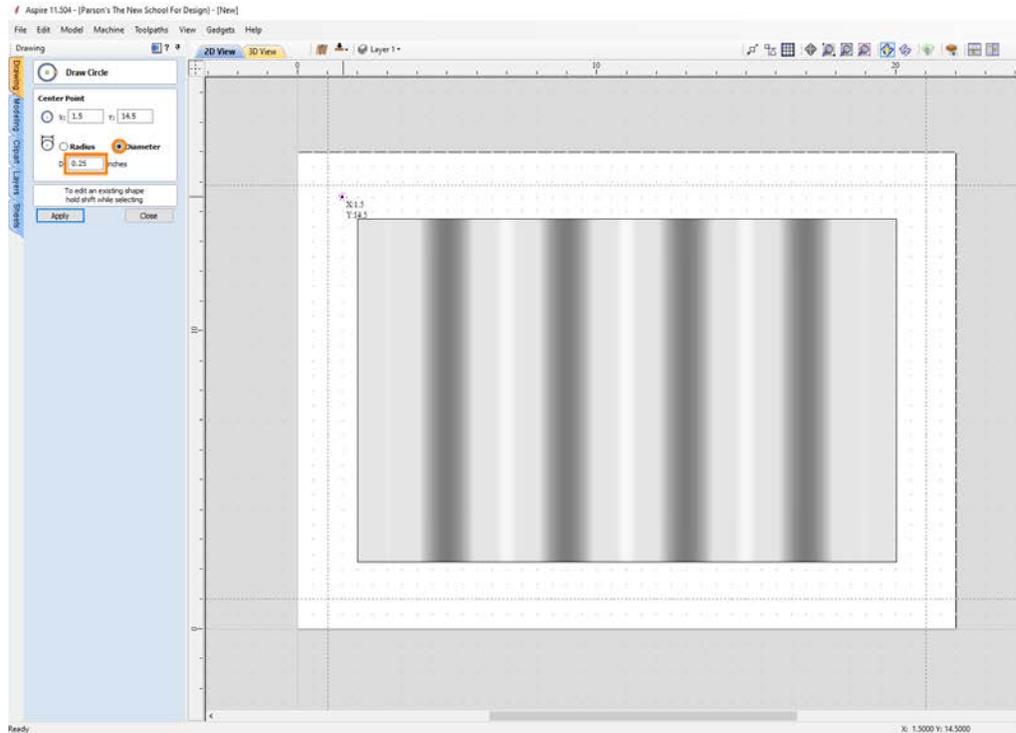


### Draw Circle

Starting on your **1st machining side**, under the Create Vectors, select Draw Circle.

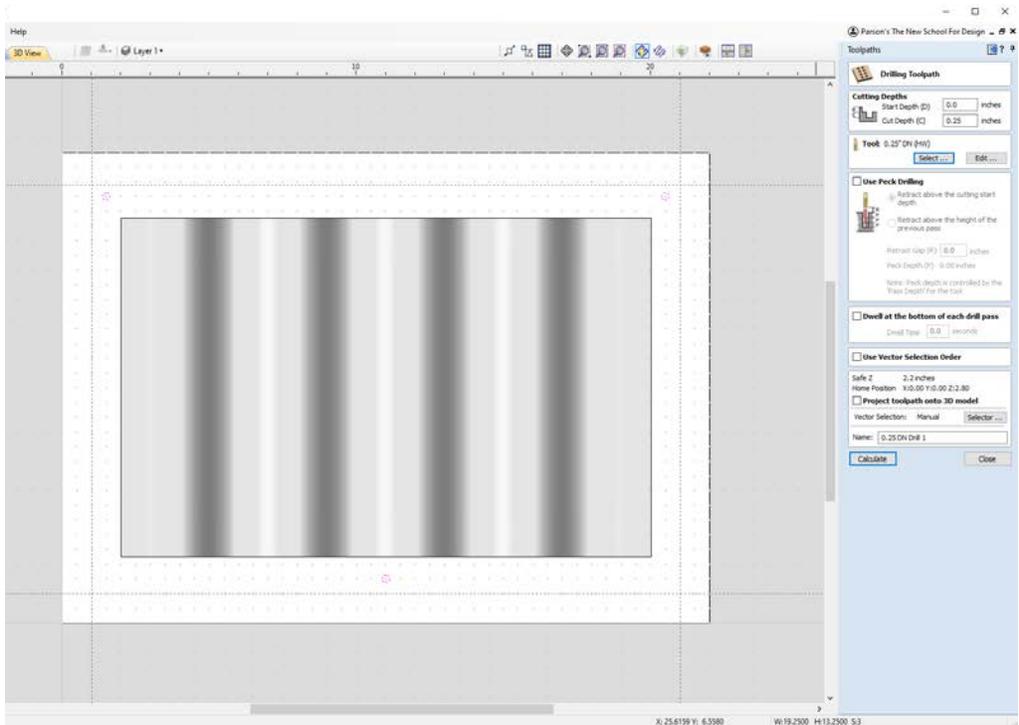
## 0.25" Circles

Create 0.25" circles to your file by adjusting the dimensions in the Draw Circle menu. Click anywhere on your work area to add circles. Usually 3-4 registration pins will suffice.

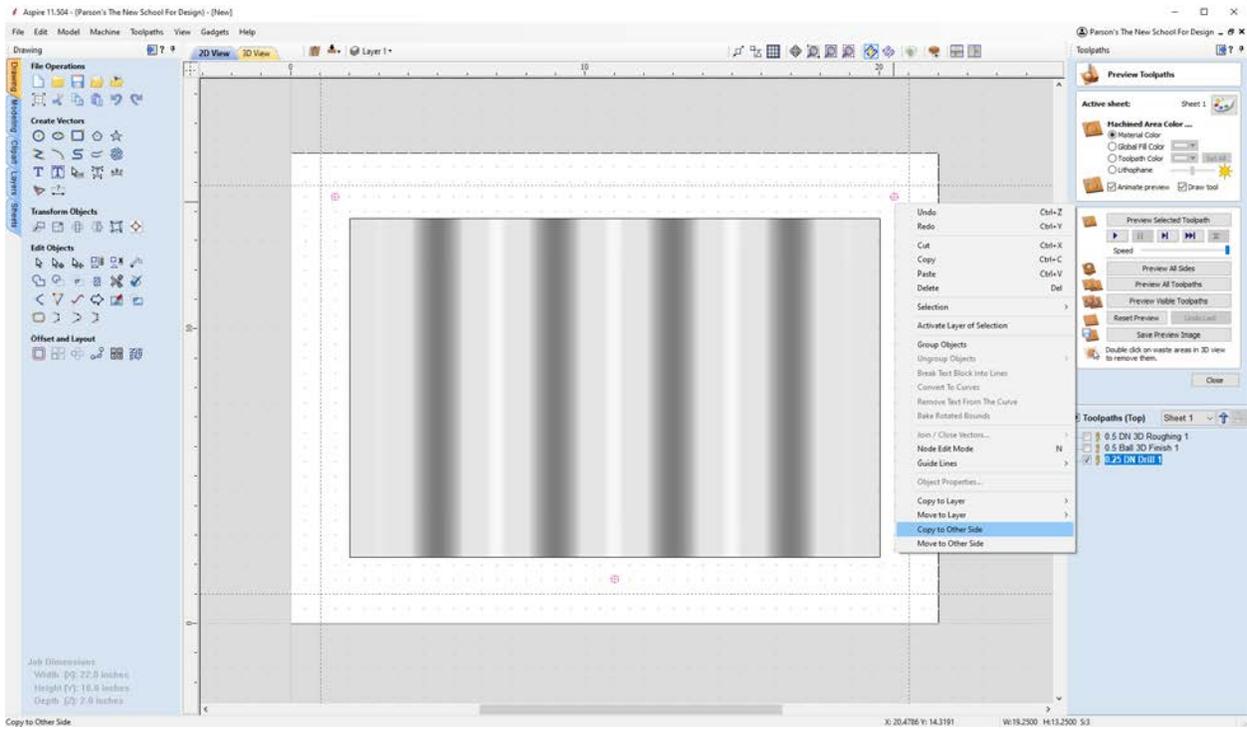


## Drilling Toolpath

Under Toolpath Operations, select the Drilling Toolpath. This drilling toolpath will create registration pins in your material.

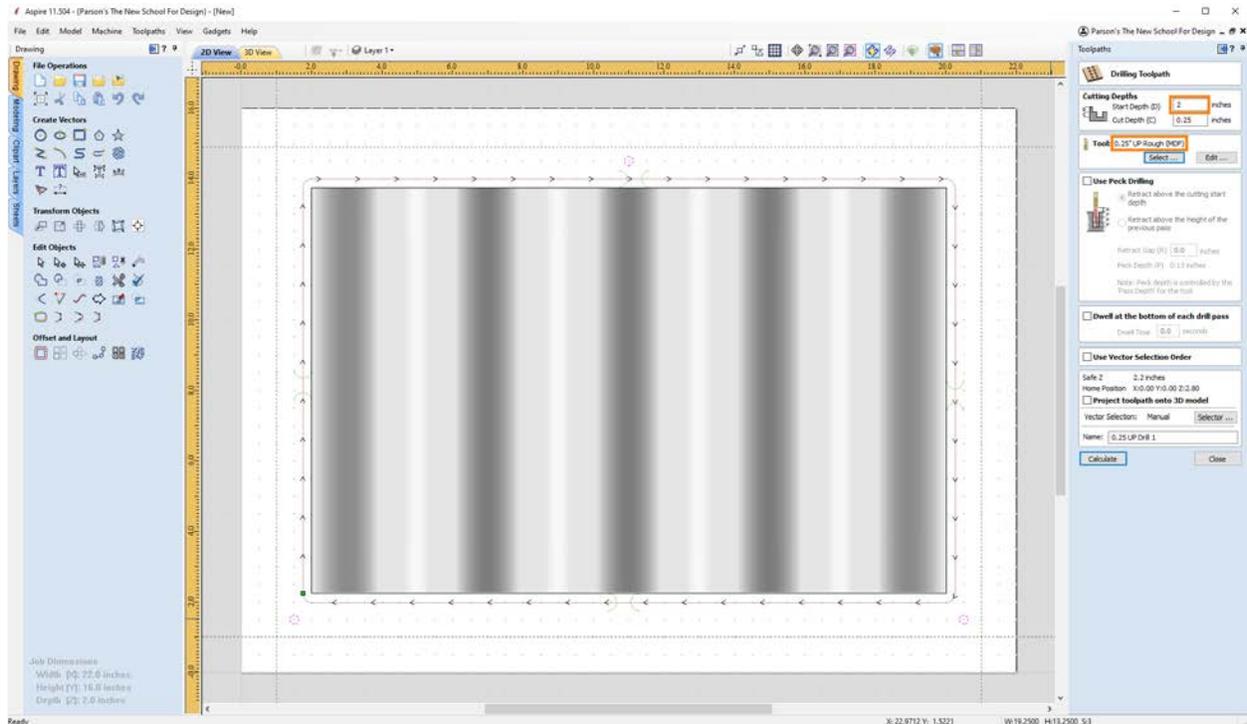


Select the circles you just made, set the cut depth to 0.25", choose the appropriate tool, rename the toolpath, and calculate.



Select your circles again, right click, and **Copy to Other Side**.

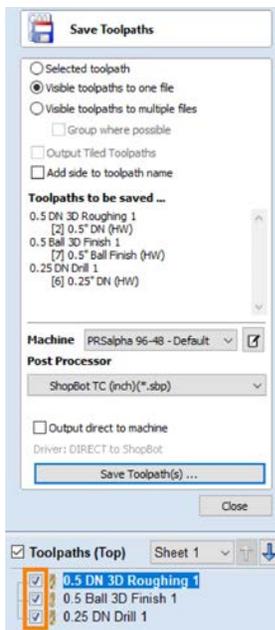
Toggle to the other side and create another drilling toolpath.



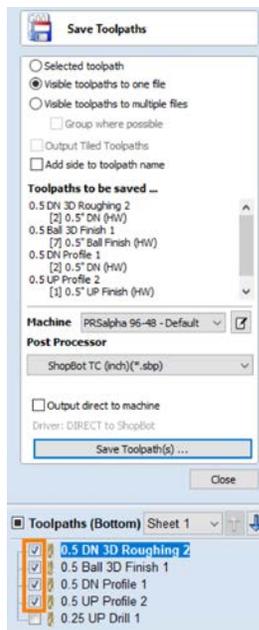
This drilling toolpath will create the registration pins in the **bed**. Set the start depth to the **thickness of your material**. Change the tool to **0.25 UP Rough (MDF)**.

## STEP 6: Save Toolpaths

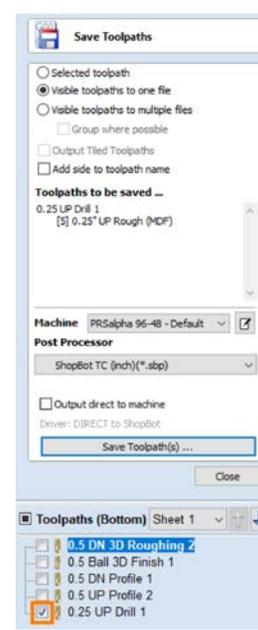
With flips, you'll save **3** separate toolpaths: top, bottom, and registration. Rename your files to:



*MMDD\_First Name\_Last Name\_top*



*MMDD\_First Name\_Last Name\_bottom*



*MMDD\_First Name\_LastName\_registration*