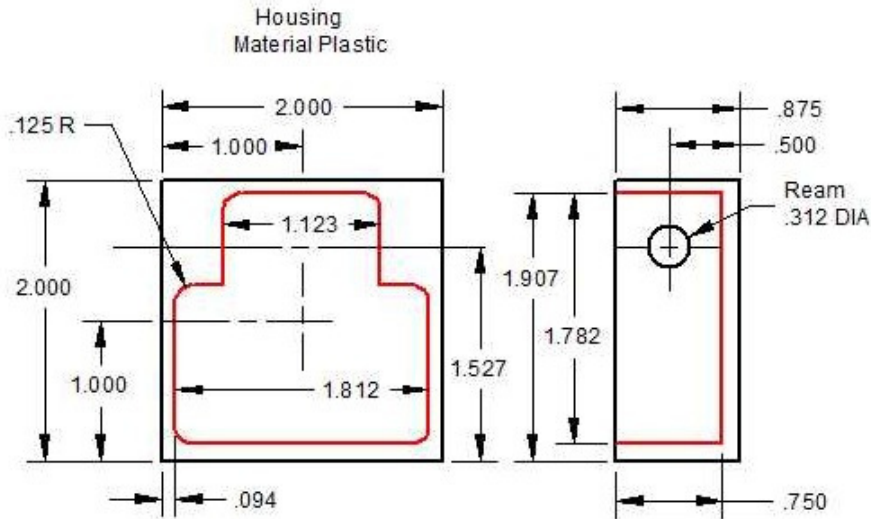


Machining the Home Limit Switch Housing

By Bob Adams

This is how to machine the Pocket using the part print.



The **RED** outline is the Pocket to be machined.
Create the DXF file using CAD (Computer Aided Design).

The Print shows that all the Radii are .125 R (Radius).
This means a Tool Dia. of .250 Dia. to a depth of .750 can be used.
The Reamed .312 Dia. hole can be done after cutting the pocket.

To do this you need two programs:
Free CAD (AutoCAD Clone) program
<http://www.3ds.com/products/draftsight/>

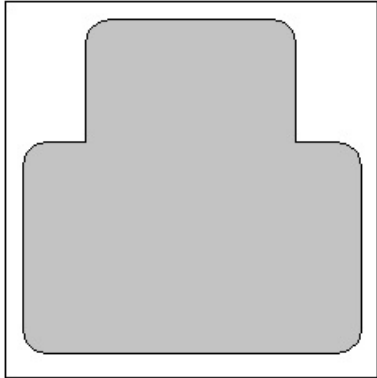
DXF to G-code Conversion Program
<http://www.cad2gcode.com/id42.html>

DXF file is run in the DXF to G-code Conversion program.
G-code is used for the Machine controller in this case.

Mach3 Mill
<http://www.artsoftcontrols.com/>

Using CAD

The gray area is the Pocket outline.

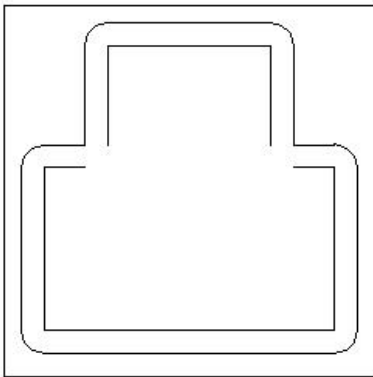


Using the CAD Offset command.

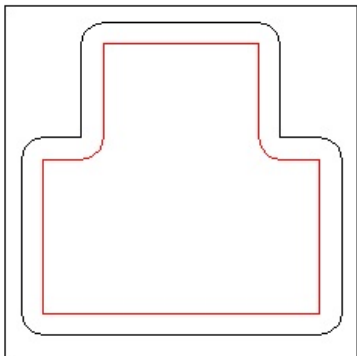
Offset the lines by .125 half the Tool Dia.

Using the Fillet command with a .125 Radius.

Clicking on the two corner lines creates the Radius.



The **Red** Outline is the path the Endmill will follow.



Next to remove most of the material.

I don't have a CAM program to make the Pocket in one cut.

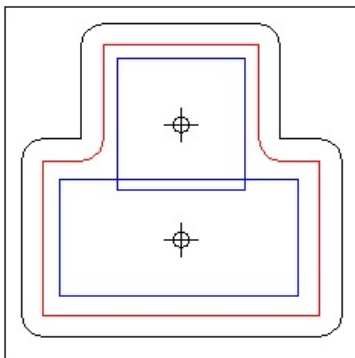
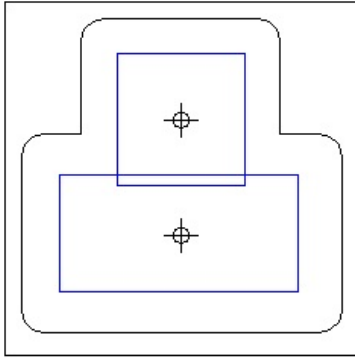
I have a CAD2Mill program that makes Square or Rectangular pockets.

Placing Square and Rectangle shapes to visualize how much can be cutout.

Adding the center points too.

Make a note of the X (lengths) Y (widths) and X Y center points.

This will be used to machine the Square and Rectangular Pockets.



Two G-code files are needed to machine the Pocket.

The Square and Rectangular Pockets are cut First.

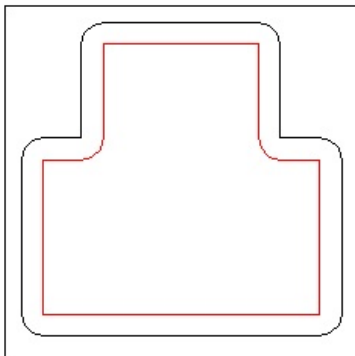
The X (lengths) Y (widths) and X Y center points and pocket depth.

Are used for the Pocket program.

Next is the Outline or Contour.

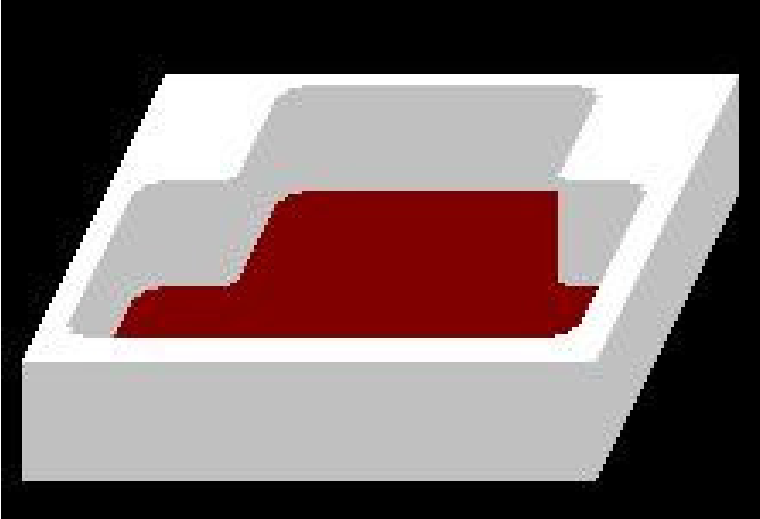
Convert the **RED** line to a Polyline.

This will be use in the DXF to G-code conversion program.



G-code was run in a Free CNC Simulator Program.
<http://www.cncsimulator.com/>

Picture from the Free CNC Simulator



This CNC Home Limit Project is at:
<http://www.cad2gcode.com/cncprojects/id18.html>

That's It!