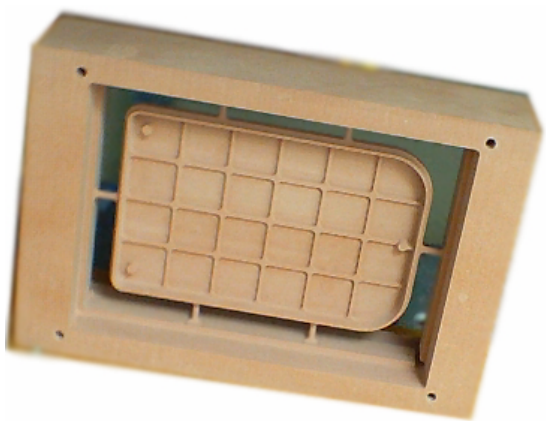
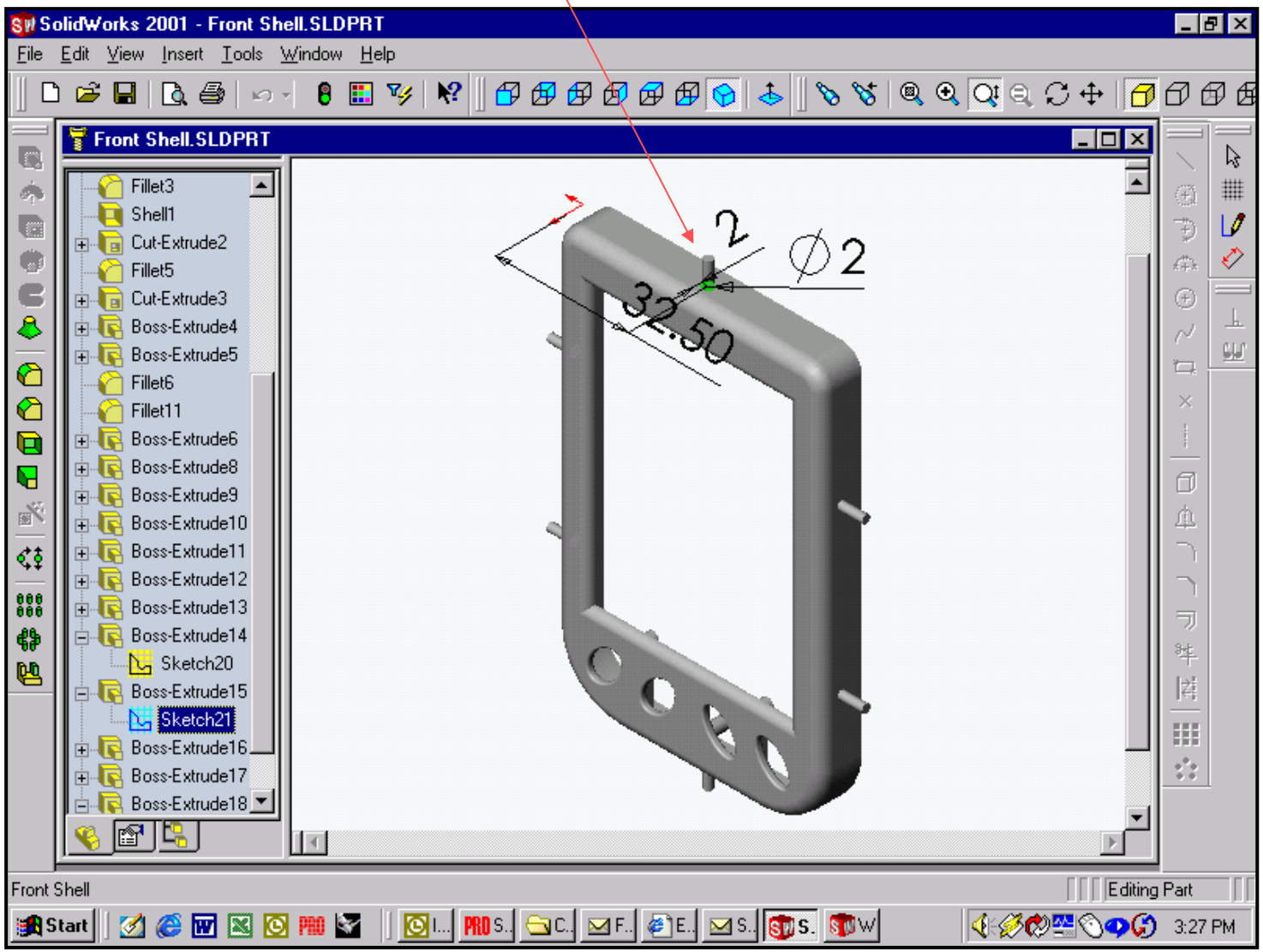
MDX-500
Tutorial

How to Mill a Two Sided Part



Roland

Design part with posts using a CAD/CAM package and save as an .STL file format.



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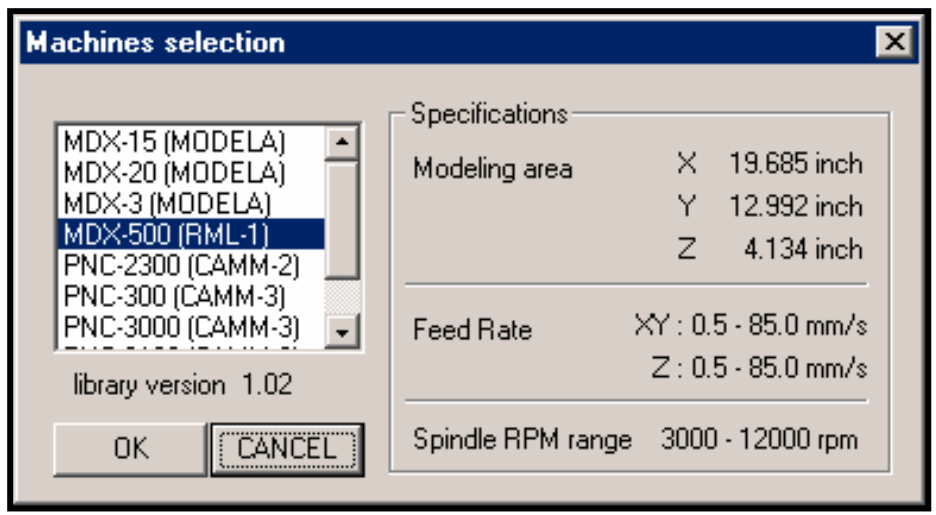
Make sure that the MODELA software is setup for the MDX-500 Windows driver.

- The machine setting is located in MODELA Player software under [OPTION] [MACHINE].



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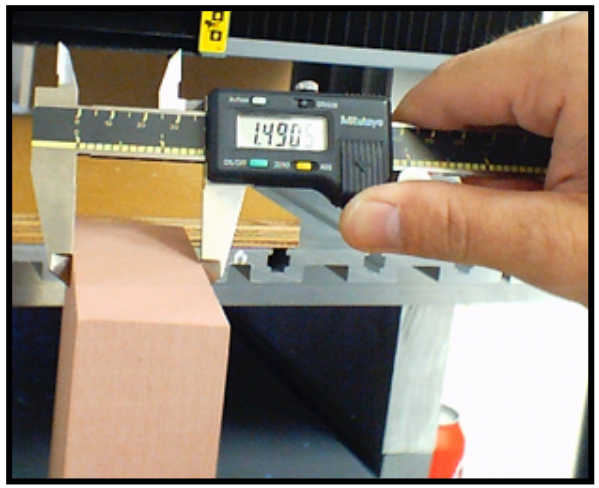
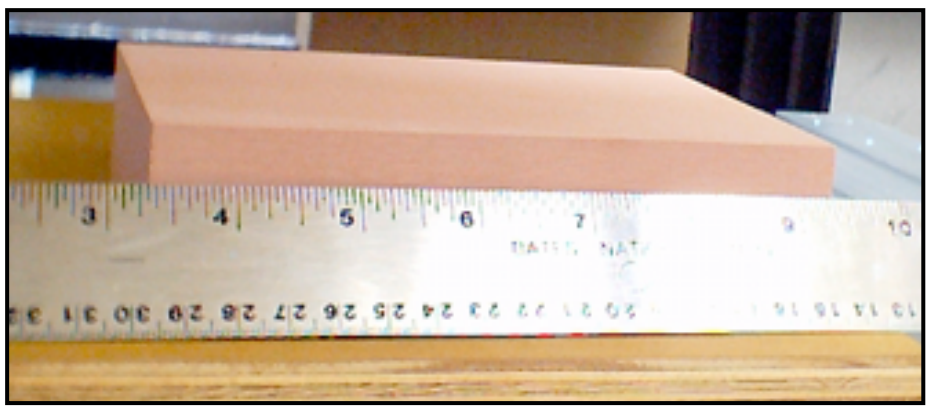
Measure the Stock
(example: 4 x 6 x 1.490)





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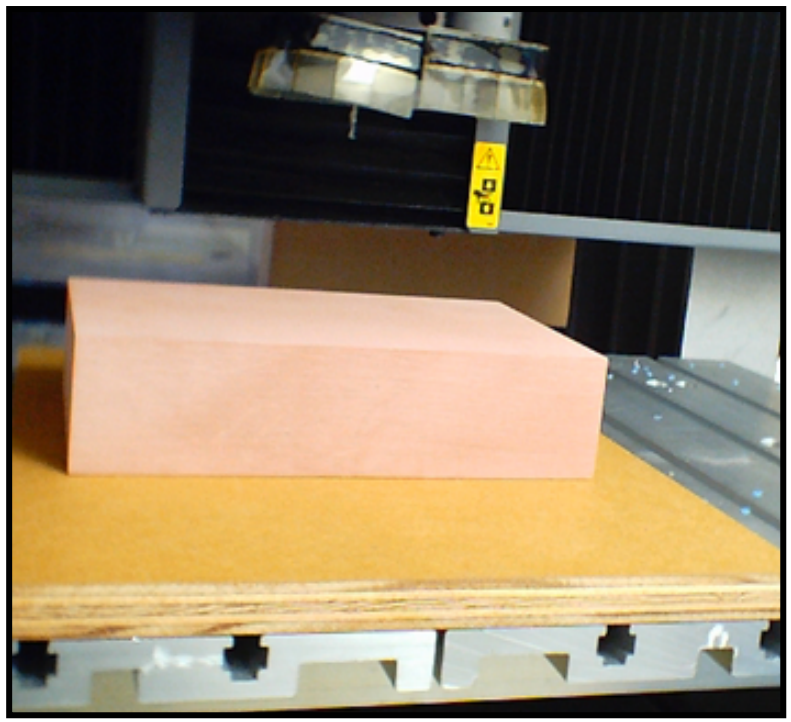
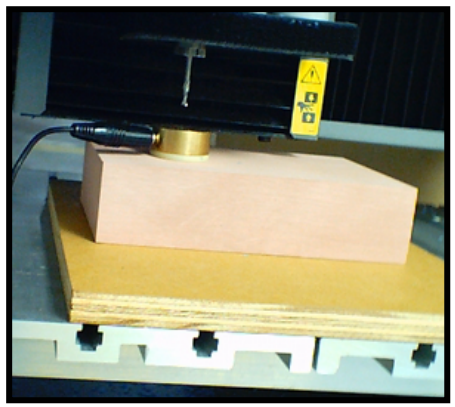
• Secure the material to the bed using high tack double stick tape.

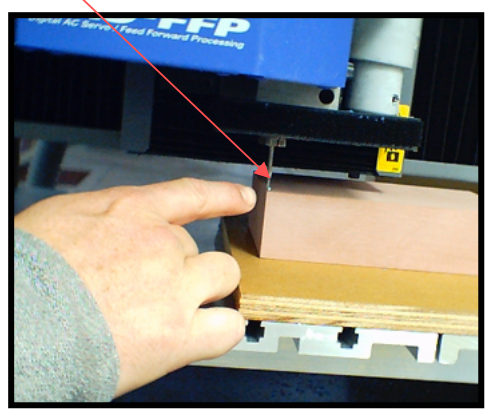
• Place a .125” tool in the MDX-500.



• Set Z zero by using the sensor mode located in sub-menu 10-Sensor mode on MDX-500.

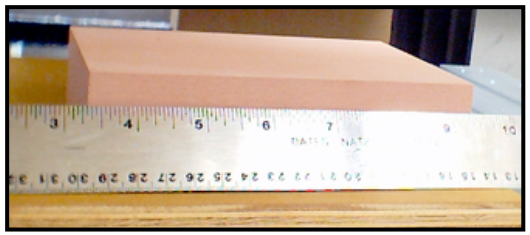


• Set your XY Origin to the lower left of your material stock.



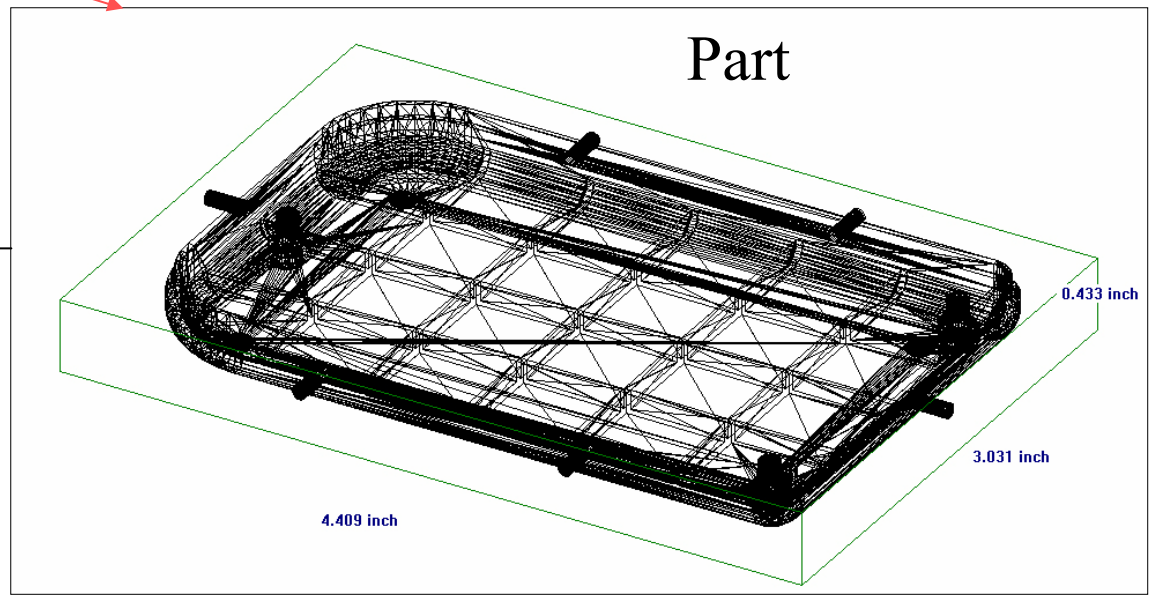
Time to do the Math

Stock



1. Measure Length [6”]
2. Measure Width [4’]
3. Measure Height [1.490]

Part



1. [6”]Stock Length: Subtract part Length [4.409”] = [1.591”]. Divide by 2 = [.795”]. This is your **LowerLeft X** value.

2. [4”]Stock Width: Subtract part Width [3.03”] =[.969”]. Divide by 2 =[.484’]. This is your **LowerLeft Y** value.

3. [1. 490”]Stock Height: Subtract Part Height[1.047”]. Divide by 2 = [.5285”]. This equals surfacing depth.

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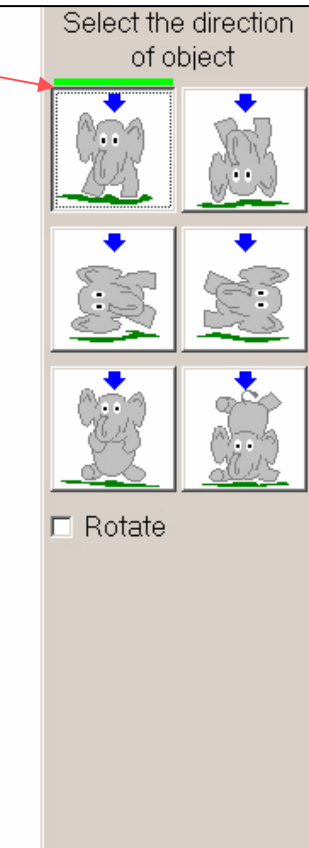
How to Layout Your Part in MODELA Software

- First mill the top of the part by selecting the upper left elephant.



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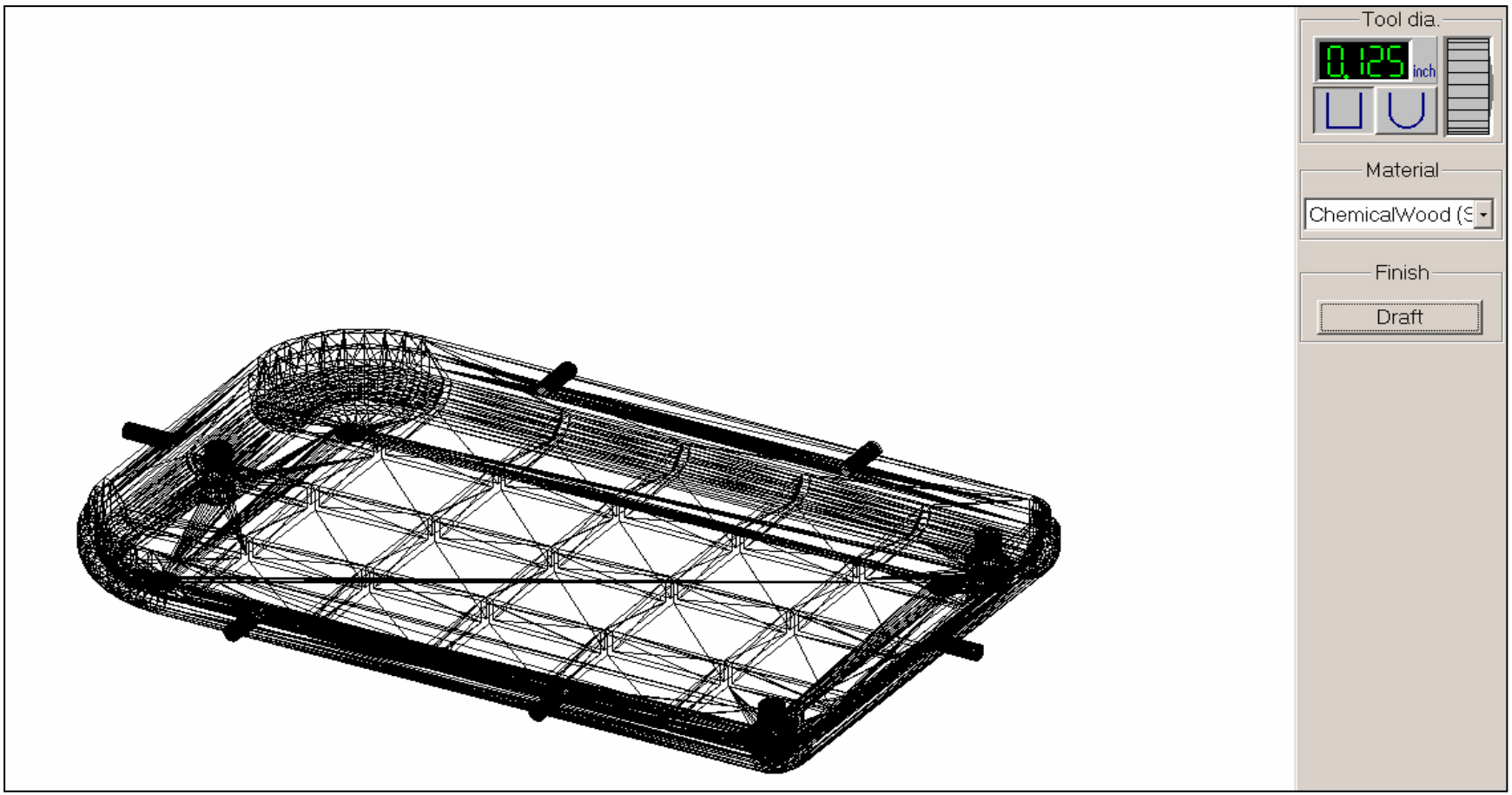
- Select your material type and tool; then select Draft finish, but do not click [Start]. Proceed to the [Option] [Layout] menu as shown on the next page.



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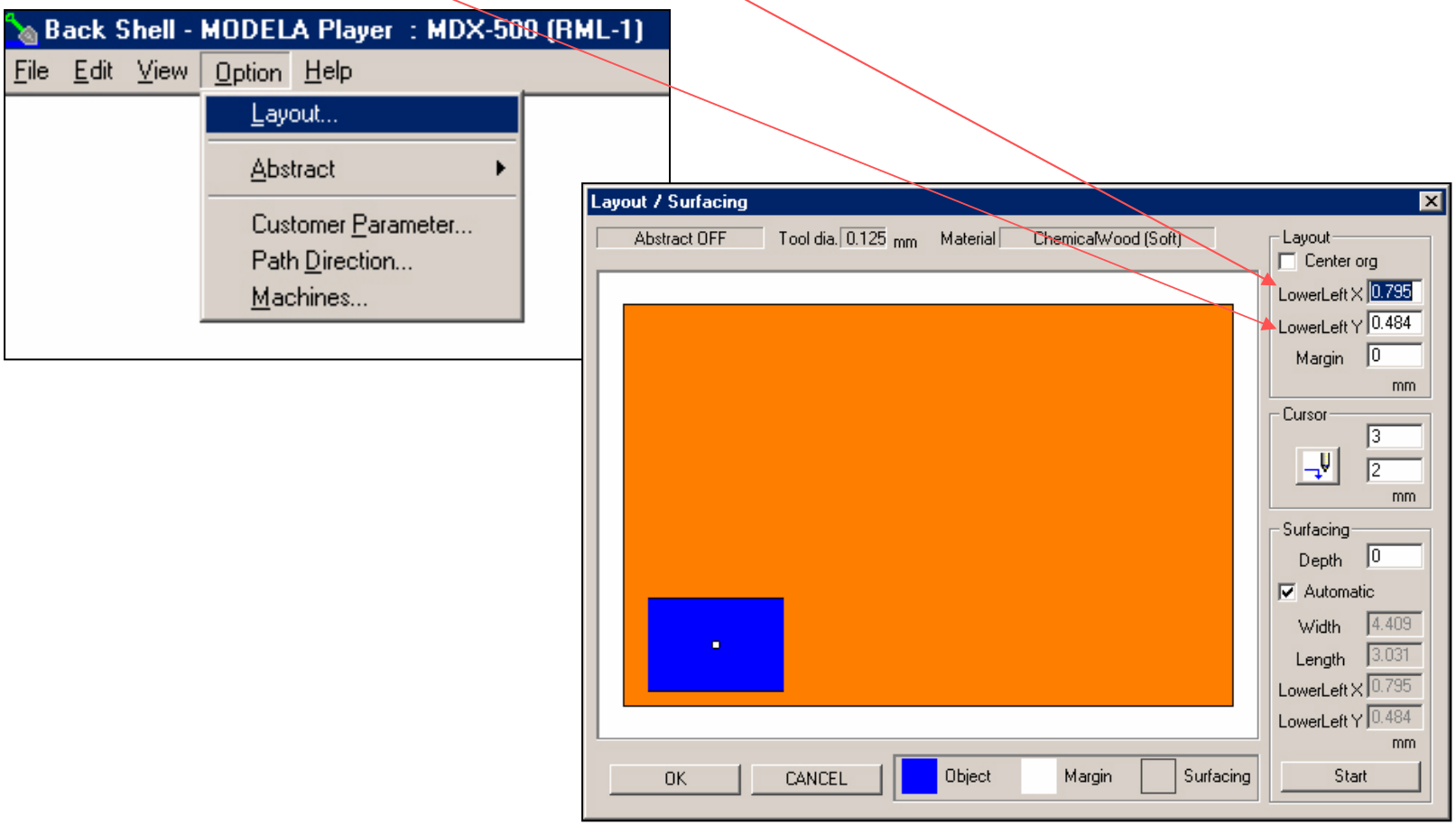
- Input the following LowerLeft X value [0.795”].
- Input the following LowerLeft Y value [0.484”].



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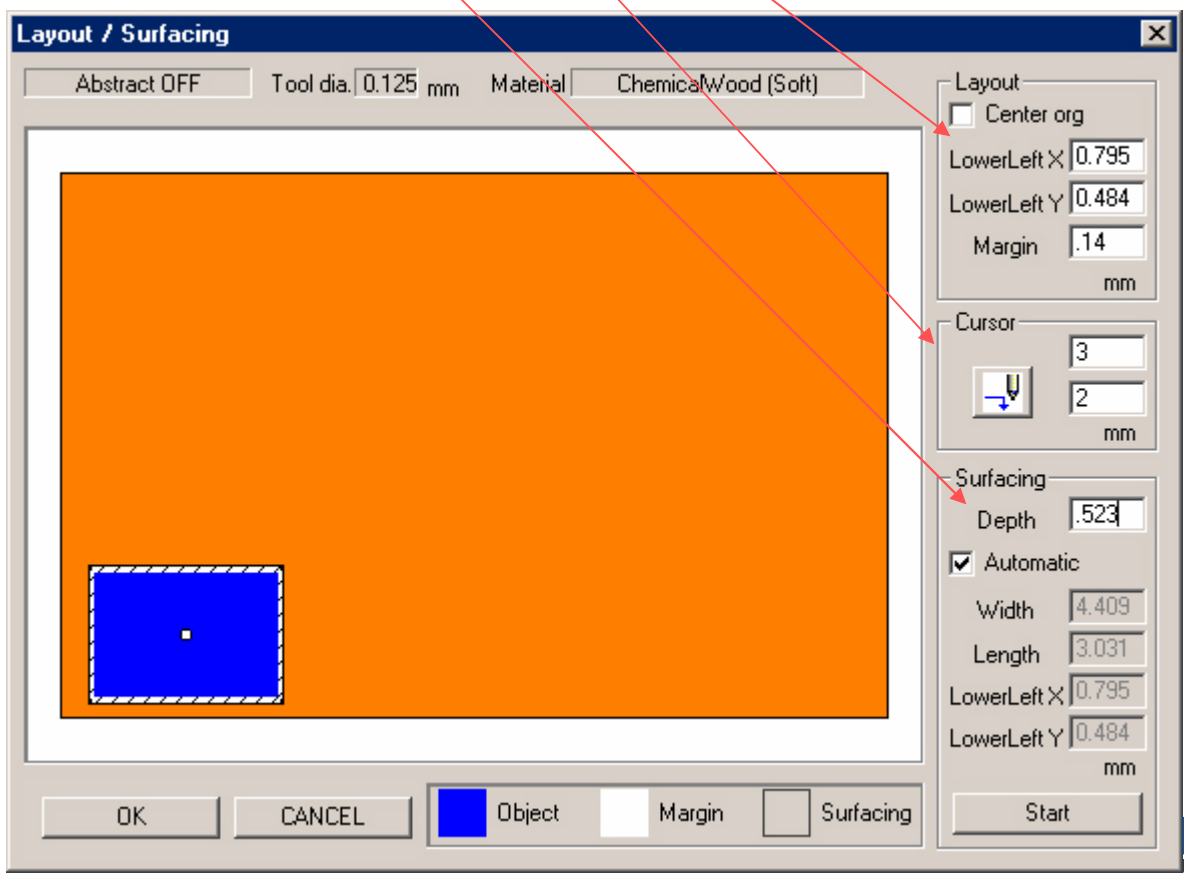
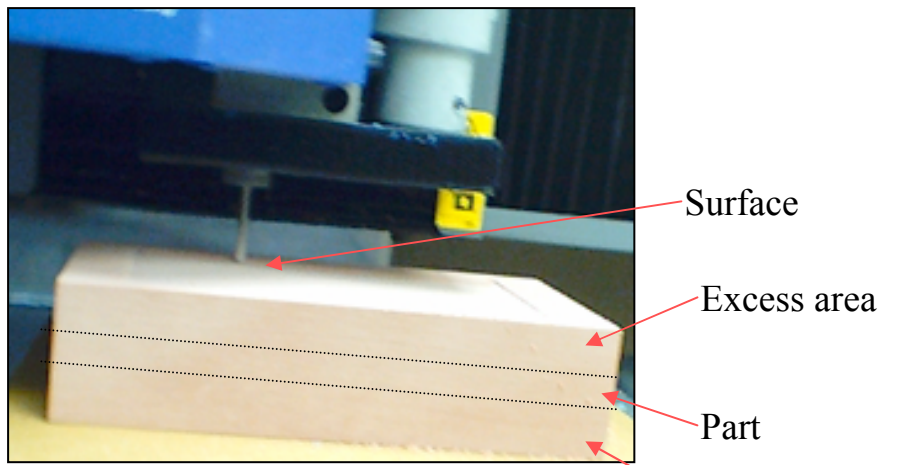
- Input [.528] in the Depth field located under Surfacing.
- Change Margin to .14 so your tool will not make contact with the side.
- Now Click [Start] to perform Surfacing.

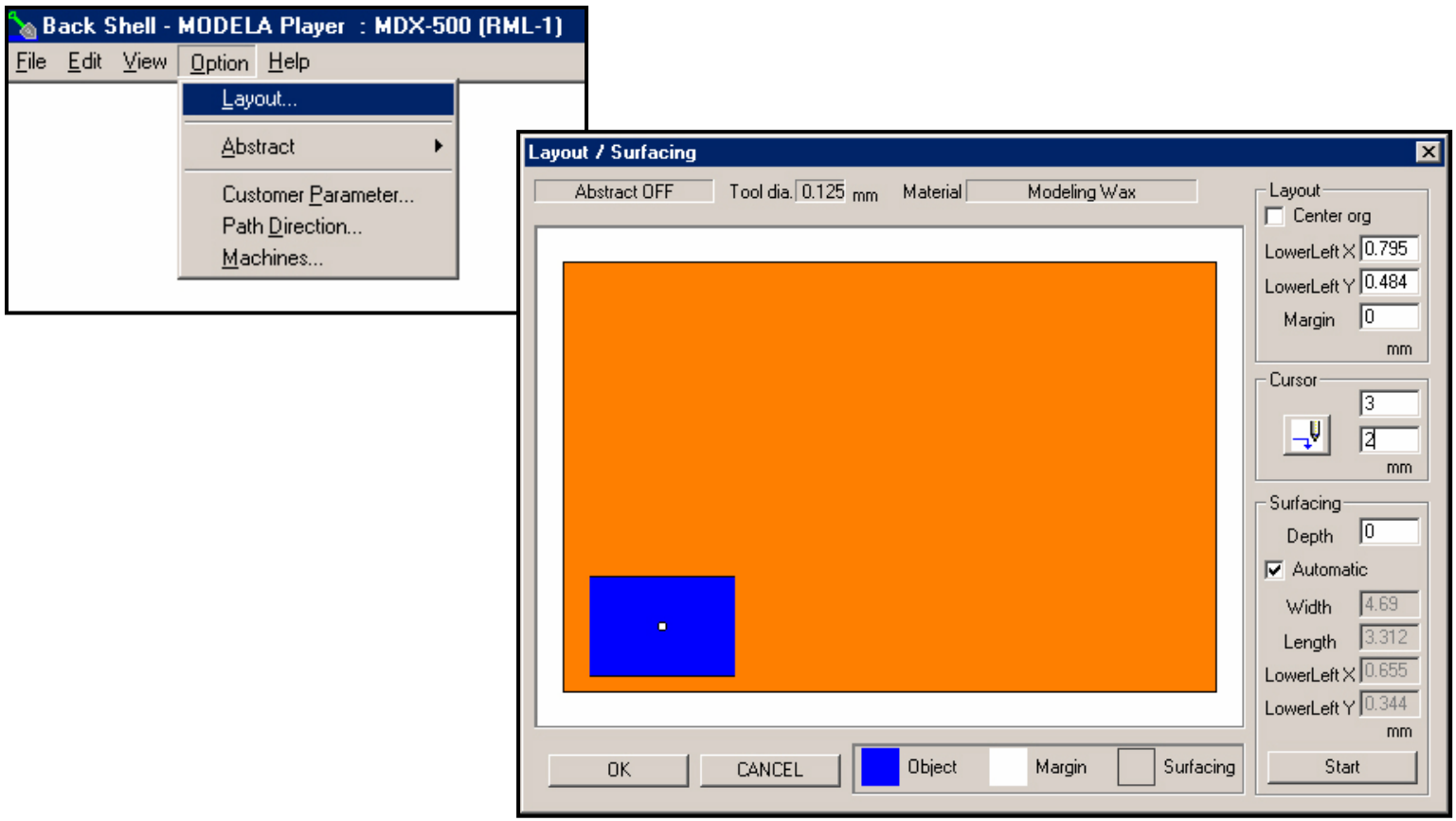


- Surfacing is required to removed excess material to reach the center working area of our stock.



Top Draft Cut

- Change the [Margin] to [0].
- Change Surfacing Depth to [0] and [Click] [OK].



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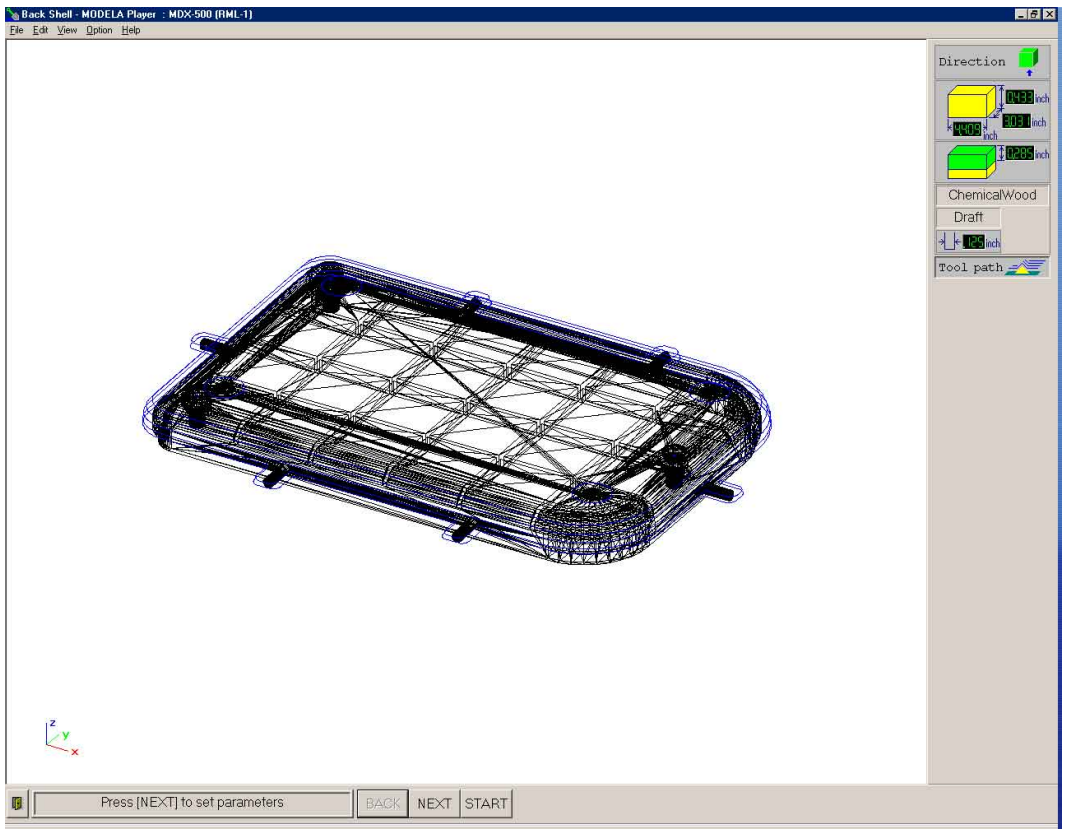
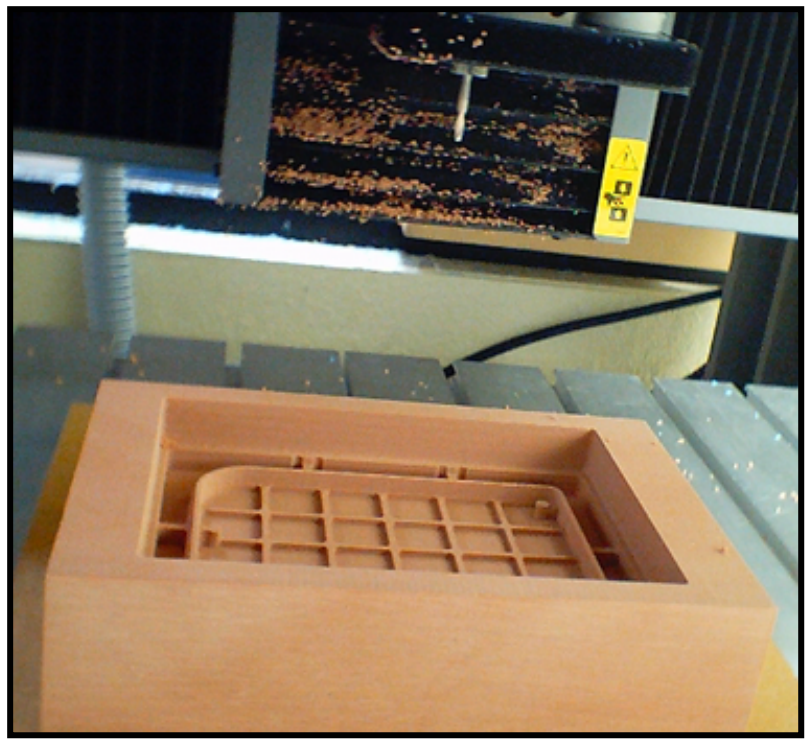
Top Draft Cut

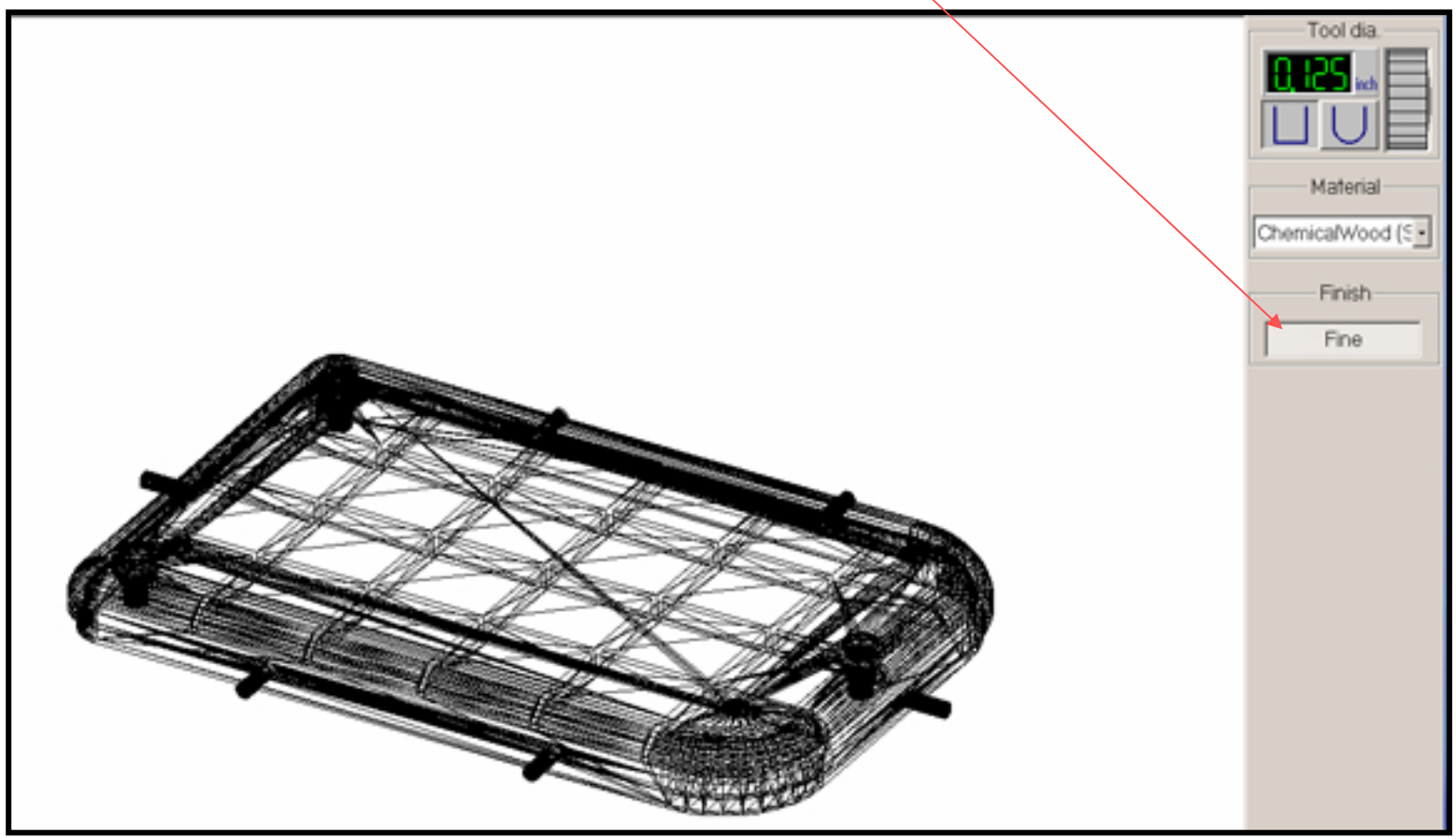
- In Modela software, select [Tool path] to view your draft settings.
- Click [Start] to begin Draft pass.



Your Draft Cut is now complete .



• Proceed with Fine pass on your part by selecting the [Finish][Fine] in Modela software.



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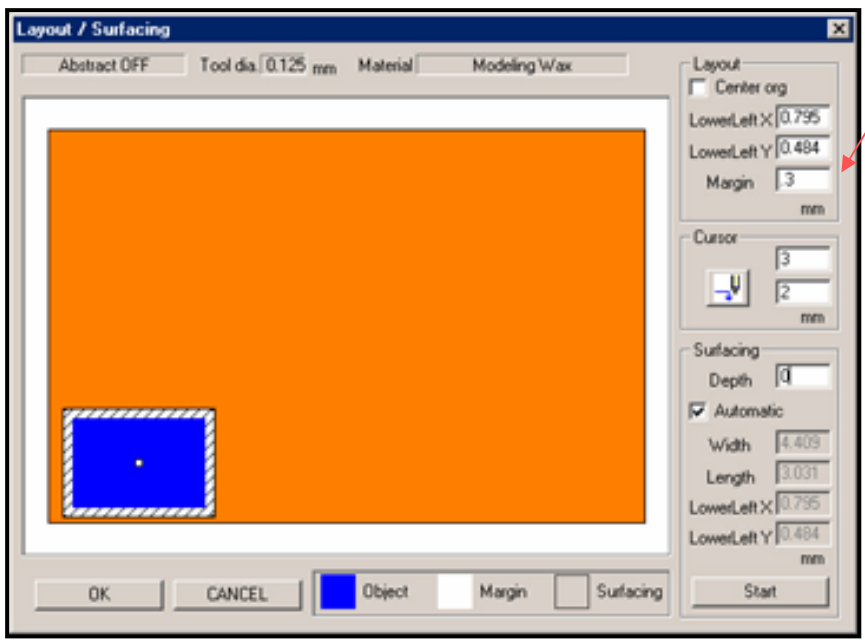
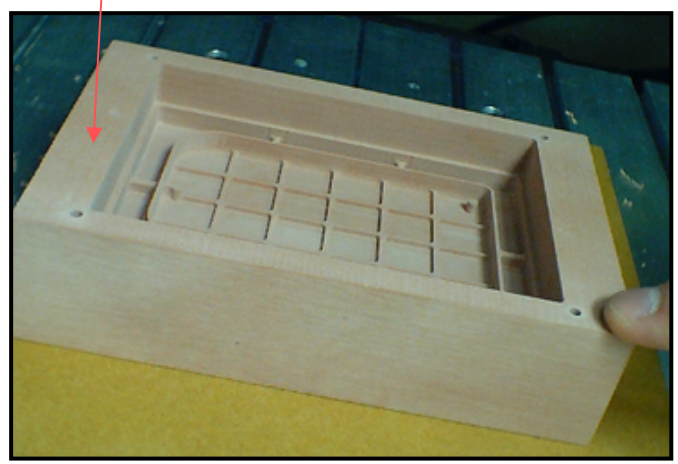
Drilling Index Holes for the Part Flip

- Reset your Z-Zero on the top surface of the block.
- In Layout/Surfacing Screen – set margin to .3.





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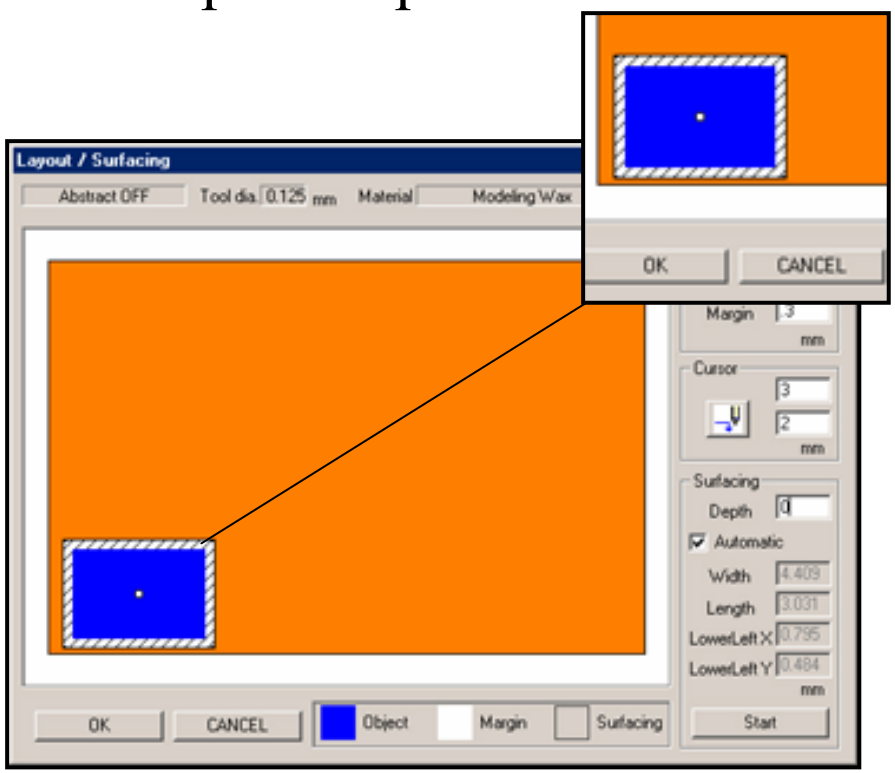
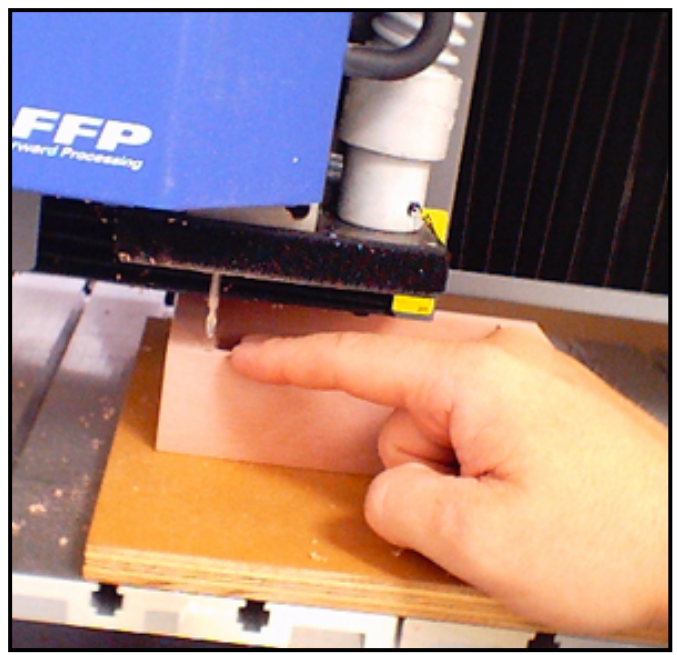
Drilling the Index Holes

- Click on the bottom left corner of the blue square.
- The MDX-500 head will move to left corner and Z-O.
- Manually on the MDX-500 you will need to click[Spindle] and use the [Z-] to drill the pins holes.We recommend [-600].
- Repeat steps 3-5 on each corner.





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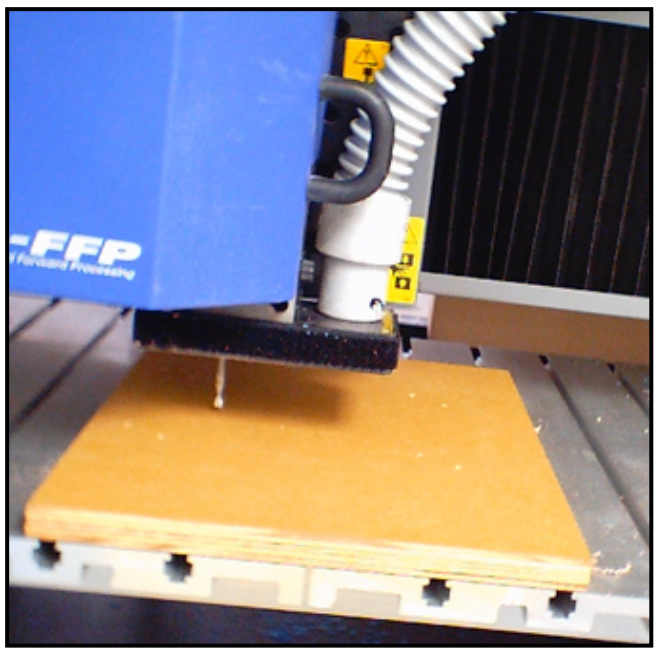
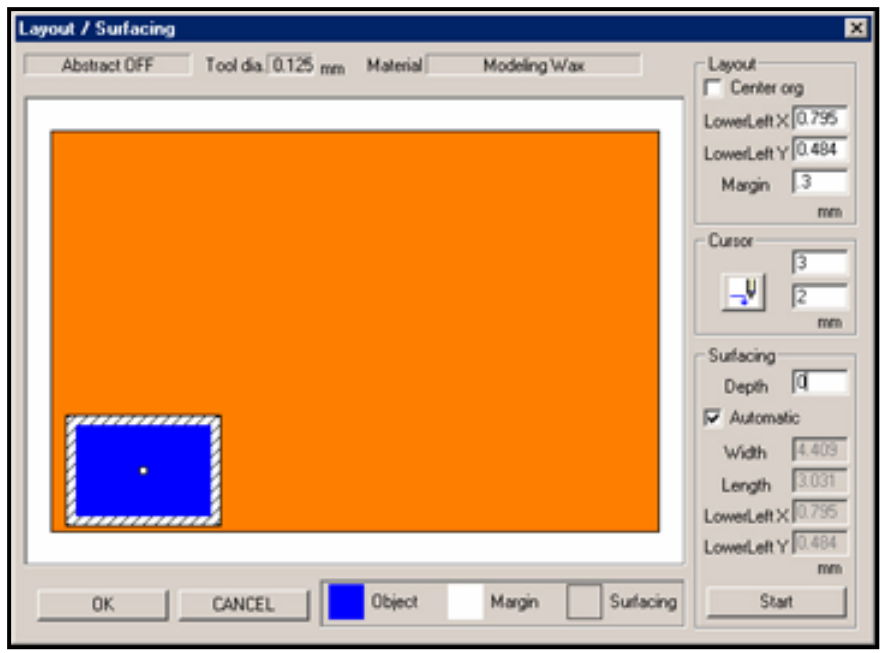
Index Pin Mount

- After removing your part, mount a quarter inch board with double sided tape to the bed.
- Set a new Z-zero on the board and drill a new set of index holes just like the example on the prior page.





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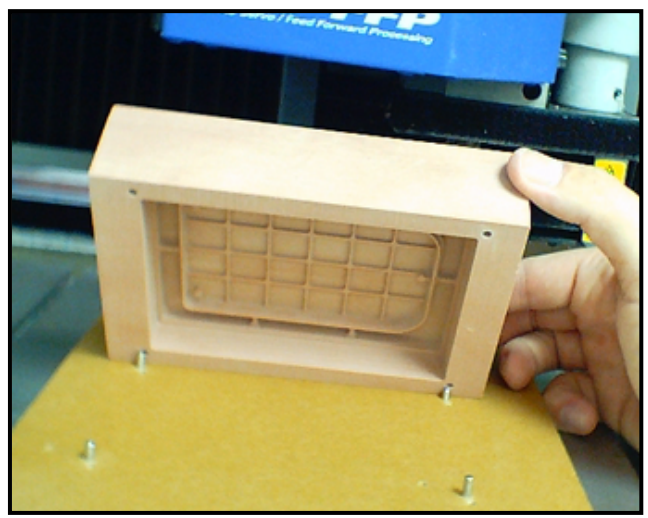
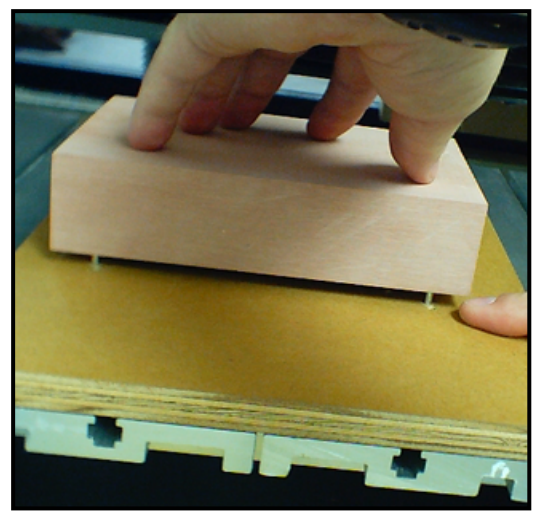
Set Up Part with the Same Holes

- Place pins in the drilled holes and flip the cut stock and press down.
- Use double-sided tape to secure part.
- You are now ready to surface the second side of the part.





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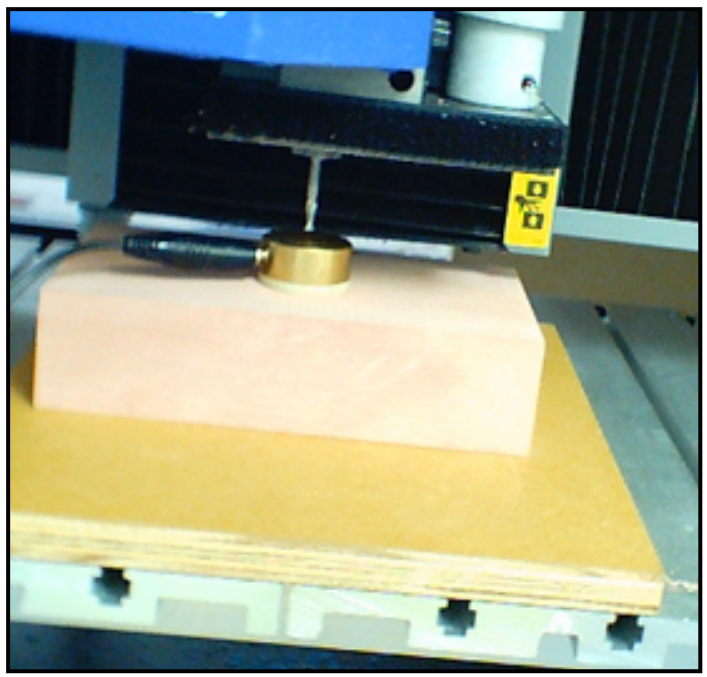
Set New Z-Zero on the MDX-500

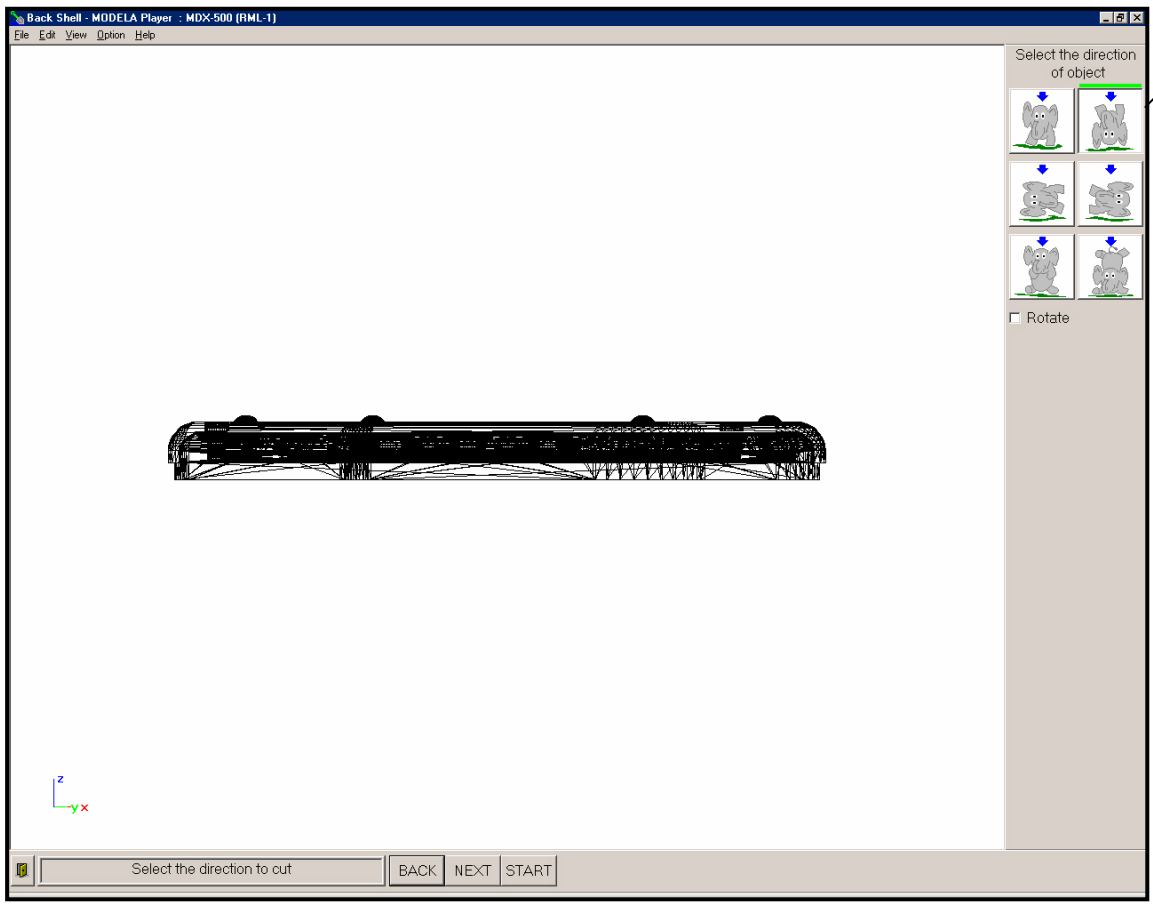
• Set Z-zero by using sensor mode located in sub-menu 10-(Sensor mode).

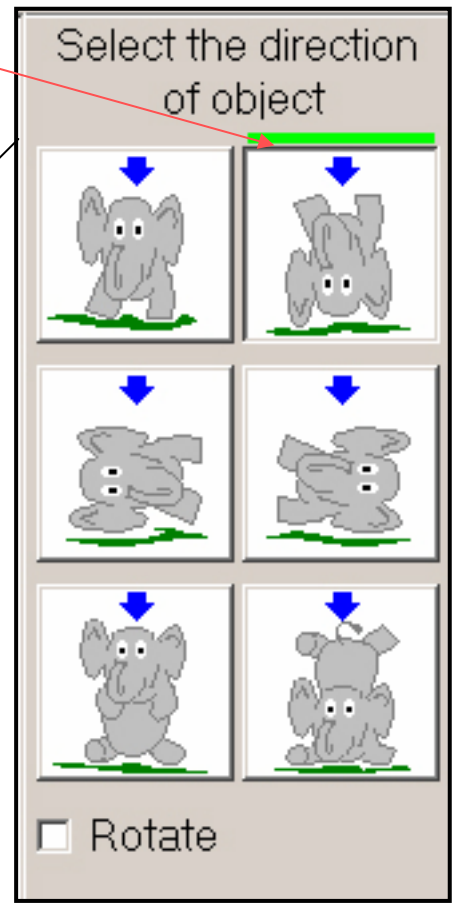


Flip Part in Modela Software

- To flip the part in Modela software, click the upside down elephant.

- Your part should appear on the screen upside down.





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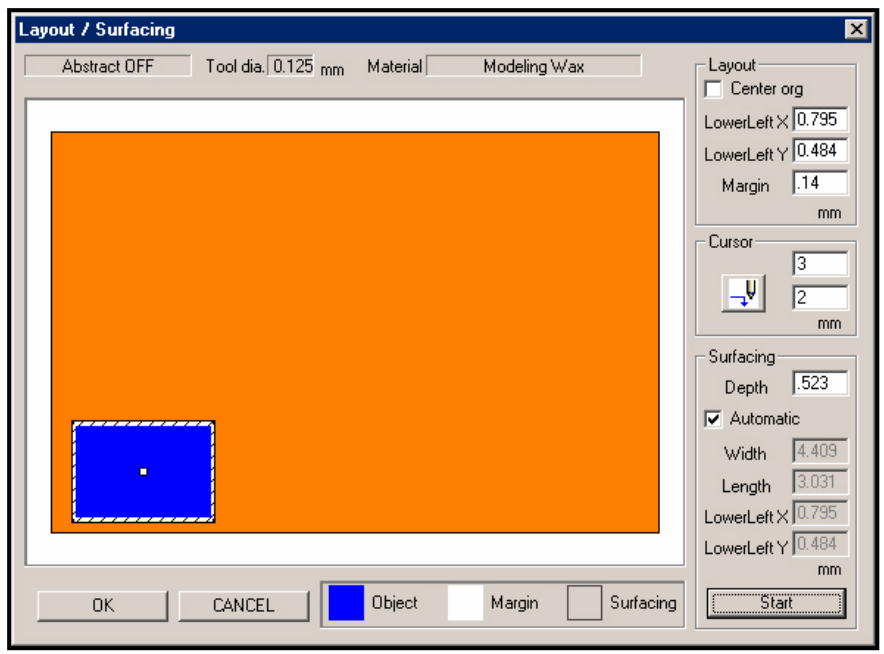
Surfacing Mode

- Proceed to the [Option] [Layout] menu in Modela software.
- Input the following LowerLeft X value [0.795”].
- Input the following LowerLeft Y value [0.484”] with a .14 margin.
- Input [.523] in the Depth field located under Surfacing.
- Now Click [Start] to perform Surfacing on second side.



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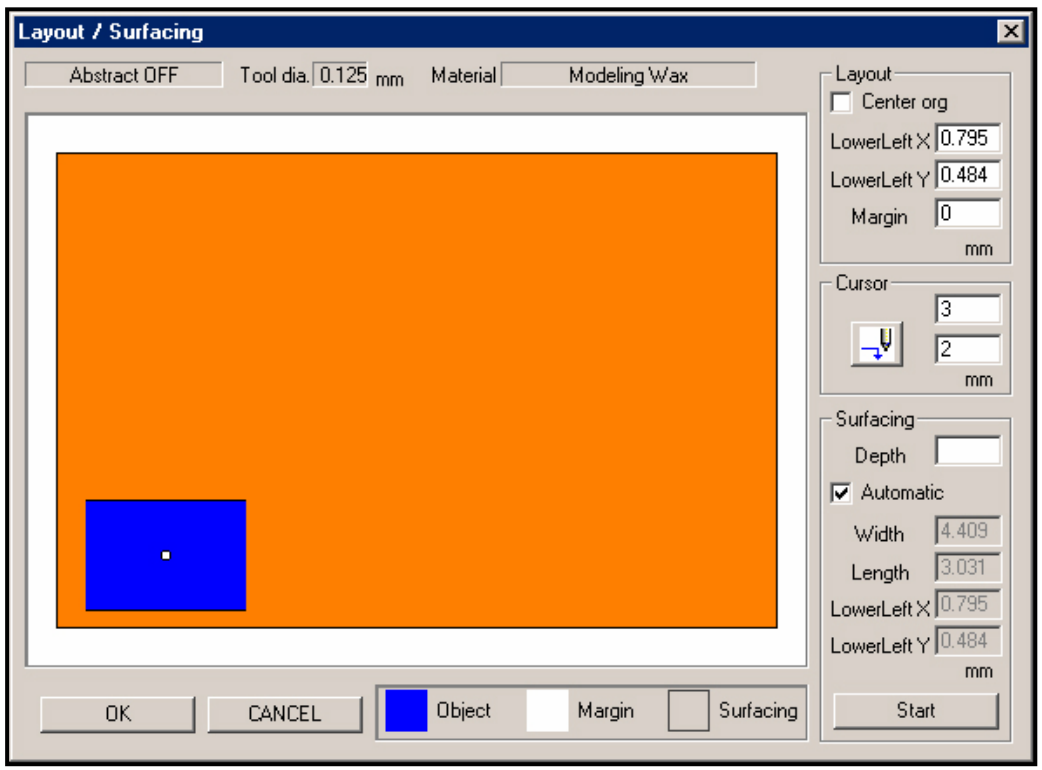
Draft Mode

Reset draft in Modela software by the following

- Change the [Margin] to [0].
- Change Surfacing Depth to [0] and [Click] [OK].



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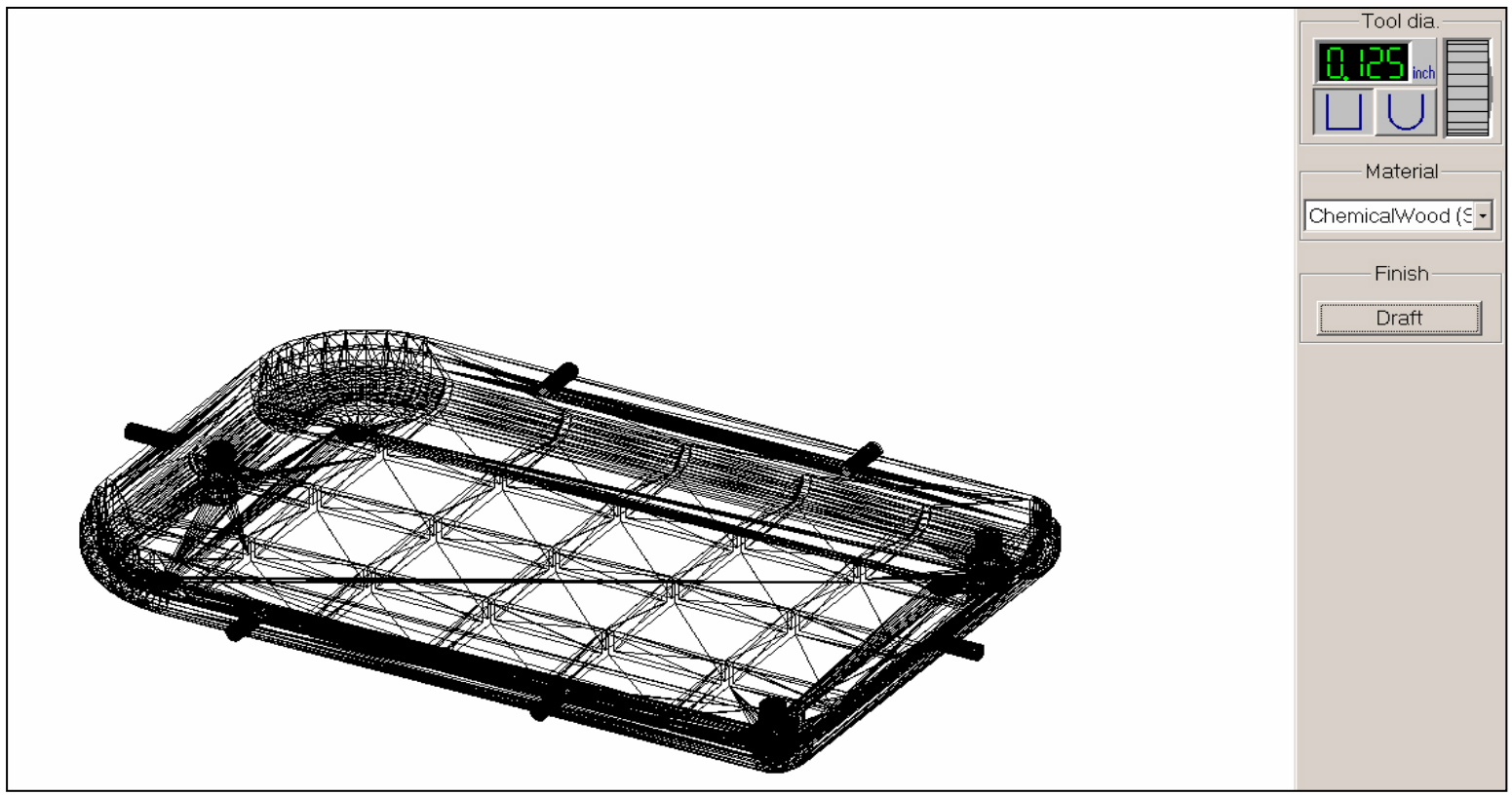
Bottom Draft Cut

- Select [Draft] and select next.
- You must reset your Z-zero on the new surface by using the sensor on the MDX-500 prior to starting your draft cut.



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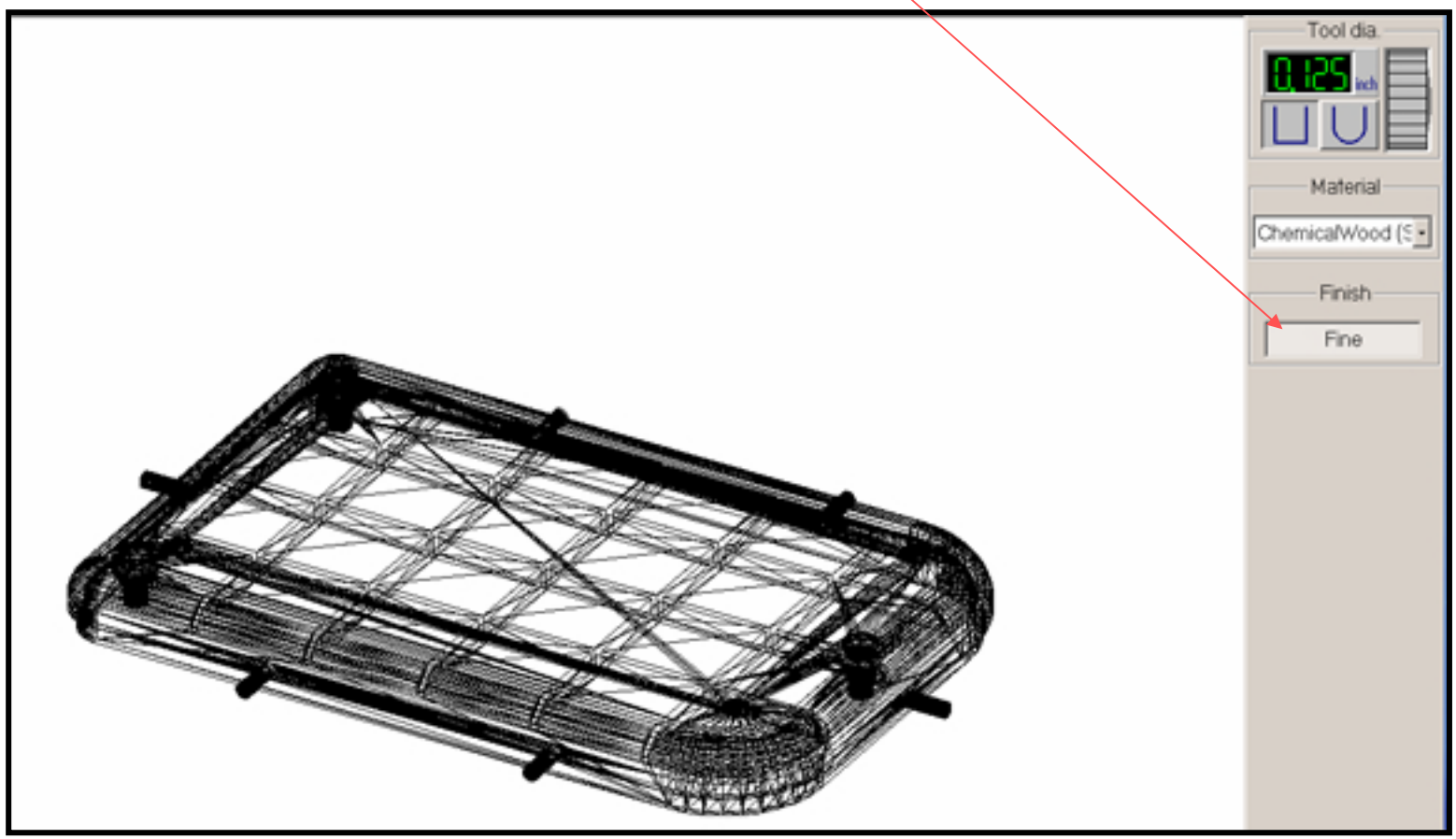
Send Draft Cut

Proceed with Fine Pass on Your Part by Selecting the [Finish][Fine] in Modela Software.



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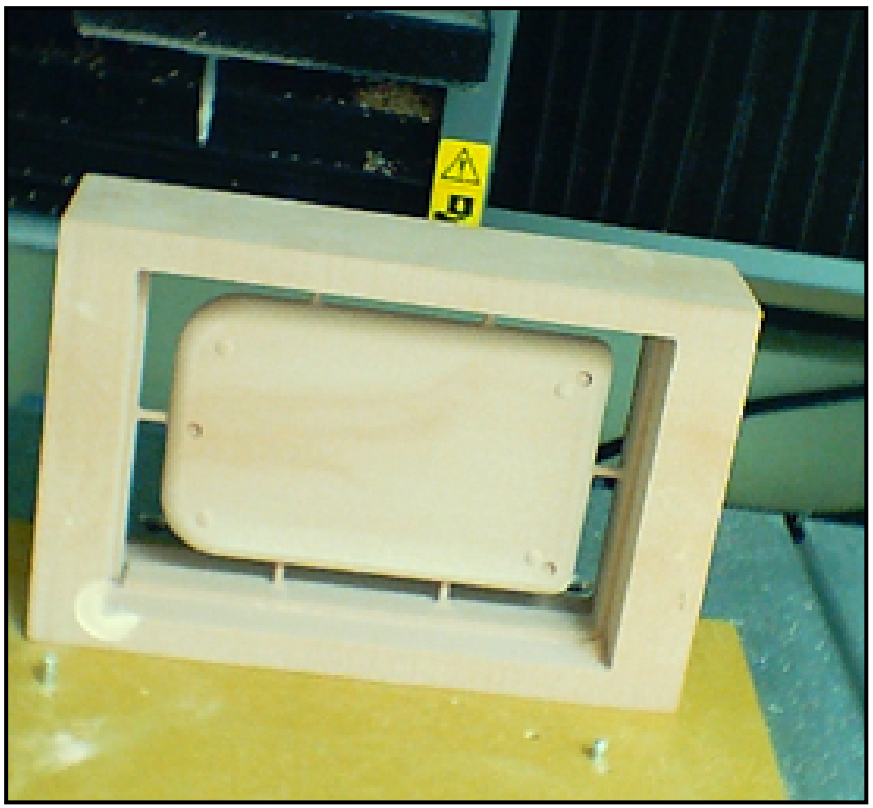
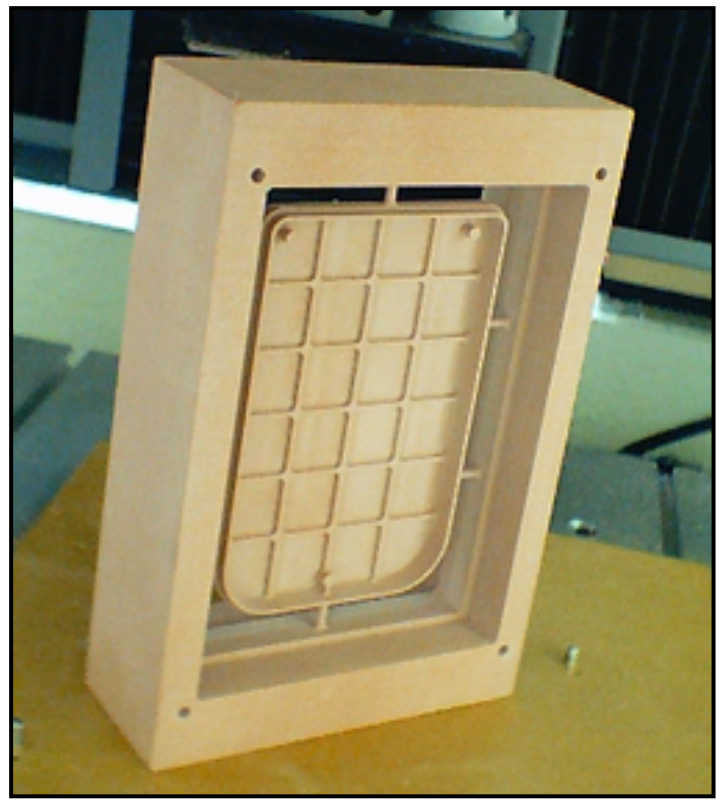
Finished Part





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