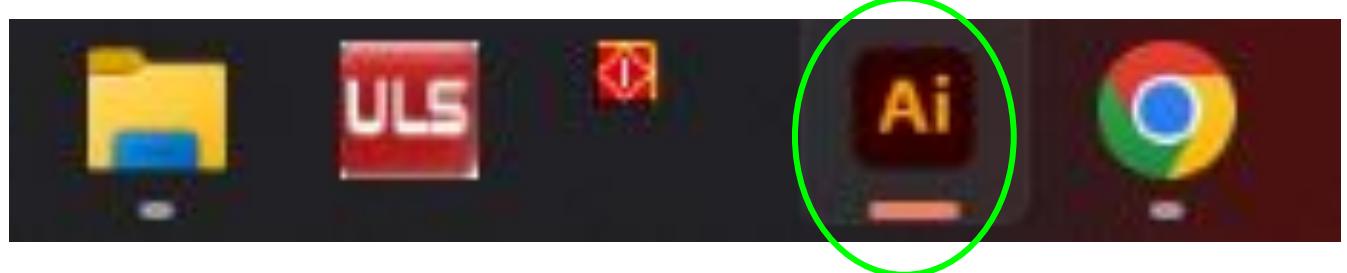


# Outline Cut Keychain

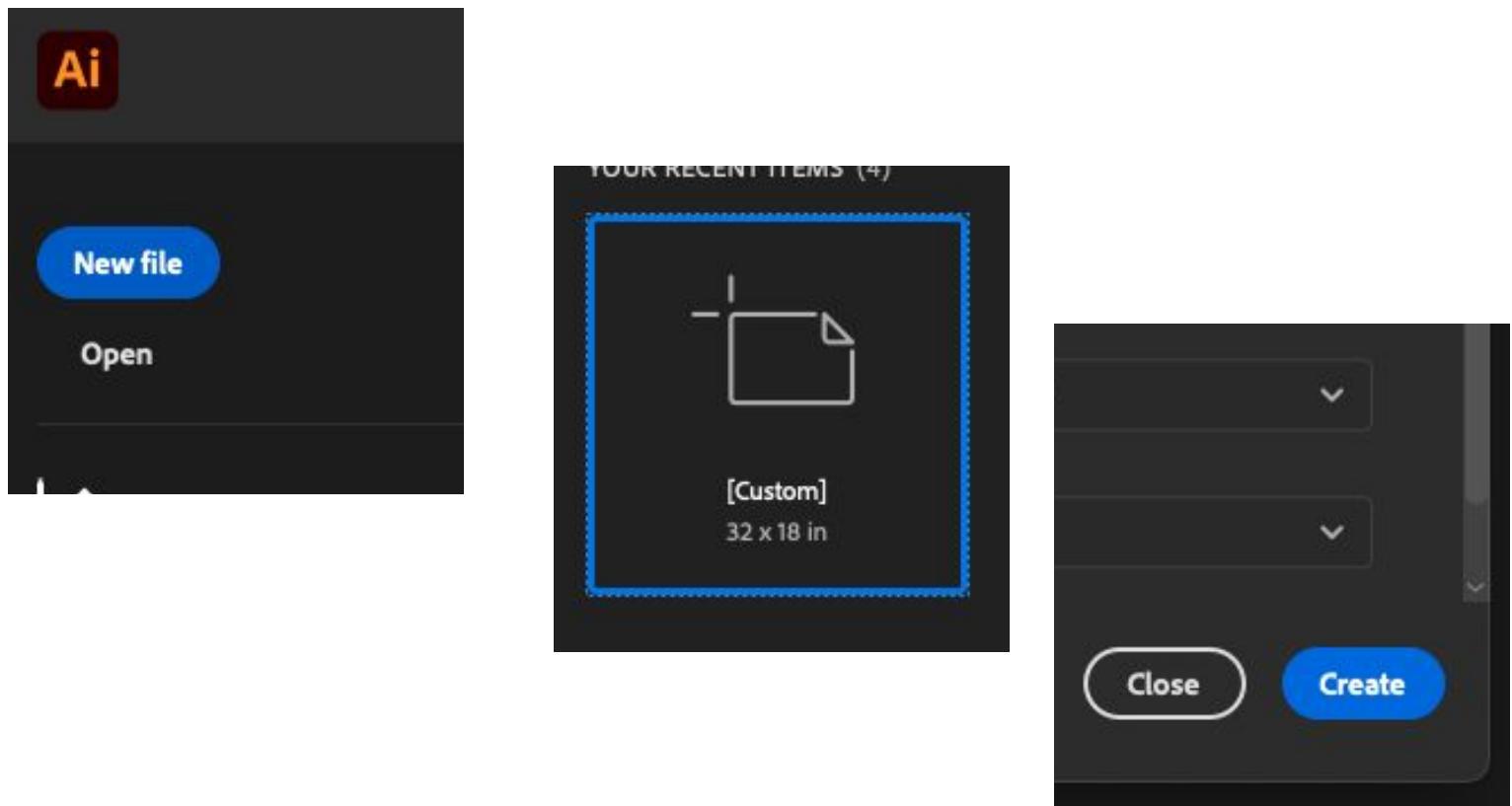


# Create the Text

1. Open Adobe Illustrator.



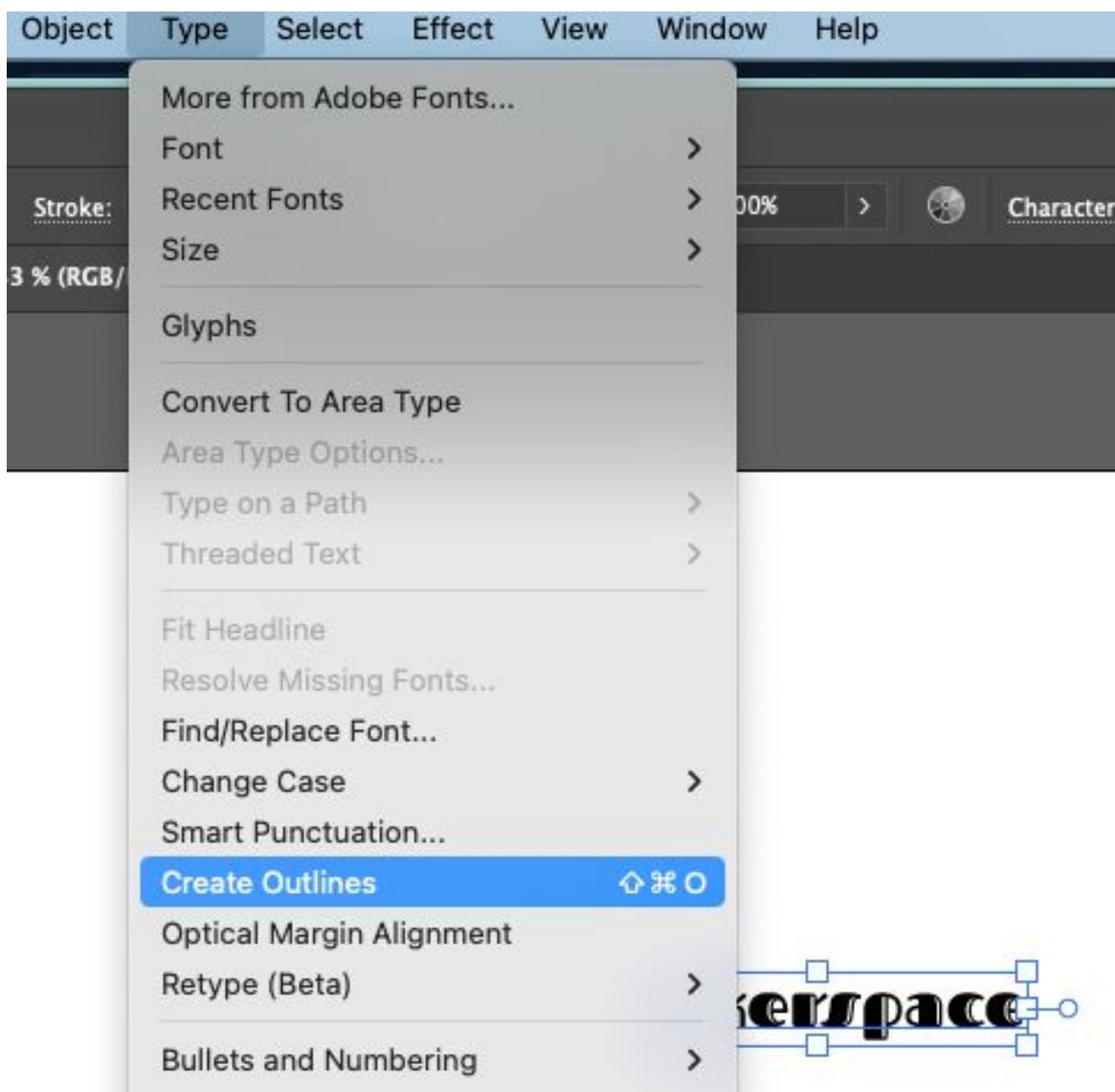
2. Create a new file with the size 34" x 18".



3. Type in the text and select the font type and size.



4. With the text selected, select the Type->Create Outlines tool.

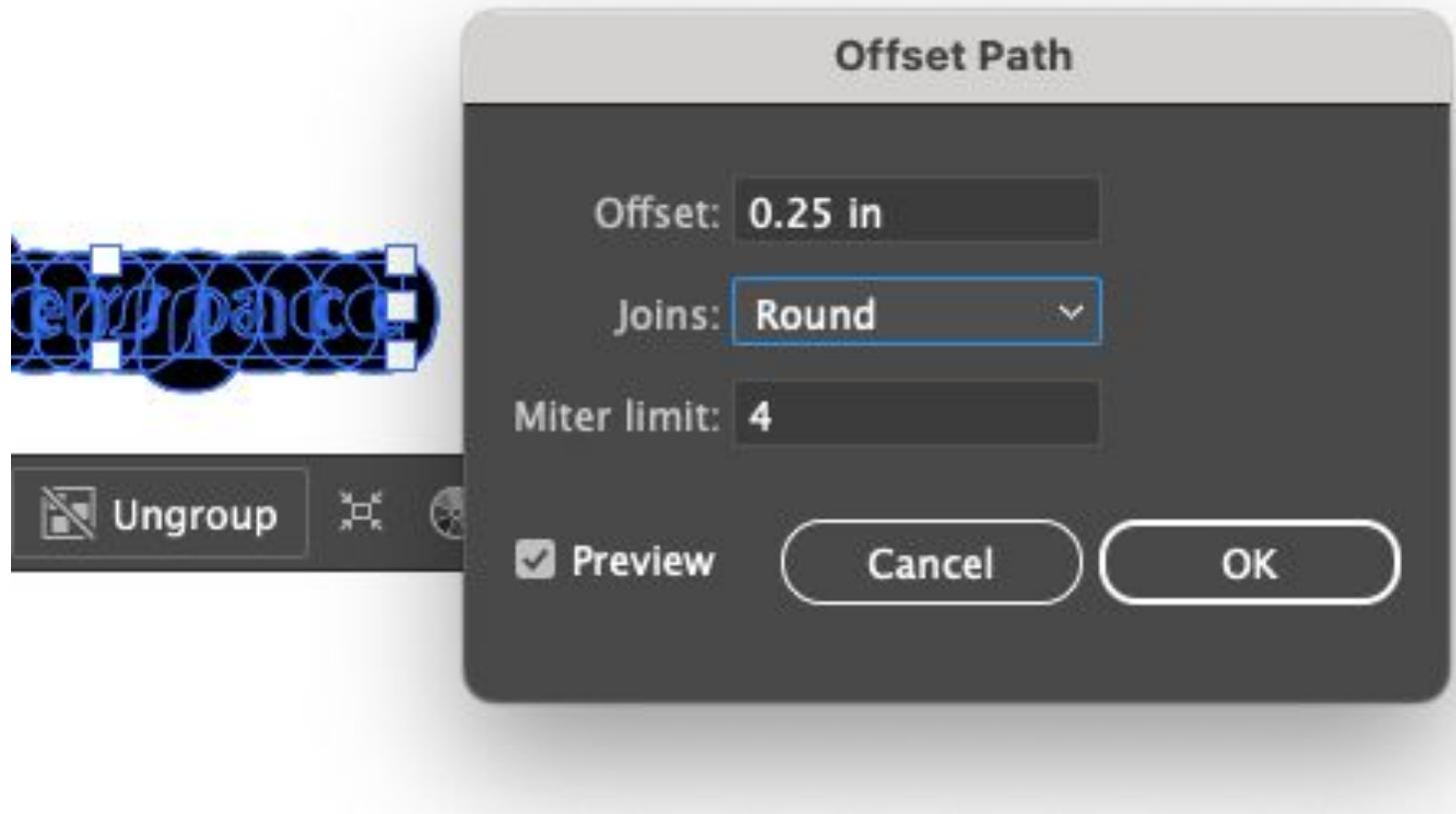


## 5. Offset the outline with Object->Path->Offset Path...

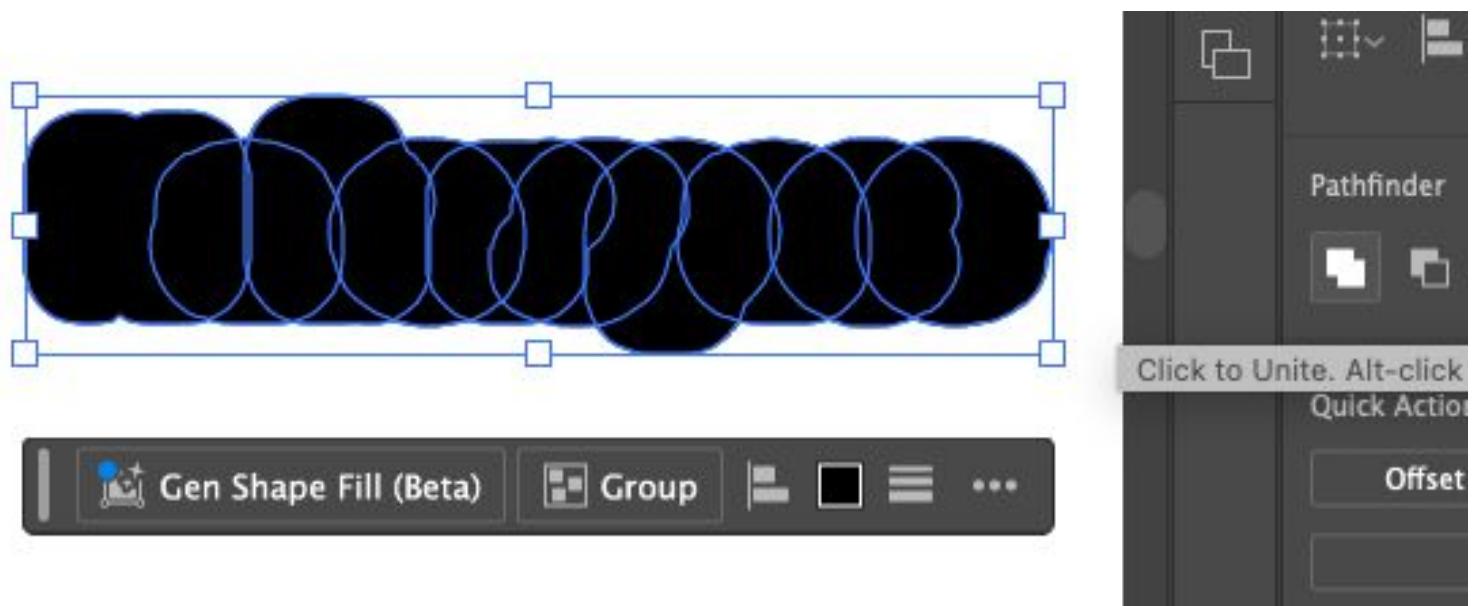
The image shows a portion of the Adobe Illustrator interface. At the top, there is a horizontal menu bar with the following items: Edit, Object (which is currently selected and highlighted in blue), Type, Select, and Effect. Below the menu bar, a secondary context menu is displayed, which includes options like Transform, Arrange, and Align. The main focus is on the 'Object' menu itself, which is expanded to show several sub-options: Create Gradient Mesh..., Create Object Mosaic..., Create Trim Marks, Flatten Transparency..., Make Pixel Perfect, Slice, Generate Vectors (Beta)..., Path (selected and highlighted in blue), Shape, Gen Shape Fill (Beta)..., Pattern, Intertwine, and Reverse. To the right of the menu, there is a workspace containing a blue text object that reads "Makerspace". Below the workspace, there is a toolbar with various icons and a set of control handles for the selected text object.

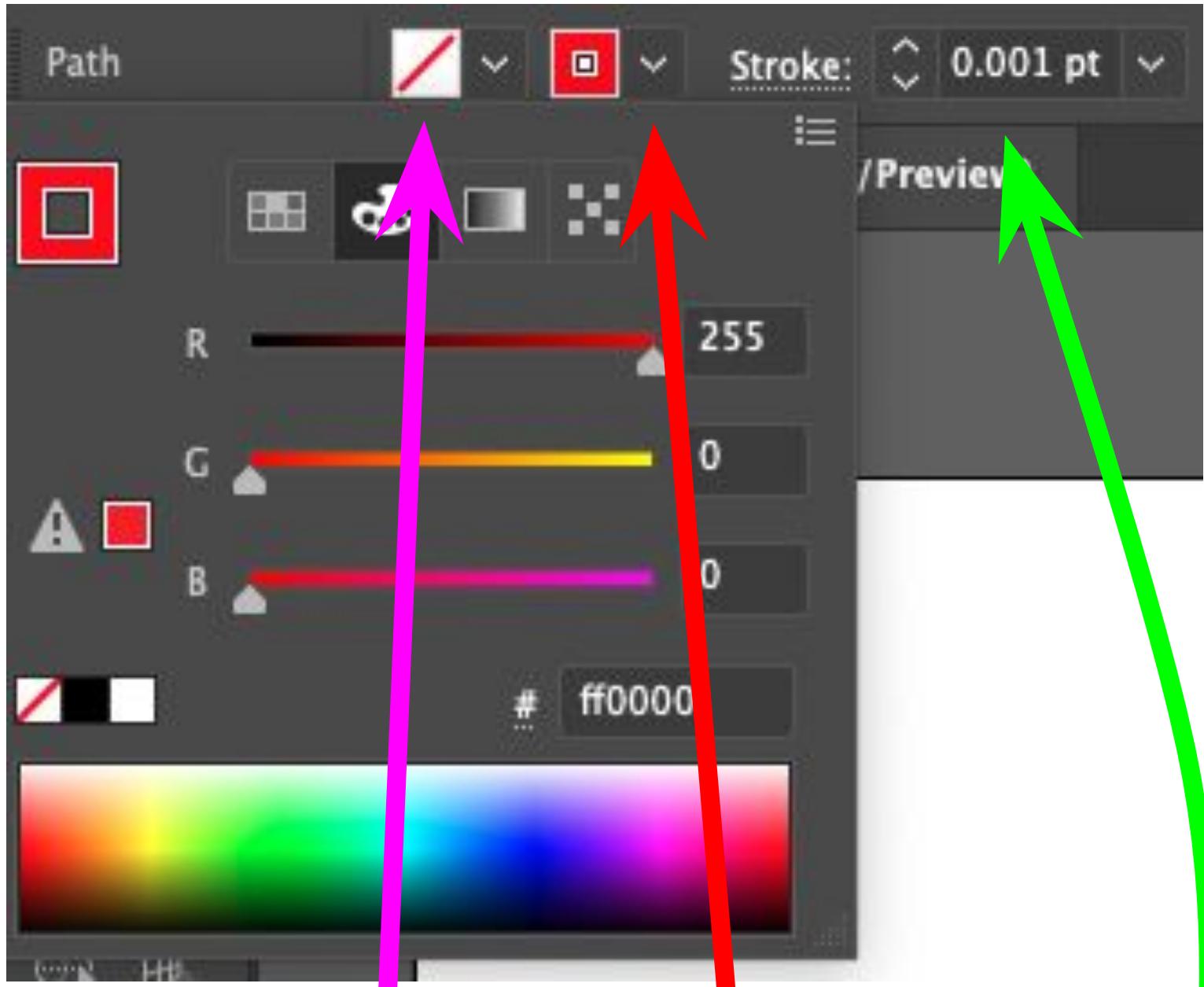
- Create Gradient Mesh...
- Create Object Mosaic...
- Create Trim Marks
- Flatten Transparency...
- Make Pixel Perfect
- Slice
  - Generate Vectors (Beta)...
- Path
  - Join ⌘ J
  - Average... ⌘⌘ J
  - Outline Stroke
  - Offset Path...**
  - Reverse Path Direction
- Shape
- Gen Shape Fill (Beta)...
- Pattern
- Intertwine
- Reverse

6. Change the Offset to “2.5 in”, and the Joins to “Round”



7. In the Pathfinder panel, select Unite





8. Change the Fill to “none”, the Stroke to “red” (it must be absolute red,  $\text{rgb}(255, 0, 0)$ ,  $\#ff0000$ ), and the Stroke Width to “.001” (points or inches).

9. Select the object and “Ungroup” so that the text and outline are now separate.



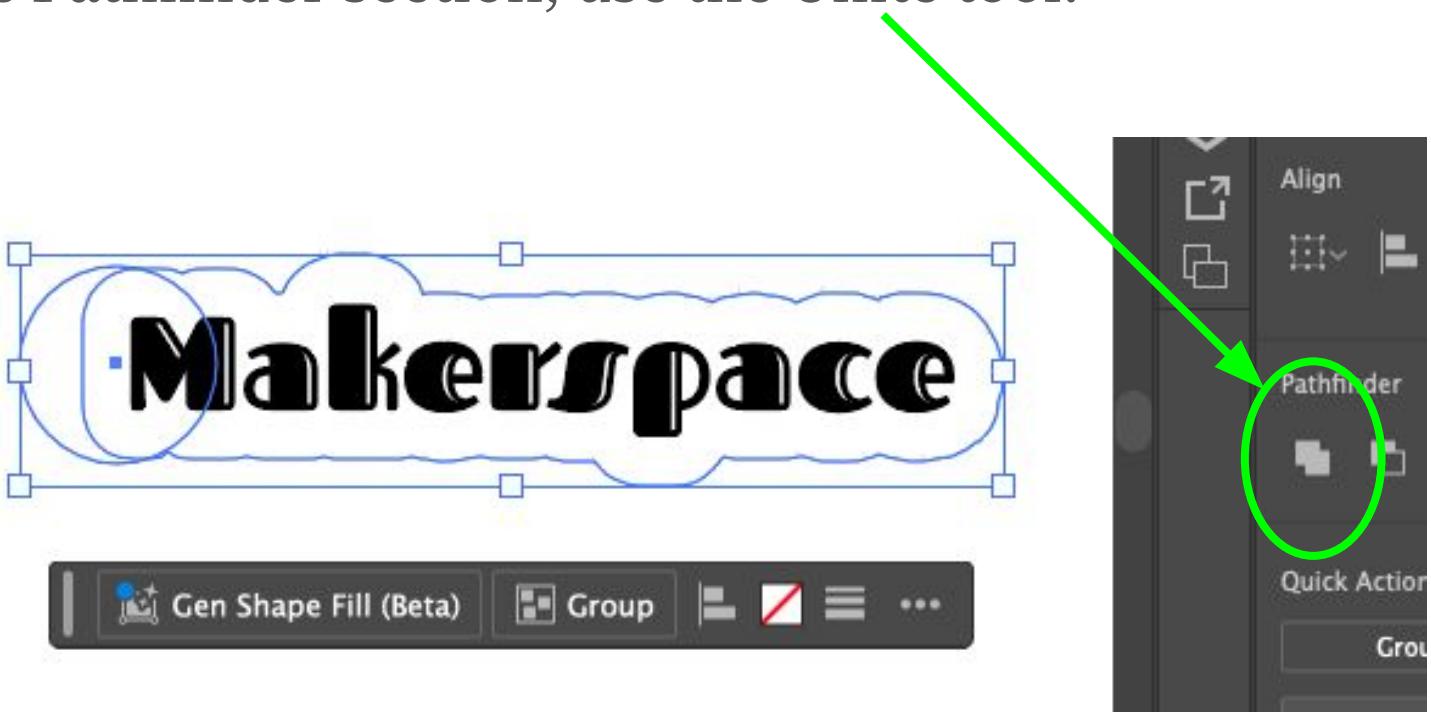
10. Create a circle to add to the end of the outline. This will be used for making a hole. Make sure there is no Fill and the Stroke is #FF0000 and .001pt.



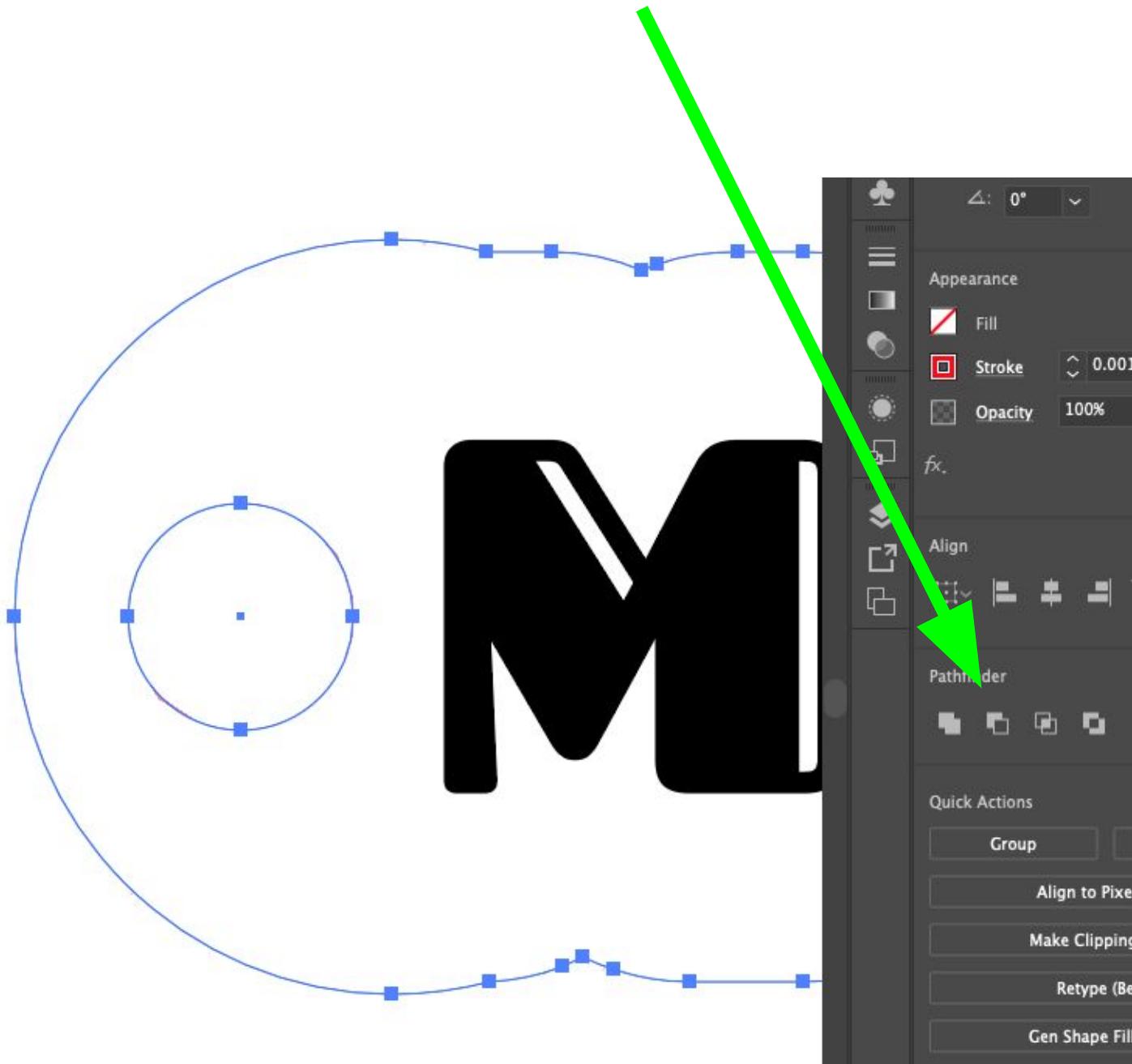
11. Position the circle on the end of the outline so that it makes a bump where we can add a hole.



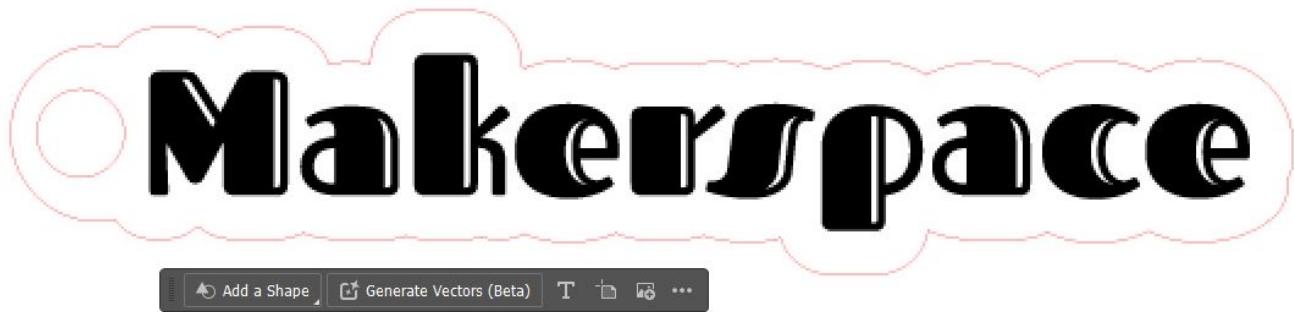
12. Select just the outline and the circle, and under the Pathfinder section, use the Unite tool.



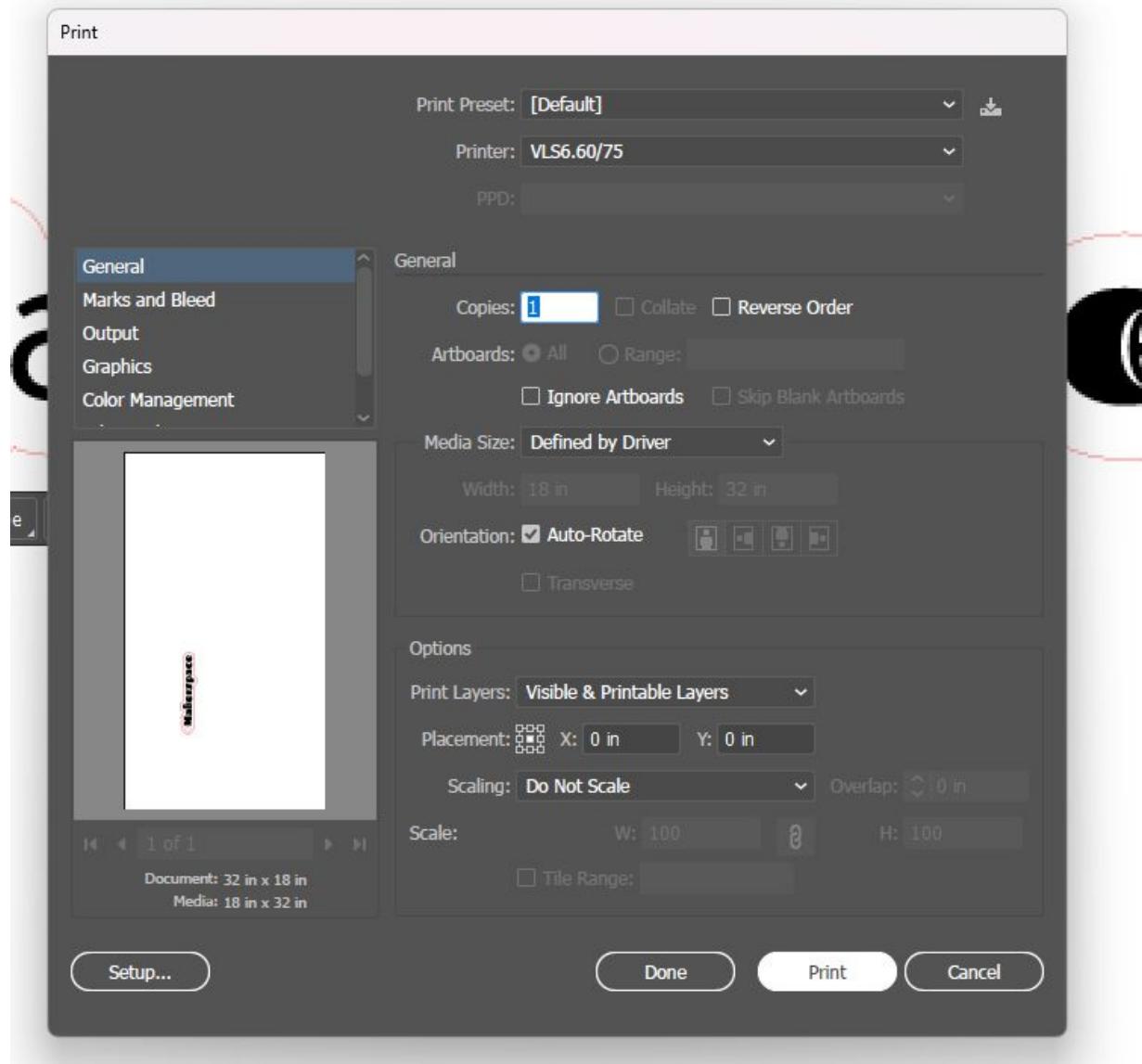
13. Make another circle, about .25 in, and then in the Pathfinder section select the Minus tool.



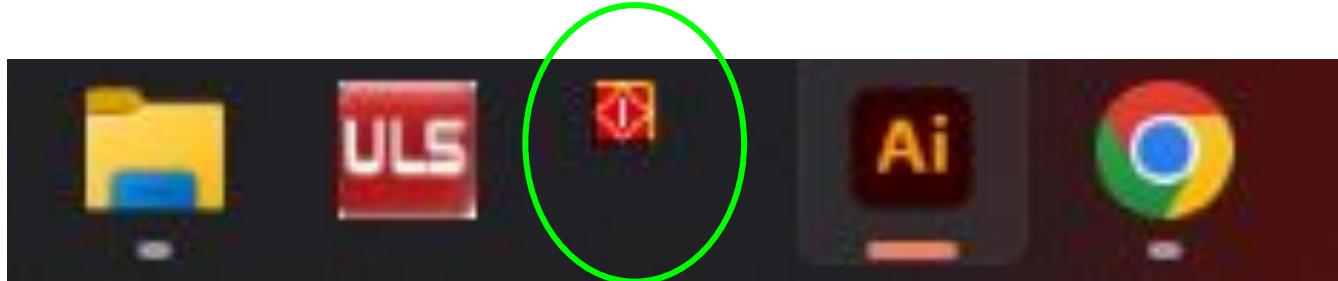
Your design is now ready to laser cut and engrave!



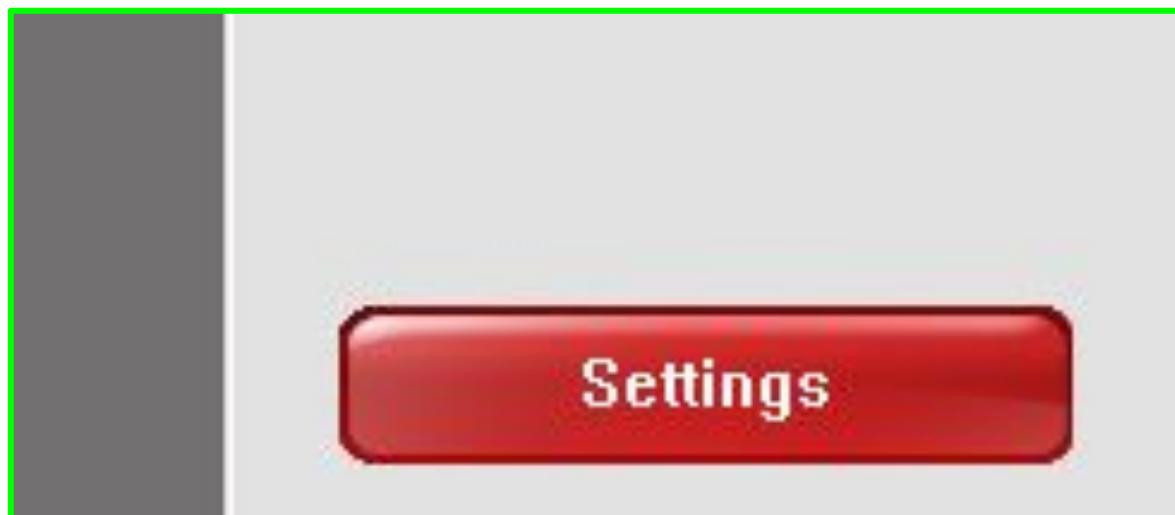
14. Print the design. File->Print, then click Print.



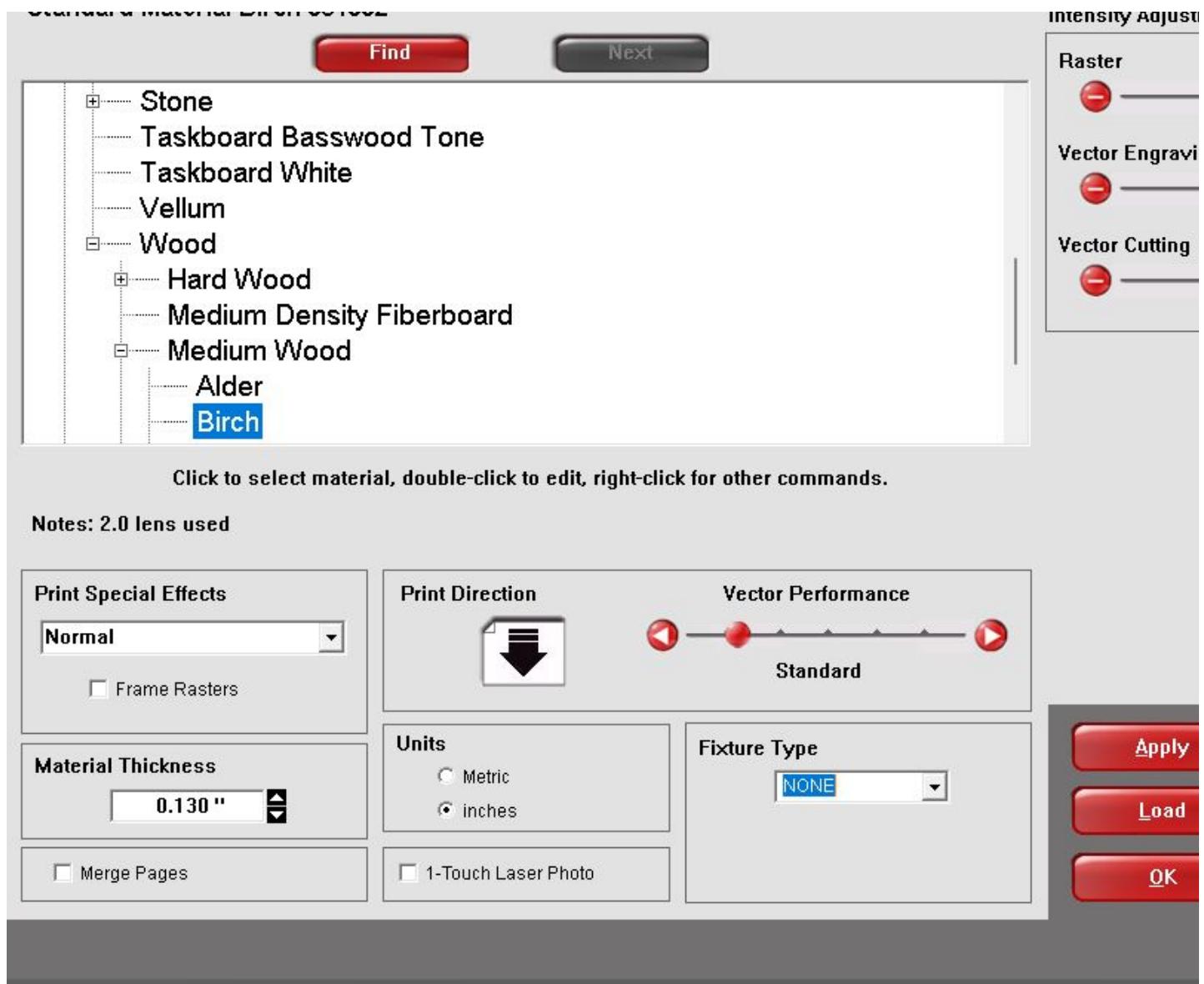
15. Open the Universal Control Panel



16. Click the Settings button.



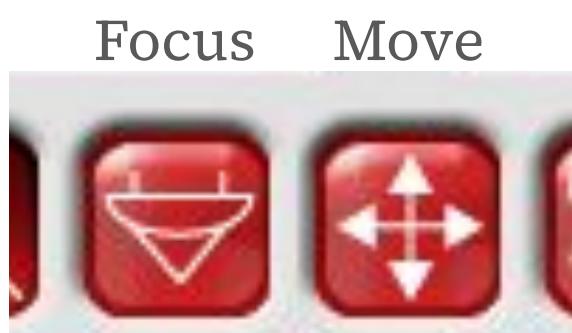
17. Select the correct material and set the correct Material Thickness. Then click Apply and OK.



18. Click the Power button to turn on the system.



19. Place your material in the bed. You can change the location of the pattern using the Move tool. Use the Focus tool to make sure the design fits on the material.



20. When the material and design are aligned. Press the green Play button to activate the machine.



You made it!

