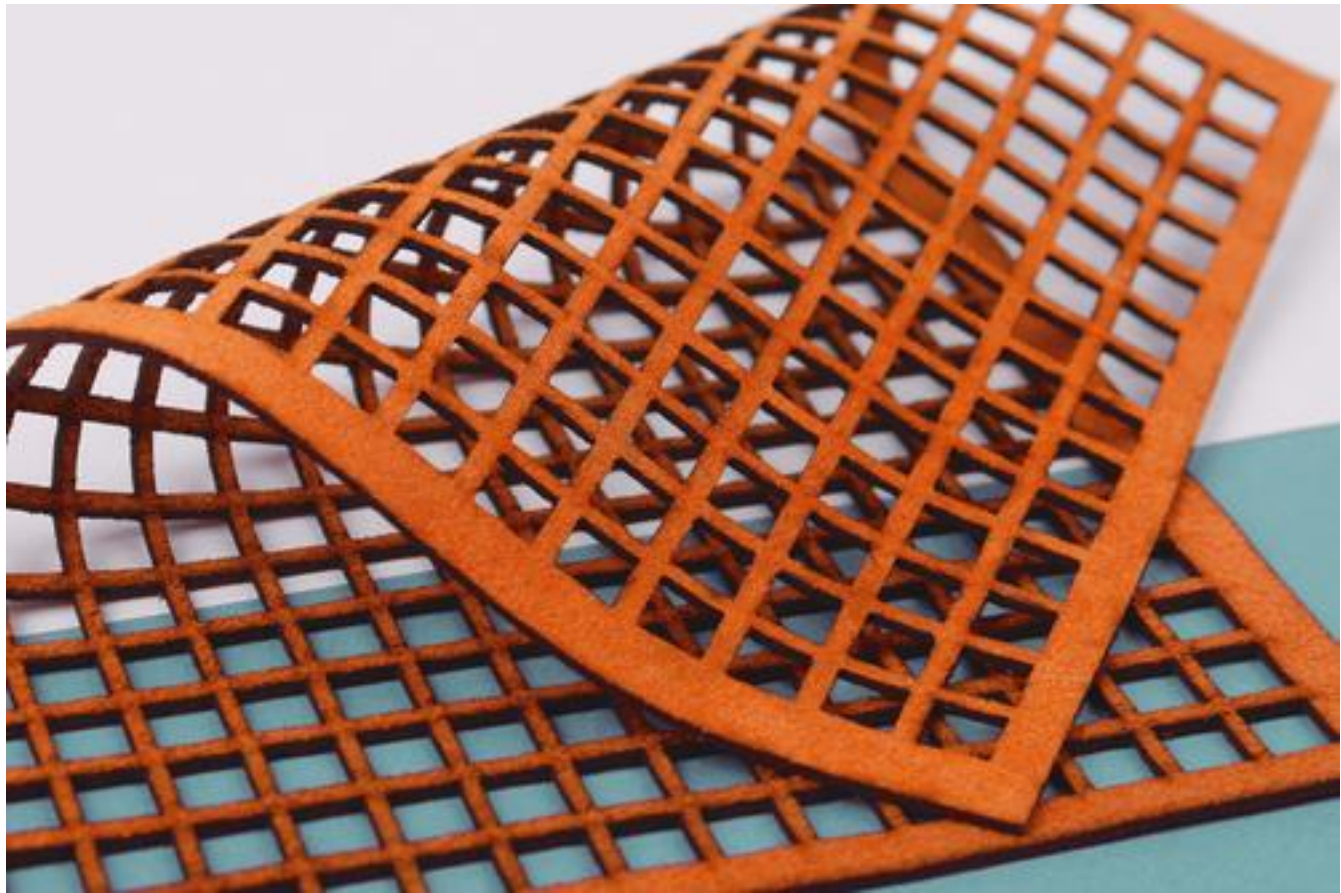


The background of the image shows several pieces of red fabric laid out on a light gray surface. Each piece of fabric features a different pattern created by laser cutting. Some patterns consist of repeating semi-circular or scalloped shapes along the edges or in the center. Others show more complex, interlocking geometric designs. The edges of the fabric pieces are slightly irregular, suggesting they were cut by hand or in a workshop setting. The overall composition is a collage of these various laser-cut fabric samples.

Laser Cutting on Textiles





John Richmond



Alexandra Verschueren

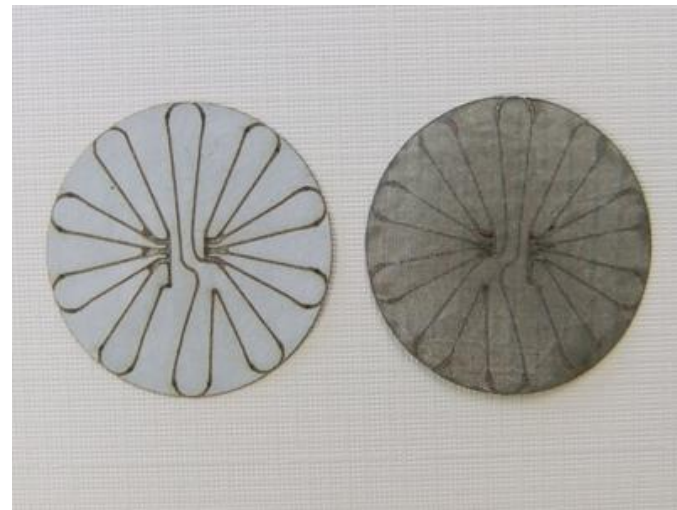
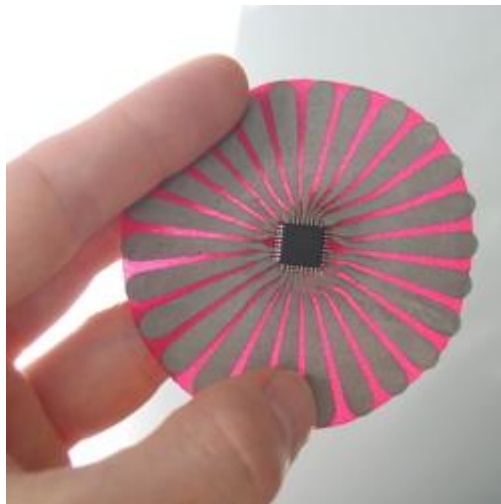


Laser cut wood - flexible in two directions, like fabric

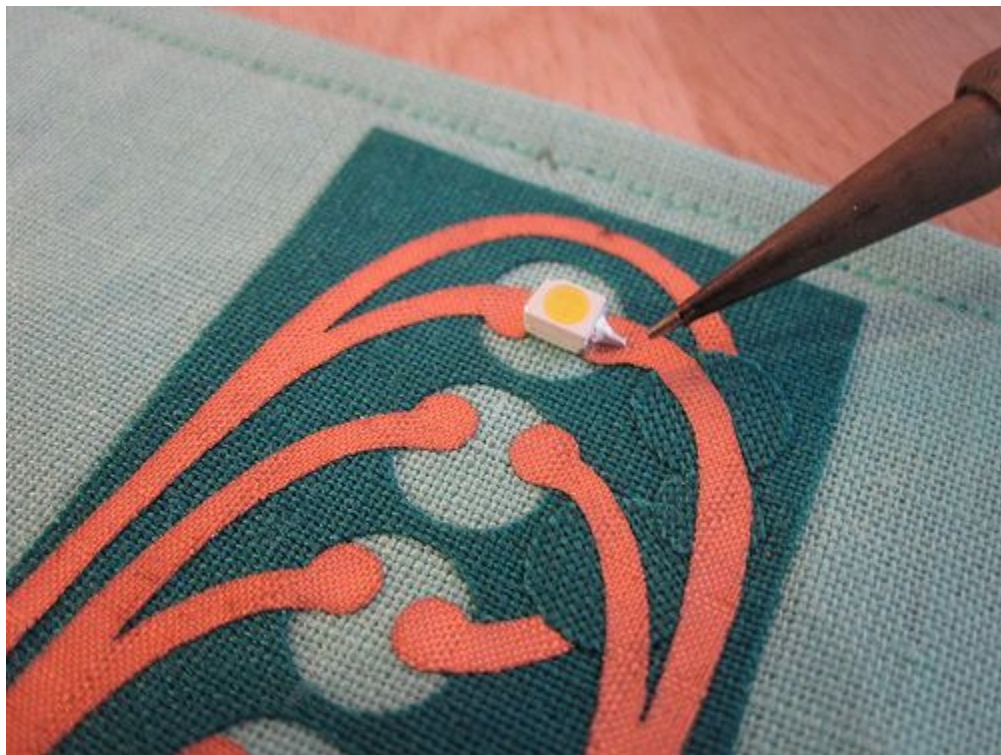


Engineered print:

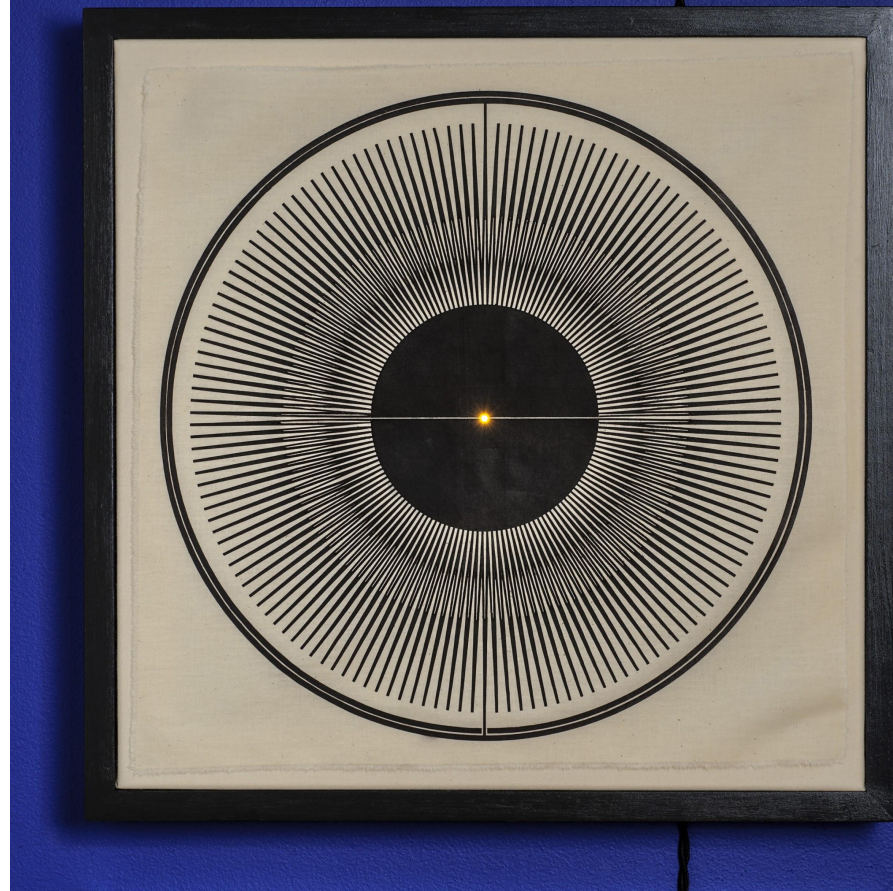
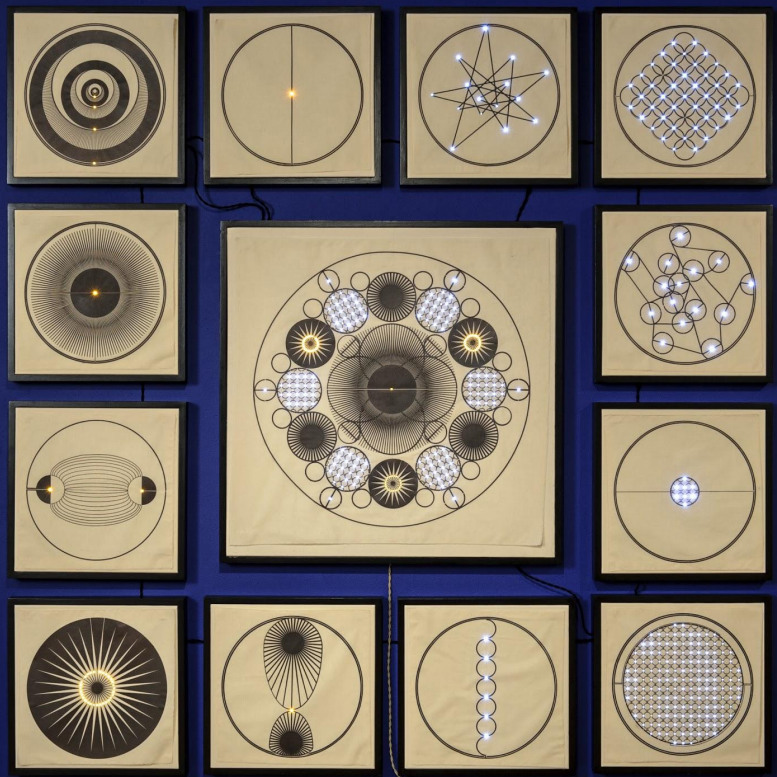
Controlled placement of
design within the object



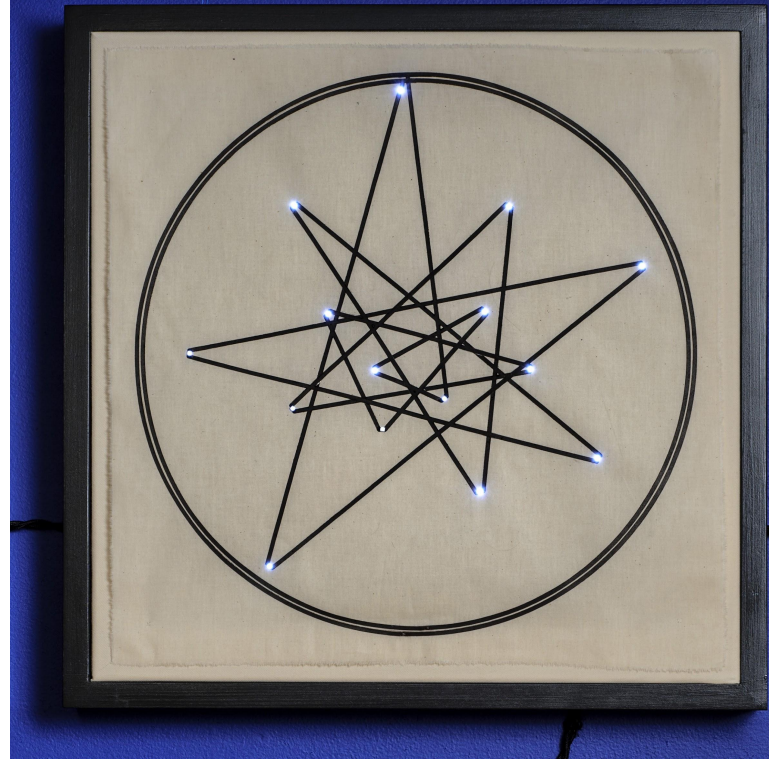
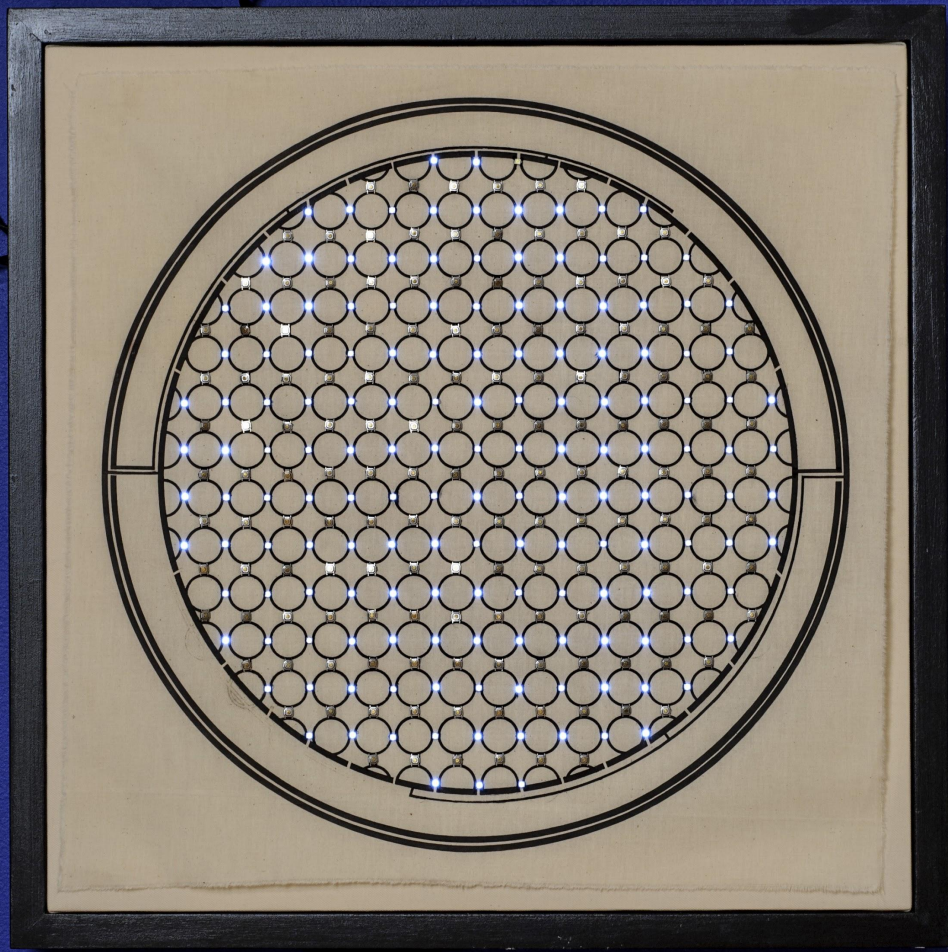
Early iterations for Lilypad Arduino

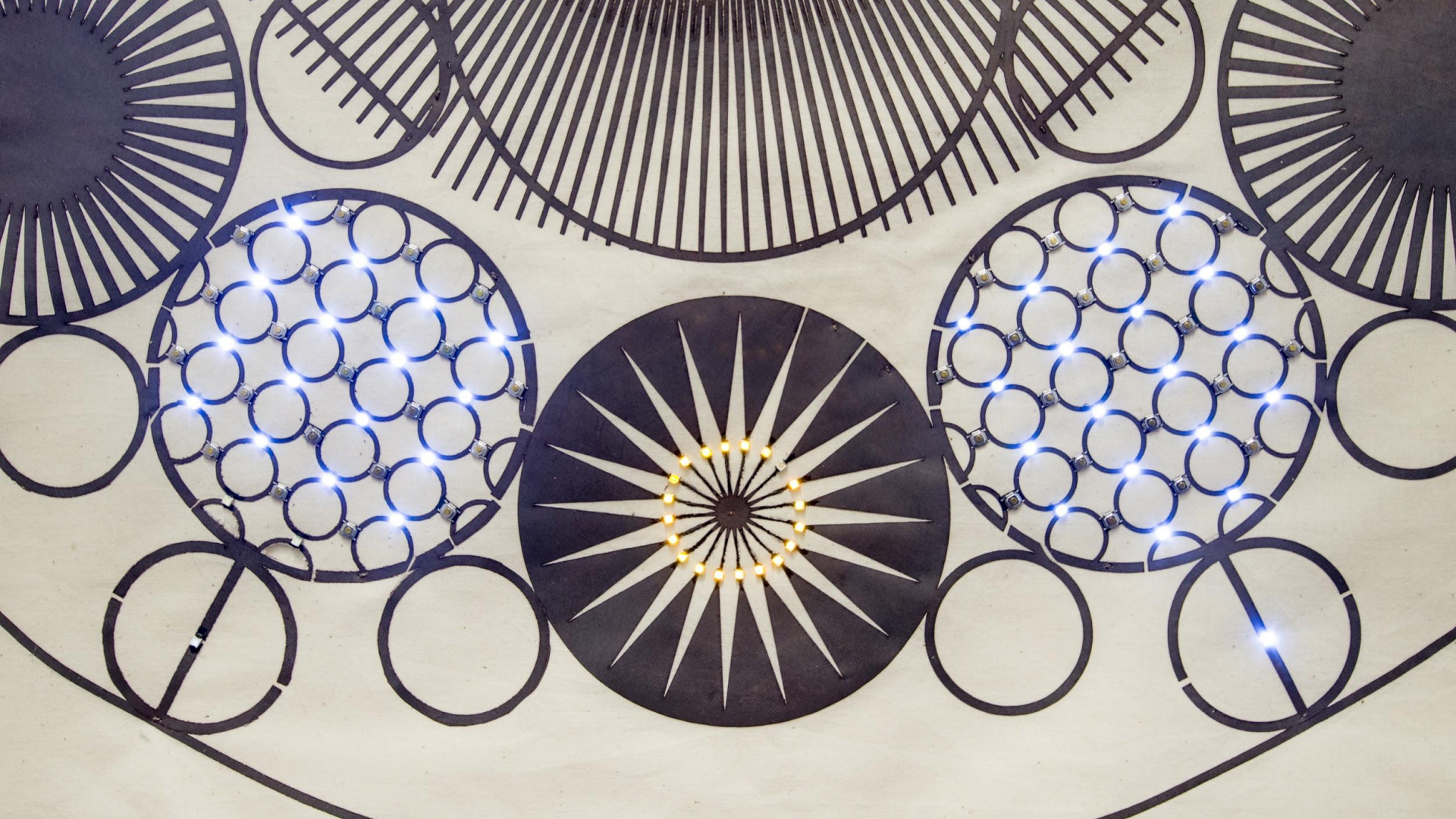


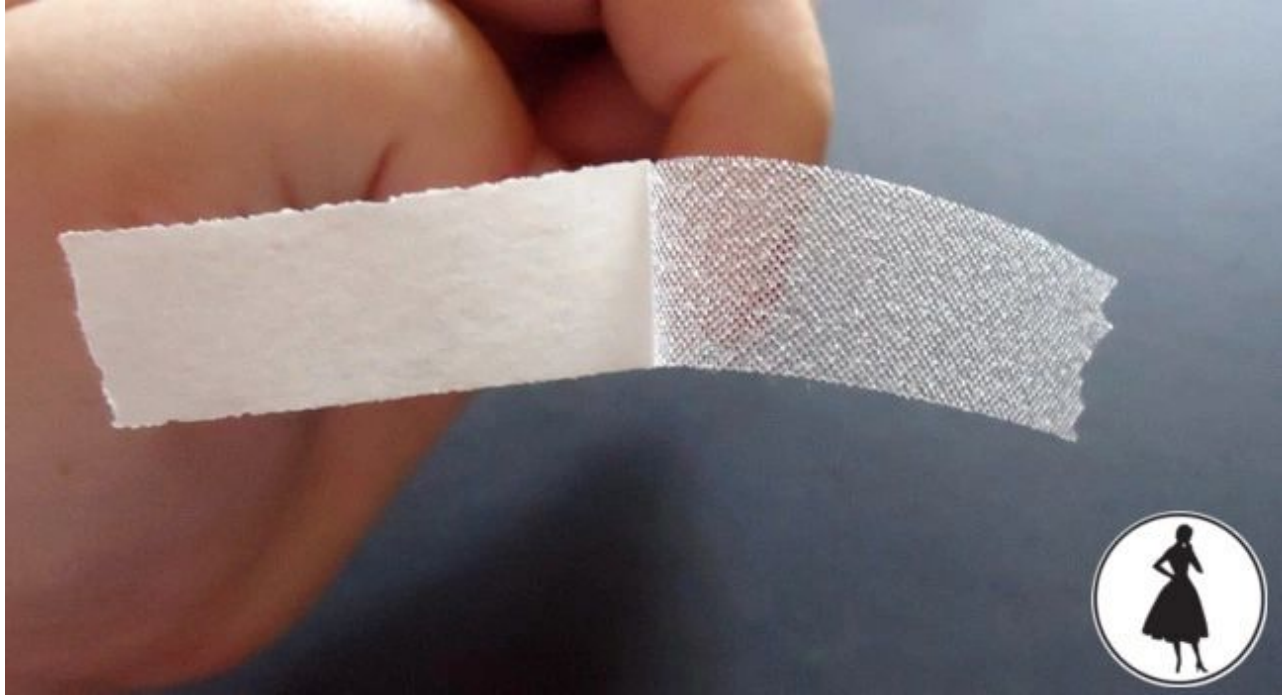
Copper fabric can be soldered onto if it's not too hot.



Olivia Robinson - laser cut copper fabric ironed on cotton. Copper fabric are traces for circuit.







Fusible webbing

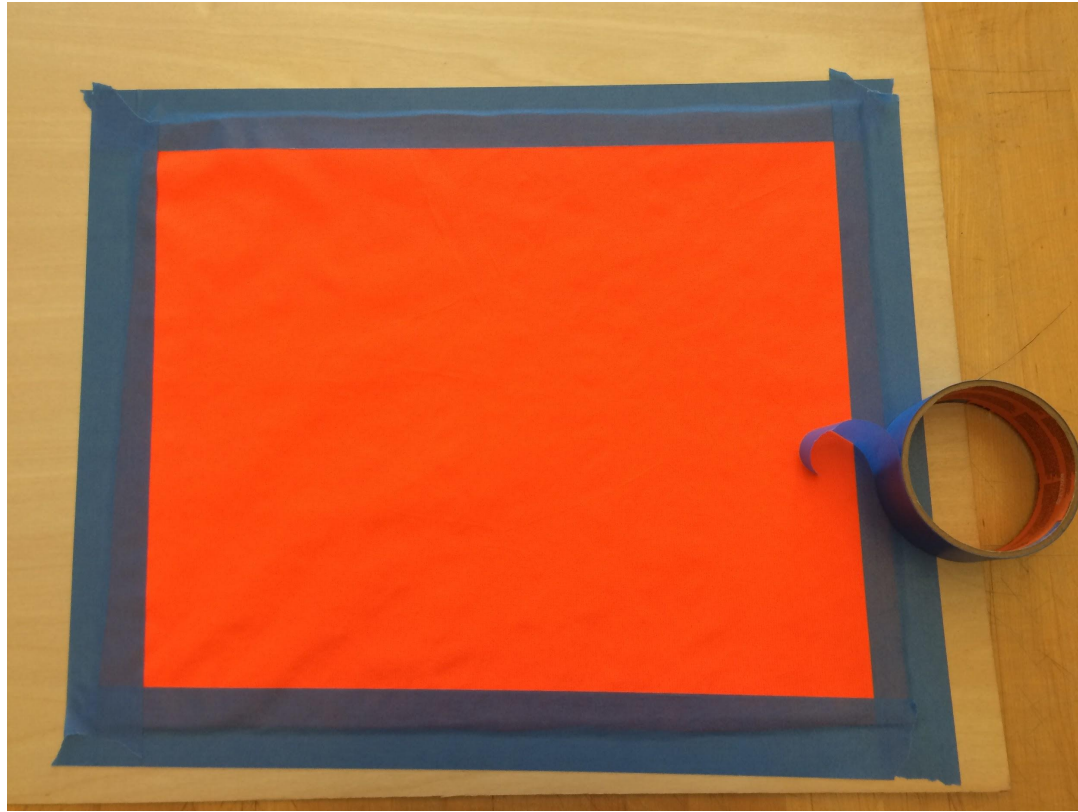
Laser Cutting on Fabric (Applique)



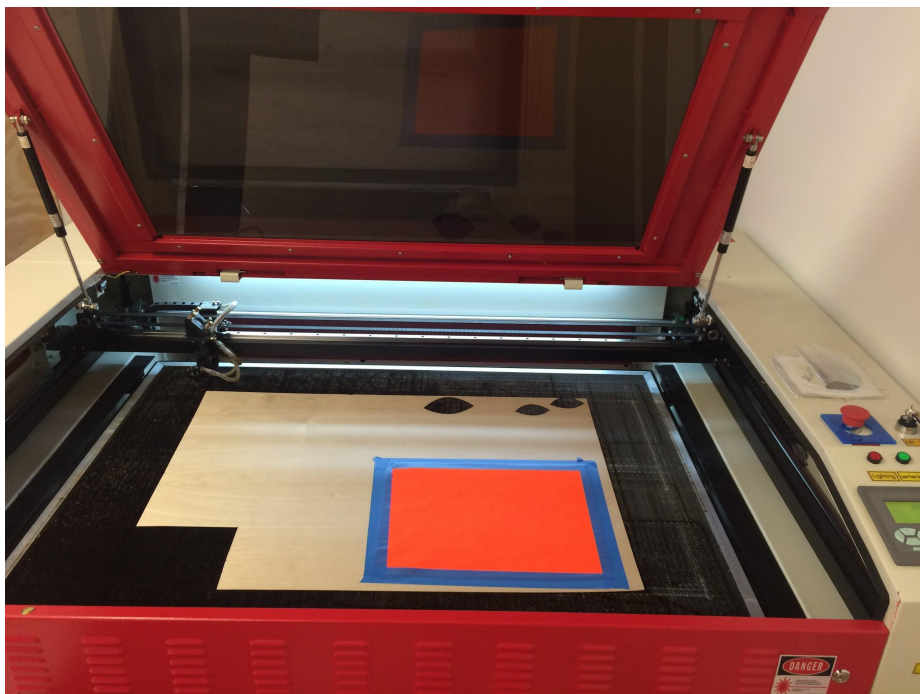
Make sure fabric is flat



Apply fusible webbing to the back of fabric.
Make sure the webbing is smaller than fabric piece.

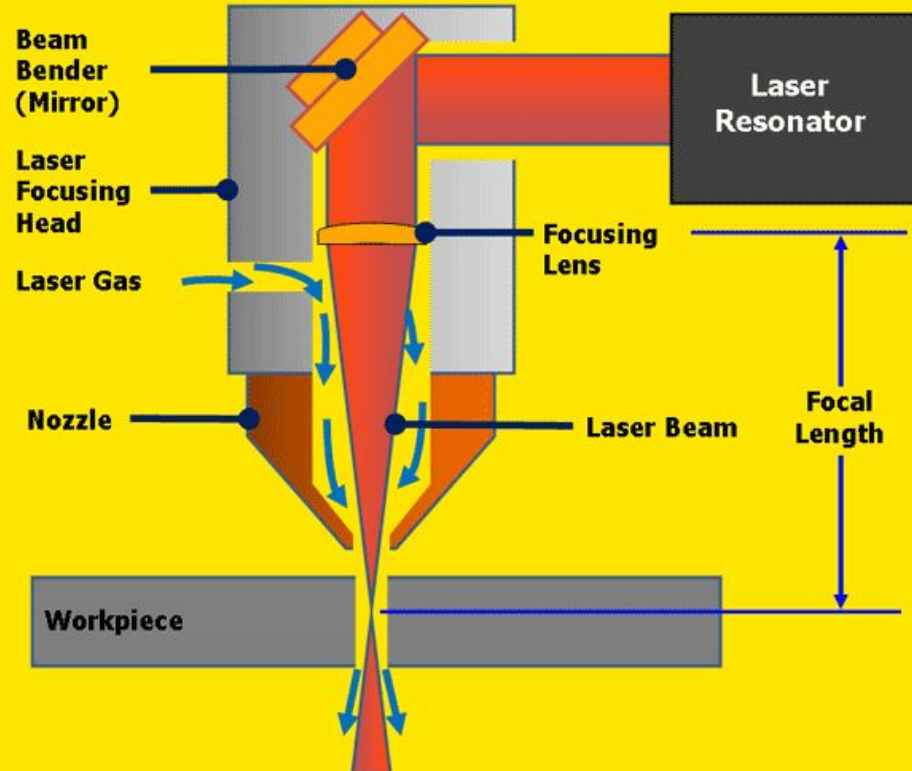


Trim excess fabric and tape down to a piece of chipboard or thin plywood
OR! Apply thin layer of spray adhesive to back and mount on board.



Set into machine + enter into the right settings

How A Laser Cutter Works



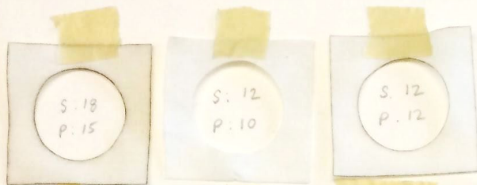
Set into machine + enter into the right settings

Out-dated Laser Cutting Settings (for Rabbit Laser Cutters)

But these are
close and might
be a place to
start....

Material	Content	Speed	Power	Result
Plain woven cotton	100% cotton	18	15	
		12	10	
		12	12	
Warp knit jersey	Cotton	15	15	etch
		12	15	
		12	10	
		12	12	
Canvas	Cotton	12	18	etch
		12	15	
		12	12	
		10	12	
		10	15	
Felt	Acrylic	12	15	
		12	12	
Copper Taffeta	Copper	15	15	
		10	15	
		8	12	
		8	15	
Denim	Cotton	10	15	

cotton plain weave



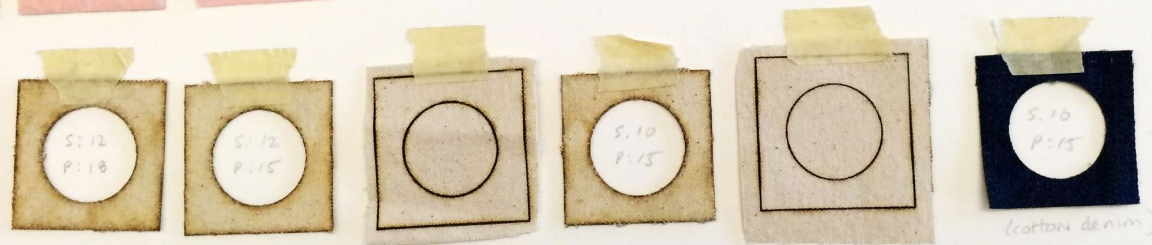
cotton jersey



acrylic felt



cotton canvas



(cotton denim)

copper felt felt



Thoughts on Materials & Process

Good

- Felt or other thick nonwovens
- Tight weaves

Eh

- Loose weaves
- Thick knitted/knots
- Really intricate designs (for applique)

BAD

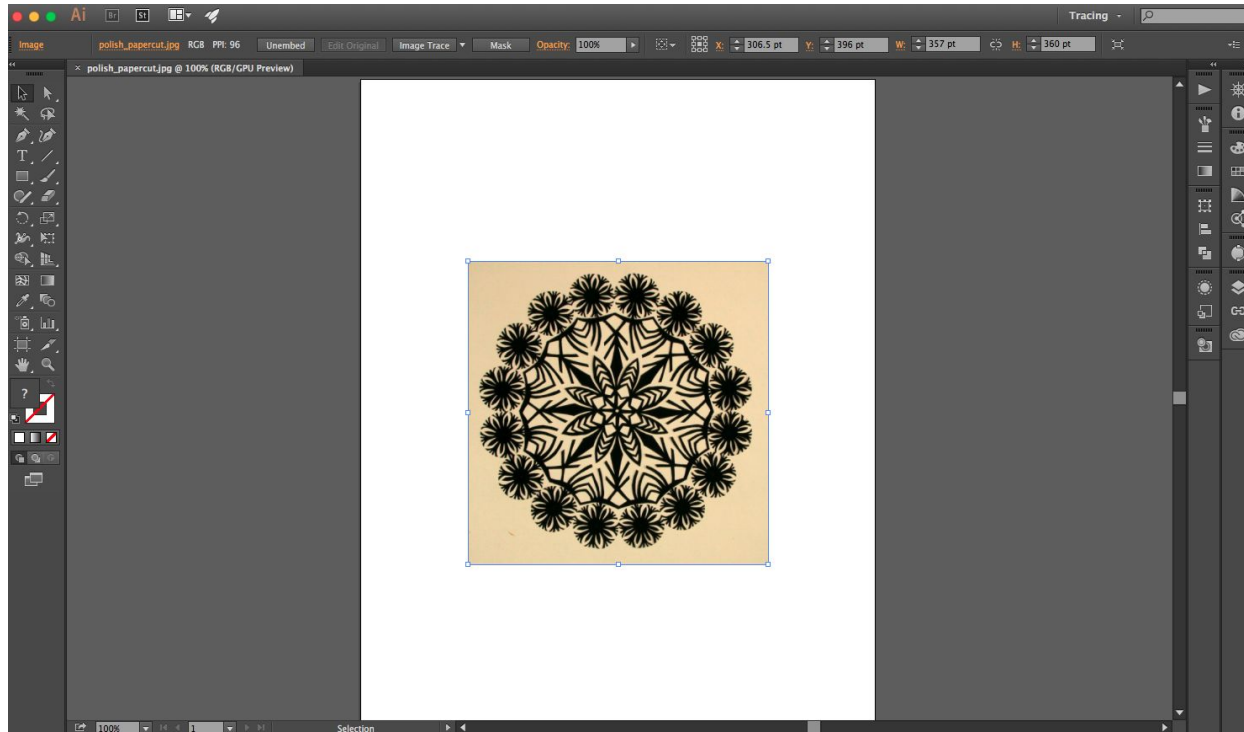
- No vinyl, metallic/reflective materials, neoprene any material containing chlorine
- Check with techs if you are unsure!!!!

Laser Cut Patch!

- Split into groups, at least one person must have been trained on the iDeAte laser cutting process
- Make your own design or download the Soft Fabrication Patch

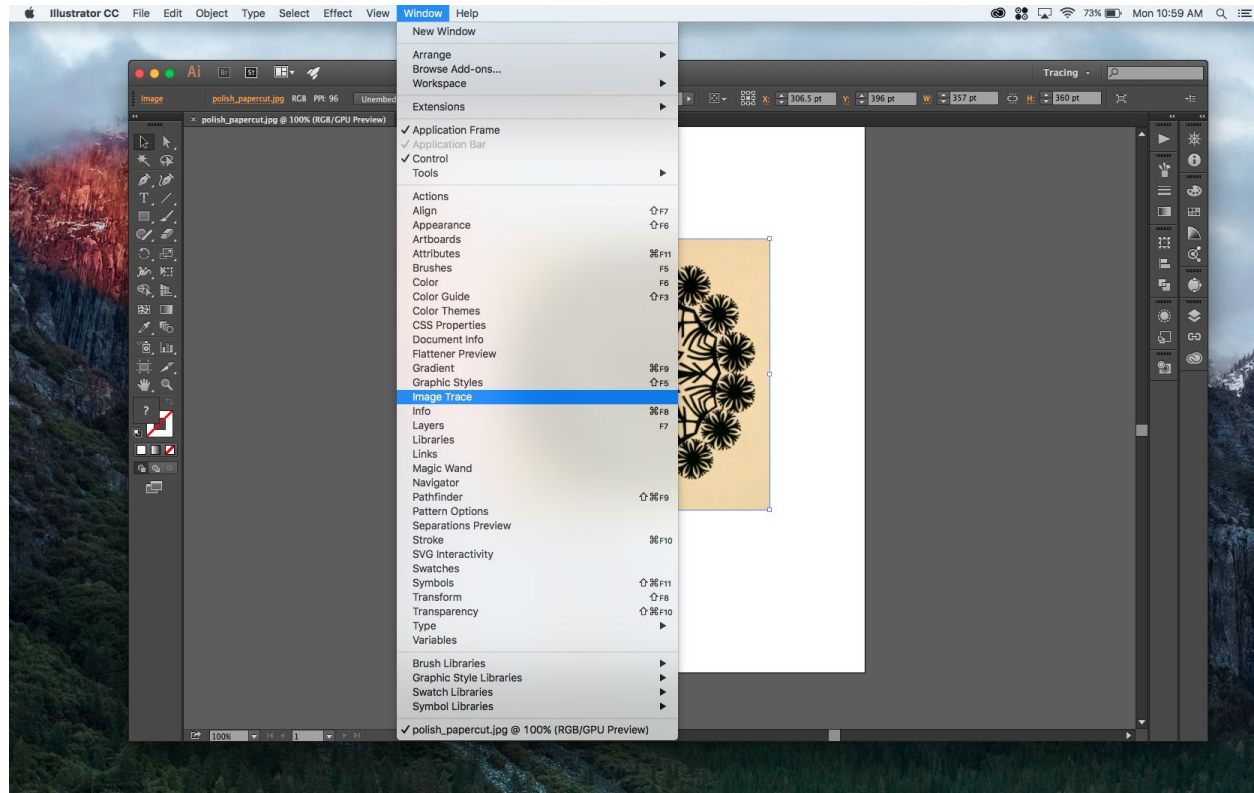


Changing JPG to DXF file
via Adobe Illustrator 6



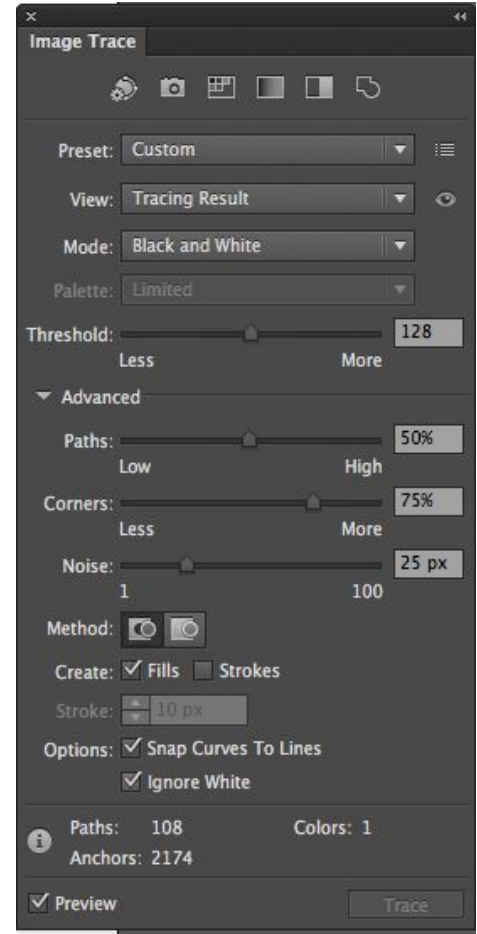
Open image in Illustrator.

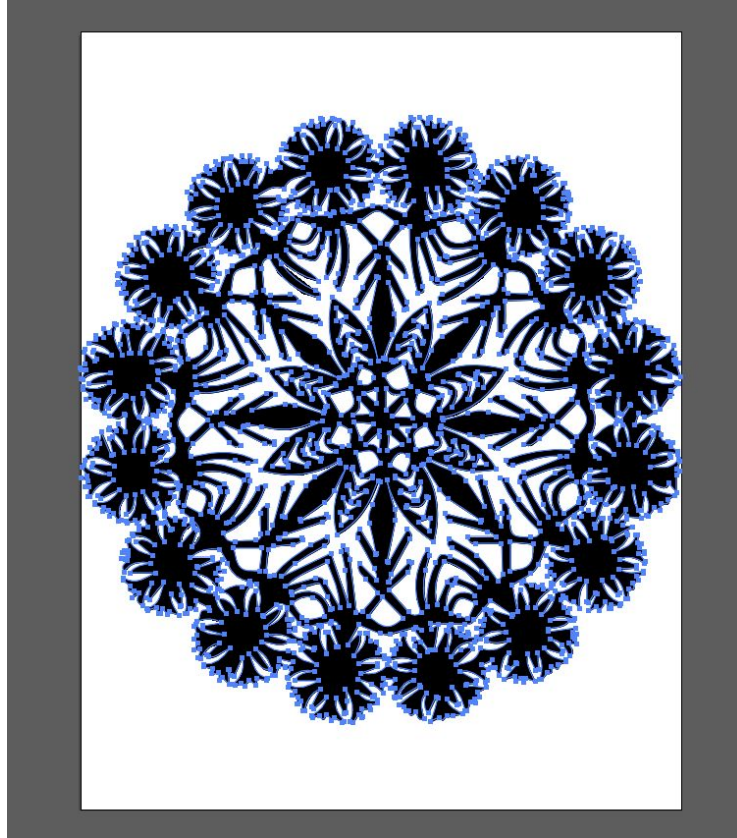
Use selection tool and click on image so a blue box appears around it



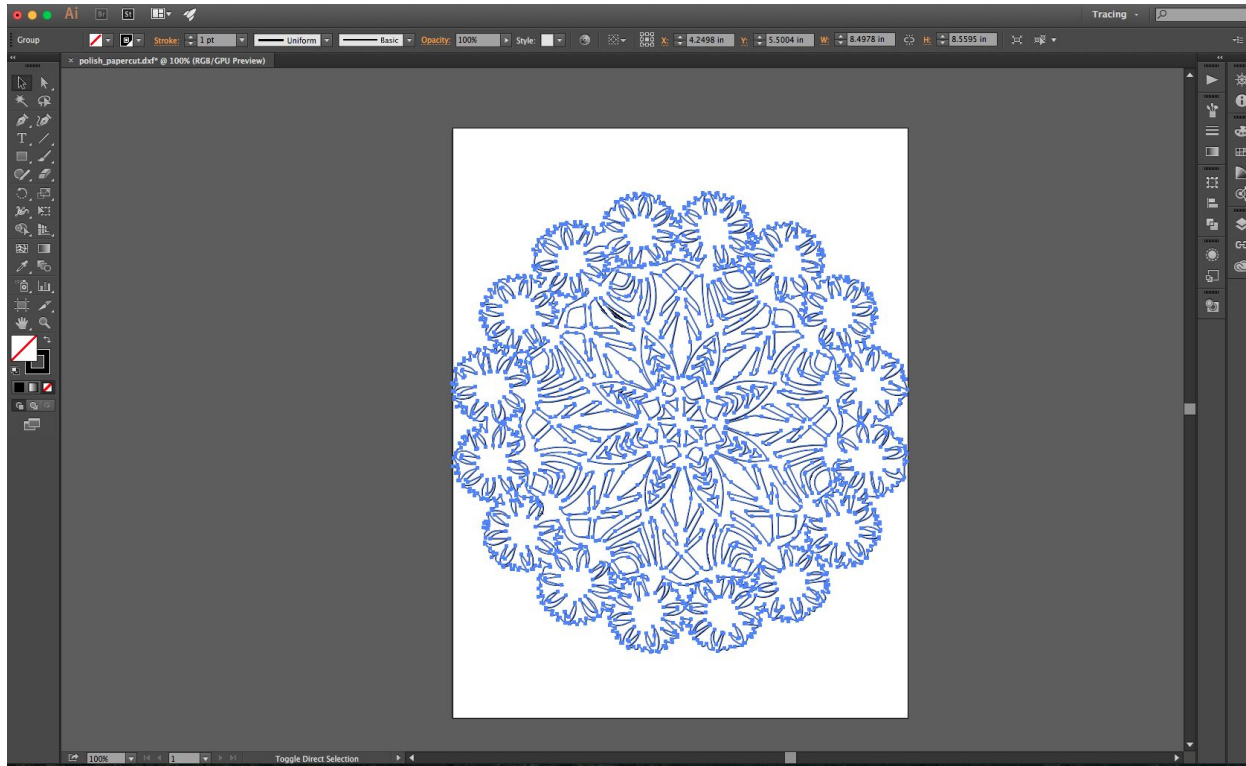
Use the top bar to find Image Trace Window (we want to custom set it, so don't use the button at the top of work window)

- Make sure Preset is set to Custom.
- Set to black and white mode.
- Check Preview Box and Ignore White (under Advanced drop down menu).
- Adjust the threshold values depending on what you need. (You may not need super skinny lines for what you are cutting)
- Click the Trace button.

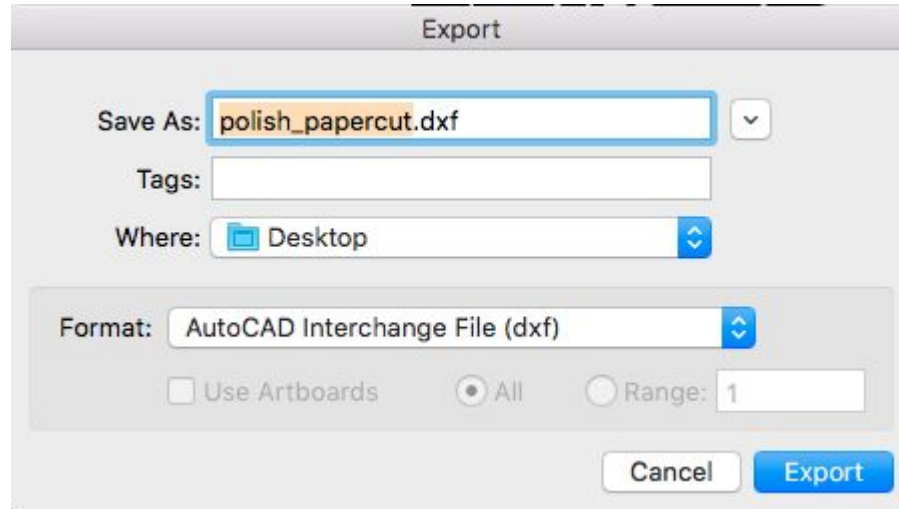




- Click “Expand” at the top of your work window to see the paths.
- Delete any unwanted paths using the direct selection tool or make any changes to curves with other tools.
- Expand/contract to necessary size (can be done in laser cutting program but wayyy less accurate)



Change stroke and fill colors so that you can see the outline of what you are going to cut.



Export as a DXF.

DXF/DWG Export Options

AutoCAD Version: R13/LT95

Artwork Scale

Scale: 1 Millimeters = 1 Unit(s)

☐ Scale Lineweights

Color & File Format

Number of Colors: 256

Raster File Format: ☒ PNG

☐ JPEG

Options

☐ Preserve Appearance

☒ Maximum Editability

☐ Export Selected Art Only

☐ Alter Paths for Appearance

☐ Outline Text

Cancel

OK

Make sure your export is "R13" and that the scale is 1 millimeter to 1 Unit.

Laser cut your file!!!!

[CONVERTIO.CO](https://convertio.co)

online, free

JPEG to DXF file
converter