

This is a "Level 3" how-to, on a scale of how accessible it is to follow along.

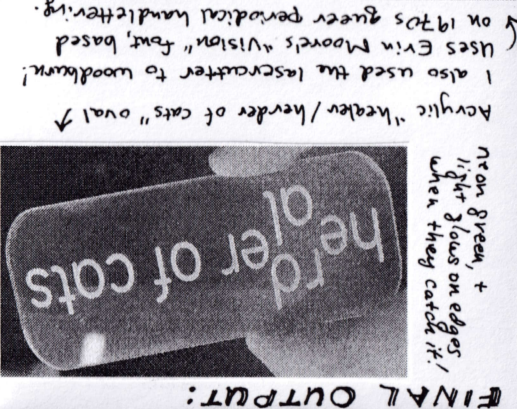
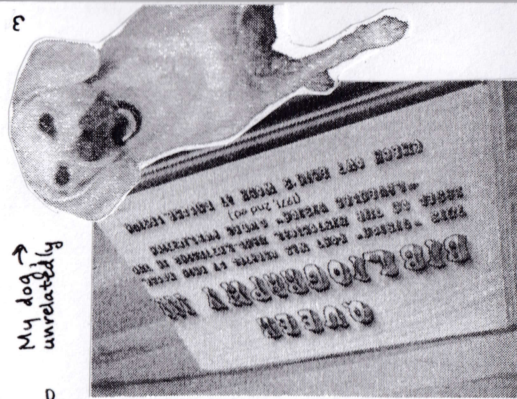
1 = you probably own all supplies  
 2 = you need to purchase some supplies/equipment (< \$200)  
 3 = costs more than \$200 to do intro project, and/or you'll likely need makerspace equipment access

you'll need:

1. Adobe Illustrator (or figure how to make the SVG using free software)
2. A flat piece of acrylic (can be < \$2)
3. A flash drive to bring your file...
4. A lasercutter

I use the Scholars' Lab's Makerspace's lasercutter. Locals/visitors can use it for free w/ supervision or slab training.

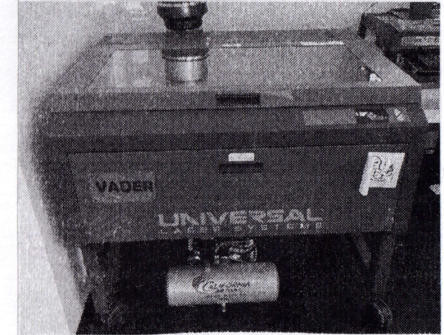
Visit [ScholarsLab.org/makerspace](http://ScholarsLab.org/makerspace) for more info! And come see us - we're here to help you make AND learn to make.



# LASERCUTTING!

Cheatsheet Mini-Zine  
 for a Very Specific use case

Amanda Wyatt Visconti,  
 based on training by Ammon Shepherd!



↑ Using the Scholars' Lab's Makerspace lasercutter!  
[ScholarsLab.org/Makerspace](http://ScholarsLab.org/Makerspace)  
 (Free UVA Library makerspace!)

← My dog. Unrelatably.

CC BY-NC Amanda Wyatt Visconti  
[ZineBakery.com/home-made](http://ZineBakery.com/home-made)  
 Biscuit (Mini-Zine) #1  
 September 6, 2024

Version 1. Charlottesville, VA.  
 Scholars' Lab's lasercutter's named "Vader".



couldn't ID maker, but likely uses → Björn Karnebogen + Gerd Jungbluth's "Historic Tale Construction Kit" which remixes the 11th Century Bayeaux Tapestry.  
 (I know: it's "No, I am your father" actually)

PREP THE DESIGN:

- In Adobe Illustrator, create an artboard 32" wide x 18" high (matches lasercutter bed dimensions)
- To cut out a shape from the acrylic, create a rounded rectangle:
  - pure red (#F000) stroke
  - .001 stroke width
  - no fill
- Type your text
  - pure blue (#000FF) fill
  - no stroke
- Save to flash drive as SVG (preserves special fonts!)

ON LASERCUTTER PC:

- Open SVG in AI → File > Print
- In lower-right of screen, choose [V] then [D] icons
- This sends your file to the lasercutter software, and brings you there.

PLACEMENT:

If you didn't perfectly position your image on the AI artboard (I prefer not to!), you're going to either move the material to the right place in the laser-cutter bed manually, or tell the software to move where it will cut.

1. Turn lasercutter power on (loud fan turns on with it!)
2. Move where laser will cut
3. Click, then place cursor at edges of image, to see where laser head moves. Adjust material or software as needed.

Ready to cut? Is the top of the lasercutter shut?

[D] = make the lasercut cut/etch/engrave!

Once done, laser head returns to Start position. →

[D] Turn power off. →

Open hood + take your work!

DETAILS!

RED = cut through material  
 BLUE = "engrave" (eg. to fill in acrylic text w/ frosted area)  
 BLACK = "etch" (eg. to woodburn)

Neon transparent acrylic is a RAD material! Got mine from TRPPlastics.com. Petaled top paper off, left bottom on until after lasercut.

Measure your material's length and width in inches. Use digital calipers so you can be accurate to 3-4 decimal places.

(Don't forget to turn them off when you're done, so the battery's not dead for their next user!)

## SETTINGS:

# MATERIALS TAB

- Plastic > Acrylic > Cast Acrylic
- Material thickness (use caliper measurement)

→ click "Apply"

# MANUAL CONTROL TAB

I didn't adjust these, but you can adjust how different colors are handled here. My settings were:

COLOR	POWER	SPEED
Black	16%	100%
Blue	8.7%	30%
Red	100%	12%