



# Glowforge 101:



## Getting to Know the Machine

Introducing... the Makerspace's Glowforge! The Glowforge is a laser printer that cuts and engraves with a beam of high-intensity infrared light. Let's walk through the basic anatomy of the machine.



We control print jobs from the browser based Glowforge app. Here we will communicate to the software what power and speed we want the laser to move at.

### ENGRAVE:

The laser moves back and forth slowly burning away material for a deep marking.

### SCORE:

The laser makes a single pass at a lower power.

### CUT:

Set at the highest power to pass through material.





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## Considering Materials



*Get inspired by materials! A beautiful wood grain or funky metallic acrylic might be the launchpad you need for an innovative design.*

### What is Proofgrade?

Glowforge sells a line of Proofgrade materials that are **laser-compatible** and provide the best results when used with the Glowforge Laser. All Proofgrade material is encoded with a **QR code** which the Glowforge scans and registers the automatic power and speed settings for that specific material. Utilizing Proofgrade material will ensure material safety, proper maintenance, and longevity of the Glowforge.

Glowforge offers a wide range of finishes and colors: **wood or acrylic** are great places to start. Please keep in mind our Glowforge only accommodates the standard **12x20"** material size and can only cut up to **1/4"** thick .

[www.shop.glowforge.com](http://www.shop.glowforge.com)

### Non-Proofgrade

Although we recommend our patrons to purchase Proofgrade material, we understand that material cost can be a barrier to starting and completing projects, so we have experimented with and have approved the following local and on-line materials that are laser-safe. Prior to purchasing, **please ensure you have the correct size and thickness of material.**

#### Inventables

[Wide range of acrylics](#)

#### Amazon

[6-pack plywood](#)

#### Smokey Hill Designs

[Patterned acrylic and MDF](#)

#### Rockler

[Local wood resource](#)

#### Plasticare

[Local acrylic resource](#)





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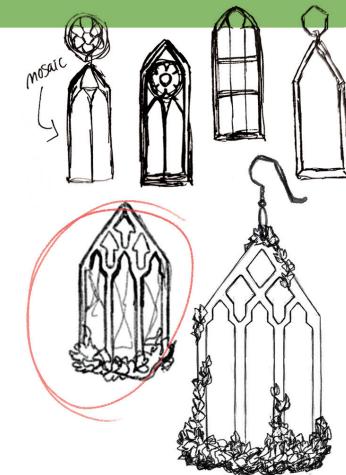
## The Software

We've considered how the Glowforge works, design ideas and materials: now it's time to get making! After sketching and visualizing your design, you'll need to properly prepare your artwork. You'll want a vector-based file separated by color for each part you wish to engrave, cut, or score. Here's where to get started.

### VECTOR SOFTWARE

#### Glowforge App:

- The library's premium Glowforge membership gives patrons access to downloadable ready to print projects.
- You can make some designs right in the software with basic shapes and type.
- The software also has a scan function. Place a printed or drawn design on the crumb tray, select scan, and your design will be uploaded to the print bed.



#### Adobe Illustrator:

- Industry standard
- \$20.99 a month. 7 day free trial.
- Available on the Makerspace Mac or at any of the library's Digital Media Stations.  
[www.arapahoelibraries.org/digital-media-stations](http://www.arapahoelibraries.org/digital-media-stations)  
Reservable at Smoky Hill, Southglenn, Sheridan & Kelver branches

#### Inkscape

- Free open source software

#### [www.boxy-svg.com/app](http://www.boxy-svg.com/app)

- Free browser based program

#### Silhouette Studio Business Edition

- \$99 one time fee



Learn even more and take free Illustrator & Inkscape courses on-line at [LinkedIn Learning](#) with your library card through the Arapahoe Libraries website.

### STEP BY STEP GUIDES

#### Our Makerspace Laser Design Videos

- Visit our Glowforge page to view our Illustrator and Inkscape design videos  
[www.arapahoelibraries.org/blogs/post/glowforge-laser-guidelines](http://www.arapahoelibraries.org/blogs/post/glowforge-laser-guidelines)

#### [Earring Design Step-by-Step YouTube Video](#)