Universal Laser Systems VLS4.60 laser cutter system with 50W CO2 laser and 24” x 18” cutting bed. Rapid prototyping with various kinds of plastic and wood. Rotary attachment.

### Description

50W CO2 Laser
- HPDFO Lens available
- Rotary attachment with Perfect Chucks
- 24” x 18” honeycomb cutting bed
- Air assist

### Training

Safety Rules
1. Never leave the machine running unattended. Stay in the room and pay attention to your job at all times.
2. Never put unapproved materials in the laser cutter. When in doubt, ASK.
4. Always keep ventilation at maximum. DO NOT close the exhaust vent.
5. Always use the ‘air assist’ N2 purge. Always fully open the N2 valve.
6. Clean up and remove all debris generated by your job. Use the HEPA vacuum to clean out the honeycomb downdraft table after each job.
7. All users MUST be trained and authorized by MPML staff.
8. All users MUST have their own key. Lab or shared keys are not allowed. Lock the room door when you are finished.
9. All users MUST make a reservation prior to use.
10. All users MUST sign in and sign out of the logbook.
11. All users MUST sign in and sign out of the computer with their CNET ID.
12. Immediately REPORT all accidents (eg: fire, smoke, & laser carriage crash).
13. DO NOT attempt to fix or repair any problems on your own. Report them.
14. The laser cutter is provided for lab research and outreach projects only. Personal projects are not allowed. Use the Searle Hack Arts Lab instead.

Failure to follow these rules will result in immediate loss of user privileges

When in doubt, ASK MPML staff FIRST

### Allowed Materials

- Acrylic, Plexiglass, & Lucite up to 3/8” thick. Cast acrylic is preferable. Leave protective paper on when cutting. Remove paper when engraving or rastering.
- Delrin (POM) up to 1/8” thick.
- Medium Density fiberboard (MDF). Use bare wood only. No veneers or plastic laminates.
- Matte board, cardboard, posterboard.
- PDMS or Silicone rubber. Make sure PDMS is halogen-free
- Plywood (hardwoods with low resin content: birch, balsa, maple, cherry, polar, walnut, oak)
- Glass for engraving only. Do not try to cut glass (even coverslips).
- Other materials may be allowable, but must be approved by MPML Staff prior to use.

**Strictly Prohibited Materials**

- Polyvinyl chloride (PVC)
- Any material or plastic containing halogens (fluorine, chlorine, bromine, & iodine)
- Polycarbonates (Lexan)
- ABS
- Vinyl
- Any reflective materials. No mirrored acrylic.
- Soft woods with high resin content (pine, cedar, spruce, fir)
- Wood laminates or veneers
- Fiberglass (circuit boards)

Use of any unapproved materials may result in severe damage to the laser cutter, dangerous fumes, fire, or other serious personal safety hazards.

Anyone using unapproved materials will immediately lose their access to the laser cutter and be held liable for damage to the machine.

**Location**

Lab: GCIS ESB18

**Contact**

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