

Appendix H7:

Laser Engraver Policy & Procedure

Purpose

The Laser Engraving and Cutting service is a premier resource for advanced manufacturing, artistic expression, and entrepreneurial prototyping. By providing access to precision laser technology, the Library supports the development of technical skills in computer-aided design (CAD), material science, and industrial fabrication. This service empowers local small businesses, students, and hobbyists to transform digital designs into intricate physical products, fostering a competitive, tech-savvy workforce.

Eligibility & Access

- Account Status: Patrons must have an active LJCLS account in good standing.
- Certification: Users must complete the LJCLS Training Certification or demonstrate technical proficiency before operating equipment.
- Waiver: A signed Makerspace Release Waiver must be on file for all users. Minors (under 18) must have a parent or legal guardian's signature. See *Appendix H1 – Makerspace Policy*.
- Age Requirements:
 - 18+: Independent use upon certification (see *Staff Oversight* below).
 - 12–17: Direct adult supervision (18+) and a staff member required at all times.
 - 8–11: Observation only with staff present; no equipment operation.
 - Under 8: Not permitted in the Makerspace.
- Liability: The Library is not responsible for any damage to patron-provided materials (e.g., wood, stone, metal, etc.) during the laser process. Users "Engrave at their own risk."
- Staff Oversight: Due to the inherent fire risk associated with laser cutting, a staff member or designated volunteer must be present in the Makerspace for the duration of any laser operation.

Liability & Safety Guidelines

- Fire Hazard: Laser engraving works by burning material. Users must never leave the machine unattended while a job is in progress. If a flame appears that does not immediately self-extinguish, the user must follow the emergency stop and fire suppression protocols learned in training.
- Ventilation: The exhaust system must be powered on and functioning before any job begins to ensure the removal of smoke and odors.

- **Eye Safety:** Users must never look directly at the laser beam. If the machine is not fully enclosed or if the lid is raised (on applicable models), safety goggles rated for the specific laser wavelength must be worn.
- **Prohibited Materials:** To prevent fire and the release of toxic/corrosive gases, the following materials are **strictly prohibited**:
 - **PVC/Vinyl/Pleather:** Releases chlorine gas which is toxic to humans and corrosive to the machine.
 - **Certain Plastics:** Materials like Polycarbonate or ABS can catch fire or melt into the machine bed.
 - **Chrome-Tanned Leather:** Releases toxic fumes when burned.
 - **Mirrored Surfaces:** Can reflect the laser beam back into the lens, causing permanent damage.
- **Responsibility:** Users assume full responsibility for their projects and agree to hold the Library harmless for all matters related to equipment use, including intellectual property violations.
- **Equipment Damage:** Users are financially responsible for any damage to the Laser Engraver and its accessories caused by improper operation, negligence, or failure to follow instructions during their session.
- **Policy Adherence:** Users must comply with all LJCLS policies and safety warnings.
- **Additional Prohibited Items:**
 - Items intended for resale that infringe intellectual property, copyright, or trademark rights.
 - Materials prohibited by law or containing obscene or inappropriate content.
 - Unsafe items, weapons, or weapon components.
- **Supervision:** Users may not leave the Laser Engraver unattended while it is powered on or cooling down.

Operational Procedures

- **File Requirements:** Users are responsible for creating their own vector or raster designs. Common compatible file types include .svg, .ai, .pdf, and .dxf.
- **Material Approval:** All patron-provided materials must be approved by staff before use. Patrons may be asked to provide proof of the material's composition (e.g., a link to the product or an SDS sheet) to ensure it is laser-safe.
- **Focus and Settings:** Users are responsible for correctly focusing the laser and selecting the appropriate power/speed settings for their material. Staff are not responsible for laser or power/speed settings.
- **Cleanup:** Users must clear the "crumb tray" or honeycomb bed of small debris after their session to reduce fire risk for the next user.

- Ownership: Users are responsible for the costs of all design-related or Laser Engraver user failures.
- Privacy Disclaimer: The Library will review all designs before printing. There is no expectation of privacy for designs and activities within the Makerspace.

Scheduling & Costs

- Appointments: Use is limited to 2 hours per session, and 2 sessions per week, subject to equipment availability and staff scheduling.
- Costs:
 - Machine Use: \$0.20 per minute with a \$1.00 minimum.
 - Consumables: Fees are charged for Library-provided materials (e.g., wood, acrylic, or engraving blanks). Arrangements must be made with the Makerspace Manager at least 10 days before the session for specific material requests ordered through the Library. All material ordered through the Library must be prepaid.
 - Payment: Due prior to the start of the engraving session, with final adjustments (+/-) made upon completion.
- Data Collection: All users must sign in and provide a brief project description for administrative and grant reporting.