

# Laser Area Rules

This page is under construction. The information below is to be the most materially up to date. However, for exactly details and conflicts, while this page is still undergoing review, please refer to the lower section of the rules for details. Any questions, please message cvrana on Talk. This information will be cleaned up in the near future.

1. Do not operate the lasers without having received training, either in person or online at [learn.dallasmakerspace.org](http://learn.dallasmakerspace.org)
2. You must watch your job and be within arm's reach for the entire duration of the process.
  - a. Seriously, stay within arm's reach at all times and keep a constant eye on your job. Don't get back on the computer or sit down where you cannot see into the cutter.
3. All lasers are \$1 for 5 minutes of active run time, rounded *up* to the nearest five minutes.
  - a. We do check. Please don't forget to pay.
4. There is a queue. Follow it. (Check below for details, this one is long)
5. Do not hog the computers. If you're not running or setting up to run, please do whatever you are doing elsewhere.
6. Clean up after yourself. Both on the computer tables and in and around the laser.
  - a. This includes taking your trash to the dumpster when it's finished.
7. Do not attempt to repair the lasers without first having received training from an authorized DMS member.
  - a. We have a list of laser maintainers. If you're not on it and you try and do maintenance, you will likely break it worse.
8. One laser per person. Period.
  - a. If there are two of you, each can man a laser. however, if it's during peak time we may request you finish your job and get off to allow others to use the laser as well.
9. Do not ever remove or attempt to remove any panel from the machine, including the front panels or panels on the side.
  - a. This falls under the scope of maintenance. Show up to a maintenance day if you'd like to learn.
10. Never run a laser with any panels missing from the machine, for any reason.
  - a. It's a serious safety hazard and is NOT SAFE.
11. Seriously, watch your job. Keep an eye out for fires. I'm restating this one because of how incredibly important it is.

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The following information is to be considered accurate pending review by the committee. IN THE INSTANCE INFORMATION BELOW CONFLICTS WITH THE INFORMATION ABOVE, the information above takes priority.

THIS PAGE IS UNDER CONSTRUCTION

## **Users Must have completed training and meet Age Restriction.**

- Laser 101 Thunder Basics course to operate the Thunder Nova lasers.
- Laser 102 Zing Basics course to operate the Epilog Zing.
- Laser 103 Fusion Basics course to operate the Epilog Fusion.
- Age Restriction: You must be at least 16 years of age to take the training.

## **Must monitor laser for the duration of your job. Stay within arms reach at all times.**

If you use a proxy to watch the laser, they also must be trained for the particular laser, and be within arms reach.

Desperately need to use the restroom but no Laser-trained proxy? We understand. Hit the pause button. Add a "Be right back" note to the laser sign-in board. Return promptly. Your session time limit does not get extended. DO NOT abuse our understanding by using this loophole for getting a snack from the galley, visiting with friends, leaving the premises, etc.

You shall not run multiple lasers at once as you cannot monitor them both or stay within arms reach of both.

Why? Because Lasers cause fires. We have a 4-part fire suppression system: you, the CO2 line, the fire extinguisher, and the fire alarm. None of these work without you. A fire risks not only a \$15,000 laser, but also the facility and everyone in it.

## **Pay for usage. (including cost and payment link)**

All lasers including Epilog Fusion: \$1 per 5 minutes of laser run-time, rounded up. Example: 4 min = \$1, 6 min = \$2.

Run-time: laser operating time as measured by the counter in the laser's control panel.

These prices are accurate as of 11/7/2021. In the case of a discrepancy, the price posted in the committee area/on the kiosk is the governing price.

- Credit cards (preferred) and cash accepted at Laser.
- Swipe credit cards at Square kiosk.
- Record cash payment in Square kiosk and take receipt. This is the only proof of payment. If you do not record cash payment in Square, it may look like you didn't pay. You are responsible for keeping this proof of payment. Put cash in envelope (see side pocket on cash box); write name, date, and "Laser" on envelope for bookkeeper; submit in tall black cash box under Square kiosk. If you cannot find an envelope, re-stock them from the supply kept in the Common Room on top of the white shelving.
- Multiple jobs during one visit? Add all the run-times together, then round up.
- Must be made at the time of your visit.

Accidentally walk out without paying and can't turn around to come back? Don't panic. Notify us on Talk. We'll respect your prompt honesty and you'll set a good example. We'll work something out.

You can pay online at this link: <https://dallasmakerspace.org/laser>

## Be excellent and clean up after yourself.

Tidy up tools and trash. Remove bits of material from laser beds. Do not leave scrap in Laser area. Be honest with yourself; is it really usable scrap? If yes, place on shelf in Workshop. No room on shelves? Take usable scrap home...or throw it away...or throw away existing scrap to make room. Otherwise, throw bad scrap in the trash can or dumpster. Empty the trash can in the dumpster. Join us on the monthly Maintenance Day for a deep cleaning.

All scrap must have a useable area greater than 8"x8" or fit inside the bin dedicated to test material. Please, please, please walk all questionable or unusable material to the dumpster. This is a recurring problem.

## Obey the queue and session limit (3 hours total if someone else is waiting)

### Definitions

- Workstation: area including laser and PC.
- Session: when member occupies a workstation, whether laser is operating or not and whether user is logged into computer or not.
- Run-time: laser operating time as measured by the counter in the laser's control panel. A subset of session time.
- Work piece: single lasered item that can be lifted out of the laser without ruining it. Note: your job may consist of multiple work pieces.
- Off-peak hours: 10p-10a CST
- Peak hours: 10a-10p CST

### Queue Procedure

1. Queue Sign-In: Write your name, phone number and arrival time on it. Indicate if you are waiting for any laser in particular. Write clearly or you may lose your turn.
2. Tell laser operators that you are waiting in the queue. They may not realize that a queue has formed.
3. Answer your phone or text message promptly, or else you may lose your turn.
4. Erase your name and information from the queue sign-in board when your turn begins.

### Session Procedure

1. Session Limit:

Operator vacates the workstation under these conditions:

- After 3-hours
- AND when a work piece can be removed from the laser bed without ruining it
- AND if people are waiting in the queue for the laser (even if the queue only formed 10 minutes ago)

If no one is waiting for the laser, operator may continue to use the workstation until a queue for the laser forms. At that point, the operator will finish the work piece in progress, then vacate the workstation.

2. Get another turn: Go to the end of the queue.

### Plan Your Work FAQs

- How do I estimate my run-time?

Software for the Thunders and Fusion have a simulator feature. It underestimates the runtime significantly, so beware. The laser has a simulator feature that is more accurate.

- What if my single work piece takes longer than the 3-hour session time limit?

You get to keep using the laser until your work piece is done because moving it from the bed would ruin it. That said, be considerate by performing the job during off-peak hours. See the famous Middle Earth Map that took 7 hours at <https://talk.dallasmakerspace.org/t/dallas-makerspace-show-and-tell-november-2016/13883/62>

- May I start lasering a new work piece near the end of my session time knowing that it will run over the remaining time?

No.

- What if I have several work pieces that will take longer than 3 hours total? For example, multiple coasters from a sheet of cork.

Do not send a laser job of multiple work pieces that is longer than the remaining session time. Plan the order of cuts & rasters so you can finish at least one work piece before the session is up. You may go to the end of the queue or return another day. Consider using the lasers during off-peak hours to avoid being interrupted by a queue.

- Am I obligated to let people “play though” if they say they have a shorter job?

No. That rule has been removed. You have use of the workstation until your session time is up. All members should plan for a wait. Using the lasers during off-peak hours is a way to avoid waits.

## **No designing. Tweaking OK.**

Sessions are for importing your prints, not creating your designs. Tweaking a design is expected. Makespace has other computers available for designing.

## **In case of EMERGENCY, use the red E-STOP button.**

Use the fire suppression equipment: the CO2 blue line or the fire extinguishers. There is a fire extinguisher on the floor next to each laser. Notify us of issues on Talk.

## **Attempting to perform your own maintenance may damage the lasers.**

Unless you have been previously trained (i.e. on our maintenance team), please do not try to repair the lasers. The optics are extremely delicate and even small adjustments to the laser can take several hours to correct if done improperly.

## **Consequences**

If you are observed violating committee rules, we may take the following actions:

- we may not allow you to complete your job.
- we may suspend your access to the Laser Area up to the maximum time permitted by the Dallas Makerspace Rules.
- we may invalidate your laser training. Why? Because you have forgotten your training.
- we may petition the Board for stricter consequences.

Unless the situation warrants us petitioning the Board, you have a path forward. You may get re-certified by participating in a Monthly Committee Meeting /Maintenance Day. Our committee does not want members who have lost their authorization to re-take generally offered laser classes. Those limited slots are kept available to members-in-good-standing. We have a Committee Meeting/Maintenance Day once a month.