

Before you start

1. You need training before you can use the laser cutter
2. The wiki is at <http://bit.ly/LHS-LC> (<http://bit.ly/LHS-LC>)
3. Edit your file on your own computer, not on the laser cutter
4. Save your file in DXF format, or JPEG if engraving
5. Copy the file to the cutting machine via the network or by plugging in a USB device. See the wiki for details.

Startup

1. Get key from it's safe location
2. Turn unit on using the key
3. Check laser unit powered on
4. Boot up the PC
5. Open the laser cutter lid
6. Check the following from left to right:
 1. Water flowing in cooler
 2. Coolbot on (black box with LCD Display)
 3. Airflow working inside front-left of the lid
 4. CO2 fire extinguisher at your left foot

Loading Files

1. Click on 'Lasercut' icon next to start menu
2. File → Import
3. Move drawing to top right of cutting area on screen
4. Scale the import by 0.98 (Is this necessary?)
5. Locate the cut and engrave power on the materials list
6. On the top right of the screen, set up properties *for each colour*:
 1. Choose the mode (cut or engrave)
 2. Set the power
 3. Set the cut speed
 4. Set the corner power
 5. Correct order so that engravings are done before cuts by moving items up and down
 6. Correct order so that cuts which would cause material to shift happen last by moving items up and down

Preparing for the burn

1. Coolbot and the laser must be on for at least 5 minutes before commencing the burn
2. Decide where focal point will need to be - top of material if engraving, bottom if cutting
3. Place material on the cutting bed, at top left, red dot indicates cutting position
4. Set height of cutting bed using "Up" and "Down" buttons on the laser unit keypad

Make sure you perform these steps after each change to the image!

1. In lasercut application:
2. Tool Menu → Set Knife Origin → Enter 299 / 559
3. Download Button → Download Current
4. Run 'Bounding Box Tool' to check cutter will not overrun your material

Burning

1. Did you remember to:
 1. Give coolbot 5 mins to cool the laser before you reached this point?
 2. Set the knife origin?
 3. Download the file to the cutter?
 4. Check that the laser won't run off your material with the bounding box tool?
2. Close lid
3. Check left to right:
 1. Water flowing in cooler
 2. Coolbot (black box with LCD Display) On
 3. Airflow working inside front-left of the lid
 4. CO2 fire extinguisher at your left foot
4. Click 'Burn'
5. Wait for burn to complete, watching for fire
6. Monitor Coolbot temperature - if it reaches 25 degrees, hit pause on the cutter
7. Fill in the log book at <http://bit.ly/LaserLogbookForm> (<http://bit.ly/LaserLogbookForm>)
8. Memorise burn time from the cutter LCD
9. Put money in the usage box

Shutdown

1. Leave the machine on, but not cutting, for a few minutes so that coolbot can cool the laser down
2. While you wait, clean up around you - vacuum the cutting bed if needs be
3. Close the lid
4. Turn off the key
5. Shut down the computer
6. Return the key to it's safe place

Emergency / Fire

1. Hit **STOP** button
2. Shout for help
3. Fire extinguisher
4. Keep back
5. **then** open lid and put out fire

After

1. Do not use the cutter, even if things seem ok. Residue on the mirrors will cause problems.
2. Log the problem in the online log book
3. Mark the machine as out of order, with a clear reason as to why
4. Contact the mailing list and Solexious (Charles Yarnold) or Hipster (Chris) and let them know what happened

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