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| Emblaser 2 laser cutter Safe Operating Process |
| This Safe Operating Process (SOP) is to be used in conjunction with any legislation, operating manuals, Australian or International Standards or task relevant training. |
| **Description of the Work:**  |
| Operate the Emblaser 2 laser cutter in the Library MakerSpace to complete projects |
| **Personal Protective Equipment Required:** *remove any which are not relevant* |
|  | Safety glasses may be required for some operations. |  | Face masks may be required when opening the device. |
| **Potential Hazards** |
| * Water leaks and electricity. Do not use near any wet surfaces
 | * Reflective materials (mirrored surfaces) - will cause the laser to be reflected causing damage to user and device
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| * Irritation from fumes - must be vented correctly through the exhaust hose and Fume Filtration System
 | * Explosions and fire. Do not use in the presence of flammable gas. Some materials can combust. Never run the emblaser unattended
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| * Some materials produce harmful fumes or are more susceptible to igniting. All materials are to be approved by technician prior to use. Material will be checked against the Material Property Table to identify risks
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| **Pre-Operational Safety Checks:** |
| * You must complete Emblaser 2 induction prior to using the device
* Ensure the laser cutter and workspace is clean of residue and debris
* Make sure there are no maintenance tools in the laser cutter
* Be aware of the location of the fire extinguisher and fire blanket
* Is your material safe to use? Any material must be approved by a Makerspace technician prior to use
* Ensure a MakerSpace technician has checked your project and is available to supervise if required
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| **Operational Safety Checks:** |
| * Never run the Emblaser unattended. You must stay at the machine while your job is running
* Turn green button on - Left hand side
* Is the laser enabled? Turn red laser enable button on - Right side
* Ensure the exhaust hose is vented correctly and the Fume Filtration System is turned on
* Make sure your material properties within the Library Tab are set correctly in Lightburn
* Laser will immediately become disabled when the lid is opened.
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| **Post-Operational Safety Checks:** |
| * Ensure project is complete prior to opening laser cutter
* You may want to wear a face mask when opening the lid of the laser cutter
* Ensure the device and workspace is clear of residue and debris
* Check laser is disabled and turn off machine and filter
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| **Housekeeping:** |
| * Place any residue and debris in appropriate bins
* Clear any work surfaces and return any tools you may have been using
* Inform makerspace technician that your project is completed
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| **Maintenance & Cleaning** |
| Daily / after every project* Ensure the laser and workspace is clear of residue and debris

Weekly * Clean interior workspace
* Perform a lens clean *(MakerSpace technician)*
* Check air-assist is not blocked *(MakerSpace technician)*

Monthly* Wash cutting mats *(MakerSpace technician)*
* Wipe lid with lint free cloth *(MakerSpace technician)*
* Check Fume Filtration System filters *(MakerSpace technician)*
* Check filtration system filters and replace as necessary (MakerSpace technician)

Quarterly* Check for software / firmware updates. I.T. are available for assistance as Machine is not on the network *(MakerSpace technician)*
* Check rails and bearing. Lubricate if needed *(MakerSpace technician)*
* Re-run Optics Calibration Process *(MakerSpace technician)*
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| **Assessed by:** | Charles Barnett |
| **Date of Assessment:** | **6 February 2019** |