# Operating the XTool laser

## Studio Monitor Setup

* Studio monitors should ensure Jewelry fans are on
* turn on both fan switches in the lab
* make sure there is a window or door open in the outer studio
* ensure user operations are performed safely.

## Powering Up

* turn on only 1 laser
* launch the XCS application and connect it to the laser (top right panel)
* click the gear icon and make sure that `all` safeties are enabled
* if you want to operate without lid safety enabled consult with the Studio Monitor to make sure that safe operation can be maintained. Do NOT just turn it off!
* open Settings (top left) and in Device Settings perform the `Z Homing` action

## Job Preparation in XCS

* select your material and place securely on the bed
* use AutoMeasure to focus the laser
* Confirm your material settings (run a Material Test Grid to determine)
* this includes making sure you have the correct laser type selected
* Check job on material location
* use Framing/Stop Framing (bottom right panel)
* or use Preview (camera icon, top right button)

## Job Start

* Make sure the lid is closed
* select `Process` button on lower right to preview the job
* examine the preview and make sure output matches your expectations
* select `Start` at top right to send the job to the laser controller
* when the laser controller says "ready" press the wide green button at the bottom to start the laser
* stay with the laser while operating
* it will beep and obviously stop when done
* open the lid and examine the work piece w/o moving it
* if it needs another pass, close the lid and double-click the laser controller button

## Powering Down

* Save your work if you want to keep it
* quit XCS
* turn off the laser
* turn off the fans