

# Laser Cutter Quick Start Guide

## Turning on the Laser

1. Turn on the power brick (this will turn on the water pump and the air pump. It will also power up the fume extractor)
2. Turn on the fume extractor by pressing the red button on the front.
3. Turn on the laser by twisting the big red knob on the machine clockwise
4. Wait until the LED display shows an IP address (169.XXX.XXX.XXX)

## Open RetinaEngrave 3D

1. Double click on the desktop Icon and wait for startup
2. At the bottom left hand corner of the application window should display the IP address of the machine. If not try turning off the machine and turning it back on again.
3. Home the laser head by pressing the "Home" button on the top toolbar.

## Import Your File

You can import your file in a variety of ways. The most common way is through your preferred application's print menu.

1. Select Print from your application's File Menu
2. Select "Full Spectrum Engineering Driver" from the pull down menu of available printers
3. Click Print
4. Return to RetinaEngrave 3D

## Loading Material

If you are going to be cutting your material you must use the aluminium honey-combed cutting tray. If it is not already in the laser it is in the first drawer below the laser. If you are only engraving then you can work directly on the floor of the laser.

1. Place your material in the laser. The scribed marks on the floor of the laser describe the extent of the laser's reach
2. Loosen the thumbscrew on the the front of the laser head and position the lens high enough up so that it easily clears your material. Retighten the thumbscrew
3. Using the directional pad on the laser control panel, position the laser head over your work piece

4. Loosen the thumbscrew on the laser head again and place the focusing tool (the cylindrical aluminium billet tucked inside the laser) between your workpiece and the laser head.
5. Lower the laser head onto the focusing tool and retighten the thumbscrew. Return the focusing tool to the right hand side of the laser.

## Positioning the Laser

1. Using the directional pad and the red pointer laser, move the laser head to the top left corner of where you want your file to start printing from.
2. You can verify that your job will fit on your material by pressing, on the laser control panel, the button with 4 yellow arrows. This will job the laser to the 4 corners of your file.

## Running your file

1. Make adjustments to the threshold and power and speed settings.
2. Select your "Raster" "Vector" or "Raster then Vector" from the Mode-Select Menu from within the RetinaEngrave 3D program
3. Press Go

**Once your file has started do not leave the room for any reason. Be watchful and vigilant while the laser is running.**