

Keep These Thoughts In Mind When Creating A Drawing For A Model:

The drawing space is the bed area of the laser.

- The VLS and PLS, 3.60, has a bed size of 12" deep X 24" long.
- The VLS and PLS, 4.60, has a bed size of 18" deep X 24" long.
- The VLS and PLS 6.60, has a bed size of 18" deep X 32" long.

The laser will not see to engrave or cut anything outside of this area. Your drawing must fit this work space.

The XOYO is in the upper left hand corner of the laser bed. Rulers are along the top edge and right edge of the bed.

You **MUST** know the exact type and thickness of your material:

Because the lasers material data base will create an algorithm which takes this information and the Wattage rating of your laser to create the suggested Power, Speed and PPI to use for your work to start, you may need to adjust these settings later.

For vector cutting and vector engraving the line must be hairline.

If the line is larger than hairline the image will be raster engraved. For AutoCad line weight .001"

The line must have a definite color.

This color will be matched with a color in the laser driver menu for Power, Speed, and PPI.

As a general rule Use:

- **The color Black may be used for either raster engraving or vector engraving.**
- **The color Red is for vector cutting.**
- **The color Blue is used for vector engraved lines.**

I use yellow as a color not to engrave or vector cut but for material outlining. That is to define the shape of an image to be engraved on. If lettering is to be on a plaque that is 8 X 10 then I create an 8 X 10 yellow rectangle. I will not give this color a duty; I will skip this color for engraving or vectoring. I use it for outline only.

- I use **Black** for Text. This will be raster engraved.
- I use **Red** for **vector cutting**.
- I use **Blue** for **vector engraving**

Do not place multiple lines on top of each other. The laser will do multiple tasks. Meaning, that the laser will raster engrave, vector engrave or vector cut an image twice. This may be intentional, much like scoring a piece of mat board with a knife multiple times to cut through. This may happen when you copy and paste images and forget to paste one or delete one. Double check your work. Saves time and money.

Lines too close will wipe out an area.

- The spot size of a **2" lens is .005"**.
- The spot size of a **1.5" lens is .003"**.
- The spot size of the **2" HPDFO lens is .001"**.

Think of the cut line as a saw kerf. If you get your lines too close to a delicate edge / line, you will destroy it.

Laser engraving glass:

- I use a lower PPI setting (250) the surface is less "hammered" by the laser, keeping surface abrasion down to a minimum.
- I also change the Gray Scale of the image to 70%.