Laser Cutter Training

Pre-training learning?
Raster v Vector

Vector
Only lines and curves with a thickness of .001" (.0254 mm) or less will be interpreted as vector objects. All other elements of the graphic being printed will be interpreted as raster objects.
Page 40 P 3 PLS User Guide

Lines can be too small 0.0001 didn't work during '25 training event

PLS User Guide – available on AMIL website (amil.skc.edu)

Example cut
AMIL Keychain

Laser Operations
Vector cutting depth and raster engraving depth (or marking intensity if you are surface marking only)
controlled by
1. speed of processing,
2. laser power level and
3. number of pulses per inch (PPI)
Two methods to specify
1. materials database method which simplifies setup for beginners and casual users
2. manual method with allows much more control for advanced users.

Power Level & Speed
Artwork Positioning on Material

Venting – laser works by burning
Air Assist – Required for cutting, otherwise only if Air Assist Cone is on

Figure 1 Laser focusing tool against laser lens head

Focusing the laser system by adjusting the Z axis

UCP
Setting speed and power
Materials Database
Manual?
Set button
Positioning art on material
Focus view
Middle of design visual middle vs physical middle

Log book

General Software Guidelines Pg 67 PLS User Guide