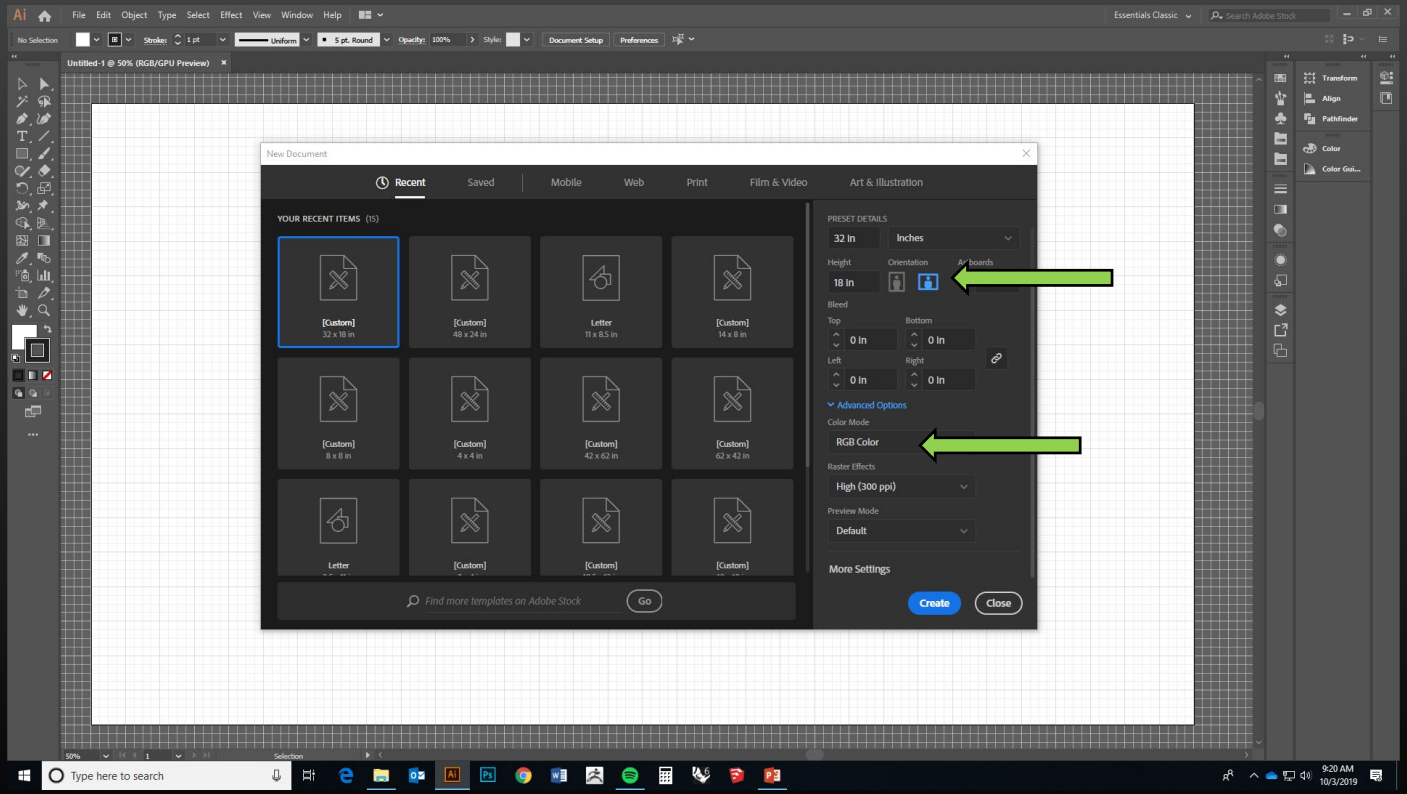
Laser cutting and engraving from Adobe Illustrator

Quick Start Guide

Start by creating a new document which is set to the dimensions of the laser bed.
In this case the laser bed is 18”x32”, so we will use that to insure we are working within the limits of the bed.

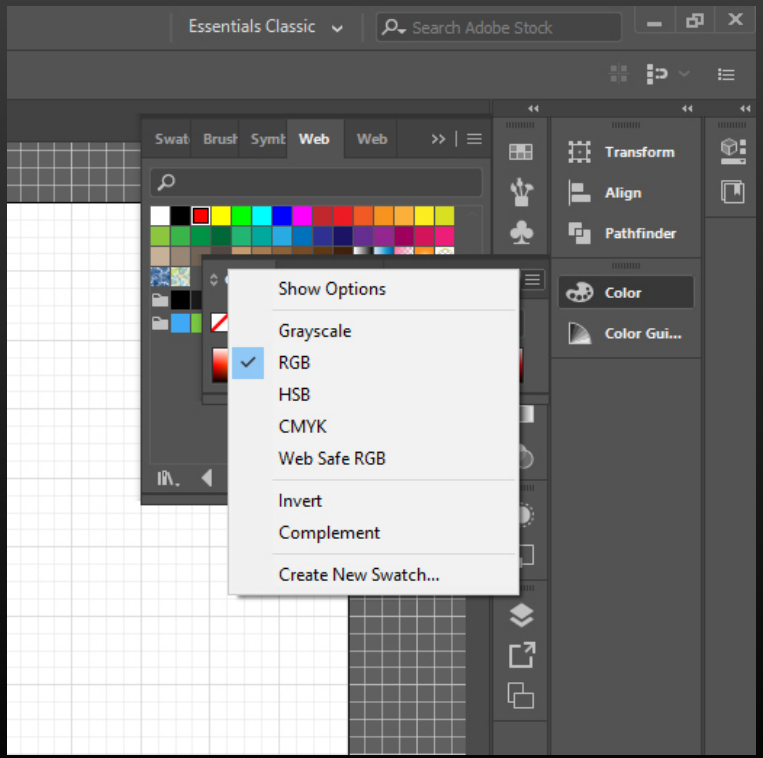


The orientation is
Landscape

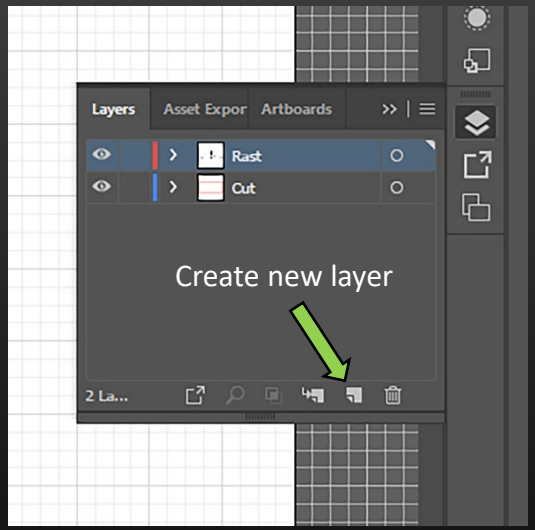
Under the “Advanced Options” select the
RGB Color Mode.

You must use the RGB color mode for the laser to detect the cut lines.

You can also check to see if you are in the correct color mode by clicking the color tab and selecting the RGB option.



The laser only reads RGB colors in the following order: Black, Red, Green, Yellow, Blue, Magenta, Cyan, Orange.



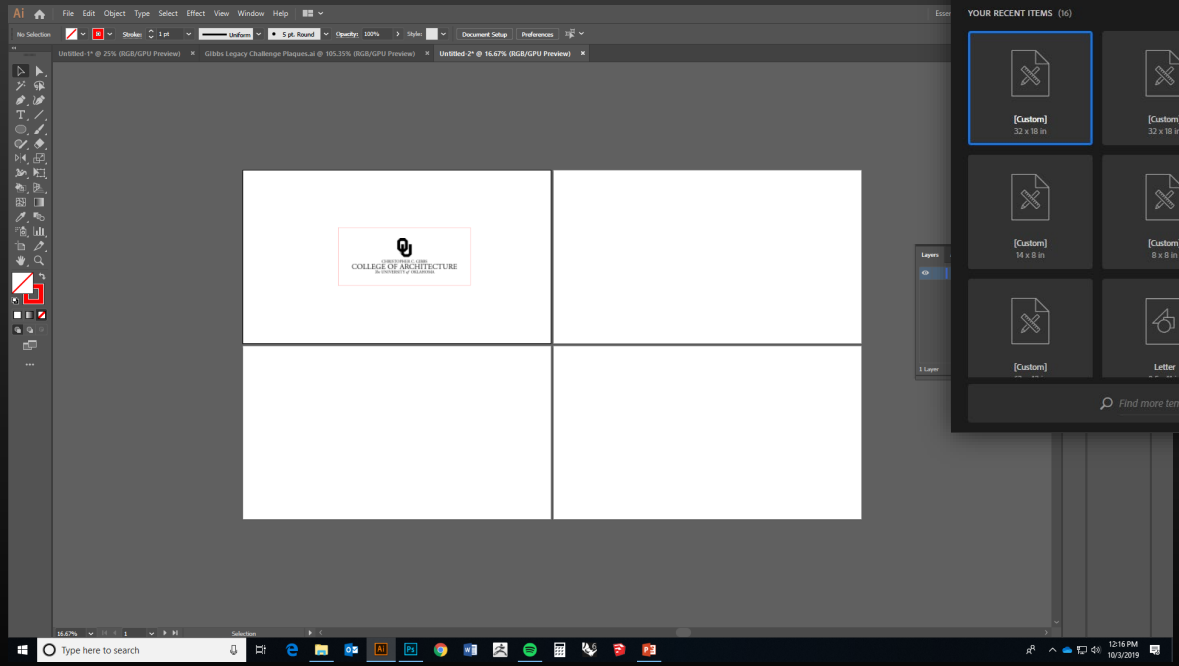
Creating layers is helpful when you have multiple functions.

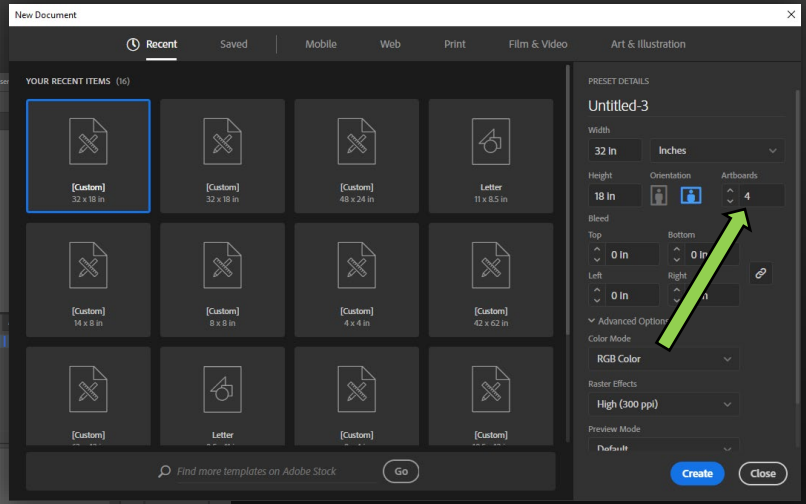
Naming your layers will help to keep things organized.
Example: Etch, Cut 1 and Cut 2.

The color associated with each layer does not impact the lines on the layer itself.

Line Weight must be .003 in order to cut.
A wider line will not register with the laser as a "vector" (or cut line) and can only be "rastered".

- Multiple artboards can be laid out in one simple file.
- Place items to be cut/engraved inside each box.
- These boxes will be sent to the laser as separate pages.





Artboards can be added when you create a new file, or by going to File/Document Setup/Edit Artboards

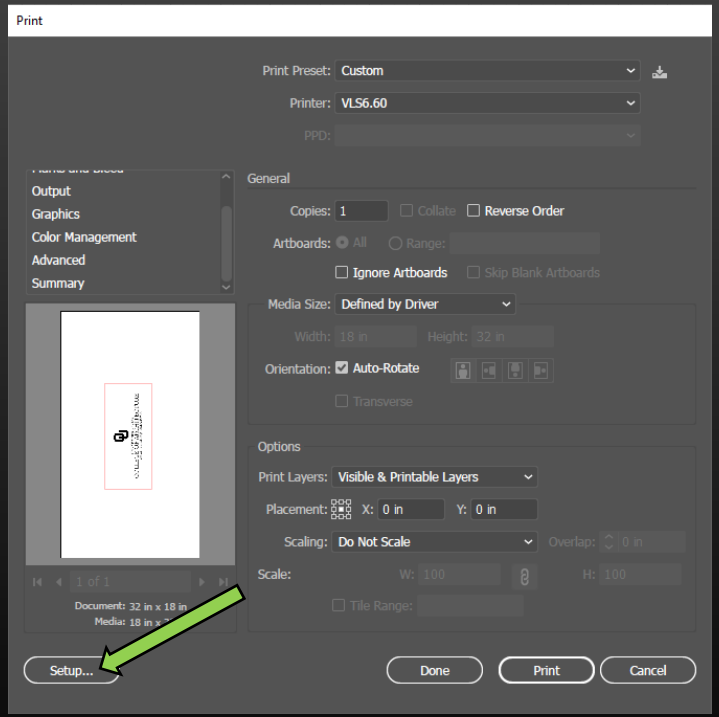
Note: There are two ways to handle the output of your file to the laser.

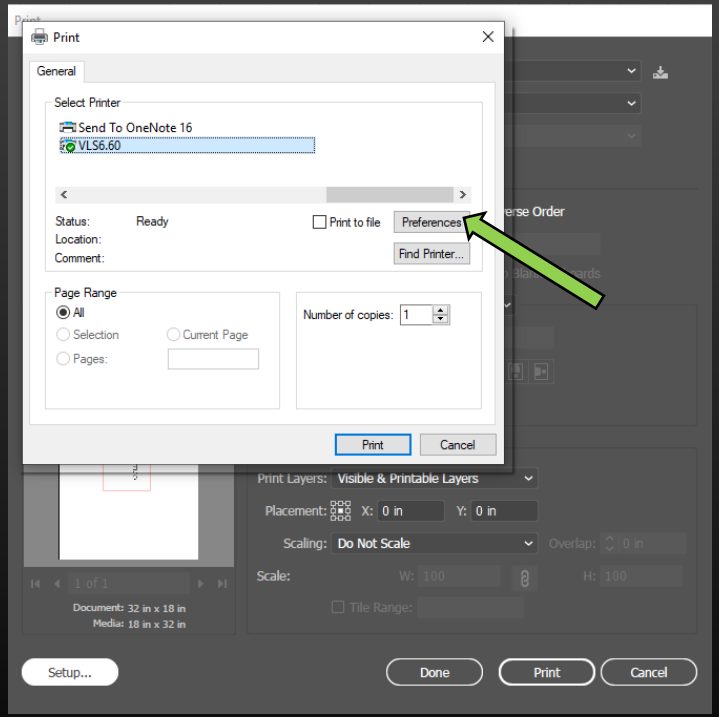
- The first is to print directly from illustrator.
- The second is to save the file as a .PDF file before addressing the printer settings.

Let’s start with the direct approach…

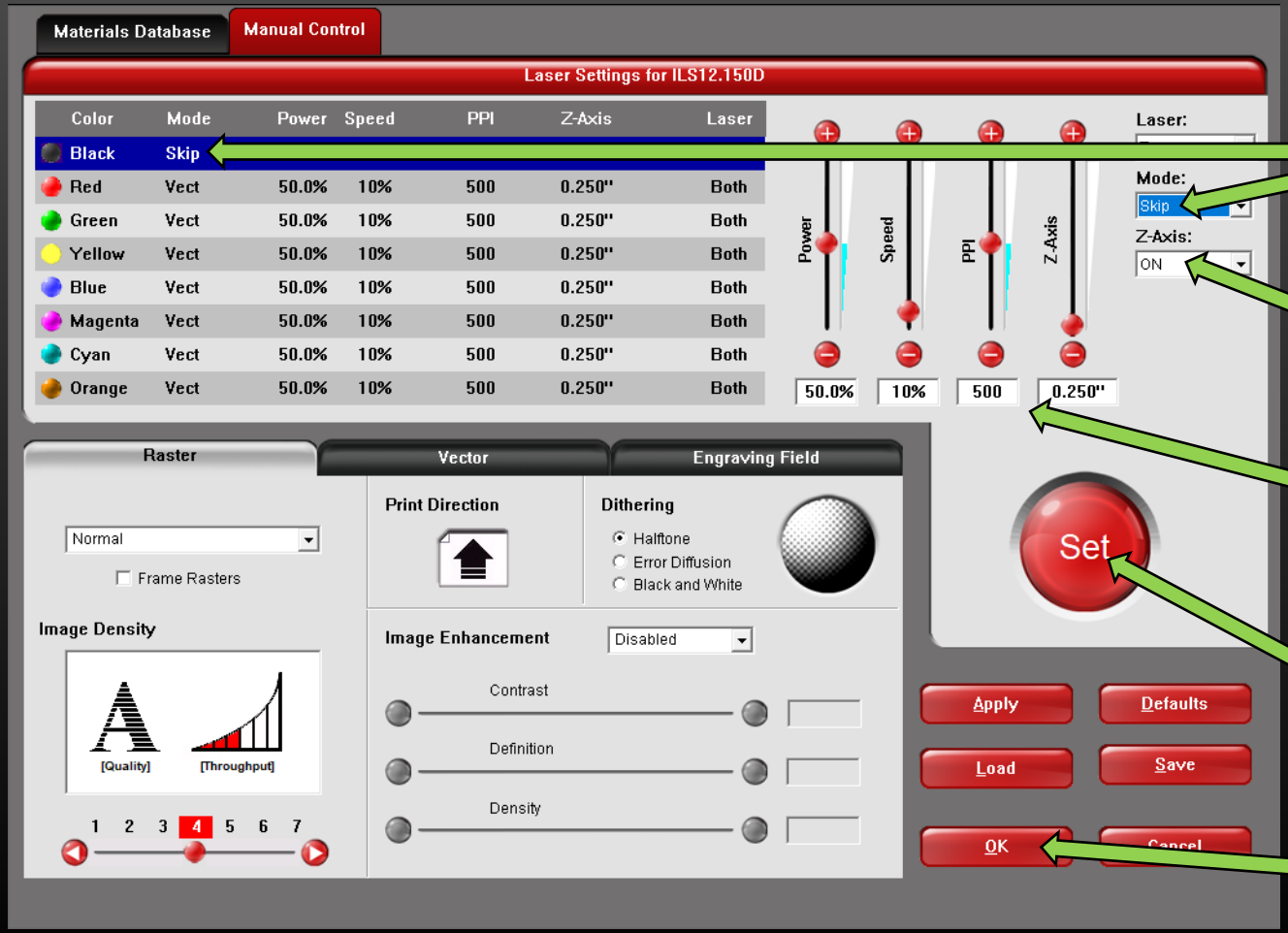
When your file is ready to laser cut, select File/**Print**.

The printer should be VLS6.60





Click Setup, then click Preferences to adjust the laser control settings.



Choose Mode:
VECT for line cutting and engraving.
RAST to raster engrave a text body, solid fill, or image. SKIP if you don't want a color to cut.

RAST/VECT not recommended.

Be sure Z-axis is ON and set to the thickness of your material.

Click the specific color to adjust the Power, Speed & PPI (Pulses Per Inch.)

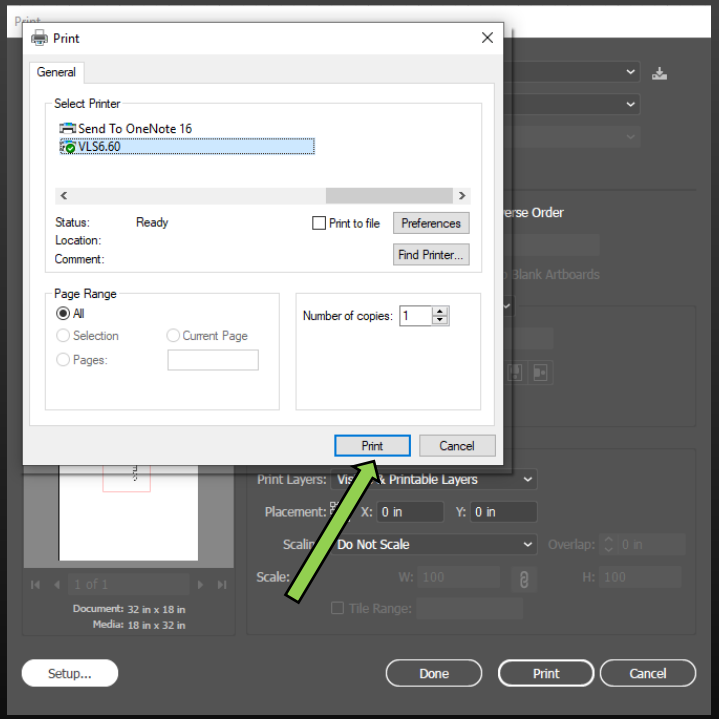
Settings guide can be found at:
http://www.engraversnetwork.com/files/MVX_Laser_Settings-Guide.pdf

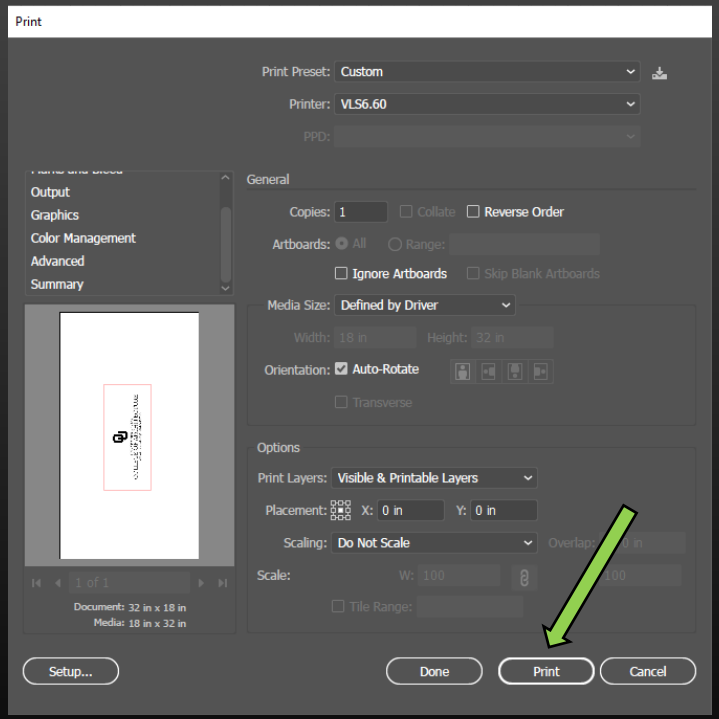
Press "Set" Button before you select your next color to avoid group setting.

Click OK when done.

NEVER SAVE

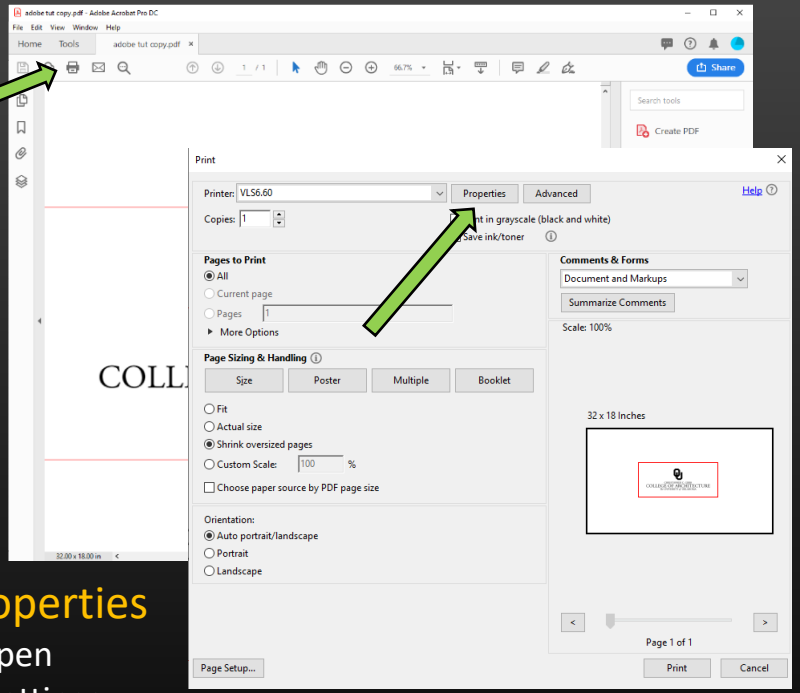
Click Print...

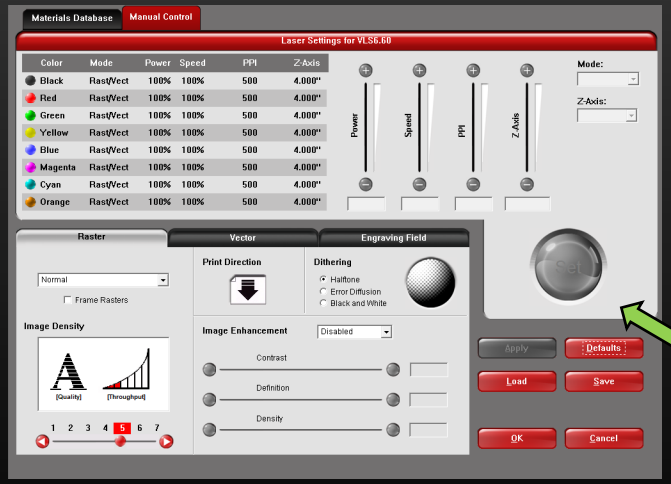




...click Print once more.

The indirect approach requires saving a copy as a .PDF file.
Go to File/Save a copy…
Change the file from .AI to a .PDF
Once saved, open the .PDF file and click print.



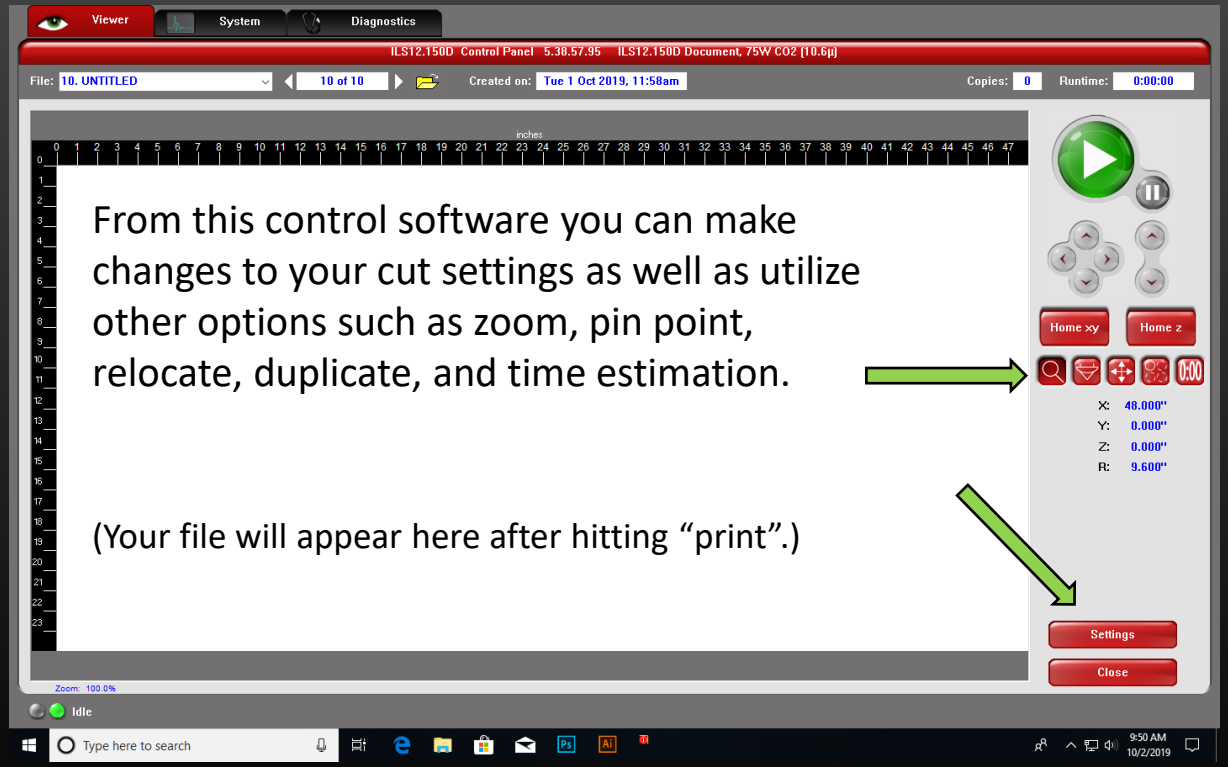


Click Properties
This will open the laser settings window.

Once set, click OK, then Print.

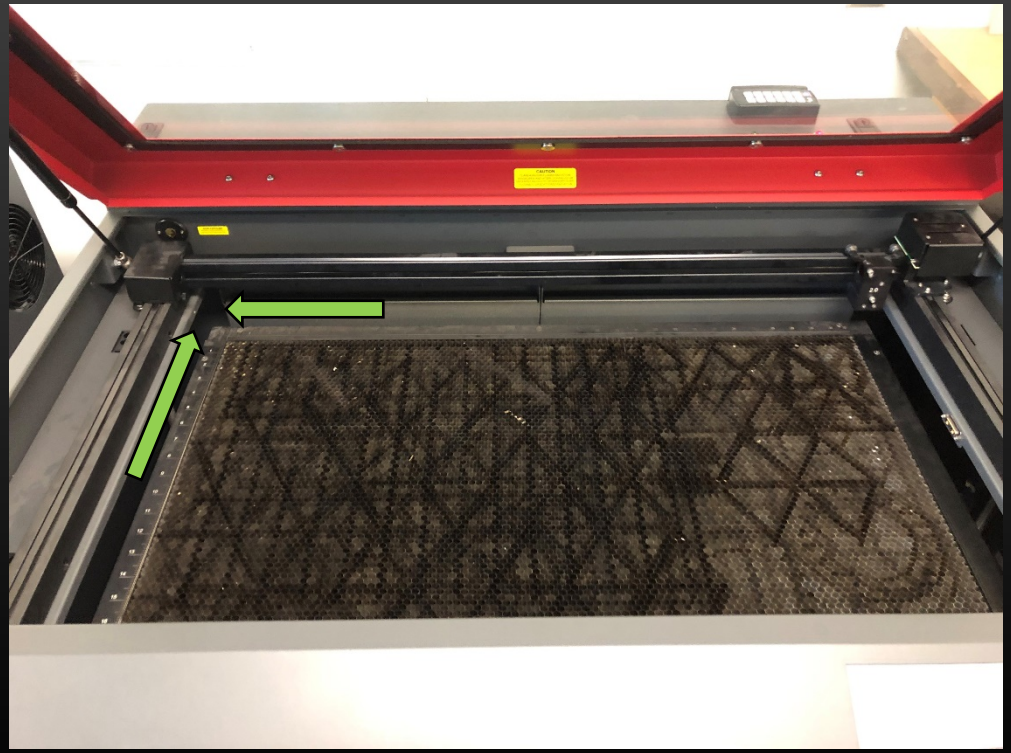
Your file will now be available in the laser control software.

Open the UPC application located on the desktop.



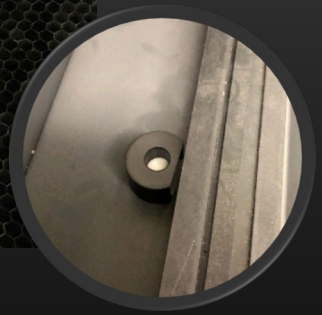
For more information, visit https://www.ulsinc.com/ and click support for more detail about the laser cutting process

Open laser lid and place sheet onto honeycomb cutting bed.
This cutting bed is designed to float on engraving table.
Cutting bed should be pressed to the upper left corner.

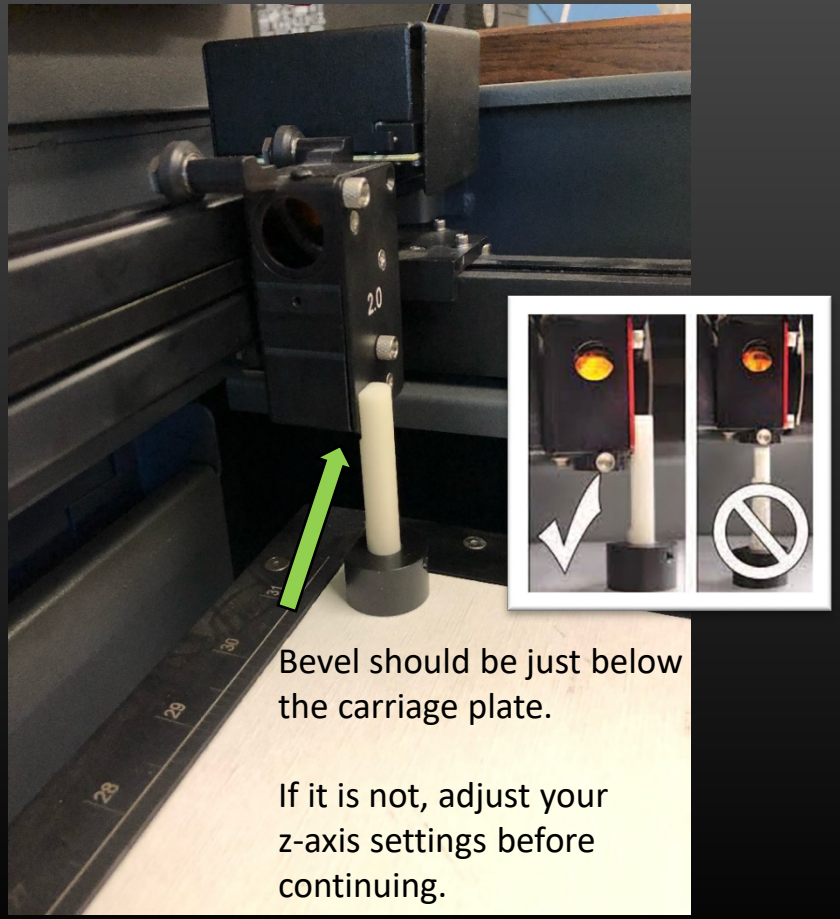


Remember to turn on the exhaust, located to on the right side of the laser.

To insure the accuracy of your settings, place the focus tool on top of your material after the z-axis has been adjusted.



Focus Tool is located in the inside on the left side.



TIP:

The z-axis will not adjust using the UCP software until you hit play.

In order to check the z-axis focus using the focus tool, leave the lid open and hit play to allow the machine to move the bed into place. This will also initiate a dry run where the laser is not cutting but following the cut paths. (Be sure that the path is clear.)

You can pause the laser after the bed adjusts to the settings you have entered. Now use the focus tool to check the accuracy.

Note: Only manual control on the key pad will move the z-axis before a cut is initiated. You can use the key pad to determine your z-axis height, but if you do, you must turn off the z-axis within the UCP to avoid an override of this manual adjustment.

It’s very important that the lens is focused or you will not get a good cut or engraving.

YOUR MATERIAL SHOULD ALSO BE FLAT!

Warped material will change the focus of laser lens causing problems or even FIRE!

FIRE IS BAD!

IN CASE OF FIRE:

There is an ABC Dry chemical extinguisher on the west wall within the DML, next to the storage closet.

Alert OU Fire Department (911) in the event of a fire. Promptly report the event to COA staff at GCA-Lab-GA@OU.edu.

Close the lid &

Swipe your soonercard.

Press PLAY in the UCP window.

Now you are laser cutting!

Laser Cost:

1 Swipe = $1.00 = :04 minutes

$.25 a minute after

- This means you will be charged a minimum of $1.00 every time you swipe your card to turn the laser on. Then after :04 minutes, you will be charged $.25 a minute. ($7.50 = :30)($15 a hour)
- If you need to laser cut more than once, don't swipe out, just start new laser file.
- Remember to swipe out when you are finished laser cutting or you will be charged.

Please throw your trash in the trash hopper!

For technical support or to report problems with the equipment within this lab, please contact the following support staff:

GCA-Lab-GA@OU.edu
Garrett.R.Stowe@OU.edu
Jerry.Puckett@OU.edu

We appreciate you letting us know when there are issues concerning this space and the tools. Help us keep things running by promptly reporting breakage and misconduct within the lab.

Thank You.