

# LASER CUTTER

For use with the Universal ILS12.150D Laser Cutter

---



# Table of Contents

---

|          |                                     |
|----------|-------------------------------------|
| p. 3-4   | .... Preparing Your Material to Cut |
| p. 5     | .... Preparing your Vector File     |
| p. 6-9   | .... Exporting and Printing         |
| p. 10-12 | .... Troubleshooting                |

# Preparing Your Material to Cut

---

**1.** Prepare your materials to be cut. You should note down the length, width, and thickness of the materials as well as the type of material you are cutting on the Laser Sign-In Sheet. You must be 100% sure of the material that you are cutting. Check in with staff if the material is not acrylic, wood, paper, cardboard, leather, etc.

There is a pair of calipers at the workstation to note the thickness of your material. Measure in several spots and note down the thickest distance.

**2.** At this point, you should turn the laser on. Give it some time to warm up and load. (The switch is located on the wall). Then, log into the controller computer with your net-ID.

**3.** Place the material on the bed of the laser cutter. If your material is the same dimension as the bed (24"H x 48"W), take extra precaution to make sure that the cutting head does not bump into your material. If it does, get a staff member to help you lower the bed.

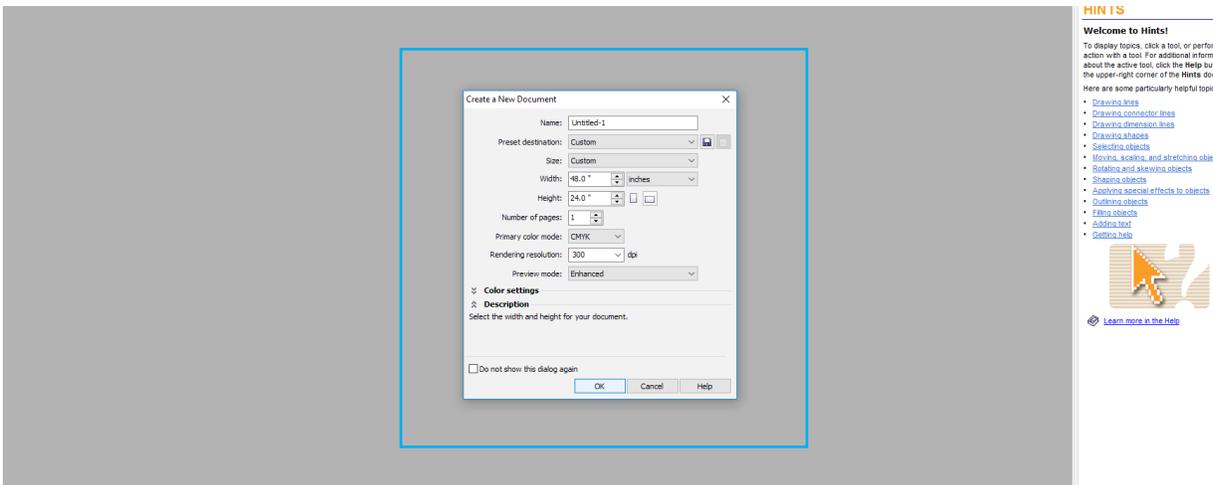
To make it easier to match your Corel Draw placement with the placement of your material on the bed of the cutter, make sure that one edge of your material is flush against the ruler of the bed.

4. Import your drawing in Corel Draw. The Document Size in Corel Draw should be set to 48"W x 24"H. This will mirror the bed of the laser cutter, and where you place your image within that rectangle, it will translate to that placement on the bed.

3.



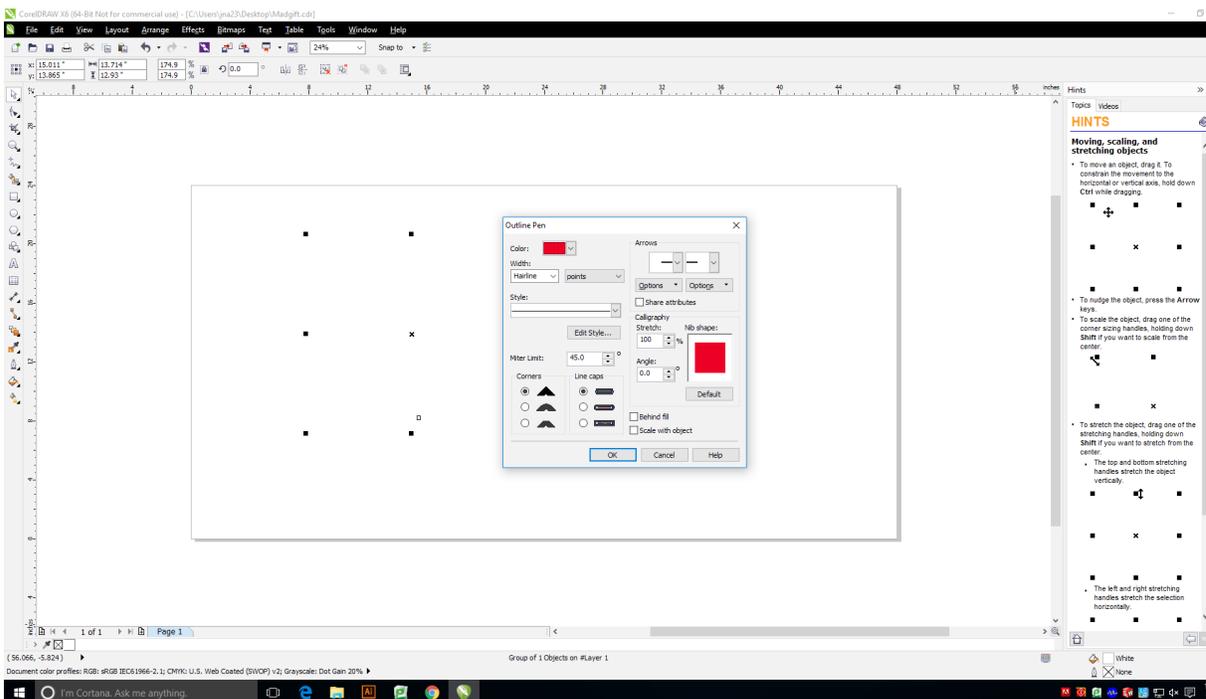
4.



4

# Preparing Your Vector File

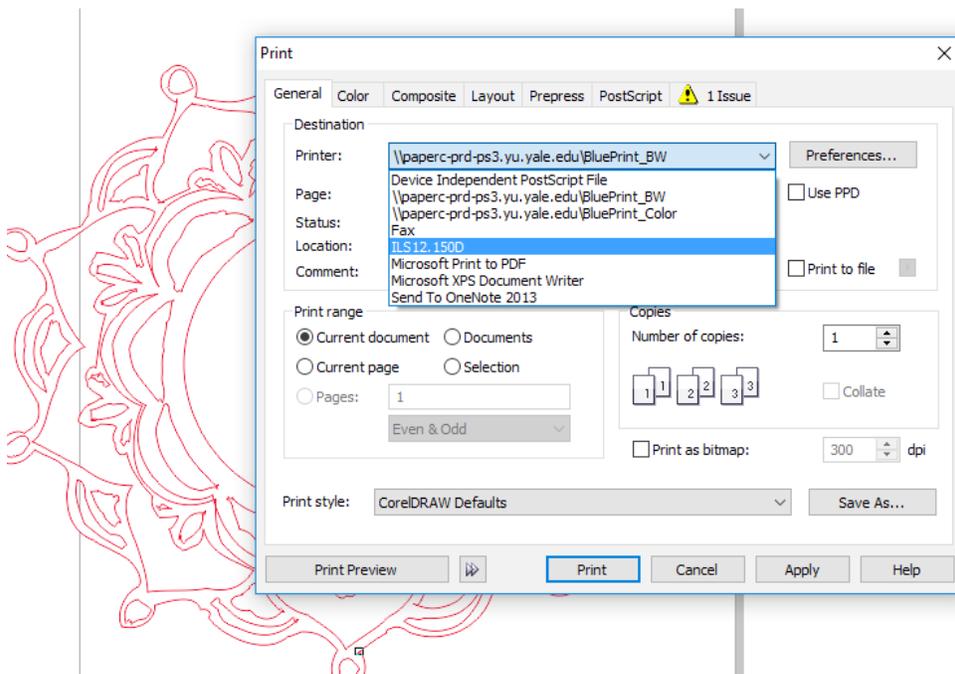
1. Open your vector image in Corel Draw. If you need help creating a vector file, refer to the “Creating a Vector Image” pamphlet.
2. Set your Document Size to 48”x 24” to help you locate your image in relation to the laser cutter bed.
3. Ensure all cut lines are RGB red and hairline width. All engraving lines and shapes should be black. You can do this by going to EDIT ->OBJECT PROPERTIES.
4. Ensure that the drawing fits within the actual dimensions of your material. (Use the length & width determined in step 1 of “Preparing your Material to Cut”



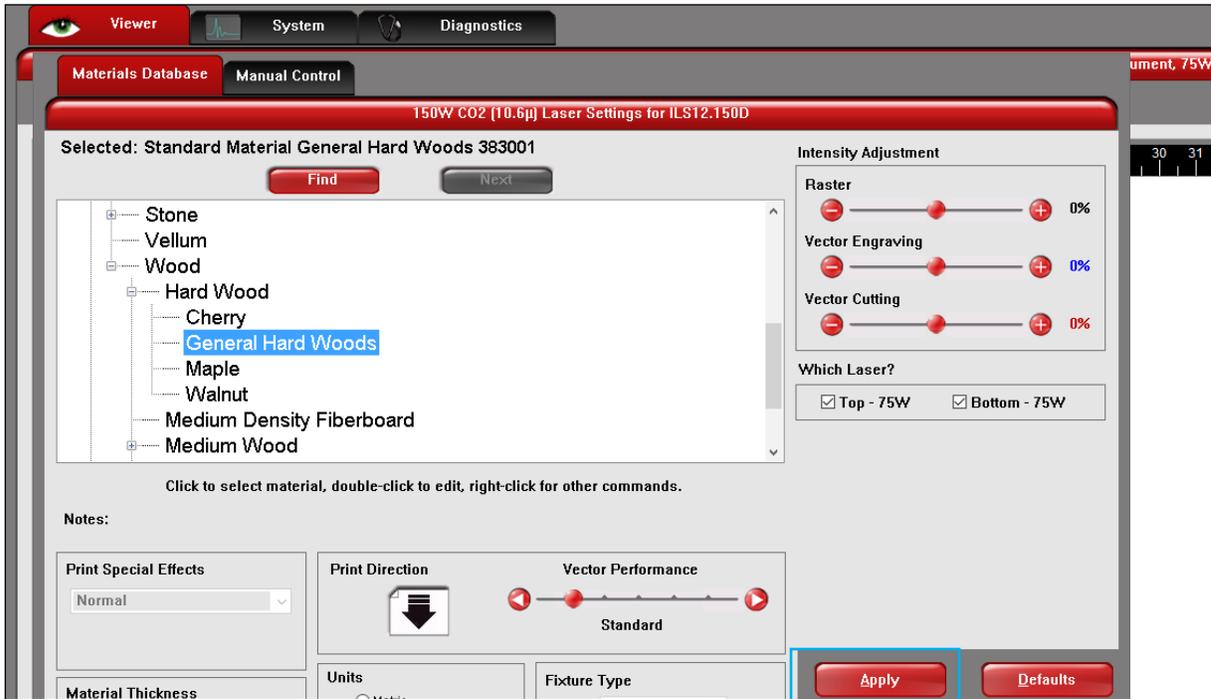
# Exporting and Printing

Once your image is ready, press CTRL+ P to begin laser set-up.

1. Be sure the printer is set to ILS12.150D. Click “Preferences” next to printer name on the print dialogue box.

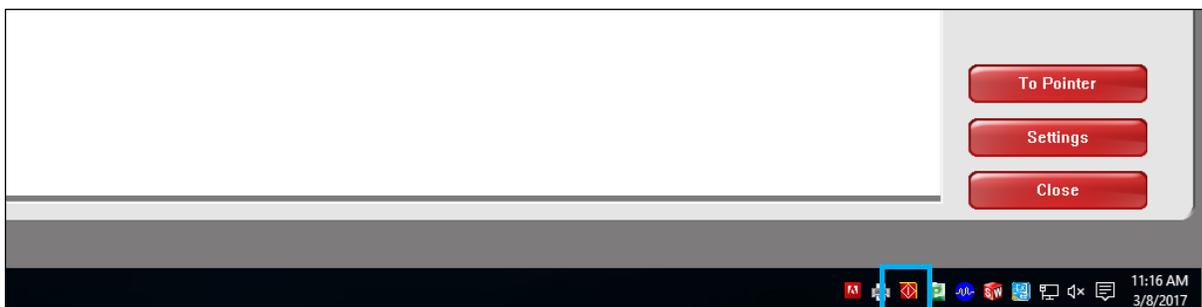


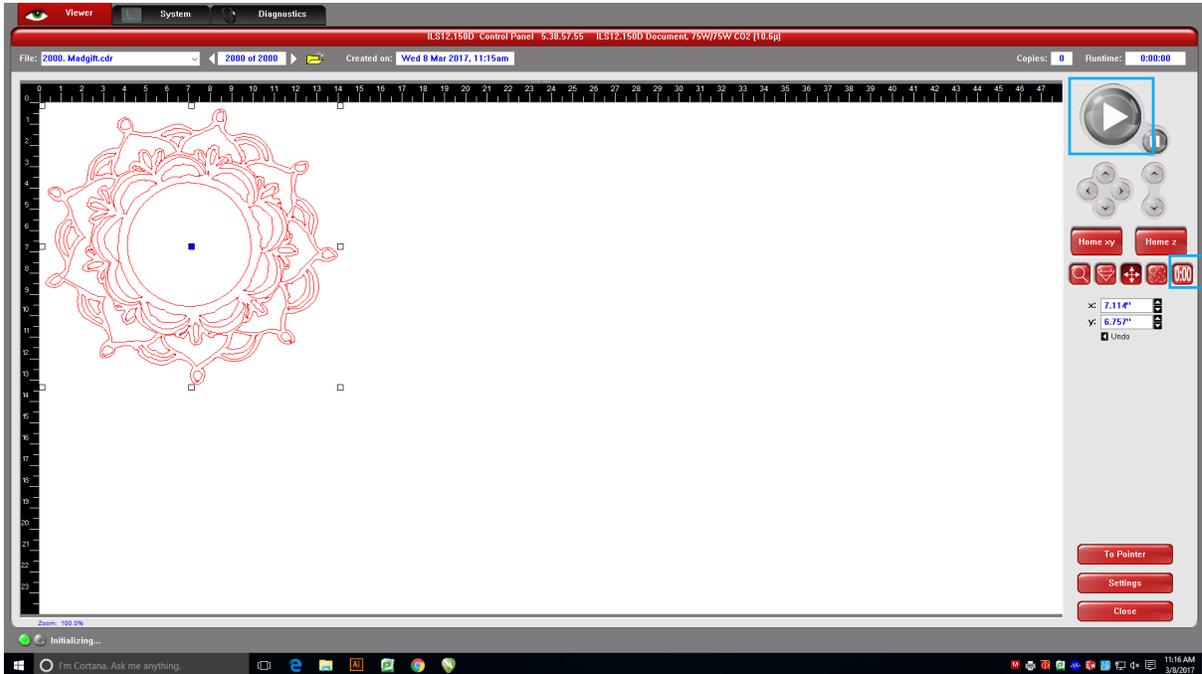
2. Navigate to the “Materials Database” tab of the laser cutter preferences. Select the appropriate material and set the “Material Thickness” as determined in step 1 of “Preparing Your Material To Cut”. Manual controls to power and speed can be adjusted if necessary. **The power should never go below 1%.**



3. Once your settings are correct, press apply and then press "Print" on the dialogue box.

4. Open the print driver by clicking the red laser cutter icon in Windows Notification Bar (bottom-right of screen). It is represented as a red rectangle with a diamond in it. The printer driver window should open with a representation of your drawing on the screen. If not, then recheck your settings and try again or call a staff member for help.





6. Time out your job by pressing the “00.00” button on the printer driver underneath the big “play” button and then press “start” underneath. Make sure your cut takes less than 30 minutes. If it is over, refer to the troubleshooting page.

**\*NOW YOU MUST GET A STAFF MEMBER TO CHECK OVER YOUR SETTINGS\***

7. Once a staff member has approved your cut, you can turn the blower “ON” ( the button is located on the wall) and press the green “play” button to start your cut. Make sure that the cover of the laser is closed.

Keep an eye on the laser cutter to ensure that everything is going smoothly, and that your piece is not smoking heavily or on fire. DO NOT stare directly into the laser itself, as you could damage your vision.

**8.** Once your cut is complete, wait an appropriate amount of time for the blower to suck up any remaining fumes. (For wood you can wait a minute, for Acrylic you should wait closer to 3minutes.)

*At this point you can lift the hood and without lifting your materia too much, try to check if the laser cut all the way through. If not, ask a staff member for assistance.*

**9.** Turn the blower OFF, turn the laser off, log off of the computer and then lift the hood of the laser gently and carefully remove your piece. Complete the log-in sheet before you leave.

\*Never leave the laser unattended, or step out of the room while the blower is on.

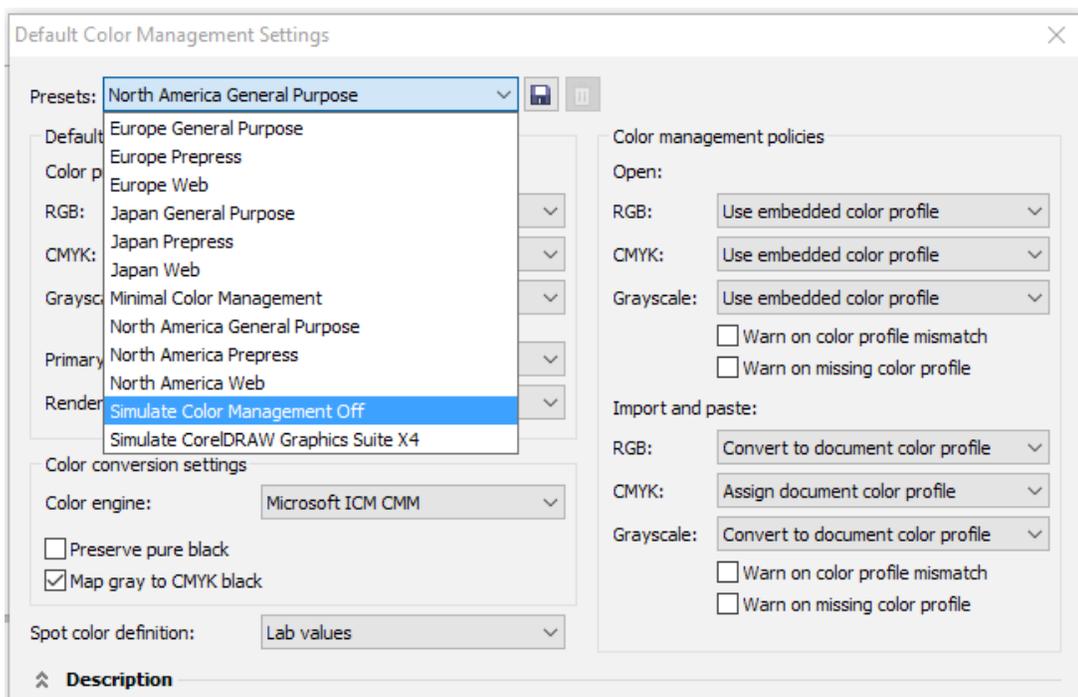
# Troubleshooting

*The laser will not start cutting* : Check to make sure that the blower is “ON”

*My image does not show up on the laser cutter driver when I exported from Corel Draw*: Make sure that your outlines are all the correct color and width. You can also check that you are only printing ONE page, or the current page.

## Making sure your color settings are correct:

Navigate to Tools-> Color Management -> Default Color Settings -> Presets-> Color Management Off



*The laser did not cut all the way through:* Talk to a staff member and they will help you adjust your settings.

*My job is going to take more than a half hour:* Certain geometries take longer to cut. Raster cuts take a lot longer than a vector cut.

If you are expecting a quick cut, but your time-out says otherwise, make sure that your line colors and line weights are correct. If a vector cut line isn't RGB red, it may raster the line instead, increasing your cut time.

### Correct Color Settings:

Red:

R:255

G:0

B:0

Blue:

R:0

G:0

B: 255

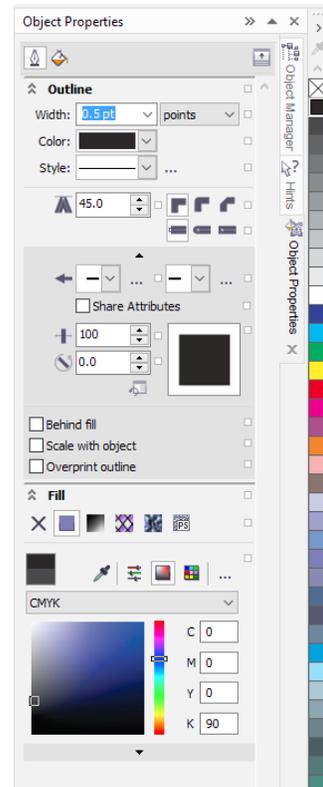
Black:

C:0

M:0

Y:0

K:90



## General Tips:

1. It is always a good idea to make a test cut with the same material so you can ensure your settings are correct.

Cutting a rectangle instead of a circle will give you a better idea of how the material will cut.

2. Light color woods give more contrast to your engravings

As always, if you feel uncomfortable or unsure, get help from a staff member!