

This tutorial is not intended as instruction for first-time users, only as a reference. You must attend a training session before using the laser cutter. For more detailed instructions and safety warnings, visit:

www.troteclaser.com/en/contact/technical-support/manuals/

File Preparation:

1. Measure the width and height of the material you're going to use. The laser cutter bed is 29" x 17", so your material can't be larger than that.
2. Measure the thickness of the material. You will need this later.
3. Set up your file. This can be done in Inkscape or in Illustrator:

In Illustrator:

1. Set the Artboard to the X and Y dimensions of your material. You can either do this when you create a new file or by going to File > Document Settings > Edit Art Board and entering the values and units.
2. Make sure that the color mode is set to RGB by going to File > Document Color Mode.

In Inkscape:

1. Set your document size to the X and Y dimensions of your material by going to File > Document Properties
2. In Document Properties, go to the 'Color' tab and choose 'sRGB' from the 'Available Color Profiles' dropdown.

Design your Piece

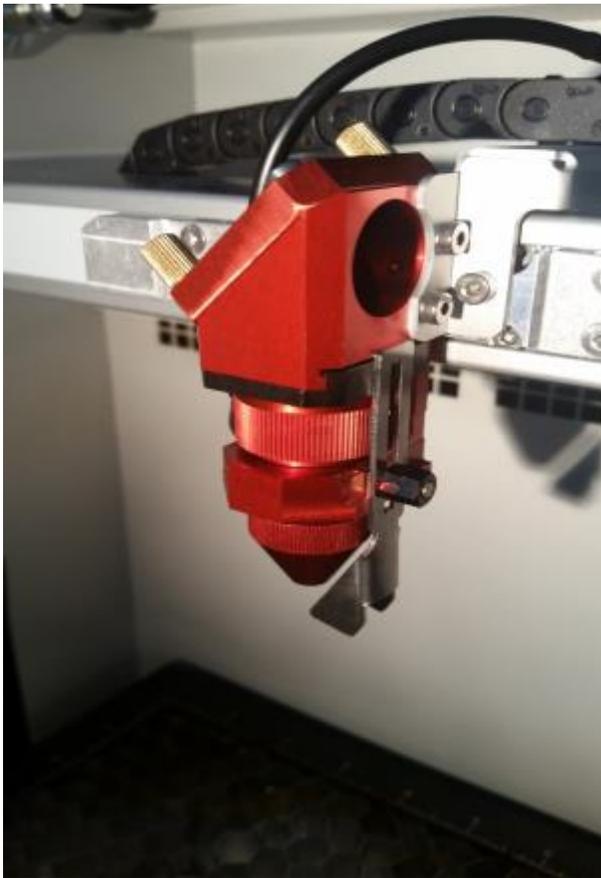
1. All lines that you want cut should be pure red. In the color picker, set Red to 255, and Green and Blue to 0. Set the weight of all your cut lines to .001 points.
2. All etched lines should be pure black. Line weight can vary -- the machine will etch wider or narrower lines depending on how you set them. You can also use filled black shapes.
3. If you would like to have certain lines that are skipped, you can make them pure blue (0, 0, 255.)

If you are etching from a photo or other raster image:

1. Set the image to grayscale in an image editor of your choice.
2. Adjust the brightness and contrast of the image. The laser cutter will engrave darker parts of the image more deeply, while the lighter areas will be shallower. To get the maximum relief in your etching, make sure your image has high contrast and a full range of values from black to white.
3. Import the image into Inkscape or Illustrator as a .JPG or .PNG file.

Preparing the Laser Cutter

1. The laser cutter needs to be focused each time you put in a different piece of material. This process tells the machine where the top surface of your material is.
2. Turn on the laser cutter using the switch on the back on the left-hand side.
3. Place your material in the laser cutter, flush against the rulers in the upper left corner.
4. Use the four-directional arrow buttons on the side of the machine to position the cutter head above your material.
5. Place the focuser piece on the cutter head so that the brass tab on the focuser piece balances on the lip of the cutter head.



The focuser piece on the cutter head.

6. Using the up-and-down arrow buttons on the side of the machine, move the bed slowly upwards until the material makes contact with the focuser piece and the focuser piece falls off of the cutting head.
7. Place the focusing piece back in its container. Close the lid of the machine and wait for it to beep twice. This indicates that it is fully closed and ready to print.

Cutting your File:

1. In your graphics program, go to File > Print. Make sure that 'Trotec Engraver' is selected in the 'Printer' dropdown and click 'Print.'
2. Choose a descriptive name for your project in the 'Job-Identification' dialog and click 'Apply.'
3. Go to the 'Job Control' window that will open automatically.
4. Select the name of your project in the right-hand menu bar. This will add it to the canvas, but you won't see a preview of it immediately.
5. Click the eye icon in the top menu bar to preview the project.
6. Go to the Materials Templates menu by clicking the  icon, or pressing CTRL+M.
7. Choose what color of line should take what action: red for cut, black for engrave, blue for skip, etc.
8. Make sure all of your lines show up on the canvas.
9. In the left-hand menu, choose the preset for your material. These presets provide a good starting place but you may need to adjust the settings. Check the cut log for suggestions.
10. The lower the speed setting, the deeper your cut or engraving line will be. For a cut, the speed setting should be less than 3. The setting measures the percentage of maximum possible speed.
11. Set the thickness of your material in the thickness field and then close the Materials Database window.
12. Click the USB plug icon in the lower right to connect to the machine.
13. A crosshairs will appear on the canvas, which corresponds with the position of the cutter head. You can move the cutter head around using the arrow keys on the machine.
14. Click and drag to move your project around the canvas. It will snap to the crosshairs if you want to position it to where the cutter head is.
15. When your project is set up the way you want it, click the Start icon in the lower right.
16. You can stop the cut at any point by opening the lid of the machine, or by pressing the stop or pause buttons in the program window or on the machine itself.
17. When the cut has finished, check to make sure that it has cut all the way through your material. If possible, do this by lifting one edge of the material without changing its location in the cutter bed - that way if it hasn't cut through, you can do a second pass without the piece having shifted at all.
18. If it hasn't cut through, close the cutter lid, right-click your project in Job Control and select 'Repeat Cut Line.'
19. When you are finished, vacuum any scraps of material out of the cutter bed using the hand vacuum. Turn off the laser cutter using the switch in the back on the left-hand side.