

Laser cutter #1 - Using Illustrator

Basic File Setup information:

Document size = material size (Basswood = 28.5 x 6 in. All others, 28.5 x 17 in.)

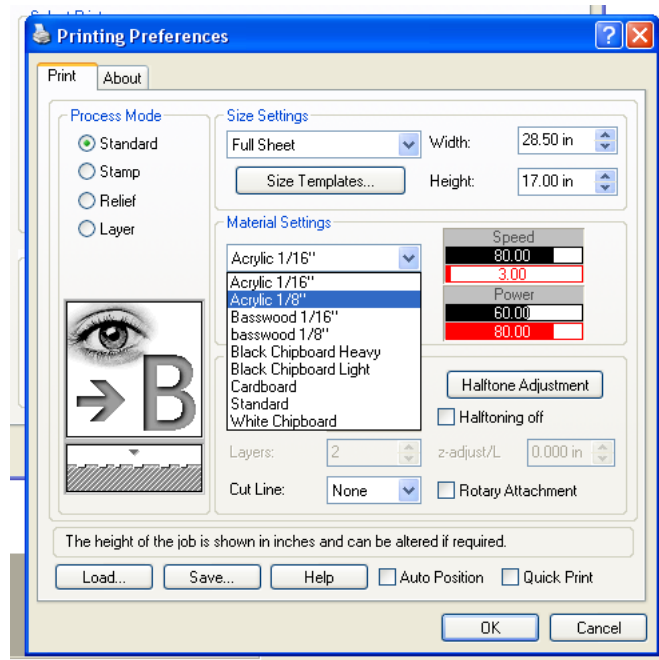
Document Color Space = RGB

Cut = 100% Red (R=255, G=0, B=0), Line weight = 0.01 pt.

Engrave = 100% Black (R=0, G=0, B=0), Line weight minimum=1pt. All black areas will be engraved. Note: Please keep engraving to a minimum, as engraving is a lengthy process.

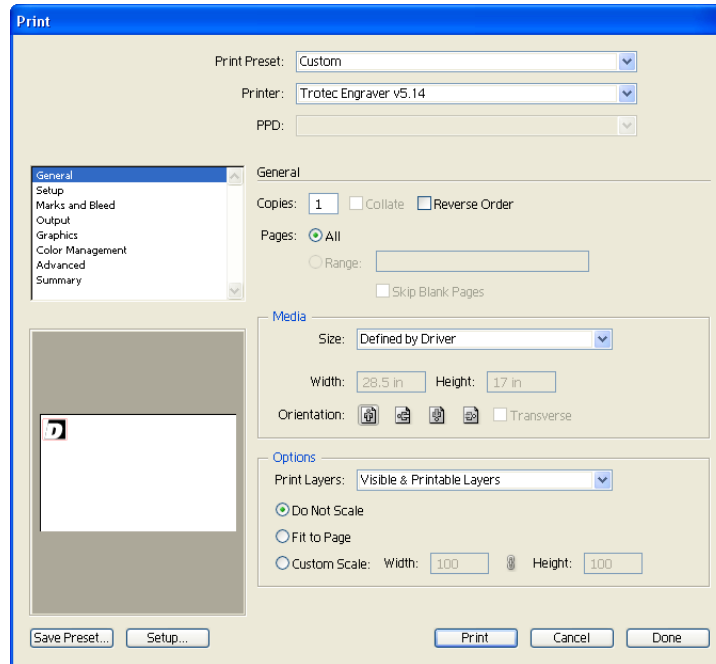
Convert all text to outlines, and ungroup all objects to be engraved.

1. Open your Illustrator file. Double-check that your color space is RGB, and that your line color and weight are correct. You can set the color space by going to the FILE menu and selecting Document Color Mode > RGB.
2. Go to the FILE menu and choose PRINT.
3. In the PRINT dialog, click the “Setup” button.
4. Make sure that “Trotec Engraver” is the selected printer. Click the “Preferences” button.
5. In the “Size Settings” area, you can either enter your document or material size in inches, or select one of our presets from the pull-down menu. Setting the size to match the size of your material is recommended.

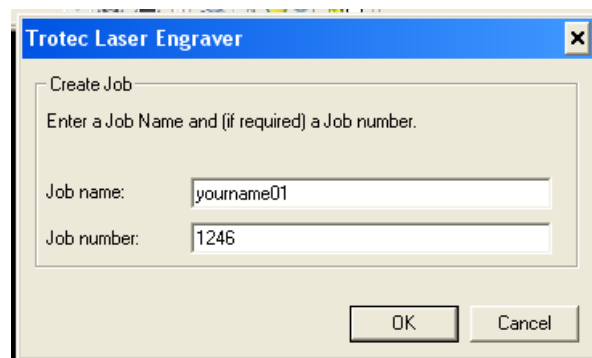


6. In the “Materials Settings” area, select the type of material that you are using from the pull-down menu. Click the OK button to accept the settings.

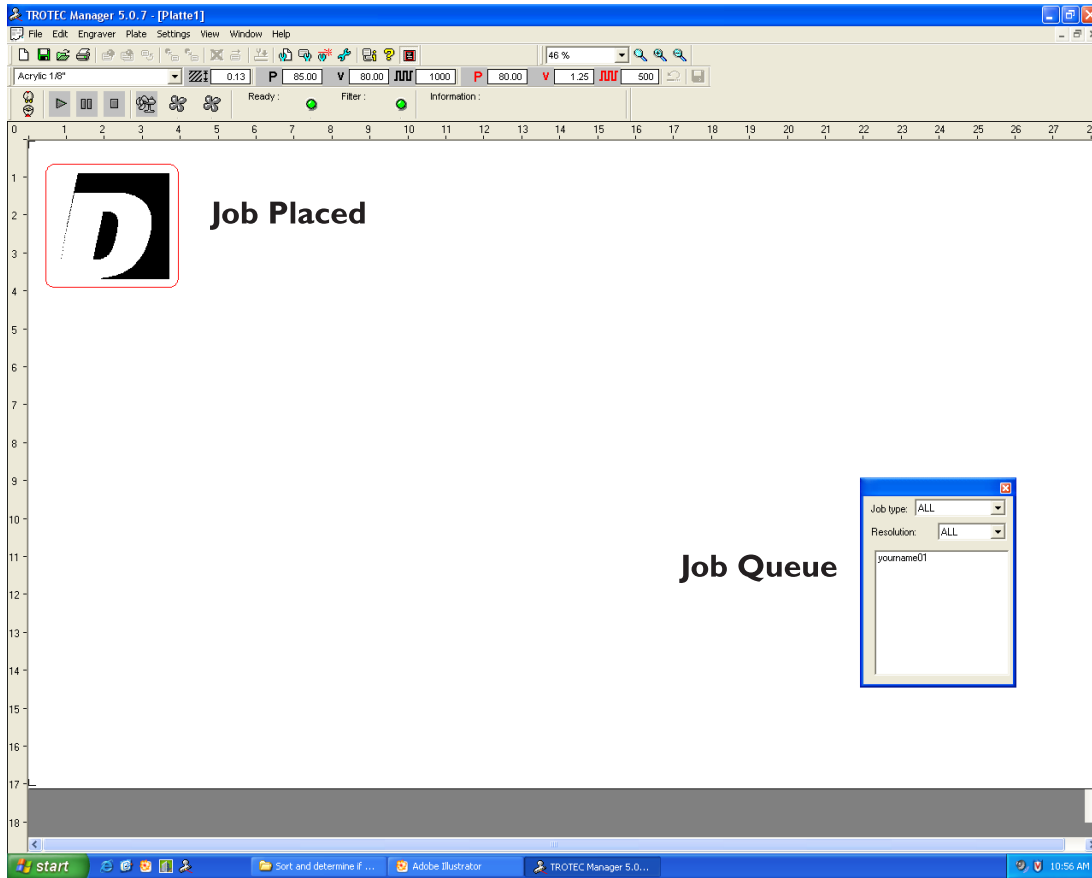
7. Click the “Print” button in both Print windows to proceed. Check the preview area to make sure your file shows up correctly.



8. The Trotec Laser Engraver window will open. Click the window to bring it to the front. In the “Job Name” field, enter your first name, or other descriptive name, plus a number (ex. firstname01). This will help keep track of your jobs in the Trotec Manager. Use a new number or name for each job that you send. You can ignore the job number field (this is not used). Click OK.



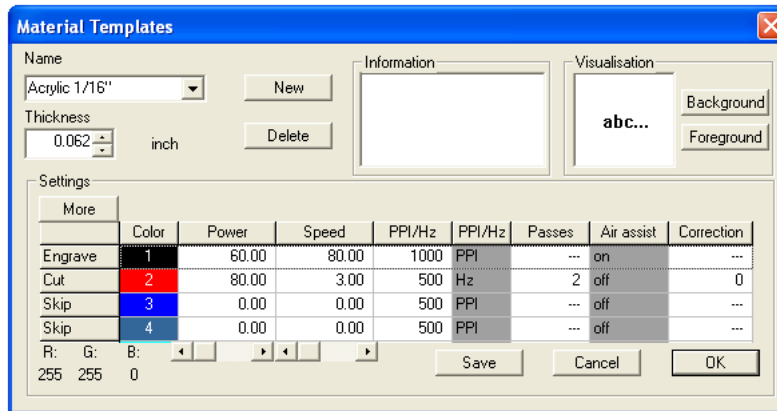
9. The Trotec Manager program will open. The “Job Queue” window shows all pending jobs that have been sent during this session. If you do not see this window, go to the VIEW menu and select “Job Queue”.



10. Select your job, and drag it to the main window. If you selected “Full sheet,” or entered 28.5 x 17, or 28.5 x 6, your job will pop into place correctly. If you entered a smaller size, you will have to move the job to the upper left corner of the window.

11. To see the file, go to the VIEW menu and select “WYSIWYG on/off”. Make sure that everything to be cut shows in red, and everything to be engraved shows in black. If your cut lines show up black, you have an error in either line weight or color, or your document is not using RGB color space. Go back to the Illustrator file and fix this.

12. Go to the SETTINGS menu and choose “Material Template Setup”.

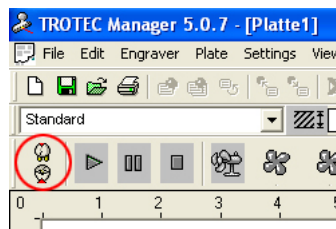


13. The Material Template Setup window lists the power, speed, and PPI settings, along with the number of passes the laser will take to cut the material. Engraving always is set to one pass, and the “Air Assist” should be ON. Cut will be set to either one or two passes, depending on which type of material is selected. All materials will have different power and speed settings. You can turn off the cut or engrave options by clicking the Cut or Engrave label until it reads “Skip”. This is useful for various reasons listed in the Tips section.

Note: DO not change power and speed settings. Improper settings can cause fires, damage to your material, or damage to our lens. In particular, DO NOT INCREASE POWER SETTINGS. There is no need to use 100% power, simply use the default power settings, and do another pass or two to cut through the material. Click OK when you are finished examining the options.

14. If you are ready to cut, click the “Connect” button (looks like two plugs). The cutter takes a couple of seconds to connect.

If you have not already done so, you will need to prepare the laser cutter to be used. Please see the “How to Setup the Trotec Laser Cutter” handout.



15. Click the “Play” button to start the cut.

IMPORTANT: You MUST watch your cut the ENTIRE TIME it takes to cut or engrave. This is nonnegotiable. If you see your materials start to burn, or if the cutter malfunctions at any time, stop the cut, and notify the lab monitor.

16. When your cut is finished, wait at least 30 seconds before opening the lid, to allow the fumes to clear.

17. Without moving the material, carefully check to see if the cuts go all of the way through. If so, you can remove your material, and you are finished with the cut. If not, leave the material in the cutter.

At this point, have the lab monitor clean the lens, even if the material is not cut all of the way through. Just ask the lab monitor to not move the material. You will have to refocus the laser after the lens has been cleaned, as they have to lower the table to get to the lens.

18. Go back to the Trotec Manager.

19. Right-click the job in the main window. Select “Job Reset” from the options.

20. Go to the SETTINGS menu and choose “Material Template Setup”.

21. Set Engrave to “skip”. In the Cut settings, set the number of passes to “1”. Click OK.

22. Make sure the cutter is still connected, and click the PLAY button.

23. After your cut has finished, check the material again. Repeat from #18 if it is still not cut through.

24. When your cut is finished, remove the material and all debris, and have the lab monitor clean the lens.