Epilog Fusion Short Guide

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Revision #: 1.1
Purpose: This document enables the user to safely cut and engrave laserable materials.
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1. Turn on the laser cutter
   a. E-stop out
   b. Power on
   c. Lights on (optional)
2. Layout document in Adobe Illustrator.
   a. DO ALL SOFTWARE WORK OFF THE MACHINE.
   b. Make sure output paper size is correct: 40" x 28".
   c. Make sure vector lines are <0.1pt thick
3. Print the file
   a. Go to file-> print
   b. Choose a Epilog Fusion Ethernet as the printer,
   c. Go to Setup in the lower left corner.
   d. Select Epilog Fusion Ethernet and go to preferences.
   e. Load the appropriate settings (listed in the manual)
      i. Raster Settings
         1. Resolution (400 dpi is pretty good)
         2. Speed and power listed in the manual
         3. Bottom-up engrave direction
         4. Dithering
            a. Standard looks like a comic book
            b. Low Res smooths out low resolution images
            c. Any of the last three options (Floyd Steinberg, Jarvis, or Stucki works well)
      ii. Vector Settings (Choose from the manual)
      iii. Piece Size (inches): 40 x 28
      iv. Press OK
   f. Press Print
   g. Press Print
4. Open the lid and manually focus the laser.
   a. Put focusing tool (Calibrated for the lens) on laser head
   b. Go to Focus mode on the laser cutter

> > > i. Moving the joystick up or down moves the bed up and down (the speed is proportional to the position of the joystick)
> > > ii. Moving the joystick left or right switches between fast (2 arrows up) and slow (1 arrow up) mode
> > c. Move the bed until the part just touches the focus tool
> > d. Remove the focus tool and return to the tray

5. [Optional] Jog the laser head to a convenient location on the part
   a. Go to Jog mode on the laser
   b. Turn the laser pointer on (RED LASER BUTTON)
   c. Move the joystick to the proper position
   d. Center click to set the path start home

6. [Optional, rarely used] Saw off scrap pieces
   a. Adjust the power for the material and thickness
      i. Go to Config mode on the laser
      ii. Move the joystick up or down to navigate to Jog Laser PWR
      iii. Center click to select it, move the joystick to adjust the power percentage to the recommended setting (from the manual)
   b. Close the lid
   c. TURN THE AIR ON
   d. Press and hold the white laser button and move the joystick to cut the part
   e. Adjust the power back to a lower setting (a nice thing to do)

7. [Optional, rarely used] Override speed and power settings
   a. Go to the Speed Mode
      i. Center click to select
      ii. RS: Raster Speed, VS: Vector Speed
      iii. Set to a new value (usually used to fix completely wrong settings, or to make slight adjustments)
   b. Go to Power mode
      i. Center click to select
      ii. RP: Raster Power, VP: Vector Power
      iii. Set to a new value (usually used to fix completely wrong settings, or to make slight adjustments)

8. Print your job
   a. Close the lid,
   b. TURN THE AIR ON
   c. press GO in the Job menu, for the name of your file

9. You cannot leave the machine while the laser is cutting. Try not to lean on the machine.
10. Usage notes:
    a. The stop button pauses the job at the end of a vector, not necessarily when you press the button.
    b. The reset button moves back to the path start home.
11. CLEAN UP
    a. Turn off laser cutter
        i. Lights off
        ii. E-stop in,
        iii. Power off
    b. Remove scrap material and close lid

Materials to use on the machine: We will use the list at AtX Hackerspace for now, but eventually we will have a laser cutter Wiki.