Prototyping, Printing Protocol, and Printing Process

Now that it's your turn on the LaserCutter...

PRESS PRINT

Go to the LaserCutter and line up your material with the Top Left corner of the printer.

Make sure the file name presented is theone you sent it

When ready close the lid and press the GREEN Button
Thus your TEST PRINT can commence.

You must watch the LaserCutter for fire-safety purposes

Enjoy your new Laser'd object!

LASERCUTTING

How To Not Look Like an Idiot at the LCCC Fablab

Fablab Zine #1

Written by our Wonder-Lords

PROLAN & N.O.M.B.

Instructional Zine #3 — EMH

First Steps

Creating the File you want to LaserCut or LaserEngrave

Rule #1 :

In order to LaserCut any file, all elements MUST be Vectorized (Text, Image, Etc.)

SO ... we must make all elements of the file into Vector Objects

Vectorizing Text

Select all text Right-Click and go down to Create Outlines

Or

Type--> Create Oulines

Now each Letter is it's own Vector Object!

Vectorizing Images

1. Object--> Image Trace
(or the Image Trace dockable dialogue)

1b. If an image won't image trace you have to go to
Object —> Rasterize
Then repeat Step 1.

2. MOST IMPORANT
Make sure you select "IGNORE WHITE" in Image Trace Window. The lasercutters print all elements of an image including the whites !!!!!

note: Grays & Colors in the image will become represented by depth gradients in the engraving. If you want normal engrave, select Black & White Image Trace

Export File

Save As **PDF** or **SVG** onto a Flashdrive

Make sure that **Preserve Illustrator Editing Capabilities** is selected in the Save dialog)!

this is what allows you to do edits in CorelDraw for the LaserPrinter

Using CorelDraw on LCCC's PCs

Go to a LCCC Lab computer and plug in the Flashdrive that has your file(s)

Open your file with CorelDraw 8
if this step doesn't work then you probably didn't do one of the previous steps right. Make certain you selected **Ignore White** for all of your Vectorized Images

Formatting for Printing

First, you make sure the Size is right in the top left hand corner (Horizontal & Vertical)

Hairline stroke thickness is **CUT** (in stroke thickness options at top) - this means the laser will completely cutout that stroke!!!

All other thicknesses are ENGRAVE

Note: IF you make any 0.1pt Strokes in Illustrator, CorelDraw WiLL interpret them as Hairline and CUTOUT THAT SHAPE!

Double, Triple check in CorelDraw that there are Absolutely nO Hairlines that aren't intentional

Patience is a Virtue

Always intend to do a COMPLETE test print on scrap material. This is a very complex process and MANY things can go wrong - from accidental hairlines to poor engraving power and more. Just suck it up and take the extra time to do a COMPLETE (not partial) test print

PRINT DIALOGUES (MOST IMPORTANT Step!)

Print dialogues are REALLY important - they are the most powerful yet confusing part of the whole process

First go to the LCCC PC's desktop and open the "LaserCutter Settings" Spreadsheet

In the Spreadsheet, find the thickness and substance that corresponds with the material you are going to print on and look to the "Vector Settings" column (NOT the Raster Settings column)

hack notice
It seems choosing 1 size up is better since it cuts more definitively and engraves deeper (e.g. if you're cutting 1/8" Acrylic, use the recommended 1/4" Acrylic Settings)

now sign up on the white board to be in line for a printer

File --> PRint and choose the right printer`

PRINT DIALOGUES cont.

Inside the Print Settings go to Preferences... it will open a unique LaserCutting Preferences dialog

In the Preferences dialogue, there will be a section labeled "Vector Settings". In the "Vector Settings" put in the Values you found on the spreadsheet (for Speed, Power, Frequency)

If the Spreadsheet calls for a Freqency of 5000hz (needed for thick Acrylic) just click and drag the slider.... the dialog won't let you input the high number in the number box due to a bug

Make the Size match the one in the document (it's defaulted to 8.5x11 so this will always be necessary)

Exit the Preferences dialog and go back to main print dialog

NOW go to the Pages and MAKE SURE the right page is chosen (One page and ONLY one page or itll print all the pages on top of eachtoher!!!)

Press Apply (this saves the settings for the project)

And then.....