LaserCutter @ Bitraf
BSU: Basic, Safe Usage

WIFI:

bitraf

grimbadgerassault

Full documentation

https://bitraf.no/wiki/Laser

Workshop goal

Everyone

a) Educated in Basic Safe Usage

b) Comfortable using lasercutter with no/minimal assistance

Workshop setup

Introduction to laser. Talk 15 mins

How to use. Demonstration, 30 mins

Individual hands-on usage

Bitraf lasercutter Access

Members only

Requires course (this!)

Personal/prototyping: Free

Commercial jobs: 350kr/hour + tax

http://bitraf.no/join

Laser operating principle

Infrared laser beam burns material

Works from the top (XY)
Laser is focused to a point (using Z axis)

Cut or engrave (raster/vector)

Fundamentally mostly 2d

What can it be used for?

Structural

Decorative

Textiles

Signage

Compared to CNC mill

Tool not mechanically touching workpiece

+ Quicker setup time
+ Less bits/settings
- Limited in materials
- Poor control over depth/3d
- Slower on big parts

= Easier, but less flexible

Safe materials

Non-toxic, not catch fire, give nice finish

Typical

- Acrylic, light woods
- Paper, cardboard
- Textiles, leather

Unsafe: plastics w/chloride (PVC, vinyl)

Getting materials

- Left-overs in workshop
- Buy in Bitmart: Acrylic, Poppel
- Pro: Oslo Fineerfabrikk, Plastkompaniet
- Quick: Clas Ohlson, Biltema

Check wiki! https://bitraf.no/wiki/Laser

Basic process

- Design → export .DXF.
- Prepare toolpaths. On laser PC
- Run job
  - Insert material
  - Run Autofocus
  - Choose job Origin

Safety

- Fire
- Toxic materials