2x2 meter laser machine test protocol

An error can occur during the first launch of LightBurn.

```
Waiting for connection...
[VER:1.1h.20190825:]
[OPT:V,15,128]
Target buffer size found
ok
<Alarm|MPos:0.000,0.000,0.000|FS:0,0|WCO:0.000,0.000,0.000>
ok
Starting stream
error:9
G-code locked out during alarm or jog state.
On or near line 0:
error:9
G-code locked out during alarm or jog state.
On or near line 0:
Stream completed in 0:00
```

The problem can be resolved once you move to the “home” position.

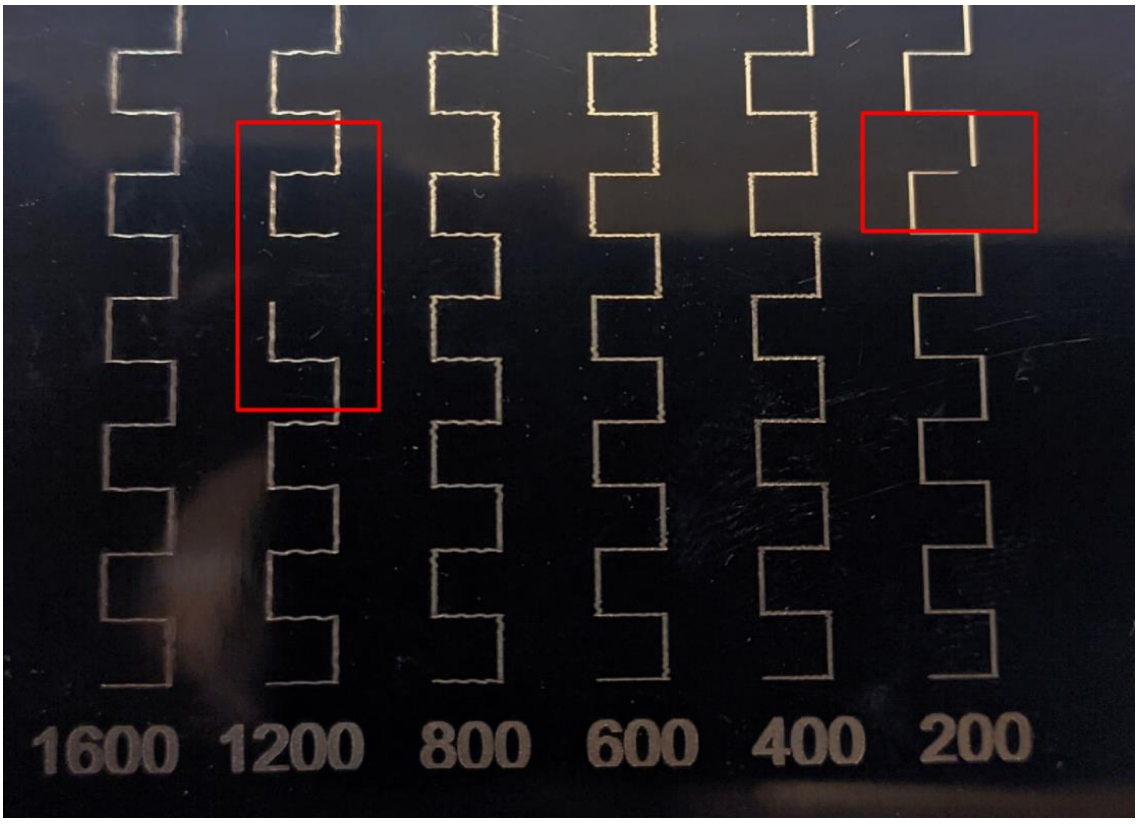
Keep in mind that the laser should operate at 90-95% power range.

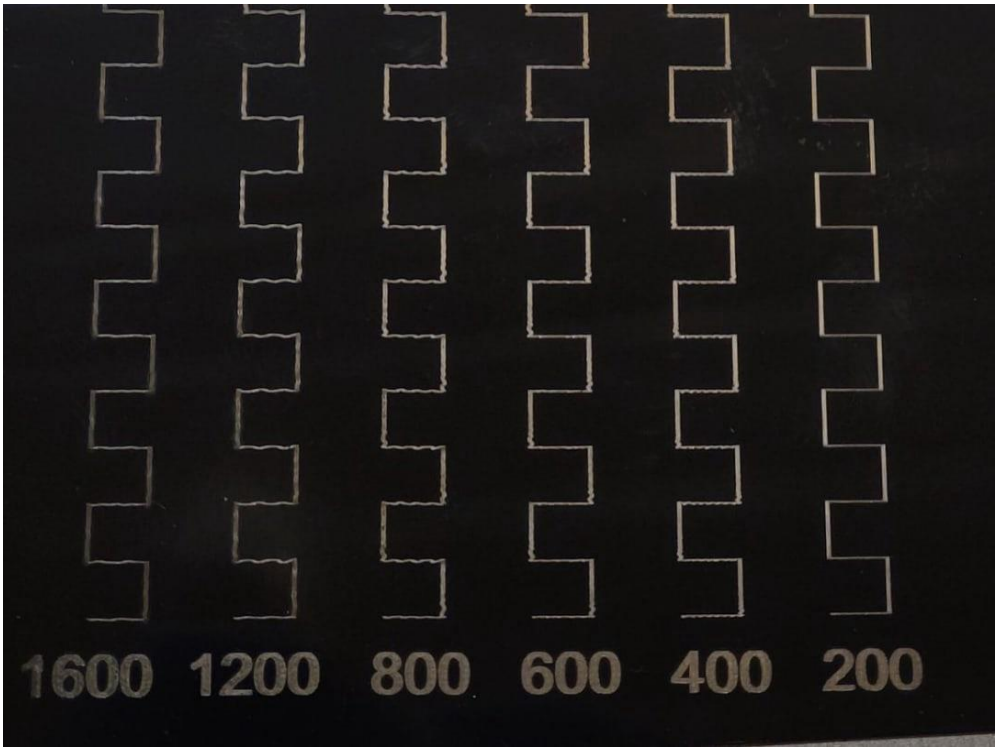
The laser engraving test accuracy

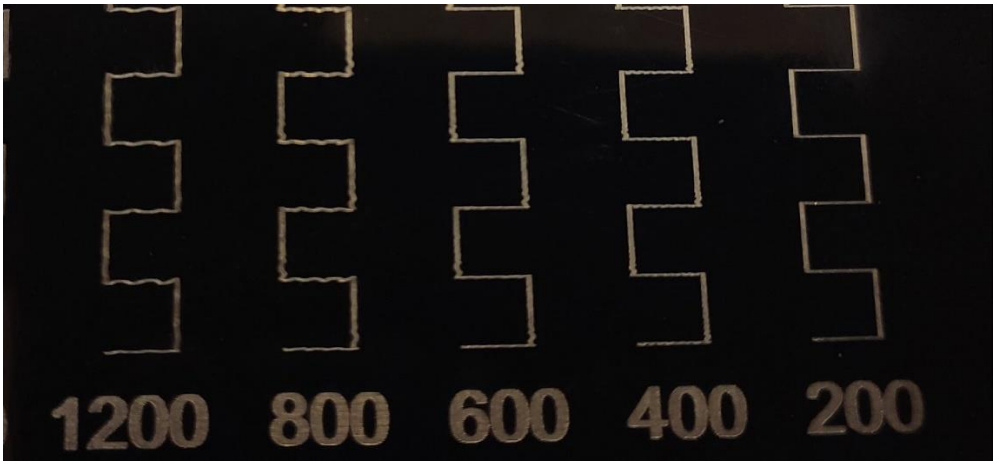
The machine works perfectly without “waves” at an engraving speed of 200 mm / min (random path)

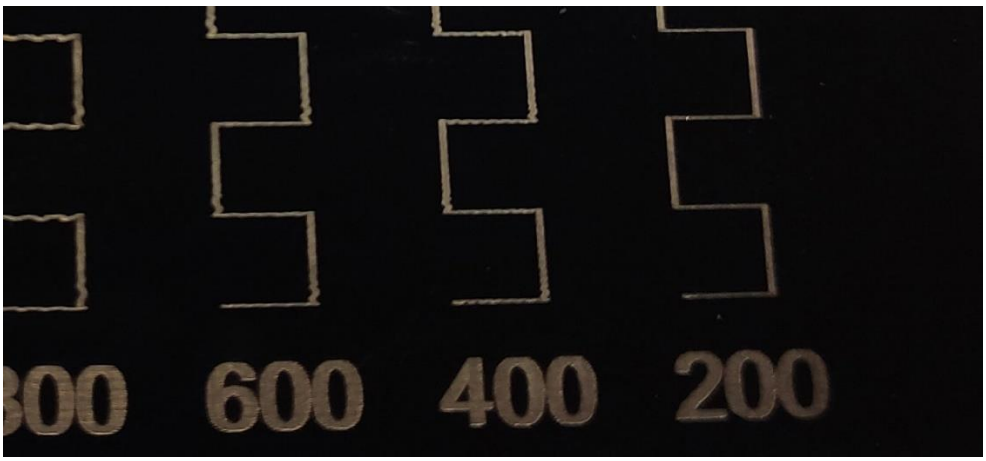
Limited number of “waves” can be seen at 400 mm / min.

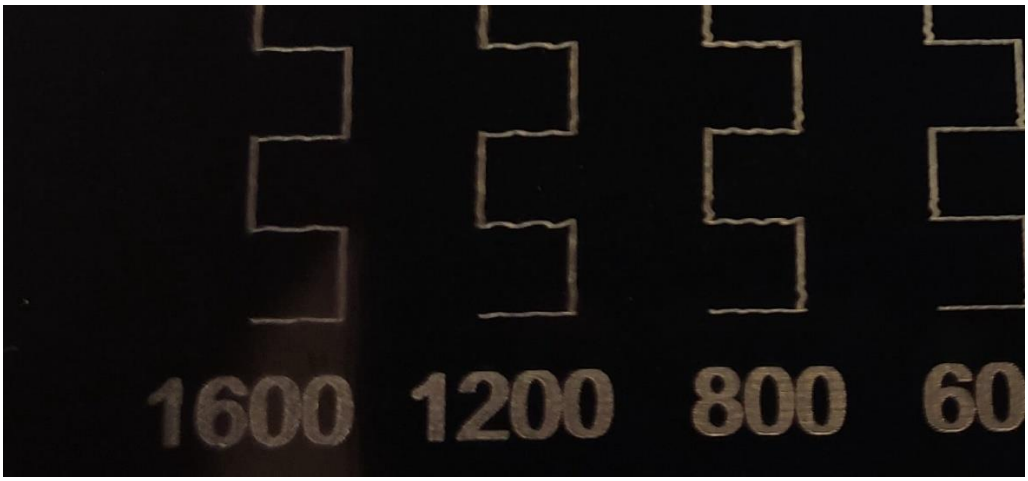
With a higher speed, “waves” can be seen with a naked eye




1600 1200 800 600 400 200


1200 800 600 400 200





Laser engraving speed check.

Movement accuracy +-1-2 mm per meter.

Working area: 1850-1500 mm

Max movement speed is 15000 mm / min

Speed limit is activated at 10000 mm / min

Recommened max machine speed is 5000-7500 mm / min

Acceleration: 500 mm / sec^2

A 15 watt Duos laser has 2x G7 lenses

Average total CW power is 12.2 - 12.5 watt

The focal range is 37 mm (from the aluminum laser casing)

Max photoengraving speed is 10000 mm / min

Engraving speed accuracy

Speed, mm / min	Max deviation, um
200	0
400	+-60
600	+-100
800	+-130
1200	+-160
1600	+-260