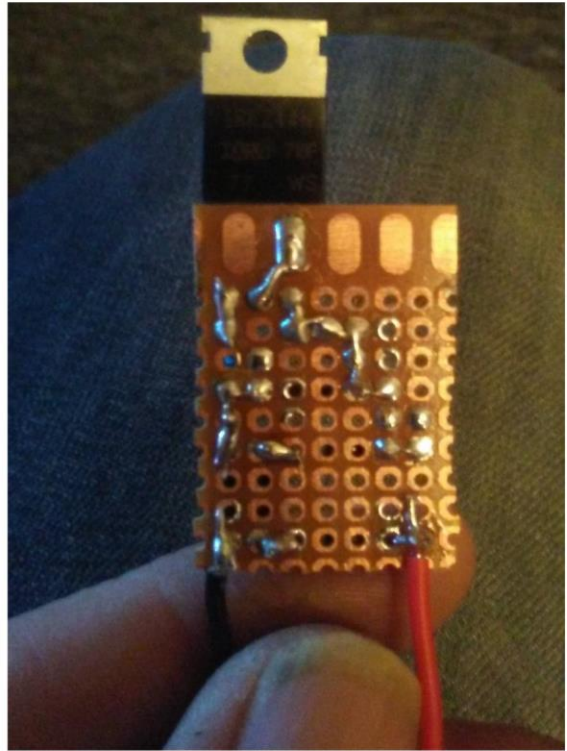
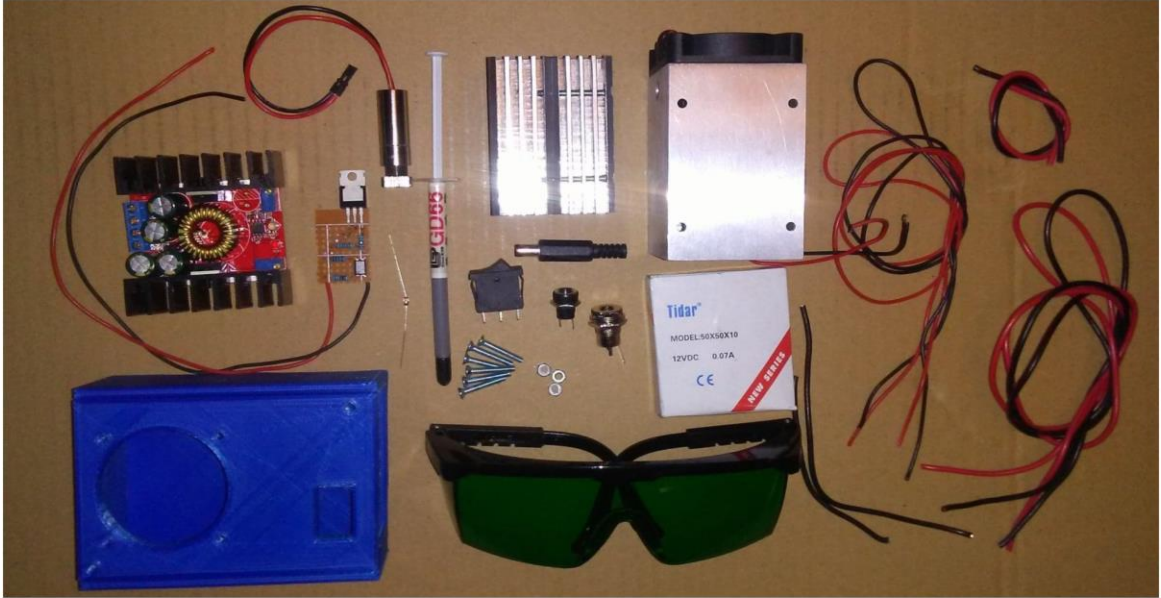
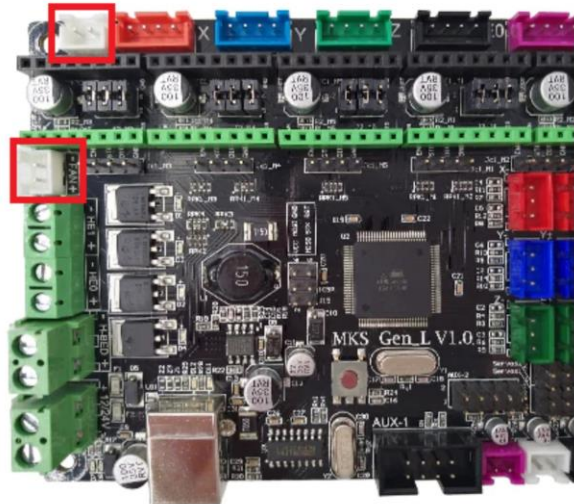
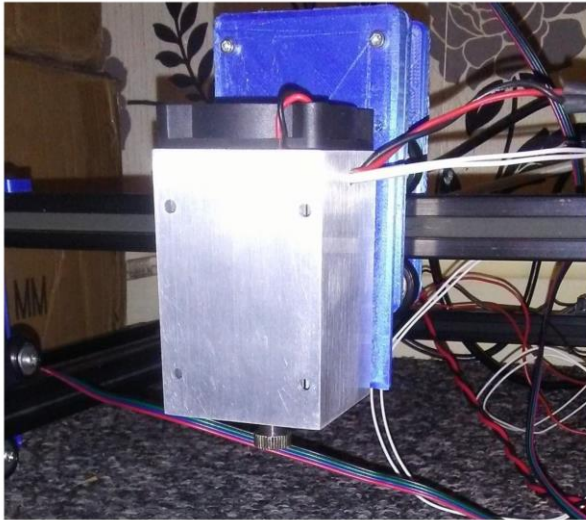


After stumbling upon the Endurance Facebook group I spoke to George and ordered a 10w laser Kit. I was super pleased when it arrived as it only took a week to get from Russia to my door. Set up was really straight forward and easy for anyone who knows how to solder I just followed the instructions that are on the endurance site and used a few videos online to coincide with the instructions to make sure I was doing it correct. It was as easy as soldering a few wires to the M01 PCB and to the 2 way on off switch and a few jack ports just connected it all together to the DC/DC converter and hooked it up to my engravers Power supply and I was ready to attach it to my engraver using the PWM port, also known as your fan port with speed control, so to test the fan port was correct and worked I plugged a fan into the boards known fan port, the first one I plugged it into was a constant fan as it come on straight away asoon as I plugged it in, so I tried again in the second fan port and the fan didn't come on until I told it too in the temperature options on the screen under fan 1, I adjusted the fan so it was around 50 at first the fan started up and then I tried full power all of this responded well and knew it was working as I thought it would so I hooked the red and black wires coming from the M01 PCB to the positive and negative of the fan port now when I have the 2 way on of switch on the second position PWM/TTL mode is active so if I turn the fan speed up now on my screen it will activate the laser at different power.



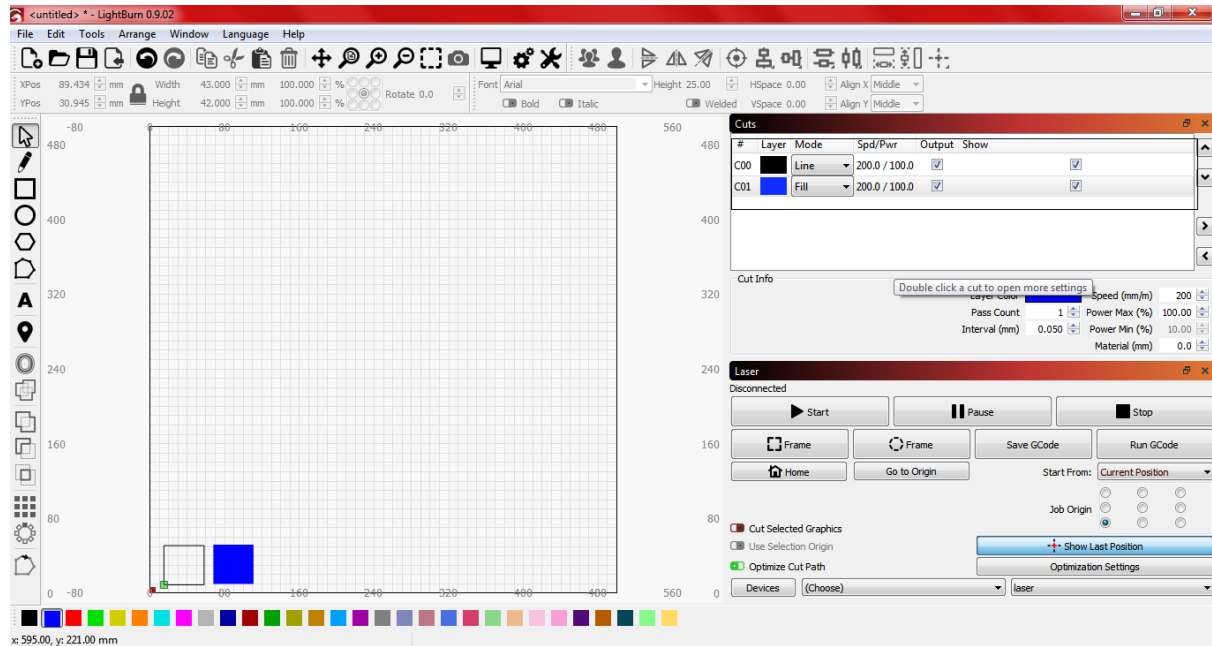


My engraver is made from an FLSUN Cube which I modified to be used as an engraver I used the existing PSU and MKS 1.0 motherboard the extrusion, steppers and stepper wires along with the endstop and belts and even the 2004 screen, so I have SD access to my engraver I only had to buy some wheels in addition to the kit, and for the engraver itself like the X and Y bracket plates I modified a version of these files to suit my own needs <https://www.thingiverse.com/thing:3076099>

once the laser was mounted to the frame of my engraver then it was time to learn the programs side of the laser I tried a few different laser controllers and didn't really get many to work, now knowing more I realise it was for different controllers that use GRBL so with a bit of help from the Endurance Facebook group it was suggested and try the free trial of Light Burn which is found here <https://lightburnsoftware.com>

when it comes to programs I found it a very easy to use it took me a few days messing around to get the hang of what I was doing but it's a very intuitive setup and was as easy as picking marlin from a list and putting in my workspace parameters I don't use direct to PC connection but if I did that's very easy to use from the control panel called move you can control the engraver from your PC for me though I just use the Save Gcodes option and save to SD card and use the engraver via the screen options also the cut and scan options are easy to use by just using a drop down bar and assigning a

## colour to various shapes



we've engraved on different materials so far glass, aluminium, mirrors, and with a bit of thermal paste can even etch onto the surface of different metals and also can engrave slate and rocks the main things we do is different type of wood with very good results from laser plywood to external plywood, bamboo, MDF still got many materials I want to try and going to have fun in the future testing what this laser can do. so far I'm more than impressed with its capability's when you think of a diode you think of an over powered laser pointer but this is so much more than that and should be respected as a serious tool. Always wear your safety goggles because it's a really bright and can damage your eyes very easy.





the cutting capabilities of the laser is amazing I can cut many different types of wood and not limited to laser ply and so far done up to 5.3mm MDF with great success I haven't got a z axis so to be able to go through anything more than 3mm is impressive for engraving this laser diode does very well turn the power up and you can get some really nice 3d engraved images using greyscale through Light burn not just a surface burn it's been tricky getting greyscale correct and to a level I would say was a match to the original picture but after hours of tuning in the engraver and learning the capability of the laser and program I'm slowly getting better and hoping to go beyond what I can already do.