



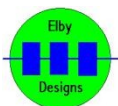
## CGS511 USG + TG

Construction Guide

Revision 0.1

PCB Revision 2.1

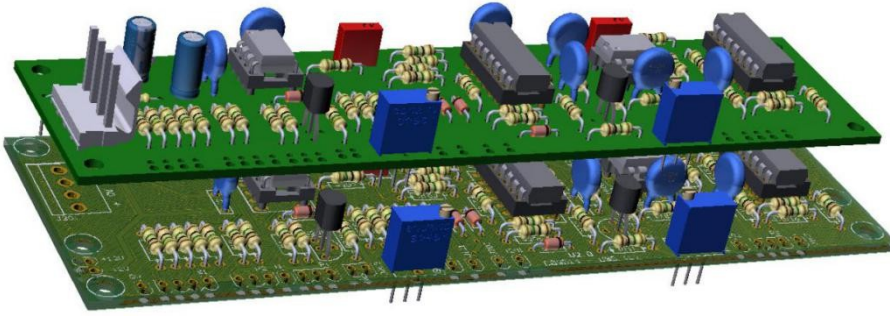
May 15<sup>th</sup> 2022



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## [3D Model](#)

Constructors should refer to the PCB Overlays for any specific comments regarding the board assemblies, the [Bill of Materials](#) for the current value of all components and [General Construction Notes](#) for general PCB assembly guidelines.

The maximum headroom under the Upper PCB is 13mm. Make sure that all components are less than this. If necessary, components such as C301 and C302 should be folded over and laid flat to the PCB.

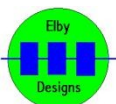
Fit all components except J301 and J302 on the Lower PCB.

Only fit J301 on the Lower PCB IF it is the ONLY PCB ie you are NOT using the Upper PCB.

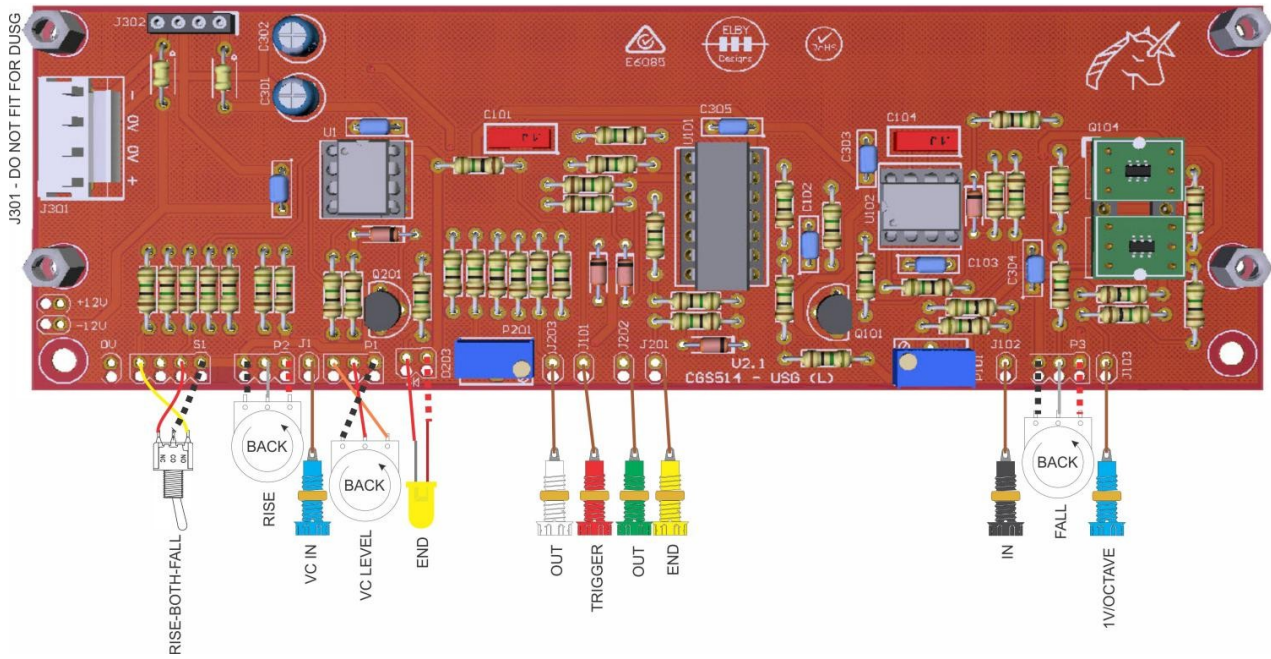
When both boards are complete, fit J302 on to J401. Fit all the spacers and then offer the Upper PCB assembly to the Lower PCB assembly guiding the pins of J302 in to its footprint. Solder J302 in to place.

On the V2.0 version of the CGS514 Lower PCB a wire link needs to be added between the top pad of R10 and the top pad of R115.

## [Lower PCB Overlay](#) - [Upper PCB Overlay](#)

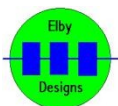


# CGS511 USG + TG



[Wiring for CGS511](#)

[Panel Bill Of Materials](#)



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## Calibration

There are 2 adjustments provided for on the CGS511 for each USG section.

Start with the lower PCB/USG:-

1. Patch [END] to [TRIG]
2. Monitor [DC]
3. Adjust [RISE] and [FALL] to produce a triangle wave shape running at about 100Hz
4. Adjust P101 so that [DC] output is 5V pk-pk
5. Monitor [AC]
6. Adjust P201 so that [AC] is centred around 0V

Repeat for the upper PCB/TG.

7. Patch [END] to [TRIG]
8. Monitor [OUT]
9. Adjust [RISE] and [FALL] to produce a triangle wave shape running at about 100Hz
10. Adjust P101 so that [OUT] output is 5V pk-pk

