

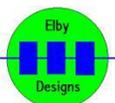


CGS735 - Synthacon Filter

Construction Guide

Revision 1.9

May 1, 2020



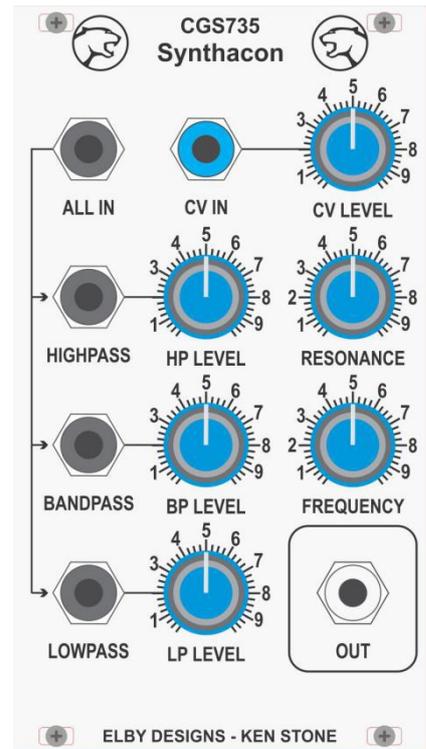
CGS735 - Synthacon Filter

Construction of the [CGS735](#) requires the assembly of 4 separate boards:-

1. Column 1: Panther Jack PCB ([3D Model](#))
2. Column 2: Panther Pot PCB ([3D Model](#))
3. Column 3: Panther Pot PCB ([3D Model](#))
4. Backboard: CGS735 PCB ([3D Model](#)) ([PCB Overlay](#))

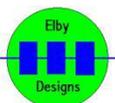
Constructors should refer to the PCB Overlay for any specific comments regarding the board assemblies, the [Bill of Materials](#) for the current value of all components and [General Construction Notes](#) for general PCB assembly guidelines.

1. Assemble the 2x jack assemblies ([3D Model](#))
2. Fit all components to the boards following normal assembly guidelines except for the 2x jack sub-assemblies
3. Place the 1st sub-assembly on the Column 2 PCB and offer up to the panel, secure using the supplied nuts and washers, and then solder the sub-assembly in to position.
4. Place the 2nd sub-assembly on the Column 3 PCB and offer up to the panel, secure using the supplied nuts and washers, and then solder the sub-assembly in to position.
5. Install the Column 1 assembly and secure using the supplied nuts
6. Attach the backboard ensuring correct alignment of the 3x IDC connectors



Calibration

1. Set the 4 [xx LEVEL] pots to their minimum position
2. Set [RESONANCE] and [FREQUENCY] to maximum
3. Remove jumper LK201
4. Set P202 to its mid-position
5. Monitor [OUT] which should be oscillating. If not, back off the [FREQUENCY] control slowly until it does.
6. Set [RESONANCE] to '8'
7. Adjust P202 (this is normally a clockwise rotation) until the oscillations stop
8. Set [RESONANCE] to maximum, the oscillations should restart
9. Repeat steps (5) to (7) if needed
10. Adjust [FREQUENCY] for an output of around 2kHz
11. Set [CV LEVEL] to maximum and apply a 2VDC voltage to [CV IN]
12. Adjust P205 for a frequency of approximately 8kHz
13. Set [CV LEVEL] to minimum
14. Set [FREQUENCY] to maximum
15. Adjust P203 for a frequency of around 9kHz
16. Set [FREQUENCY] to minimum
17. Fit jumper LK201
18. Adjust P204 for a frequency of around 900Hz



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