CGS506 Multi-Channel Stereo Mixer

Construction Guide

Revision 0.1

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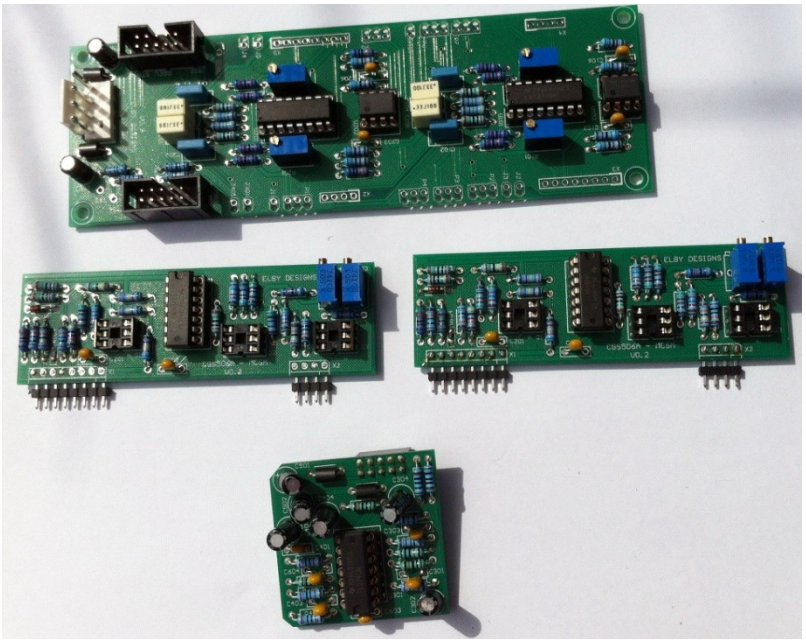
CGS506 Multi Channel Stereo Mixer (MCSM)

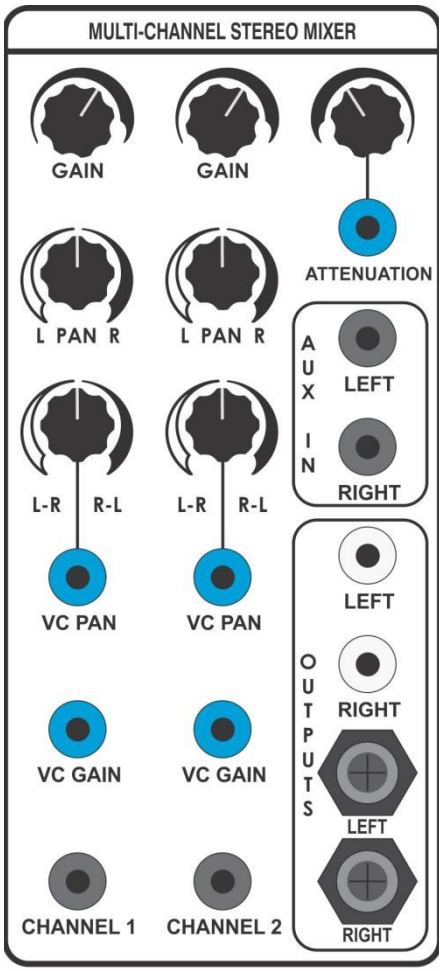
Construction of the CGS506 requires the assembly of 4 boards:-

Channel 1 – CGS506a PCB (3D Model) (Overlay)
Channel 2 – CGS506a PCB (3D Model) (Overlay)
Main Board – CGS506b PCB (3D Model) (Overlay)
Output – CGS506c PCB (3D Model) (Overlay)

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

1. Fit all components to the boards following normal assembly guidelines





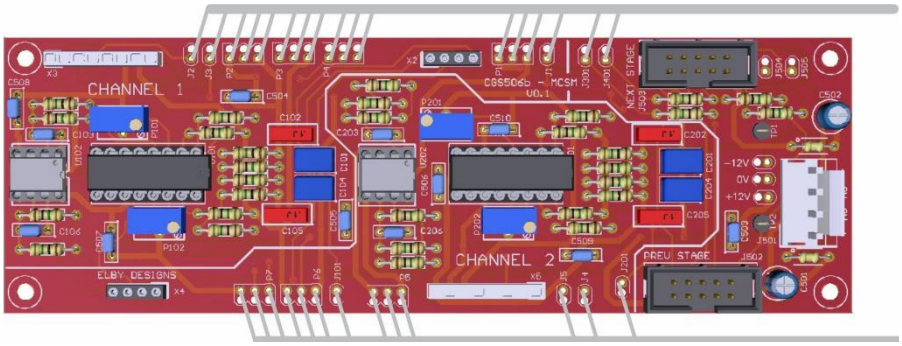
Panel Bill Of Materials

It is recommended that the 2x Channel sub-assemblies be installed after the Main Board has been wired in. The Output sub-assembly need only be mounted once installation is complete.

3D Model

Wiring

Loosely mount the Main Board in the desired location and install all wiring. We strongly recommend that the wiring be run along the 2 longer sides of the Main Board with them all feeding out at the same end. This will facilitate easier access to the underside of the Main Board when installing the 2x Channel sub-assemblies.



Example of wiring, here using the right-hand end

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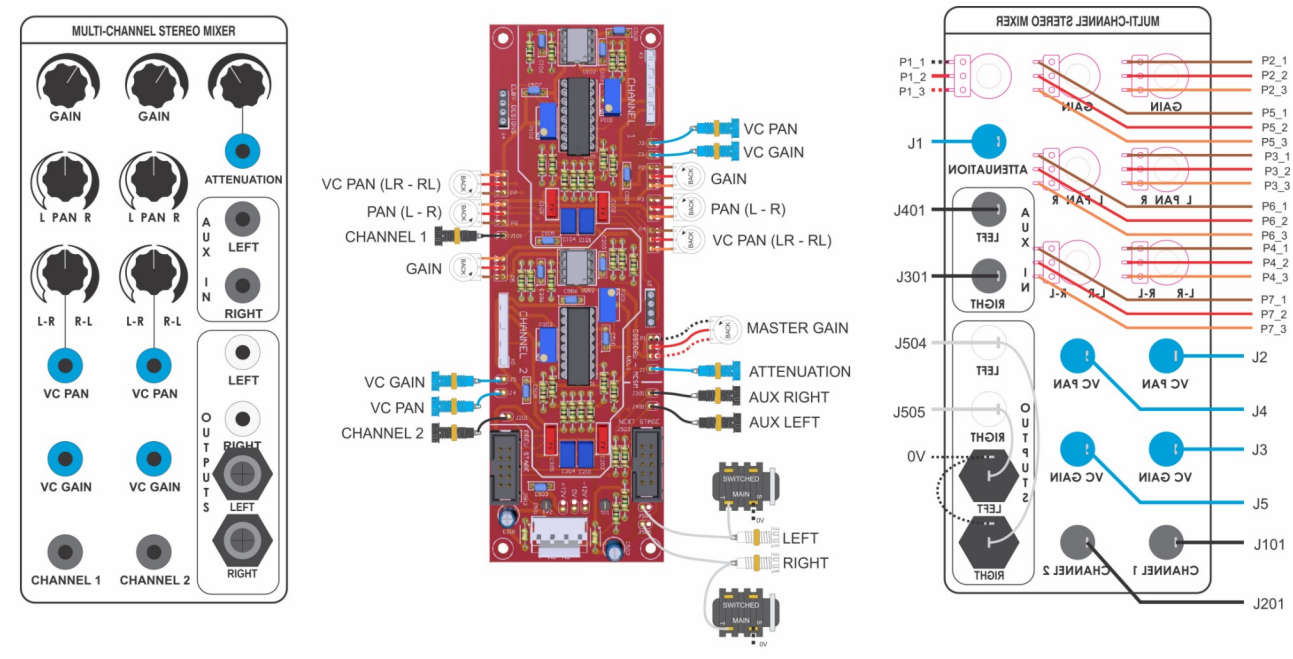
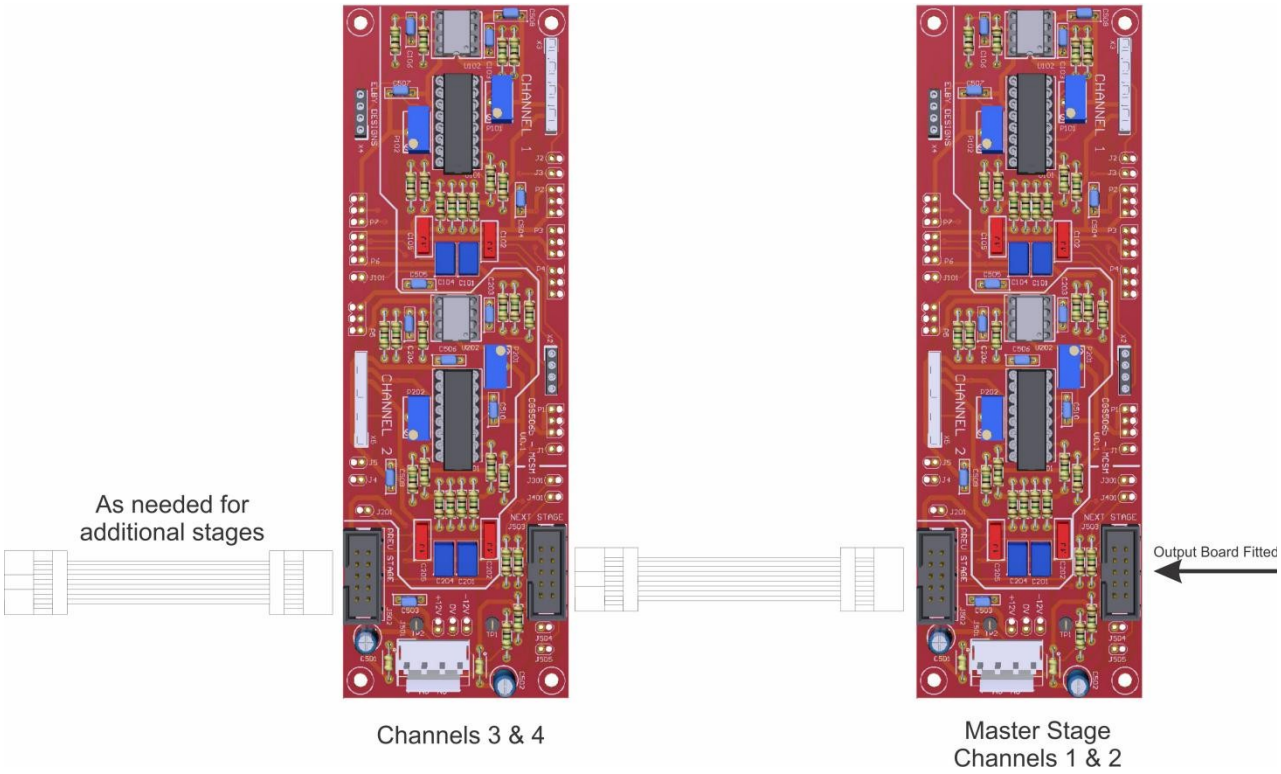


Wiring for CGS506

When expanding the system to more than 2 channels, add additional CGS506a/CGS506b assemblies for each additional 2 channels. Only the 'Master Stage' has an Output board fitted, All additional 'stages' are connected using an IDC10-IDC10 cable as shown below.



Expanded CGS506

Calibration

CV FEEDTHROUGH Adjust

NB: You may need to remove the Output Module to access test points TP1 and TP2

CHANNEL 1 (Trimpots on MAIN PCB)

1. Set [GAIN][1] fully clockwise
2. Connect 50Hz 5VDC sawtooth to [PAN CV][1]
3. Set [PAN][1] to 'L'
4. Set [VC PAN][1] to 'L-R'
5. Monitor TP1
6. Adjust P101 for minimum break-through
7. Set [PAN][1] to 'R'
8. Set [VC PAN][1] to 'R-L'
9. Monitor TP2
10. Adjust P102 for minimum break-through

CHANNEL 2 (Trimpots on MAIN PCB)

1. Set [GAIN][2] fully clockwise
2. Connect 50Hz 5VDC sawtooth to [PAN CV][2]
3. Set [PAN][2] to 'L'
4. Set [VC PAN][2] to 'L-R'
5. Monitor TP2
6. Adjust P201 for minimum break-through
7. Set [PAN][2] to 'R'
8. Set [VC PAN][2] to 'R-L'
9. Monitor TP1
10. Adjust P202 for minimum break-through

GAIN ADJUST

NB: If removed above, install the Output Module

CHANNEL 1 (Trimpots on CHANNEL 1 PCB)

1. Set [GAIN][1] fully clockwise
2. Connect 1kHz 5VAC triangle to [CHANNEL 1]
3. Set [PAN][1] to 'R'
4. Monitor [RIGHT]
5. Adjust P101[1] for an output of 5.5VAC p-p
6. Set [PAN][1] to 'L'
7. Monitor [LEFT]
8. Adjust P102[1] for an output of 5.5VAC p-p

CHANNEL 2 (Trimpots on CHANNEL 2 PCB)

1. Set [GAIN][2] fully clockwise
2. Connect 1kHz 5VAC triangle to [CHANNEL 2]
3. Set [PAN][2] to 'R'
4. Monitor [RIGHT]
5. Adjust P102[2] for an output of 5.5VAC p-p
6. Set [PAN][2] to 'L'
7. Monitor [LEFT]
8. Adjust P101[2] for an output of 5.5VAC p-p