CGS64 VCA

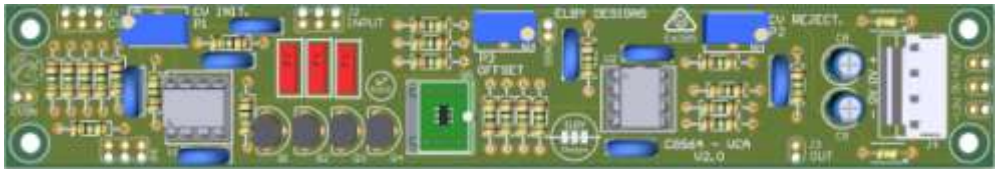
Construction Guide

Revision 0.0

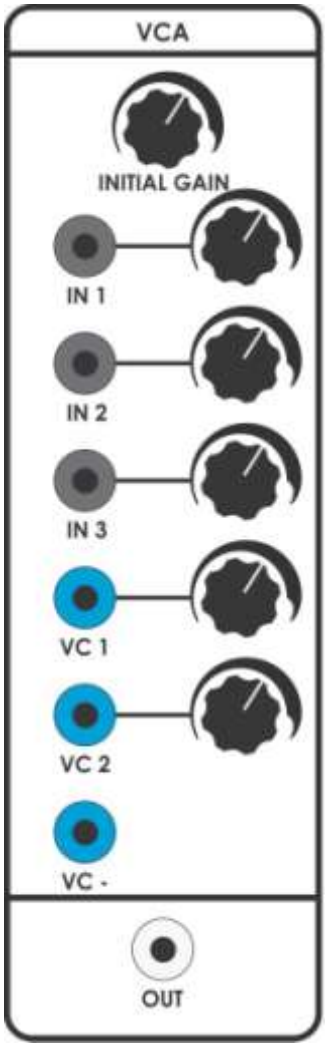
March 30th, 2019

ELBY Designs - Laurie Biddulph
9 Follan Close, Kariong, NSW 2250, Australia
elby-designs@bigpond.com http://www.elby-designs.com

CGS64 VCA



3D Model



Constructors should refer to the printed Component Overlay along with the PCB Bill of Materials for the current value of all components and General Construction Notes for general PCB assembly guidelines. You are advised to check all of these documents on our website to ensure you have the latest copy.

The SIGNAL inputs are, by default, AC coupled and so are only suited to audio type signals. If you wish to control CV type signals then replace the relevant input capacitors (C3, C4 and/or C5) with a wire link.

Calibration

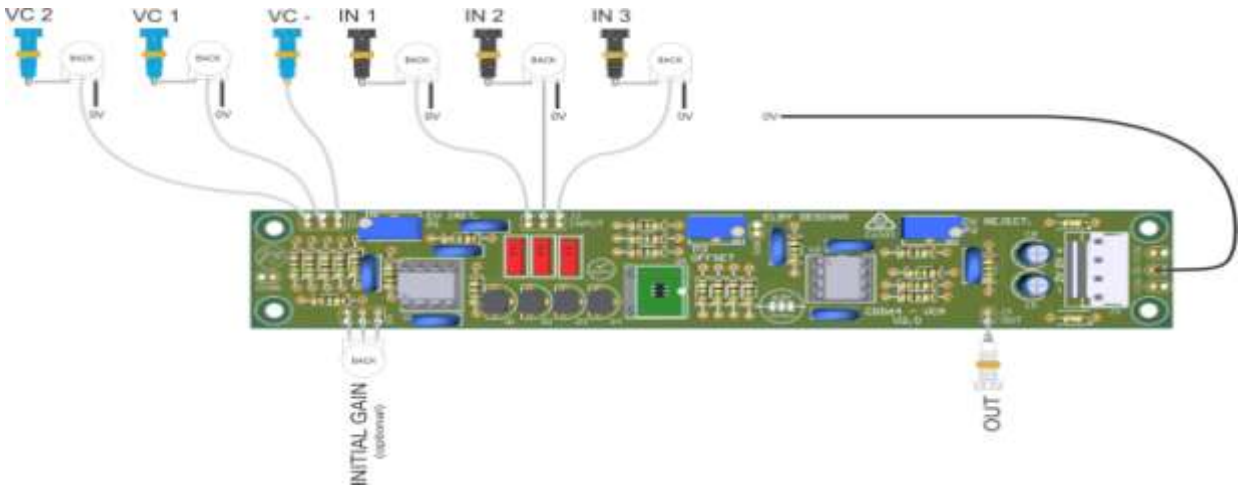
Setting up involves adjusting three trimmers.

P3 [OFFSET] is used to set the DC offset of the output to zero. P2 [CV REJECT] is used to null out the effect of the control voltage on the output.

If fitted, set P4 [INITIAL GAIN] to 0V (fully CCW).

Connect a varying waveform of low frequency (triangle wave from an LFO is ideal) into the [CV 1] input of the VCA, and turn the associated level pot to maximum. Connect the output of the VCA to a control voltage input of a VCO. Monitor the output of the VCO. You should now be able to adjust these trimmers so that there is no modulation present on the output, and the output is at zero volts. Note that these trimmers interact to some extent, so you will need to alternately adjust them until the best result is obtained.

P1 [CV INIT] is used to set the VCA to zero gain at 0 volts CV input. Feed an audio signal into the [CV 1] input, and monitor the output. With no CV at any of the inputs, and the optional external [INITIAL GAIN] pot, if used, set to its zero position, adjust this until no signal is heard.



Example wiring – click for larger image

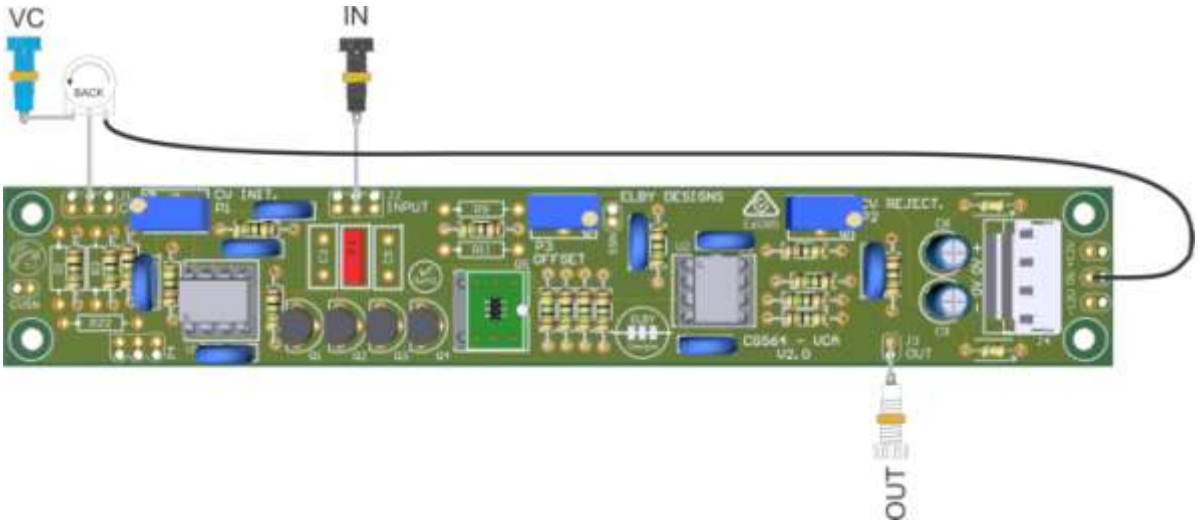
ELBY Designs - Laurie Biddulph
9 Follan Close, Kariong, NSW 2250, Australia
elby-designs@bigpond.com http://www.elby-designs.com

CGS64 VCA – BoCGS BOG & MARSH

Constructors should refer to the printed Component Overlay along with the PCB Bill of Materials for the current value of all components and General Construction Notes for general PCB assembly guidelines. You are advised to check all of these documents on our website to ensure you have the latest copy.

Some resistors and capacitors associated with the CV and SIGNAL inputs are not required in the BoCGS BOG and MARSH builds and may be omitted from the PCB if desired (image below shows these components removed).

The SIGNAL inputs are, by default, AC coupled and so are only suited to audio type signals. If you wish to control CV type signals then replace C4 with a wire link.



BoCGS wiring (1 of 2 circuits) – click for larger image

Panel Bill of Materials

ELBY Designs - Laurie Biddulph
9 Follan Close, Kariong, NSW 2250, Australia
elby-designs@bigpond.com http://www.elby-designs.com