

# MegaOhmAudio CdS VCF/A User's Guide - pcb v3

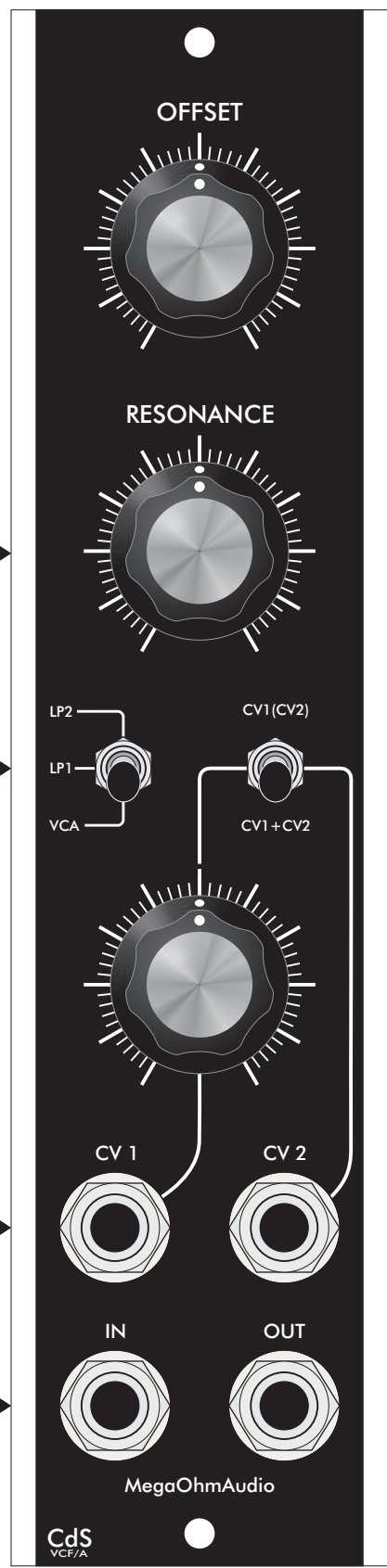
**RESONANCE POT:**  
Mode dependent control.  
LP2=emphasizes signal at cutoff point. Past the 12 o'clock position and the filter will oscillate.

LP1 or VCA= pot will act as output level control. Range of unity gain to approx. 1/2 gain. Travel is reversed. Set at full CCW (7') for normal behavior when not in LP2 mode.

**RESPONSE MODE SWITCH:**  
Selects response of the module  
LP2= two pole Sallen Key VCF  
LP1= one pole Sallen Key VCF  
VCA= unity gain voltage controlled amplifier (attenuator)

**CV 1 INPUT:**  
Attenuated CV input  
0-5V = full range

**INPUT:**  
Expects +/-5V input signal.  
Can also process DC signals and control voltages.



**OFFSET POT:**  
Sets the initial cutoff frequency when in the LP modes.  
Sets the initial level / gain when in VCA mode.

Full CCW = Off/Closed  
Full CW = On/Open

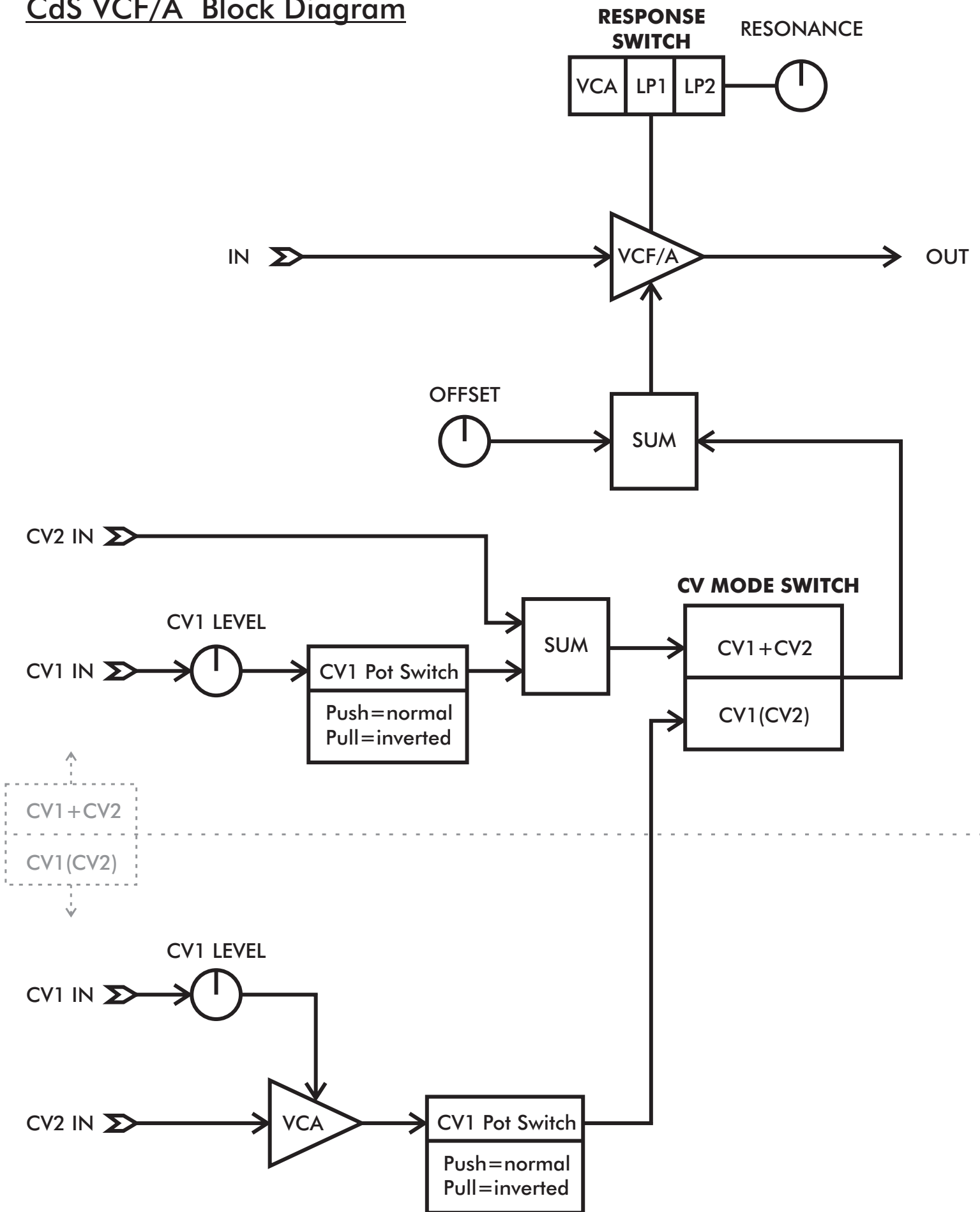
**CV MODE SWITCH:**  
CV1 + CV2 = sum of both CVs  
CV1(CV2) = VCA - CV1 controls the level of the CV2 input

**CV 1 LEVEL POT:**  
Push/Pull pot  
Push position = attenuator for CV1  
Pull position = inverting attenuator for CV1 input.  
When CV Mode switch is set to CV1(CV2), then the Pull position will invert the output of the internal control VCA.

**CV 2 INPUT:**  
Unattenuated CV input

**OUTPUT:**  
Final VCF/VCA output

# CdS VCF/A Block Diagram



# CdS VCF/A

Power: +15V, 0V, -15V

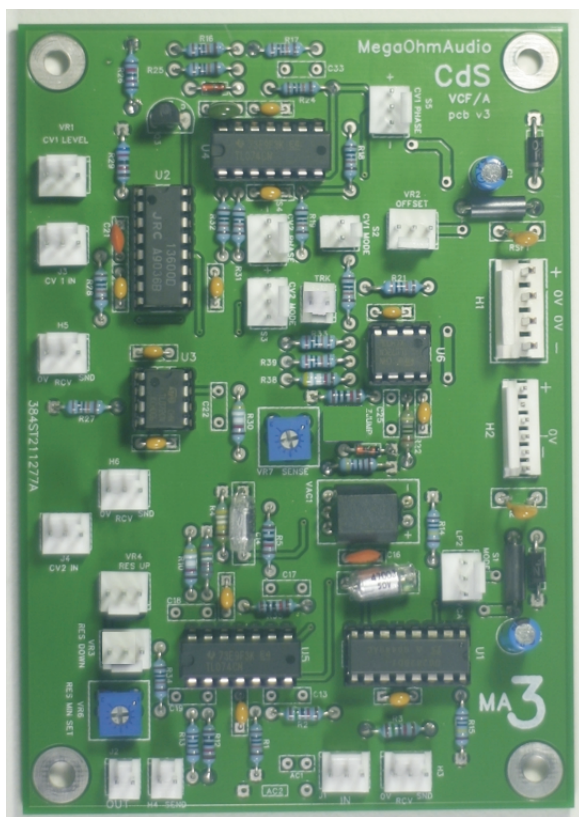
MOTM / Blacet power header

or

Synthesizers.com power header  
(do not use both at same time!)

Power consumption: average +30mA / -37mA

PCB bracket extends 5" behind panel.



← MOTM / Blacet  
4 pin MTA156 power entry header

← Synthesizers.com  
6 pin MTA100 power entry header

\*Current consumption can / will vary depending on module settings and also what modules it is patched to.

Rate your PSU conservatively.

Good practice is to keep the PSU load at or under 60-65% of it's maximum load.

Example: 1Amp PSU - once the load gets up to 650mA think about adding an additional power supply to your system.

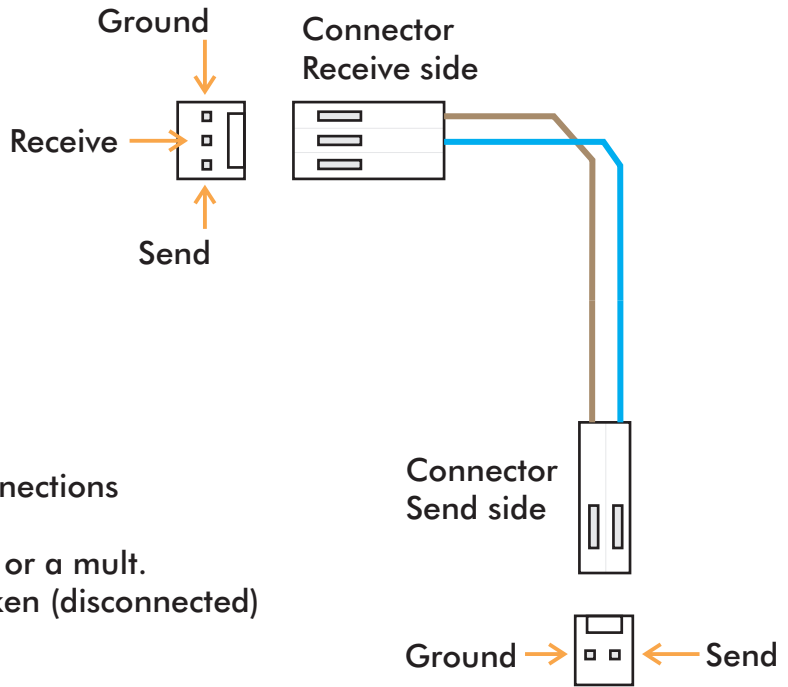
Much respect and credit due to the original circuit on which this module is based:  
Buchla Low Pass Gate  
- especially the VCA trick and 'semi linear' Vactrol driver



# CdS VCF/A

PCB normalizing cables  
and headers

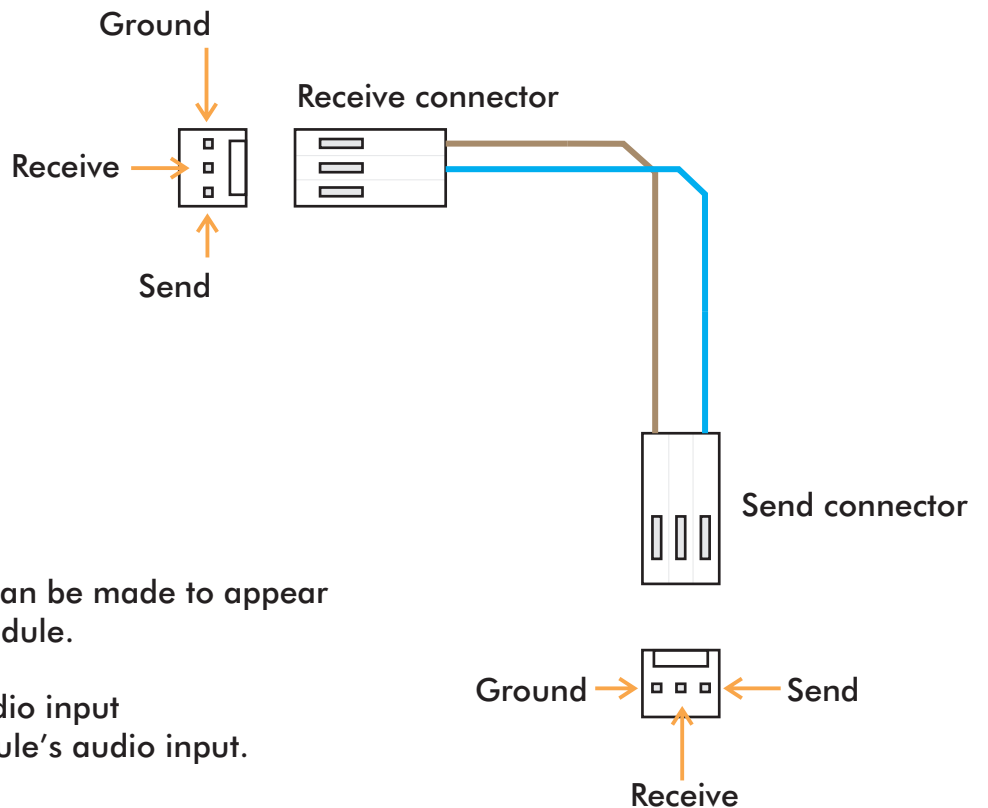
OUTPUT  
to  
INPUT  
connector



Use these cables to normalize connections  
between two modules  
This helps to eliminate patchcords or a mult.  
Any normalized connection is broken (disconnected)  
When a patchcord is inserted.

Output header - OUT send or CV VCA send

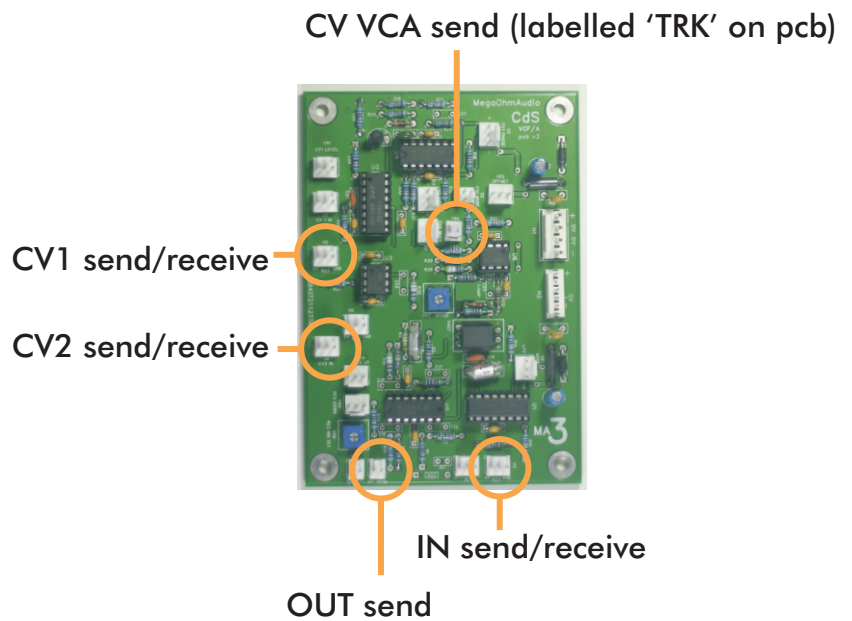
INPUT  
to  
INPUT  
connector



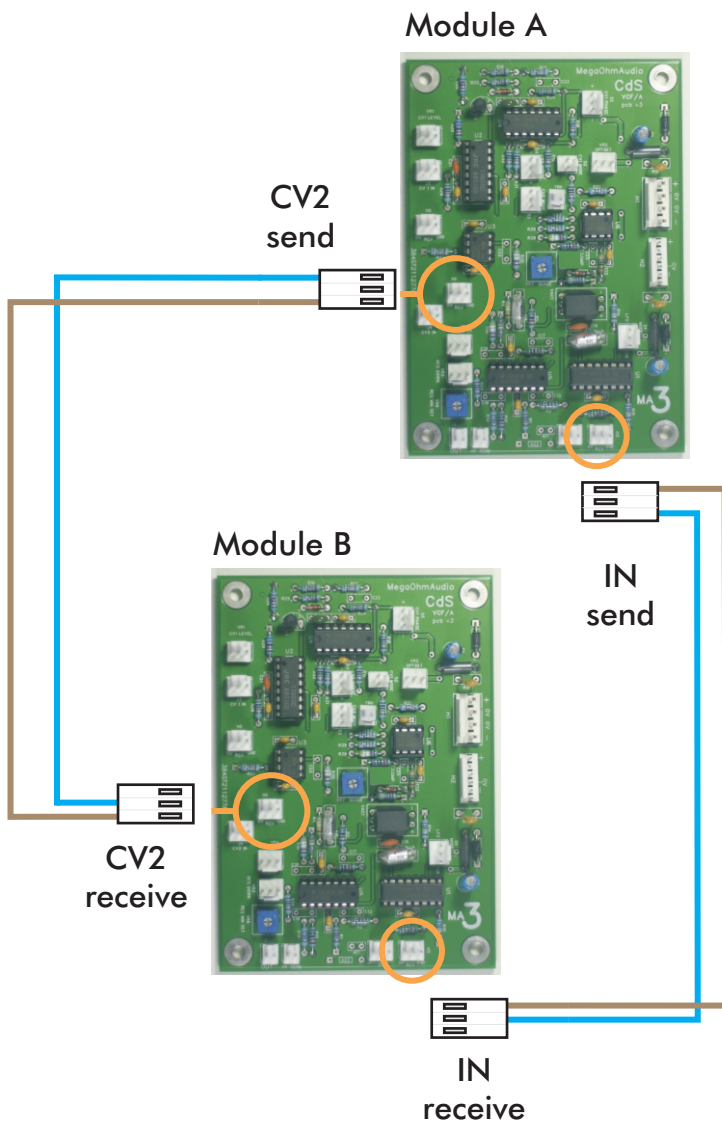
Use this cable to make a  
parallel connection between  
Inputs of two modules.  
I.E.: the input signal at CV1 can be made to appear  
at a CV input of a second module.  
Or  
The signal patched to the audio input  
can be sent to a second module's audio input.

# CdS VCF/A

Hooking two CdS module together



This example sends the CV2 signal of module A to module B. There is also a parallel connection from audio IN of module A to audio IN of module B.



This example connects the CV VCA output of one module to the CV2 input of a second module.

