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VCA-2 Instruction Manual

Inside this Manual

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Preliminary Instructions for the VCA-2

Quick Start

Power Connections
Power for the VCA-2 is normally provided by the PS-1, a wall mount power supply. The PS-1 is a fully regulated supply with an output voltage of + and - 16 volts and a rated current capacity of 200 mA. If multiple units must be powered or if redundant power is a requirement for the system, the PS2000 may be a positive alternative.

DC power enters the chassis by way of an RJ11 telephone style connector. Voltage common is found on the two center pins of the four pin connector (six pin housing). Positive power connects to the pin to the left of the voltage common pins, as viewed from the back of the chassis. Negative power connects to the pin on the right of the voltage common pins. There are no connections at the very outside pin locations of the six pin housing. An internal bridge rectifier provides a DC polarity guard to protect the amplifier.

Audio Wiring
Audio connections to the VCA-2 are virtually self-evident. The left input and output connections are in the center of the chassis as viewed from the rear. Right channel connectors are on the right side of the chassis. The input connectors are female XLR type and the output connectors are male XLR type. The XLR wiring is conventional balanced with pin 1 being the chassis ground, pin 2 is considered high and pin 3 is low on both inputs and outputs.

Control Voltage Wiring
Control voltage wiring uses an audio pair for each control line. The inputs are differential amplifiers. Both input pins must be connected somewhere. If the control voltage source is unbalanced, the unused pin should be taken to the ground point of the control voltage source. If it is not grounded at the control voltage source, it must be tied to analog ground at the chassis.

The control law is a linear +10 dB per volt, with unity gain at 0 volts. Gain is achieved with positive voltage to a maximum of +2.5 volts which will yield +25 dB. Attenuation is achieved with negative voltage. -10 volts will yield an attenuation of -100 dB. Positive polarity control voltage needs to be connected to the positive inputs of the 9-pin D connector. The RGC-P is an ideal control voltage source.

If the RGC-P is used for a control voltage source, power for it is provided at pins 1, 2, and 6 of the 9-pin D connector.

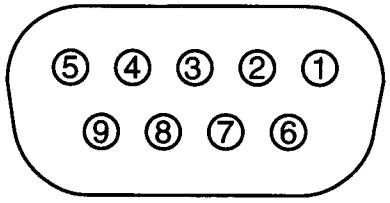
The RGC-P is a small DC control voltage generator that is mounted to the panel potentiometer that is used for control.

Internal Jumpers
Two internal jumpers control the source of the control voltage for the right channel. As shipped, they are set to use an external control voltage source. If a common control voltage source is desired, the jumpers may be set so that the left channel control voltage input also controls the right channel.

Audio Levels
The maximum input level that can be received by the VCA-2 is +27 dBu at unity gain. The output will also produce a maximum output level of +27 dBu at clip.

The maximum input level will be reduced by the amount of gain asked from the Voltage Controlled Amplifier. The input clip point, however, will never be greater than +27 dBu, even under conditions of attenuation.

Remote Control Connector Pinout



Chassis View of Connector

Pin 1 - + 15 V
Pin 2 - -15 V
Pin 3 - GND
Pin 4 - R Cont -
Pin 5 - R Cont +
Pin 6 - GND
Pin 7 - GND
Pin 8 - L Cont -
Pin 9 - L Cont +

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VCA-2 Remote Gain Control

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