

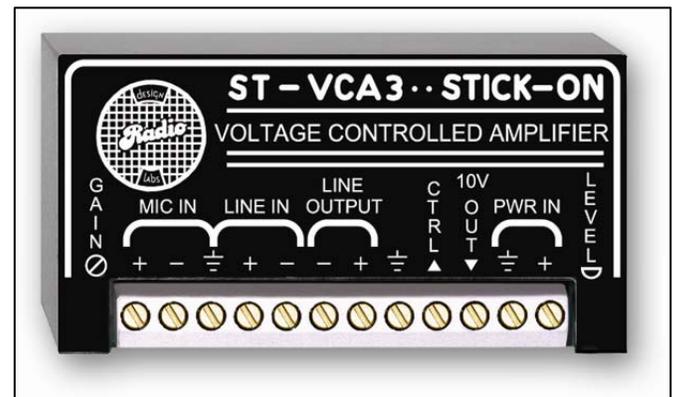
## STICK-ON<sup>®</sup> SERIES

### Model ST-VCA3

### Voltage Controlled Amplifier

- Audio Level Control from a DC Voltage
- Audio Level Remote Control
- Two Wire with Shield or Three Wire Control
- VCA with Microphone or Line Level Input
- VCA with Line Level Output
- VCA with LED Metering of Operating Level

The ST-VCA3 is a voltage controlled preamplifier in the convenient line of STICK-ON products, featuring the superior engineering and components common to RDL products. The ST-VCA3 may be rack or surface mounted with optional STICK-ON series accessories. The ST-VCA3 gives you the advantages of audio level remote control with the added convenience of STICK-ONS!



#### ASSOCIATED REMOTE CONTROL EXAMPLES:

- ▶ RLC10K and RLC10KS Wall mounted remote controls
- ▶ RLC10KM and RLC10KMS Wall mounted remote controls with muting
- ▶ RLC3 and RLC3S Remote control with preset levels
- ▶ RLC10R Rotary encoder remote control
- ▶ AMS-10K Linear potentiometer remote control

The ST-VCA3 is a high performance voltage controlled amplifier with two inputs and one output. The line input is designed to accept an input signal with operating levels between -20 dBV and +4 dBu. The microphone input accepts low or high impedance microphones with output levels from -60 to -44 dBu. Only one of the inputs may be used at a time. A multi-turn trimmer is provided for setting the correct input gain according to the dual-LED VU meter located directly in front of the gain control. The intended output level is +4 dBu for 10 Vdc at the **CTRL** input terminal. The green metering LED begins illuminating at 15 dB below +4 dBu. The green LED progresses to full intensity at +4 dBu. The adjacent red LED illuminates at +4 dBu.

Terminals are provided for connection of an external ramp generator (0 to 10 Vdc) or a linear taper 10 kΩ potentiometer remote control. The RDL RLC10K is most commonly used. Three terminals are provided for external control; a single-pair shielded audio cable is recommended. If a remote volume control with a mute button is preferred, an RDL RLC10KM may be connected directly to the ST-VCA3. The regulated +10 Vdc control **OUT** voltage provides sufficient current to power an RLC10KM. The **CTRL** terminal does not load the external control voltage, therefore a single 10 kΩ control may control multiple ST-VCA3s simultaneously. The **LEVEL** LED varies in intensity corresponding to the VCA control voltage. This provides a relative indication at the module of the level setting on the remote control.

The ST-VCA3 is used in applications requiring smooth audio level control from a remote control panel, potentiometer or dc voltage (0 to 10 V). Installation in series with the audio input of a power amplifier allows remote control of that amplifier's level. For installations where it is preferred to keep the audio localized in a rack or common equipment location, audio level control may be extended outside the rack using an ST-VCA3. Many installations benefit from avoiding long-term wear from audio running through a potentiometer. An ST-VCA3 with external dc control provides virtual immunity from scratchy audio. Audio/video system control units often provide 0 to 10 Vdc control outputs that can directly adjust audio levels using an ST-VCA3. The ST-VCA3 is primarily intended for line-level attenuation although a high quality utility microphone preamplifier is included in the module. If remote control of a microphone preamplifier is desired, such as a wall mounted level control for a microphone jack, the ST-VCA3 may serve as a remote controlled microphone preamplifier.

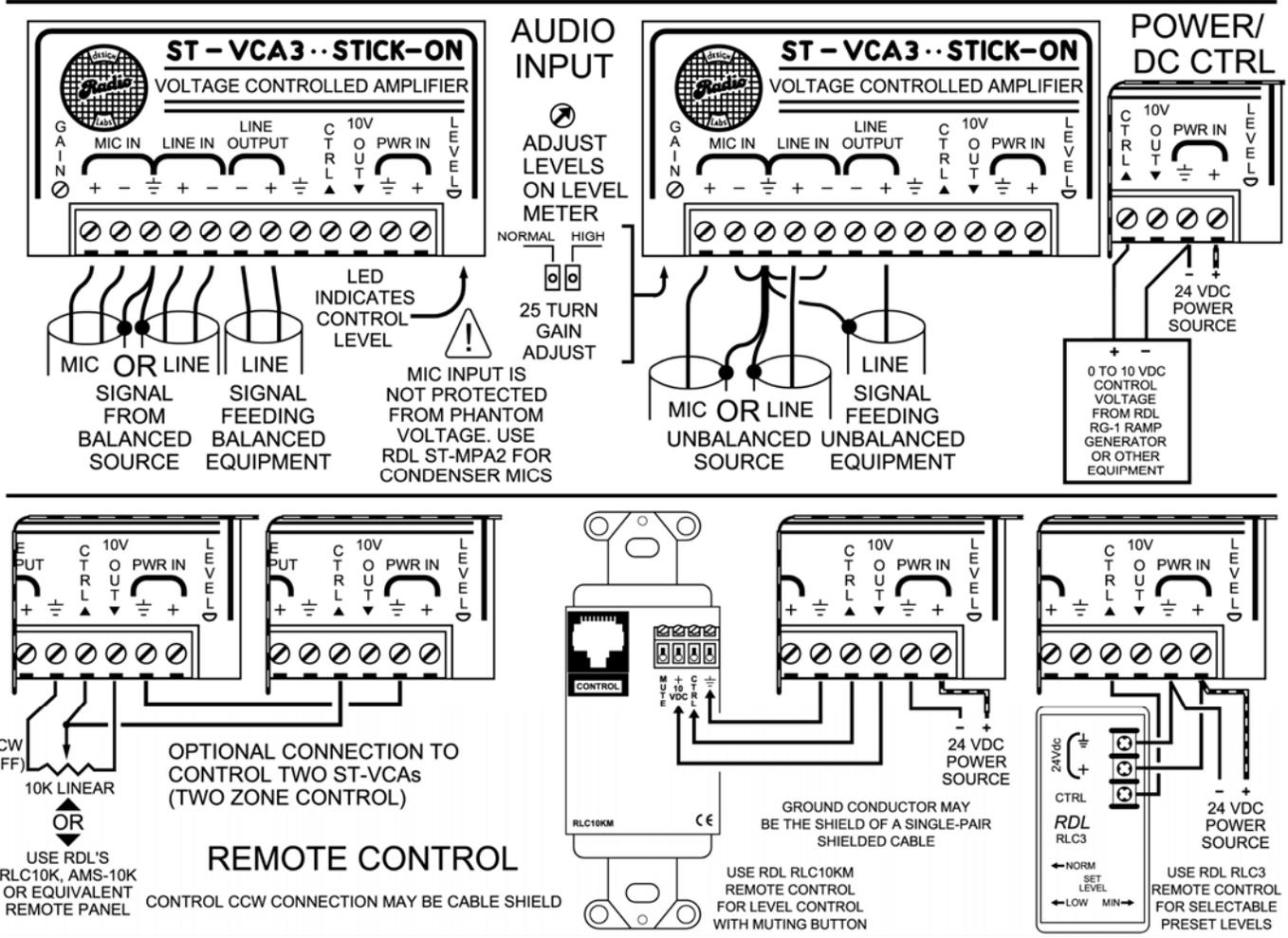
The ST-VCA3 operates from a 24 Vdc ground-referenced power supply.

Wherever it is desirable to keep audio signal sources at an equipment location while providing compact, high quality remote level control, the ST-VCA3 is the ideal choice. Use an ST-VCA3 and its associated remote control individually or combine them with other RDL products as part of a complete audio/video system.

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**Model ST-VCA3**  
**Voltage Controlled Amplifier**

## Installation/Operation

CE EN55103-1 E1-E5; EN55103-2 E1-E4  
 Typical Performance reflects product at publication time exclusive of EMC data, if any, supplied with product. Specifications are subject to change without notice.



### TYPICAL PERFORMANCE

Inputs (2): Mic: 200  $\Omega$  balanced; 5 k $\Omega$  unbalanced  
 Line: 30 k  $\Omega$  balanced bridging or unbalanced  
 Input Levels: Mic: -60 dBu to -44 dBu (for +4 dBu output; 150  $\Omega$  source)  
 Line: -18 dBu (-20 dBV) to +4 dBu (for +4 dBu output)  
 Output Impedance: 150  $\Omega$   
 Output Level: +4 dBu  
 Headroom: >18 dB  
 THD+N: Mic: < 0.05% (1 kHz, 50 dB gain)  
 Line: < 0.025% (unity gain); 0.025% typical at 15 dB attenuation  
 Frequency Response: Mic: 30 Hz to 20 kHz ( $\pm 1$  dB)  
 Line: 10 Hz to 20 kHz ( $\pm 0.1$  dB)  
 Noise: Mic: < -78 dB below +4 dBu output (150  $\Omega$  source; 50 dB gain)  
 Line: < -78 dB below +4 dBu output (maximum gain); -90 dB at normal operating level  
 CMRR: Mic: > 60 dB (50 Hz to 120 Hz)  
 Line: > 60 dB (50 Hz to 120 Hz)  
 Attenuation Range: 0 to 90 dB (Attenuation >90 dB at 0 Vdc control)  
 Control Voltage Output: 10 Vdc regulated; powers 10 k $\Omega$  potentiometer, RLC10K, RLC10KM or equivalent  
 VCA Control Input: 0 to 10 Vdc or 0 to 10 k $\Omega$  (Linear taper potentiometer), 200 k $\Omega$   
 Indicators (3): Dual-LED VU meter (Green/Red); Level LED (Red) tracks VCA control voltage  
 Power Requirement: 24 to 33 Vdc @ 50 mA, Ground-referenced  
 Dimensions: Height: 0.7 in. (1.7 cm), Width: 3 in. (7.6 cm), Depth: 1.6 in. (3.9 cm)

