

Rascal Audio Two-V Dual Microphone Preamplifier for 500 Series

Varying the sonic character of a microphone from clean to extreme saturation without losing any musicality makes this device appealing for any engineer with a 500-series rack.

While Rascal Audio's Joel Cameron has been designing, building, and modifying equipment for well over 10 years, my introduction to the company was via the Analogue ToneBuss, which I reviewed (and subsequently purchased) in 2009. The Plano, Texas-based company has recently released its second product, a two-channel 500-series mic pre called the Two-V, which offers impressive performance and extreme versatility.

Features

The Rascal Audio Two-V provides two channels of microphone preamplification in a doublewide 500-series module. The "Rascal Audio Grey" (painted a battleship gray) device features black knobs with gray inserts. The \$1,289 unit is constructed with a blend of old-school and current components, such as custom designed, proprietary I/O transformers; these are likely the most critical component in the circuit as they are fastidiously wound to attain a precise performance characteristic specifically for the Two-V.

While it's no surprise that a two-channel mic preamp requires two 500-series slots, the fact that the One-V (the \$725 mono version of the pre) is also a double-wide device demands an explanation. The truth is the narrowest dimension of the preamp's output transformer is wider than a single 500-series slot (staggering the transformer

arrangement allows two of the transformers to easily fit into a double-wide chassis).

The Two-V's two channels have identical controls that include Gain, Input and Output knobs and Phantom, Impedance, Polarity and High Pass Filter switches. The stepped Gain rotary switch varies from 40 dB to 70 dB in 6 dB steps. The continuously variable Input control acts as a pad between the microphone input transformer and the first active gain stage. Although it is located below the Gain control on the front panel, it actually precedes the circuit's active gain block. When the Input control is turned all the way down, the input signal is fully attenuated. The continuously variable Output control acts as a fader, allowing control between the preamp stage and the output stage. When the Output control is turned all the way down, no signal passes, and when it is turned all the way up, there is no attenuation between the gain stages.



The +48 VDC phantom power switch is accompanied by a greenish-blue LED signifying that phantom power is active. The 0°/180° switch inverts the polarity, and the High Pass switch activates a 6 dB/octave high-pass filter with a 120 Hz corner frequency; Joel Cameron has evidently found the magic corner frequency and curve to create the closest thing to a perfect high pass filter. Impedance is switchable between high (1200 ohms) and low (300 ohms).

In Use

Engineers who haven't used a mic pre with three independent (and interdependent) controls may be slightly thrown off by the concept at first. Once I got used to it though (which was rather quickly), it's all quite intuitive, making it an amazing tone-shaping tool. When recording a sound source that I want to keep clean, open and natural (most often piano and orchestral instruments), I start with the Gain at 40 and Input turned all the way down (no signal passing) and the Output all the way up (no trim). I then increase the level of the Input control while watching the meters on my DAW or tape machine until the desired level is reached. If I turn the Input level all the way up and the signal still needs to be higher, I start increasing the Gain control (in 6 dB increments) until the signal just

passes the desired level and then I back off the Input control until the desired signal level is reached. The result is a smooth, wonderful sound that isn't completely void of color and character, but is natural.

When preamp color is the goal—and trust me, once you hear the beautiful tone of the Two-V, it most likely will be—I start with the Output set around 11 or 12 o'clock and then experiment with increasing the Gain and Input controls until the desired sound is attained. Once the sound is there, I increase the Output level while watching the DAW or tape machine meters until the desired level is reached. The Two-V's unique design causes the Gain and Input controls to alter the character and tone of a signal in a different way, so the combination of these two controls provides the user with a broad-stroke tonal paintbrush to mold the sound into the desired result. Due to the overload characteristics of the Two-V's custom transformers, as saturation increases, transients are smoothed; in some instances, the Two-V almost sounds like a tube device, especially noticeable with drums and percussion. I should also mention that the low impedance gain setting shines when using dynamic mics on kick, snare and toms; it adds an impact and thickness to the drums that is unbelievable.

I had great results using the pre along with a pair of Radial JDI direct boxes to record keyboards; it worked wonderfully along with a Demeter Tube DI to record bass guitar. Actually, my only complaint about the Two-V is the lack of instrument inputs.

I used the Two-V to record everything from

drums, bass and percussion, electric and acoustic guitars, and violins and violas and had wonderful results in every instance. I used the mic pre to record dozens of vocal performances, always finding the pre to be present, punchy and forward. Vocals recorded via Two-V cut through a mix easier than most other tracks I've recorded; I found that they don't require the vocal to be mixed as loud but can still completely cut through a mix. I absolutely love the sound of the high-pass filter which, with few exceptions (e.g., bass guitar, kick drum, toms, etc.), I use the majority of the time; it somehow removes the exact amount of problem low-frequency information without compromising the sound in any way. There's no pad on the Two-V and the lowest gain setting is 40 dB, but since there is a variable input, I never wanted for a separate pad even with a high-output mic and a loud sound source, I had great results using the mic pre along with a Royer R-122V to record an exceptionally loud guitar amp.

Summary

Where most clone mic pres are typically what I describe as one-trick-ponies, the Two-V uses custom-designed transformers and provides much more control of the interaction between its stages than old-school designs. This yields a mic pre that has a fantastic sound, yet is much broader in its sonic flexibility than any solid-state preamp I've ever encountered.

Price: \$1,289

Contact: Rascal Audio | rascalaudio.net

Two-V Component Selection:

Rascal Audio's Joel Cameron carefully selected the components for the discrete, Class-A Two-V and he explains his philosophy towards component selection: "Component choice is, of course, critical to the performance of a device, but in my experience, the most expensive or esoteric components aren't necessarily the ones that provide the most satisfying tone upon auditioning. Measurements are useful, but auditioning has to be the ultimate determiner of component selection, and the results can sometimes be surprising. This is true for the Two-V as well. I have listened to this circuit a great deal over the last couple of years and have chosen the components that bring the biggest smile to my face when using it. Of course, the transformers have enormous impact on a circuit like this, so I spent a lot of time getting those just right."

Joel goes on to say—and I'm sure you'd be hard pressed to find a professional engineer to disagree—"There is no shortage of lackluster products with killer components in them." Joel Cameron selects components for his circuit designs based on what his ears (and the ears of his customers) tell him, not based on the component's impressive measurements in a sterile environment.

—Russ Long