

# Depeche Mode: Anatomy Of A Hit Single Remix

# RECORDING

The magazine for the recording musician

# GREAT & GIFTS & GEAR



## REC's Reviews

## of 26 Hot New Products:



**AIAIAI - Apogee - Blue - Bock Audio - CAD Audio - Eventide - 8Dio  
Icon - iZotope - Keith McMillen Instruments - KRK - Myth Labs  
Old Jersey Music Labs - PreSonus - Radial Engineering - RHA  
Royer Labs - Shure - Sonnox - Sony Creative Software - Gefen**

### New Headphones: Believable Audio, or just Bass Boost and Bling?



VOL. TWENTY SEVEN  
NUMBER THREE



DECEMBER 2013  
USA \$5.99  
CANADA \$5.99

## Tame That Low End!

What Really Works In Small Studios



# REVIEW

BY PAUL VNUK JR.



## PreSonus RC 500 Solid State Channel Strip

A new preamp design heads up a channel strip that's a real revelation

In our August 2013 issue we took a look at the PreSonus ADL 700 channel strip, built around a single channel of the Anthony Demaria-designed ADL 600 stereo tube microphone preamp, also built by PreSonus and reviewed back in October 2006. The ADL 700 married Mr. Demaria's high-gain tube preamp with an FET compressor and a solid-state 4-band equalizer designed by PreSonus in-house designer Robert Creel, the inventor of PreSonus' popular XMAX preamps (used in many of the company's interfaces and mixers, etc.). In that review I found the ADL 700 to be "an incredibly powerful tool, capable of a wide range of sonic sculpting."

This month we have another new mono channel strip from PreSonus, the RC 500. It keeps the FET compressor and equalizer from the ADL 700 and replaces the ADL 600's tube preamp with a new solid-state design, also created by Robert Creel. This is where the RC in the product name comes from.

The RC500 looks like a single-rack-space version of the ADL 700, with a similar look and layout, although the big blue lights (aside from the power light) and chunky toggle switches are gone and the backlit VU meter has been miniaturized.

### Front and rear panel layouts

The newly designed preamp in the RC 500 is a Class-A hybrid design with discrete transistors and new, low-distortion op amps. It has a 1/4" instrument input, and a switch for selecting between that or the rear-panel XLR microphone input. It offers the usual preamp functions: polarity invert, phantom power, 80 Hz highpass filter and a -20 dB pad. Like the ADL 700, it has a variable-gain knob offering 20 to 70 dB of clean gain, which lets it handle low-output ribbon and dynamic mics with no problem.

The compressor employs the same FET-based VCA-style compression circuit as the ADL 700, but simplified. The RC 500 whittles down the ADL 700's controls to three, by removing the knobs for ratio selection and makeup gain. In the RC 500 the ratio is fixed at 3:1 with a soft-knee curve. It has a -25 to 20 dB Threshold control, Attack (0.05 ms–10 ms) and Release (30 ms to 500 ms). The compressor can be switched in or out of the circuit with a hard bypass, and its VU meter can be set to show gain reduction or output level.

The EQ on the RC 500 is also simplified from its predecessor, being a 3-band rather than a 4-band semi-parametric with each band offering a fixed Q of 0.5. The Low band can be switched between peak or shelving with a range of 20 Hz to 400 Hz,  $\pm 16$  dB. The Mid band goes from 400 Hz to 5 kHz,  $\pm 16$  dB, and the High band is switchable between peak or shelving with a range of 2 kHz to 20 kHz,  $\pm 16$  dB. The EQ, like the compressor, can be hard-bypassed out of the circuit, although unlike on the ADL 700 the order of the two cannot be changed.

The last control on the RC 500 is a master output knob with a throw of -80 dB to +10 dB.

On the rear of the RC 500 there is a choice of XLR microphone or balanced XLR line input. It has a pair of TRS 1/4" insert points for patching in external gear, and it's rounded out by a choice of XLR or balanced 1/4" connections for output.

### In use: the new preamp

As a huge fan of the ADL 600 preamp, I was a tad worried when I found out PreSonus was adding a new channel strip alongside the ADL 700, but one that put in a solid-state design in place of the tube

pre I knew and loved... and using words like "vintage flavored" to describe it. I put the new Creel-designed microphone preamp through its paces, alongside two other solid-state mic preamps I know well, the Millennia Media HV-3D and the Chandler TG-2. It turns out that I didn't have much to worry about.

The sound of the new RC 500 preamp is clean, solid, and has a positively huge low-end presence. Compared to the ADL 600/700 tube pre, which I found bold with an opulent top end, the preamp in the RC 500 is thicker and punchier with a more focused top.

While it was too sonically different from the straight-wire-with-gain sound of the Millennia for any useful comparison (other than to say, "wow, it's really different"), the RC 500 shared a mid-forward punch and tightness with the TG-2 but was fuller in the lows. I should clarify that I am not implying that the low end is fat and pillowy, but rather that it has a boldness and weight to it that sits really nicely.

Overall the RC 500's preamp is a nice console-style preamp with a sound that layers well on any sound and source, be it vocals, acoustic instruments, drums, or electric guitars. Its low-end weight makes it really nice on DI'd bass as well.

This is easily the best solid-state mic pre that PreSonus has built since the classic original Jensen-equipped MP20! In fact, I would love to see this preamp available without channel strip as a two-channel unit... it's *that* nice.

### Simpler can be better

Moving on to the rest of the channel strip, my thoughts on the RC 500 remain similar to those from my ADL 700 review, especially concerning the EQ which, just

