

## Review: LaChapell Model 583s Microphone Preamp

The Model 583s' true-tube design and massive sound easily land it on the short list of the best mic preamps ever.

RUSS LONG · FEB 23, 2009

*The Model 583s and its 12 AX7 tube*

The boutique audio company LaChapell Audio came into light with the release of its Model 992 mic preamp a few years back. The company's handmade gear is meticulously designed and hand-built with the utmost precision.

The recently released LaChapell Model 583s preamp is a single-ended, vacuum-tube microphone preamplifier. This preamp is designed for use in 500 Series power supplies, offering the latter's devotees a true vacuum-tube preamplifier option for the first time.

### Features

The microphone input configuration of the 4-pound 583s is based on its big brother, the LaChapell Model 992EG, while the Hi-Z input is transformerless. The output stage utilizes premium Burr-Brown and THAT Corporation line drivers with a transformer balanced output. It features continuously variable potentiometer-controlled input and output gain via fully variable 100K-ohm pots.

**The LaChapell Pre: Now With EQ! - Model 583e** Scott LaChapell's Model 583e (\$2,025 list) offers the same high-gain tube based mic pre as the 583s, but adds three-band EQ on the right side of the module, making it the 583e. Its three-band transformerless EQ has fully sweeping frequency controls with cut/boost settings of +/- 8 dB, which can be used inline or independently with the second slot in/outs.

Because I was in 500 Series-land for this review, I located some other 500 Series mic pres for comparison such as the Shadow Hills Mono Gama (nickel transformer setting) and the Biz from Purple. Testing these pres on floor tom, snare drum, vocals and voiceover, each pre's character became clear. The LaChapell exhibited the silkiest high end of the three and a similar low end and midrange to the Mono Gama. The Biz was the most midrange-forward of the three, like the op amp design it emulates. The transient responses of the 583e and the Mono Gama were both stellar, with the Biz slightly more "FET-sounding."

Next, I engaged the 583e's three-band EQ on the snare. Although I prefer four-band EQ on snare drums, I had no problem dialing in a great snare sound with this unit. The final test was Mike Payne on acoustic guitar using a tube mic through the 583e and a tube compressor. "Surely this combo could suffer from too many tube harmonics, causing the sound to be rounded off, or somewhat fuzzy." I thought wrong; it sounded absolutely stunning, and the best the mic has ever sounded on acoustic. It should be noted that the 583s doesn't possess as much tube color as its big brother, the Model 992, but more color can be dialed in by turning up the input gain while turning down the output gain-nice.

The Model 583e tube pre/EQ excels with drums, voice, and harmonically rich stringed instruments. With the three-band EQ within the same two-module width as the 583s, you have a powerful combination for adding character to your recordings. Now, how many can I afford?

—Randy Poole

A column of four plastic toggle switches provides the means to activate phantom power, insert the -20 dB pad, reverse the polarity and alternate between the microphone and the Hi-Z inputs. The novel switches illuminate red when their associated function is active, providing a quick visual reference of the preamp's status. The input stage has a 30 dB range, and the output stage provides up to 40 dB of gain for a total of up to 70 dB of internal gain.

LaChapell created a unique DC-to-DC converter to power the 583s' tube circuit. The process uses the VPR-standard 16 volts from the power supply but delivers a true 250 volts to the tube while consuming a maximum of 210mA with all LEDs lit. This falls comfortably into the 130ma/bay requirement per VPR/API alliance rules [*The 583S is now a VPR Alliance approved module — Ed*].

## In Use

I've been using the 583s for nearly a year, and it sounds fantastic. Although vocals and acoustic instruments seem to be the preamp's forte, I have yet to find something that doesn't record well through the pre.

While recording lead vocals on Tanya Tucker's latest album, I used the 583s along with a Brauner VM-1KHE, an Empirical Labs Lil FrEQ and a Tube-Tech CL-1B, and ended up with a fantastic sound. Tanya's voice is extremely dynamic, and the 583s did a wonderful job of capturing every nuance of her performance without requiring any adjustment from song to song.

Seeming faster in terms of transient response than most tube preamps, the 583s is perfect for recording percussive instruments. I used a 583s pair on kick (AKG D112) and snare (Heil PR20) and achieved great results. On another tracking session, I used the 583s pair on overheads (Royer SF-12), again with good results. I love being able to independently adjust the input and output to control the internal distortion. While maintaining the exact same output level, distortion can be varied from as clean as .025 percent THD+N to as high as 15 percent THD+N.

Recording a grand piano with a pair of Mojave MA-201 mics through the 583s pres yielded a fantastic sound, as did acoustic guitar with an AKG C-24 and electric guitar with a Royer R-122.

I recorded bass guitar through the Hi-Z input and ended up with a raw, aggressive tone that still maintained its extended bottom and top-end presence. The Hi-Z inputs also worked well for recording keyboards, though, at times, I found myself wishing I had a built-in high-pass filter. Otherwise, I was always pleased with the sound.

The 583s tube socket is easily accessible, providing the user with the ability to swap in premium vintage tubes such as Mullard, Telefunken, Philips, RFT, or any other 12AX7/ECC83 variant. The tubes are quick and easy to switch out (although they need a five-minute cool down before being removed). Scott LaChapell sent me several tubes to experiment with. While their differences aren't drastic, they are noticeable. It's nice to have the sonic variety offered by exchanging tubes.

The durability of the plastic switches was my only initial concern regarding the 583s. Yet it turns out that the switches, which are made by NKK, feature an impact rating equal to metal toggles, so no worries there.

## Summary

The LaChapell 583s handles transients better than any tube mic pre I've encountered while retaining warmth unequalled in the world of solid-state pres. Its original, true-tube design and massive sound easily land it on my short list of the best mic preamps ever.

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