

500 Series Microphone Preamps featuring Sonic Farm Silkworm, Pete's Place Electrodyne 501 and Classic API Heider FD312

PAR's Senior Contributor recommends three great 500 Series-compatible microphone preamplifiers.

I honestly cannot get enough of the 500 Series gear. Between my two facilities, I have a 10-slot API 500V chassis, an API Lunchbox and a Tonelux V4 Roadster and I'm already evaluating my best option to increase my 500 Series module capacity. The modular format makes it simple to swap pieces between studios or easily record in a remote location. Trying out a new piece of gear or substituting a few unique pieces for a tracking session doesn't require any additional cabling or installation headaches. The format's low supply voltage, limited maximum current draw and size restrictions do pose some significant design challenges, but manufacturers have overcome these issues as evidenced by the plethora of quality options out there.

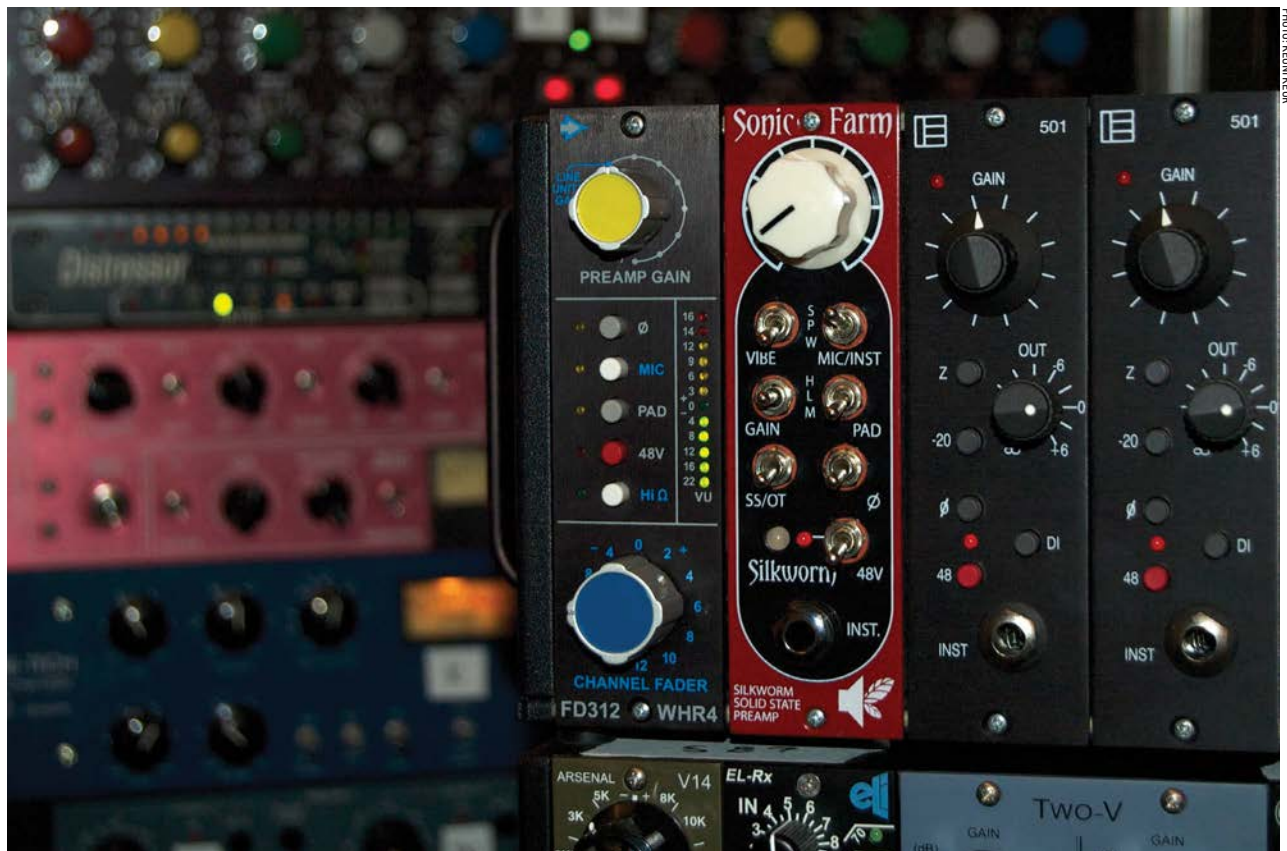


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The biggest challenge for most 500 Series users is keeping track of which modules are the cream of the crop. I've had the chance to log some serious time with several great pieces over the past few months and I'm going to use the next few issues of *PAR* to share my findings.

Here I'll discuss three fantastic mic preamps: the Sonic Farm Silkworm (\$700), the Electrodyne 501 (\$1,000) and the Heider FD312 (\$750). I will also report on MXL's latest tube mic offering, the higher-end Revelation Solo (\$699).



Sonic Farm Silkworm

I became a huge fan of Sonic Farm Pro Audio after reviewing the Creamer (*PAR* May 2012) and was thrilled to hear the company was entering the 500 Series market. Given the Creamer's success, I expected the Silkworm to be a variation of the same pre, but that's not the case. The Silkworm is an entirely new beast and is simply brilliant.

The Silkworm's gain is controlled by combining a three-position Gain switch and a variable Gain Trim control. It's switchable from Medium to Low to High, which was a bit awkward at first; when I tried to raise the gain from low to medium, my natural reflex was to turn the switch up a click, but this actually raises it from low to high.

The Silkworm incorporates a Cinemag input transformer and provides a maximum gain of 66 dB (or 42 dB of instrument gain)

with a fully discrete gain stage and a full DC path with no coupling capacitors. The maximum output level is 28.7 dBu. As with the Creamer, the output is switchable between solid-state balanced and transformer (Cinemag 100% Fe). I found that I almost always preferred the transformer output, but there were some instances (most often acoustic guitar and occasionally vocals) where I preferred the solid-state output. While the Silkworm is not a clone of any other mic pre, I'm still prone to describe it as very GML-esque in the solid-state output mode and very Neve-ish in the transformer output mode.

The Silkworm's real magic is in the Vibe switch, which completely changes the character of the pre. The manual describes this feature as a complex impedance manipulator and it includes three settings, Smooth, Present, and Warped (labeled S, P and W). Present—the most neutral and natural sounding of the three—provides a flat 8 kΩ input impedance while Smooth and Warped utilize a capacitive resistive network. Smooth has a warmer top end and Warped has a top end boost, which seemed more pronounced on dynamic microphones. In most cases, there was a substantial sonic difference between the three settings; when recording with the pre, I would dial in the entire signal path and then switch between the three modes and decide which one I liked best. Each option sounded like an entirely different mic pre and my preference was different nearly every time.

The Silkworm works wonders on drums. I only had a single unit for my review but I'd kill for a dozen channels to use on an entire drum kit during a full tracking session. On multiple tracking sessions, I used the pre along with a Telefunken M80, Heil PR20 and Shure SM57 to record snare drum; I had fantastic results in each instance. I've been utilizing Aurealex's Trap-Xpander to decrease hi-hat bleed into the snare mic and found that it works exceptionally well for that. I also had fantastic results utilizing the pre on kick drum, toms and hi-hat.

The Silkworm works equally well recording electric guitars, vocals and acoustic instruments. I've used it for all of these

over the past several months and my results have always been positive; in every instance, I enjoy auditioning the Vibe setting after getting the sound "roughed in." Its direct input sounds sick on bass; tone is punchy, present and full, while the bottom is thick and defined.



Pete's Place Electrodyne 501

Regrettably, I never had the opportunity to work on an Electrodyne desk; the company closed its doors in the mid '70s—over a decade before I entered the business—but its reputation remains legendary among my peers. I did have the chance to work on multiple Sphere desks as they were quite abundant in Nashville in my early days; Don McLaughlin started Sphere after leaving Electrodyne. McLaughlin retained the majority of Electrodyne's designs, which he used in modified form in the Sphere consoles, making them sonically reminiscent of Electrodyne.

More recently, Ken Hirsch of Orphan Audio (www.orphanaudio.com) purchased Electrodyne and partnered with Peter Montessi and Pete's Place Audio to release the 500 Series Electrodyne 501 mic pre and 511 EQ. These are not pieces created in the vein of the real thing, but *are* the real thing; each amp stage incorporates the original factory engineering notes and high-performance components, carefully matched to

the original specs, including the transformers. The two-stage discrete transistor and transformer-coupled 501 mic pre includes an active DI, too.

The 501 has a maximum gain of 68 dB, adjustable over 50 dB in 2 dB steps with two ranges (depending on if the 20 dB pad is activated or not). Output level is infinitely adjustable from $-\infty$ (off) to +6 dB, while the OUT control knob is labeled with a dot instead of a line which, unless you are looking directly at the pre, can be difficult to read. The mic input impedance is switchable between 50 and 200 ohms and the DI impedance is over 7 M Ω . The maximum output is +30 dB. The clip indicator monitors both amp stages and illuminates when either stage is within 3 dB of clipping.

The first time I put the Electrodyne 501 to work was recording a male vocal with a Shure SM7B. The sound was fantastic, possibly the best tone I've ever heard from an SM7B. Further, knowing the historical significance of the pre practically gave me goose bumps. I loved having the ability to turn the Output down slightly and push the preamp harder to get more color. I used the pre to record female vocals (Sony C800G), this time increasing the Output so as to not drive the pre as hard for a more natural sound and the results were great.

The 501's DI circuit sounds fantastic, especially on instruments with significant bottom end content like bass guitar and analog keyboards. The instrument input's amazingly high input impedance guarantees compatibility with virtually any direct signal while

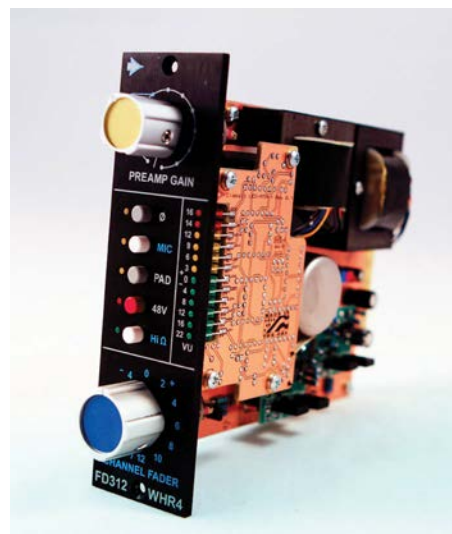
allowing the precise capture of the sound source's true tone.

Classic API Heider FD312

In addition selling components to aid in the restoration, repair and modification of API consoles, Classic API (Audio Products of Illinois) has several 500 Series kits, the majority in the \$175-275 price range, allowing DIYers to build high-quality mic preamps at a fraction of the price of fully manufactured units. Last fall, Classic API released the Heider FD312, the only Classic API model not available in kit form, distributed exclusively by Nashville's Rack-N-Roll Audio.

The Heider FD312 was modeled after the preamps in the legendary Wally Heider Recording Studio 4 console that was custom built by Frank De Medio in the early '70s. These pres were built around stock 312 cards that De Medio modified by replacing the stock input transformer with a custom-wound Ed Reichenbach RE-0887 transformer which he interfaced differently than the stock transformer; this resulted in a smoother, more musical midrange. Utilizing Ed Reichenbach's original notes and specs, Cinemag builds the RE-0887 input transformers utilized in the Heider FD312.

Unfortunately, there is no instrument input on the Heider FD312, though it includes both Mic and Line inputs. In Mic mode, the gain ranges from +22 dB to +57 dB with an input impedance of 167 ohms; in Line mode, the gain ranges from -14 dB to +21 dB with an input impedance of 9 k Ω .



While I've never found myself looking for a line input on a solid-state pre, I've fallen in love with the character of the FD312 when operating in Line mode. I've been running my ITB mixes through two channels in Line mode set to unity, and I've found that the pre adds loads of character to my mix with a smoother top end and improved definition.

In addition to the preamp circuit, the module employs an active booster stage, providing up to 12 dB of gain—identical to the boost circuit utilized in early- to mid-'70s API desks. As with other two stage mic preamps, you can attain more color and harmonic content by increasing the preamp gain and pulling back the Channel Fader, or a more pure tone by setting the Channel Fader to unity or slightly higher and pulling the preamp gain back.

Activating the Hi-Z function (nearly

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always my sonic preference) increases the input impedance to 300 ohms and raises the gain by 3 dB. Activating the pad inserts a 16 dB pad and increases the input impedance to 765 ohms. All of these different impedance changes are wonderful as they provide tons of creative options while dialing in a sound. The stepped channel fader provides a final -16 dB to +12 dB gain stage, making the preamp’s maximum gain 72 dB in Mic mode with the Hi-Z engaged, and 69 dB with the Hi-Z not engaged. The FD312’s maximum output level is +29 dBu and it includes a beautiful 12 segment, -22 to +16 VU meter that ranges from green [-22 to 0] to yellow [+3 to +12] to red [+14 to +16] where 0 VU = +4 dBu.

I first used the Heider FD312 to record kick and snare on a tracking session. The pre sounded fantastic; I found myself using substantially less-than-typical EQ. On

another tracking session, I used the pre on toms and was blown away again. When it comes to recording drums, the Heider FD312 is super. It’s punchy as hell, with tons of character, leaving nothing to be desired. The pre also excels with acoustic instruments and vocals.

The best way I’ve found to describe the Heider FD312 is like a classic API mic pre but better. It has all of the rich punch and clarity of an API with a milky-smooth midrange that sounds as musical as any pre I’ve ever encountered. The Heider excels on drums and electric guitars, but is equally fit for recording vocals and acoustic instruments.

Summary

The Sonic Farm Silkworm, Electrodyne 501 and Heider FD312 are all three wonderful mic preamps. If this was a shoot-out, I’d have to call it a three-way draw because

they are all winners. All are packed full of character, reasonably priced and fantastic performers. If you can afford it, I’d recommend getting a pair of each. And, on the microphone front, MXL continues to impress with its high-quality mics that are surprisingly affordable.

Next PAR, I’ll delve into Moog’s 500 Series Ladder Filter and Analog Delay as well as some other surprises.

Contacts:

Sonic Farm | sonicfarm.com/pro-audio/silkworm

Rack ‘N Roll Audio | racknrollaudio.com/sales-product.php?product_id=1383065948

Pete’s Place Audio | petesplaceaudio.com/electrodyne.html

MXL Microphones | mxlmics.com/microphones/studio/Revelation-Solo