

EQ Magazine, January 2004 Eureka



By Greg Rule

You've invested in a state-of-the-art DAW, loaded it with plug-ins, purchased some nice mics, an accurate pair of nearfields, and all the trimmings. Your tracks are sounding good. Nice and clean. But then you play a few mixes for your veteran producer friends and the hammer drops. "Where's the beef?"

The new Eureka channel strip from PreSonus could be the cost-effective analog solution you need. Pump your vocals, guitars, keys, drums, or you-name-it tracks through Eureka's transformer-coupled Class-A electronics, and . . . bring on the punch and power. PreSonus proudly touts Eureka's "pro-level performance at a mid-level price point." But how well does it live up to its billing? Let's find out.

TOUR OF FEATURES

The first thing you'll notice when handling Eureka is its rock-solid construction and knob-packed front panel. The sculpted, brushed-metal faceplate looks pro, as do its heavy-duty blue knobs and matching blue backlit buttons. The knobs are solid and tight — no wiggly BS. No cheesy wall-wart here either; the unit connects to the AC outlet via a standard 3-prong power cable.

Eureka's controls are grouped into four main categories across the front panel: preamp, compressor, parametric EQ, and master. A VU meter sits in the center, and can be toggled to display compression gain reduction or master output level. In case you're wondering where the on/off switch is, it's located on the back panel — which might be inconvenient, depending on your studio setup.

A rear-panel XLR input is provided for plugging in your mic of choice; instruments plug directly into the front-panel 1/4" input. A button is provided for activating 48V phantom power. The preamp section also includes controls for 80Hz cutoff, phase reverse, impedance (more on that below), and my personal favorite, Saturate, which

adjusts the drain current on the input FET amp to simulate the effect of tube saturation. It's a useful warming effect, and a smooth one at that, but note that "simulation" is the key word, as PreSonus chose not to equip Eureka with a tube as they did on their FireStation computer interface. Tubes aren't for everyone, though, as they can be temperamental and have a shorter lifespan.

Another notable feature is Eureka's variable input impedance, which allows you to "tune" the unit to a variety of microphones. It can also be used as a tone-shaping effect. "Being able to match impedance to each of your microphones is a powerful tool," adds Mitch Gallagher, "and can definitely enhance the sound. In Eureka's case the 5-position impedance control covers a broad range. The lowest setting, 50 ohms, should be great for most ribbon mics. Used with condensers, reducing impedance cuts low end and results in lower output. Fortunately, Eureka has more than enough gain to make up for it. For most applications, you'll use high [2,500 ohm] impedance, but the tonal options provided by the other settings are worth exploring, and a nice bonus to have available."

Eureka has a fast-response FET compressor onboard, offering both soft and hard knee options. It also has a make-up gain stage and an internal high-pass side-chain control. The latter can be used for frequency-specific compression — de-essing, for example. The routing switch is a useful option, which allows the compressor to be placed before or after the EQ section in the signal path.

In the parametric EQ section, three identical control sections are provided for low, mid, and high frequencies. From low to high, the frequency range in each section overlaps into the next — no gaps, in other words. For each section you'll find a knob for selecting frequency, bandwidth range, and positive/negative gain. "It's great for broadband shaping," says Mitch of the EQ section, "and it has enough precision that you can dial in surgical cuts as well."

Finally, the master section at far right provides a single master gain control and a switch for toggling between VU display modes. "I love the sexy VU output meter," says Mitch. "Combined with the three signal present/clip LEDs, it gives you a good idea of what's happening in the unit level-wise. I wish that you could switch it to different points in the signal path — post-compressor, post-EQ — however."

SESSION NOTES

I toggle my workload between two studios — a home studio, used primarily for line-level tracking and editing, and a larger offsite facility for open-air recording and mixing. The home rig is digital, so I welcome the chance to bring devices in that can pump up those cold, digital tracks. And that's just what I did with Eureka, as I was able to use it for keyboards, drum/percussion tracks, and vocals during this review cycle. Mitch Gallagher conducted additional guitar, bass, percussion, and vocal

sessions at his well-equipped studio in Nashville. Here's what we discovered during our sessions:

As slick as Eureka is physically, PreSonus had to cram a lot of features onto that slim front panel. The knobs are positioned tightly, so if you have thick fingers, you might be in for a bumpy ride. Heck, even fine-fingered folk might have to be extra precise. In the heat of tracking, I found it nearly impossible to twist a knob without bumping the one adjacent to it. Fortunately the knobs are tight, so they seldom turn when bumped. Mitch's main complaint wasn't so much the tightness of the knobs, but "the shiny metallic blue knob faces, which make it hard to see the settings against the silver face plate."

In one round of tests, I used Eureka to process some high-resolution solo vocal files — including one of a pro Broadway singer belting at full lungs. That particular source file was all over the map dynamically, and needed some compression and a touch of EQ. I routed an output from my DAW into Eureka's mic-pre input, since I couldn't resist dialing in a bit of saturation to round off the edges. (In order to access the Saturation feature, you have to patch into the XLR or front-panel instrument input, as the 1/4" input on the back panel bypasses the mic-pre section entirely). I also gave the vocal a 12k bump for a bit of air. Within minutes I had a smooth, natural, and controlled sound. Excellent.

Mitch tracked guitars directly through Eureka. "The instrument input sounded fine with all my guitars and basses. Its tone is full and rich, without the sterility or harshness sometimes associated with DI inputs."

In general, Mitch found Eureka's sound to be "tight on the low end, and detailed on top. It doesn't have quite the lower-midrange girth of some preamps, but tracks recorded with it sit well in a mix without need for EQ. Dynamically it responded well to both loud vocal passages as well as to acoustic guitar performances. The preamp's saturation control isn't an extreme distortion effect. Rather, it softens the top end, fattens up the mids, and reduces upper midrange. At 50%, the effect is noticeable, but not overly intrusive on the quality of the original signal. Even at 100%, the original signal comes through, albeit darker, less present, and rounder. I liked this effect most on hard-sung vocals and distorted electric guitar. For delicate tracks, such as nylon and steel-string finger-picked acoustic guitar, I felt that it obscured detail. On percussion, such as finger cymbal, tambourine, and triangle, I preferred the straight sound of the preamp."

The owner's manual provides suggested settings for vocals, guitars, keys, and drums, but one thing they don't talk about is running complete mixes through it. Obviously Eureka is a mono channel strip, but in a pinch you could try using it for "shoestring" mix processing by running left and right channels through it one at a time, then realigning the tracks in your DAW. For fun, I tried just that by using a few mixes that were extra edgy and "digital sounding." I was curious to see how much analog

smoothing I could achieve, and also how much noise would be introduced in the process. So I dialed in 50-percent saturation, a touch of soft compression, and a moderate amount of gain. As sketchy as this process was, I have to say that the results weren't bad. The tracks sounded warmer, and had lost much of the "digital edge" from the original straight-from-DAW mixes. Noise was virtually non-existent.

JURY

PreSonus has a winner on their hands with Eureka. It's a well-built, high-performing channel strip at an affordable price. Mitch agrees. "At under \$700, Eureka stands out in the crowd. Its specs and feature list are cool — transformer-coupled input, flexible signal path, good processing capabilities, etc. — but its outstanding attribute is its open, detailed sound. It would make a great choice as a front-end for a DAW."

There's no shortage of affordable slim-line channel strips on the market. Focusrite and MindPrint have several units that go head to head with Eureka, to name two manufacturers. But Eureka holds its own in the pack, and stands out in several key areas. Give it a test run and you might be surprised at how much it can improve your tracks — especially those cold, edgy digital ones. Thumbs up. EQ