

Christian Musician Magazine, Jan/Feb 2004 Eureka



Even in this new era of high-resolution recording systems, truly professional results can often be elusive. Most audio engineers can appreciate the impact of great mics on a recording. However, the mic preamps used in conjunction with them contribute equally to the end result. Those mic preamps found in the latest breakout boxes and tabletop recorders will always hinder even the finest mics.

If you've been gear shopping lately, you know that inexpensive mic preamps are plentiful, and amidst the flurry of marketing hype it's difficult to choose wisely. Most all of these preamps are mediocre at best. As a result, shoppers are often thankful for flexible product return policies. However, the new PreSonus Eureka is poised to redefine expectations of quality in affordable mic preamps across the board.

The Eureka was inspired by its predecessor the VXP. In short order the VXP emerged as a respectable studio tool, and is still used by many top professionals today. For example, Brent Milligan just produced an incredible new album for the Paul Colman Trio. He informed me that he tracked some of the lead vocals on the album with a Neve preamp, while others were tracked with a VXP. Can you guess which tracks are which?

Apparently the product engineers at PreSonus were not content to bask in the success of the VXP and merely repackage it. The Eureka clearly represents a dedication to innovation. While the front panel aesthetic of the Eureka exudes a level of sophistication (reminiscent of another highly regarded and very expensive product line) previously absent at this price point, equally impressive refinements are evident throughout.

The input stage features an updated version of the Class A, transformer-coupled, dual servo-controlled circuit found in the VXP. In the Eureka the noise floor has been reduced, while the headroom has been notably increased. In addition to a full complement of features, a mic impedance selector has also been added to the Eureka, further distinguishing it from other mic preamps in its class.

The compressor follows logically after the preamp stage and before the EQ (although the order of compressor and EQ can be reversed). Unlike the VXP, the compressor in the Eureka allows exact control of all parameters. The compressor section also features a soft-knee switch, side-chain high-pass control, and a bypass switch. A switch in the master section enables monitoring of gain reduction on the main VU meter.

The EQ section of the Eureka has also been updated. In lieu of the four semi-parametric bands of the VXP, the Eureka employs three fully parametric bands (20Hz-300Hz, 200Hz-3kHz, and 2kHz to 20kHz). Each band provides up to 10dB of gain or attenuation. The Q of each band can be adjusted from 2/3 of an octave to 3 octaves. The EQ section also contains a bypass switch.

Initial tests consisted of playing a bass through the Eureka without compression or EQ. The dynamic range, transient response, and overall balance were inspiring. After introducing compression, EQ, and varying amounts of front-end saturation, I discovered how versatile the Eureka is as a tone-shaping tool.

Vocals tracked through the Eureka were stunning. The preamp stage is quite transparent, yet natural sounding. When using the Eureka to amplify other sources, the results were consistently impressive. Manipulating both the saturation and impedance controls yielded useful options for customizing tracks without using EQ.

Each stage of the Eureka is transparent and functionally efficient. I'm especially enamored with the transformer-balanced input and saturation control. It's not a tube, but the even-order harmonics it can generate are similar in nature. I also found the VU meter to be indispensable in all applications.

Without a doubt this is a serious recording and live sound tool. Some of the features and test results have not been discussed here. Therefore, you are strongly encouraged to bring a Eureka to your studio and discover its potential for yourself. After all, its paltry suggested street price of \$499 won't necessitate the liquidation of your other preamps and processors.

PreSonus continues to raise the bar for cost-effective recording equipment. The Eureka is a well-conceived tool with superb fidelity. Unless you work in a truly stellar facility, chances are that you won't be able to discern the 5-10% difference between the sound quality of the Eureka and similar units priced well into the thousands.