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Rane PEQ 55 Parametric Equalizer

BY WAYNE BECKER

Rane always presents its gear in a colorful aspect that makes the arduous task of reading a manual palatable. They have also been known for innovative and unique products that at sometimes seem to be driven more by the work of mad scientist rather than a marketing department. Their latest product, the PEQ 55 is an analog controlled DSP that combines familiar analog control of digital filters. The focus of this design is to allow the user to easily compare two EQ curves, link channels, provide increased immunity to RF and electromagnetic interference and improve filter accuracy while lowering the cost per filter set.

FEATURES

The PEQ 55 is a two-channel unit in a 2RU box that offers five two-channel digital parametric filters that can be used in a stereo five or 10-band mode or two five-band independent modes, along with separate high and low-cut filters, and a three-band tone control filters. The unit is capable of selecting dual mono five-band, mono 10-band and stereo linked five-band or 10-band operating modes. Other features include individual overload indicators for each filter, bypass modes per filter or channel as well as a selectable low and high-shelf mode on the filters A1 and B1 and A5 and B5 respectively. The bandwidth control is disabled in the shelving mode and filters A5 and B1 low and high shelving are disabled in the 10-band mode.

The unit uses an internal switching power supply instead of a wallwart. The matte black front panel is laid out nicely using gray and black pots for gain, frequency and bandwidth for each of ten filter sections. The gain pots have a detent at the null position but there are no other detents for frequency or bandwidth settings, so be careful not to bump them once there set. A locking cover in a fixed installation situation is a definite must.

There are small sturdy switches used to control the bypass and frequency band multiplier (.1, 1 and 10X) modes. The tone section uses small faders to control the low, mid and high fixed ranges of +6 to off with the crossover points being 300 Hz for the low/mid and 4 kHz for mid/high. The low-cut filter goes from 15 Hz to 240 Hz and the high-cut filter goes from 5 kHz to 20 kHz. The phase shift is zero degrees with the controls at their center detent. Metering for both input and output are handled by eight LEDs representing a range of -12 to +12.

Finally there are small switches to select the channel bypass, A/B and 10-band or five-band operation. The bypass switches have two modes of operation. If the rear panel mode is set "bypass all," all filters and level controls are bypassed. If the switch is set to "bypass filters," only the filters are bypassed. There is also an overload LED for each filter, useful to help reduce the chances of distortion as you tweak the sound.

The rear panel sports a universal AC cord socket and two sets of active balanced inputs and outputs utilizing a TRS 1/4-inch jack, XLR and Euroblock terminals. And for those of you who consistently battle with code compliancy, the unit is UL listed as Commercial Audio Equipment 24TJ.

IN USE



Pulling the unit out of the box and connecting it to the console, the unit felt rugged; there was no play in any of the knobs or switches. Connecting the unit for power immediately revealed the lack of a power switch. Although not necessary in a fixed installation, studio and live sound users may miss having it available. Connecting the unit is a snap and straightforward. Setting the controls to null revealed a few quirks; the input level doesn't allow you to turn the channel all the way down and the input and output level controls are reversed, sliding up on the input level to increase, while sliding down on the output level to increase. (According to Rane the input and output sliders work 'in reverse' to maintain unity when both are utilized at the same time - Ed.)

Also the low and high-cut filters detent at 60 Hz and 10 kHz respectively

I ran a series of source material through the unit from various CDs. My first impression with the sound of the unit is that it was very musical. The bypass control bypasses the filters but is still prefader and in the digital domain. I found selecting frequency and bandwidth very similar to a traditional analog EQ however the bandwidth was a bit more subtle and took careful listening to narrow in on the width. The first filter and last filter set contain a low and high shelf setting via a recessed button. Using the filters, the unit quickly let me dial up subtle changes in the sourced material.

The control of the bandwidth is where you really appreciate the quality of this unit, as it let me hone in on the strumming of a particular guitar part that competed with a vocal. Switching to live use in my portable PA rig, the unit let me pinpoint and dial out problematic frequencies, raising the gain appreciably.

In the 10-band mode, I noticed that if you want to bypass the unit, you need to hit both bypass switches, engaging this mode does not allow the bypass to control all the filters. Also, in this mode, the A/B switches have no affect as you are using all the filter sets. Also, labeling the knobs for future recall could be a little tough with the minimal markings on the faceplate. Setting up two curves and selecting between them was smooth and without any pops or clicks as in some analog units. As far as the tone controls, they can really bare down on the sound, changing the sound dramatically.

SUMMARY

Overall I had a blast with this unit. It sounds great and puts extreme control in the hands of the user. So as with all EQs, novices beware. A good understanding of EQ basics is a good prerequisite if you don't want to end up destroying a mix or suck the gain out of a sound reinforcement system. It would have been nice to have digital I/O, especially with the advantages of staying in the digital realm and the wide use of digital I/O being used in many installations and studios.

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