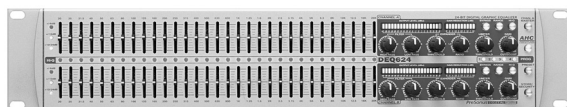


# PreSonus DEQ 624

Professional Sound, July 2003 By Ted Barker



Front View



Back View

Perhaps the most powerful tool in the hands of a live sound engineer is the third octave graphic equalizer. EQs can make up for deficiencies in room acoustics, budget consoles, racks and stacks as well as being a must-have item for stage monitor mixes. You can mix a show without dynamics and effects and end up with a reasonable result but if you cannot control the room you cannot get what they pay us for. The EQs that are most asked for on equipment riders to date are analog, have frequency filters that minimize effects on adjacent bands, are low noise and reliable.

While the guts have continually improved, the basic function has not changed since the 1970s and as a result experienced engineers are not quick to embrace new ways of doing things when the old ways have been working fine for so long. As digital "innovators" continue to redesign analog devices they do not ask the end user what they want from these products. The result is often products that are so far removed from the tools we want that they are continually met with mild interest and skepticism. These designers should be forced to try and ring out 10 monitor mixes in a half hour or stand in the middle of 10,000 people while messing around with their touch sensitive buttons and screens that have 10 different functions and four layers of operation. Only then would they finally get it! The people at PreSonus have got the message. Their DEQ 624 dual-channel 31-band digital EQ has the stuff you want without the need to relearn our reflex actions.

## Features & Technology

The PreSonus DEQ 624 utilizes 24-bit digital signal processing with two sets of 31 digital EQ encoders in two rack spaces. There are separate variable high and low pass filters, limiting and expansion for each channel. The range switching is particularly interesting with choices of +/-6dB, +/-12dB and 12dB/24dB range selection for each channel. The bypass switch on each channel is a hardwire input to output type however the onboard multisegmented LED displays for output level in dBu and gain reduction in -dB will continue to show the processed levels. The Channel A Master switch slaves the 31

digital EQ encoders of the B channel to the A channel for fast stereo setups. Any of the 62 bands of the DEQ 624 can be switched to Hi-Q mode, which will allow that frequency filter to operate at 1/8th octave (Q=11.54) rather than 1/3 octave normal (Q=4.32) operation to minimize effects on adjacent frequencies. There are four snapshot memories available that will store all functions of both channels including dynamics but when they are recalled only the EQ functions are adjustable while in preset mode. There is a proprietary hum reduction system labelled AHC (Adaptive Hum Cancellation) that is in learning mode at all times when in the off position and once the switch is engaged will take eight seconds to acquire the noise frequency and apply correction. During this time the switch indicator will be blinking. Lastly the PreSonus DEQ 624 has a security lockout system that will allow the operator to defeat the front panel controls when in the preset mode. Entering a three-switch combination will restore the operation of the front panel.

## Significant Published Specifications

Dynamic Range >105dB  
Noise Floor -95dBu  
S/N ratio >90dB  
Headroom +22dBu  
Freq. Response +/- 0.5dB from 10 Hz to 22 kHz  
THD + noise un-weighted 0.005%  
Weight 14 lbs.

## Testing

If you have never used a digital product before, I assure you that this is one of the most intuitive products that I have seen thus far. Not too long ago I was tempted to take a digital EQ out on a show because it offered remote operation. I asked one of the shop's prep. guys to get it running on the bench so I could get used to it and after 20 minutes he still did not have it operating. That show like so many others turned into a loading nightmare and we ended up with one and a half hours to get the show operational instead of the four hours we should have had. If any of the gear had caused grief that show would not have gone on. The PreSonus DEQ 624 got plunked down, hooked up, powered up

and functioning without having to open the manual. This is what we all want! I do admit that I had to skim the manual to operate the HiQ, AHC and memory functions but that is to be expected. The unit is quiet. I could not get it into digital clipping. The limiter is seamless unless you hammer it and the noise reduction is outstanding. I tested the PreSonus VXP mic pre/processor in Professional Sound Vol. XI No. 3 and it was the first PreSonus product that I had seen that could move from the studio into live work. They made me a fan with that one. Now they have convinced me that it was not a fluke. They do understand the demands of live sound.

## Final Comments

The PreSonus DEQ 624 with its expansion and limiting is a natural at Front of House. Its HiQ function and +12dB/-24dB range would be awesome in the monitor mix position and the security lock out makes it ideal for dummy proofing installations. The PreSonus 624 is priced in the same range as any touring quality EQ and it does a whole lot more. Add the PreSonus name to your list of preferred EQs – you won't regret it! The manufacturer's suggested retail price for the PreSonus DEQ 624 is \$1,250. For more product information, contact: Erikson Pro, 21000 TransCanada Hwy, Baie d'Urfe, PQ H9X 4B7 (514) 457-2555, FAX (514) 457-0055, [info@eriksonpro.com](mailto:info@eriksonpro.com), [www.eriksonpro.com](http://www.eriksonpro.com).

## Distributors Comments

When I first saw the PreSonus DEQ 624, I thought, "another graphic equalizer." Well, it is, but with a whole lot more benefits. The AHC circuitry effortlessly removes noise and hum from any system. The lockout function keeps unauthorized users from changing settings. The memory function lets the user recall four different EQ curves in a flash. The limiter protects the entire system from overload. The HiQ mode allows for ultra-precise tuning to eliminate only those pesky feedback frequencies. And best of all, the unit is very easy to use. PreSonus have made huge improvements to a classic audio tool.  
– Steven Barry, Product Mgr Erikson Audio