

Rane DEQ 60

1/3-octave Graphic Equalizer

With this EQ, what you see is really what you get

Great myths of audio #1,148: "A graphic EQ's sliders draw the response curve."

Well, they certainly try to. But with standard graphic EQ designs, there is interaction among bands that manifests itself in various ways — increased passband ripple, "spilling over" from one range to another, and additive response when boosting adjacent sliders.

In a breakthrough (and patented) development, Rane — a company that knows a thing or two about graphic EQs — has developed the DEQ 60. This 1/3-octave graphic EQ reduces passband ripple and band interaction to virtually nothing; indeed, when you look at the sliders, what you see is how the signal is being processed.

So what, you might think — isn't this mostly of academic interest?

Well, no, because it really does make a difference in the sound. Frankly, I've never been a huge fan of graphic EQs for anything other than general tone-shaping, but I didn't know why until I played with the DEQ 60. The sound is clearer, more precise, and less prone to unpredictable response characteristics. (Incidentally, for those who prefer the less surgical response of standard EQ, you can select between Proportional-Q or the new "Perfect-Q" response.

▶ RANE DEQ 60

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SUMMARY: The DEQ 60 uses a new graphic EQ design that does what graphic EQ was always supposed to do: show the frequency response with the sliders.

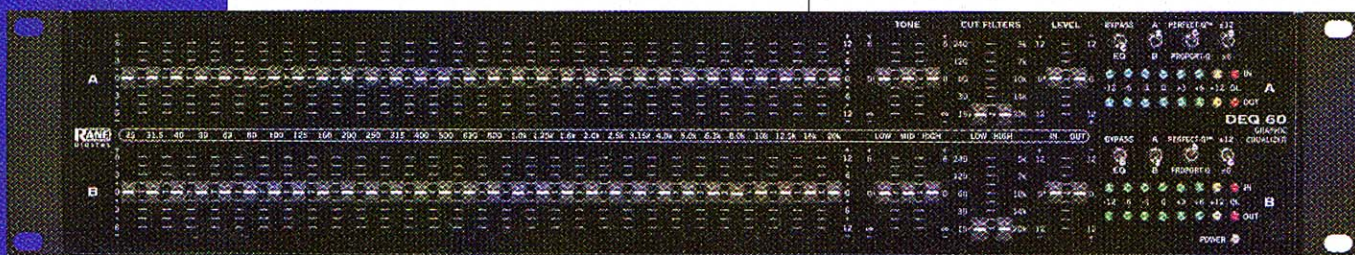
STRENGTHS: More predictable, precise sound than older designs. Each channel includes three-band tone controls, high/low cut filters, and metering for input and output. Relay bypass in case of power failure. Can choose between conventional Proportional-Q response and "Perfect-Q" response. Universal-voltage internal power supply.

LIMITATIONS: No preset storage or MIDI control. No digital I/O.

PRICE: \$999

a menuless, "one function, one control" design, as befits Rane's description of it as an "analog-controlled digital product." Naturally, there are two banks of 30 sliders for the 1/3-octave response. These have a one-inch throw with center detent, and are digitized to 256 steps for controlling the internal DSP.

Thoughtfully, there are three bands of "tone control" for each channel if you want to tweak the highs, lows, and/or mids. These use 12 dB/octave Linkwitz-Riley filters, with crossover points at 300 Hz and 4 kHz. Variable filters are included for low cut (15 to 240 Hz) and high cut (5 to 20 kHz); individual level controls (with a ± 12 dB range) are available for each channel's input and output.



For more information on the Perfect-Q design, surf to www.rane.com/note154.html.

BACK TO FRONT

The rear panel is minimal, with three paralleled connectors for the two inputs and outputs: XLR, TRS 1/4-inch, and Euroblock. There's also an IEC AC cord socket, and a bypass mode switch (this determines whether the front-panel channel bypass switches bypass only the filters, or bypass all controls).

The front panel is where the action is, and the first thing you notice is there's no LCD — this is

At first, I thought there was a bug with the output control: unlike the input control, pushing it *up* turns the gain *down*. Say what? But after a little head scratching and literature reading, I realized that Rane did this so you could grab the input and output controls at the same time, and move them in tandem to change the unit's overall sensitivity (e.g., if the input level goes down, the output level goes up to compensate). This is a minor touch to be sure, but a clever one.

Each channel has four front-panel switches: bypass, A or B channel select, choice of Proportional-Q or Perfect-Q response, and range

switch for the graphic EQ sliders (± 6 or ± 12 dB). These work as expected, except for the A/B switch. This can act like a "pseudo preset select switch" if you're using the same curve for both channels; in other words, set both switches to A, and both channels will follow the A (upper) curve. Set them to B, and they'll both follow the B curve. Of course, you can also set one channel to A and one to B if you need different responses for the two channels. Note that the A/B switches select between the entire channel (graphic EQ, tone controls, cut filters, range switch, etc.).

Finally, there are four 8-step, peak-reading LED meters (one for each input and output). Peaks are held for 1.5 seconds.

SOUND QUALITIES

Switching between the Perfect-Q and Proportional-Q options is instructive. The most obvious difference is the additive nature of the sliders when

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boosting in Proportional-Q mode; for a given set of control settings, any effects seem more "exaggerated." With program material, I greatly prefer the Perfect-Q setting, which gives much tighter control. However, with some individual instruments (particularly distorted guitar), the Proportional-Q

setting, while technically less accurate, has its own qualities that aren't necessarily undesirable.

If you get a chance to try out the DEQ 60 in a store, boost three adjacent midrange bands by 12 dB, then switch between the two response options. The difference will be obvious (no golden ears required): the Proportional-Q setting will sound peakier and louder, while the Perfect-Q option will have a tighter, more defined sound that, despite being more subtle, is equally effective — if not more so.

After taking graphic EQs for granted all these years, and accepting any limitations as "well, that's just the way it is," it's quite something to hear graphic EQ the way it was intended to be. It's sort of like watching a restored version of an old silent movie; even though the plot, the characters, and the actors are the same, seeing the restored version is a different experience. The DEQ 60 will definitely change the way you use graphic EQ, but it will also change the way you *think* about graphic EQ. ■