Equalizers

ULTRACURVE PRO DEQ2496

Ultra-High Precision 24-Bit/96 kHz Equalizer, Analyzer, Feedback Destroyer and Mastering Processor



- Ultra-high resolution 24-bit/96 kHz mastering processor featuring 32/40-bit floating-point DSP technology
- Audiophile 24-bit/96 kHz A/D- and D/A converters offering 113 dB dynamic range
- 4 concurrently selectable EQ modules (31-band graphic EQ, 10-band parametric EQ, Feedback Destroyer plus 3 Dynamic EQs per stereo channel)
- Ultra-high resolution 61-band real-time FFT analyzer with additional auto EQ function for room and loudspeaker equalization
- Unique VPQ (Virtual Paragraphic EQ) option allows parametric control of graphic EQs
- State-of-the-art compressor/expander with peak limiter per stereo channel, additional stereo imager and stereo delay for delay line applications
- Multi-functional level meters (peak/RMS, VU and SPL meter with dBA/dBC weighting via RTA/Mic input)
- 64 user memories for complete setups and/or individual module configurations
- Separate mic/line input with phantom power for RTA and Auto-EQ applications
- Balanced inputs and servo-balanced outputs with gold-plated XLR connectors, stereo aux output, AES/EBU and S/PDIF inputs and outputs (XLR and optical)

The DEQ2496 is a high-precision digital 24-bit/96 kHz EQ/RTA mastering processor, ideal for sophisticated live sound trouble or audiophile mastering. Whether you're putting the finishing touches on recorded material or creating an optimal live sound for a multi-way PA, the DEQ2496 is built to provide meticulous control.





Equalization. Dynamics. Feedback Correction.

You can have it all with the DEQ2496. How about automatic FFT analysis with Auto EQ? We added that too. The DEQ2496 is a whole rack of ultra-flexible equalization options, dynamics and time-correction solutions, all designed to optimize your rig's sound quality like no other single piece of processing gear. Consider the DEQ2496 your audio engineer's Swiss Army Knife – here are a just few examples:

- Dual 31-band Graphic Equalizers (stereo linkable)
- Dual 31-band Virtual Paragraphic Equalizers (stereo linkable)
- Dual 10-band Parametric EQ's per stereo side
- Dynamically-activated EQ
- Feedback Destroyer with Learning Mode
- Stereo Imager
- Compressor/Expander
- Limiter
- Digital Delay
- RTA/SPL/FFT Analyzer with Auto EQ function

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- Professional Wordclock input and MIDI connections for full remote control, preset dumps and system updates
- Open architecture allowing future software updates via MIDI
- "Planet Earth" switching power supply for maximum flexibility (100 - 240 V~), noise-free audio, superior transient response plus low power consumption for energy saving
- 3-Year Warranty Program*
- Conceived and designed by BEHRINGER Germany

Dual 31-band Graphic Equalizers, 31-band Virtual Para-graphic Equalizers and 10-band Parametric

Naturally, the DEQ2496 has a phase-neutral digital graphic EQ. But in addition, we've added a function that allows you to change the frequency bandwidths from 1/3, to as tight as 59/3. Or, if you prefer the old-school approach to variable bandwidth, we've included 10-bands of parametric filters that can be incrementally fine-tuned all the way down to 1/60 of an octave.





Dynamically-Activated EQ

Dynamic EQ (DEQ) automatically raises or lowers a defined frequency range based on volume level. It's literally a combination of an equalizer (with frequency center and bandwidth controls) and a dynamics processor (with Attack, Release, Threshold and Ratio parameters). DEQ opens up a world of both creative mastering and PA problem solving possibilities. We've given you total control with multiple filter types including bandpass mode. And of course you can store DEQ settings for recall at any time manually or via MIDI.

*Warranty details can be found at music-group.com.

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Feedback Destroyer with Learning Mode



With the digital capabilities we've just listed, it's easy to see why we were able to include a highly-effective Feedback Destroyer (FBQ) feature – it's essentially a dynamically-activated parametric EQ that "watches" the whole frequency spectrum in 1⁄60-octave bands and then instantly identifies and notches out feedback. FBQ can be run in AUTO mode, or in Single mode. We've also included a Learn mode that generates short audio pulses, raises their gain until feedback occurs, and then locks onto feedback-prone frequencies.

For more than 20 years, we have made some of the world's most acclaimed FBQ Feedback Elimination processors. Now you get this revolutionary FBQ Feedback Detection System in every DEQ2496, so your sound system is always completely free from feedback. Utilizing an ultra-fast detection system, this ingenious circuitry helps you recognize and tame feedback frequencies immediately. LEDs on the associated EQ frequency-band fader illuminates, showing you at a glance which fader to lower to overcome the feedback – it doesn't get any easier than this!



Stereo Imager

While usually considered a mastering technique, the ability to widen the stereo image can be useful in live sound work, too. The DEQ2496 Width processor provides control over Stereo Width (how clearly the two sides of the stereo image are separated from each other), Asymmetry (relative volume of left/right stereo signal), Rotation (panning of stereo + mono in the stereo image) and a multipart Shuffle function than can generate an additional low-frequency stereo width effect.

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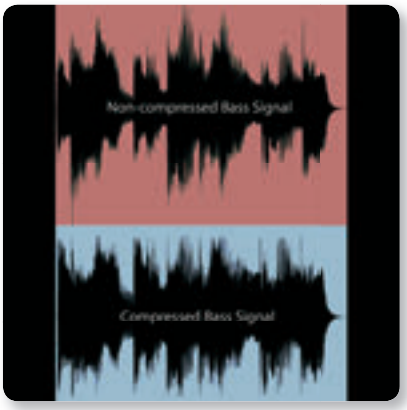
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Compressor/Expander and Limiter

The DEQ2496 has a comprehensive set of dynamics processing tools that can be used as two independent channels or stereo linked. Everything you'd find on a dedicated compressor/expander is here, including variable ratios from 1:1.1 - 1:100, Attack times of 0 - 200 ms, 0 - 3 dB variable knee and 20 ms - 4 s Release times, all adjustable via a coarse/fine adjustment scale. The built-in separate Limiter features Threshold, Hold and Release functions.





Digital Delay

You can delay either the DEQ2496's Main or Aux outputs from 0 - 300 ms, and process left and right channels independently – and not only can you specify the time delay in feet or meters, you can even instantly compensate for changes in the ambient temperature.

RTA/SPL/FFT Analyzer with Auto EQ function

The DEQ2496 features an FFT real time analyzer for precise graphic display of 61 frequency bands. You can monitor main or digital inputs and outputs, Aux/Digital Out, or a feed from an RTA microphone and display the results in a multitude of ways including funky retro VU meters. You get all of the usual peak/hold, display rate and scale features you would expect from a professional measurement tool, plus our user-definable AEQ (Auto EQ function), which allows you to analyze and adjust your system's frequency response automatically (perfect for "roughing out" initial room adjustments). In Graphic EQ mode, you can choose between Uncorrected response, which shows the mutual influence of adjacent bands, or select True response to apply a specially developed algorithm that displays the actual results of the equalizer setting.



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Easy to Set Up and Use

The DEQ2496 has balanced inputs and servo balanced outputs with gold-plated XLR connectors, stereo aux output, AES/EBU and S/PDIF inputs and XLR and optical output. Configuration is intuitive, with on-screen block diagram displays and you get a separate RTA mic/line input with phantom power, a professional wordclock input and MIDI connections for full remote control, as well as preset dumps and system updates. You can maintain up to 64 comprehensive user presets at a time and of course dump and load as needed. You can also save and recall individual modules such as DEQ, PEQ, Width or Dyn. These subsets of complete presets let you maintain most of a preset's settings but vary a few (such as graphic EQ) without having to generate a whole new preset.

Built Tough for the Road, Precise for the Studio

The DEQ2496 features high-quality 24-bit/96 kHz A/D and D/A converters and two high-performance 32/40-bit floating-point digital signal processors for incredible sonic resolution and 113 dB dynamic range. The internal switch-mode power supply assures maximum flexibility (100-240 V~), noise-free audio, superior transient response, lowest possible power consumption and freedom from power surge damage.





Feature Galore

Quite frankly, the DEQ2496 is BEHRINGER's best multi-function processor in the pro audio industry. If you only have one thing in your magic bag of tricks, shouldn't it be the DEQ2496? Try one out today, and you'll never leave home without it!

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You Are Covered

We always strive to provide the best possible Customer Experience. Our products are made in our own MUSIC Group factory using state-of-the-art automation, enhanced production workflows and quality assurance labs with the most sophisticated test equipment available in the world. As a result, we have one of the lowest product failure rates in the industry, and we confidently back it up with a generous 3-Year Warranty program.

