



Technical Specifications



ULTRACURVE PRO DEQ2496

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

EN 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 Paragrophic 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)
- 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
- High-quality components and exceptionally rugged construction ensure long life
- Conceived and designed by BEHRINGER Germany

Specifications

Analog Inputs

Type	electronically balanced
Connector	XLR
Impedance	22 k Ω at 1 kHz
Max. input level	+12 or +22 dBu, switchable
CMRR	40 dB typ.

Analog Outputs (Main)

Type	servo-balanced
Connector	XLR
Impedance	100 Ω at 1 kHz
Max. output level	+12 or +22 dBu, switchable

Analog Outputs (Aux)

Type	servo-balanced
Connector	¼" stereo jack
Impedance	100 Ω at 1 kHz
Max. output level	+12 dBu

System Specifications

Frequency range	10 Hz to 35 kHz (-1 dB) @ 96 kHz sampling rate
Signal-to-noise ratio	> 113 dB main input/output > 107 dB aux output
THD	0.007 % typ. @ +4 dBu, 1 kHz, unity gain
Crosstalk	< -92 dB/-95 dB

Bypass

Type	Relay, hard-bypass in case of power failure
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Measurement Microphone Input

Type	electronically balanced
Input impedance	2 k Ω
Max. input level (LINE)	variable from -14 dBu to +22 dBu
Max. input level (MIC)	variable from -42 dBV/Pa to -6 dBV/Pa
Phantom power	+15 V, switchable

Digital Input 1

Type	XLR transformer-balanced
Standard	AES/EBU or S/PDIF
Input impedance	110 Ω
Nom. input level	0.2 - 5 V peak-to-peak

Digital Input 2

Type	TOSLINK optical
Standard	AES/EBU or S/PDIF

Digital Output 1

Type	XLR transformer-balanced
Standard	AES/EBU or S/PDIF
Impedance	110 Ω
Output level	3.5 V peak-to-peak

Digital Output 2

Type	TOSLINK optical
Standard	AES/EBU or S/PDIF

Sync Input

Type	BNC
Standard	Wordclock (1 x sample rate)
Input impedance	50 kΩ
Nom. level	2 - 6 V peak-to-peak

MIDI Interface

Type	5-pole DIN jacks In/Out/Thru
Implementation	cf. MIDI implementation chart

Digital Processing

Converter	24-bit Delta-Sigma, 64/128-oversampling (AKM®)
Sample rate	44.1, 48, 88.2, 96 kHz

Graphic Equalizer (GEQ)

Type	digital 1/3-oct EQ
Frequency range	20 Hz to 20 kHz, 31 1/3-oct. bands according to ISO frequencies
Bandwidth	1/3-oct.
Control range	+15 to -15 dB

Parametric Equalizer (PEQ)

Type	max. 10 independent, fully parametric filters per channel
Frequency range	20 Hz to 20 kHz
Bandwidth	1/10 to 10 oct., shelving filters (6 and 12 dB)
Control range	+15 to -15 dB

Dynamic Equalizer (DEQ)

Type	max. 3 independent, fully parametric filters per channel
Frequency range	20 Hz to 20 kHz
Bandwidth	1/10 to 10 oct., shelving filters (6 and 12 dB)
Control range	+15 to -15 dB
Threshold	variable from 0 to -60 dB
Attack	0 to 200 msec
Release	20 to 4,000 msec
Ratio	1:2 to 1:100

Feedback Destroyer (FBD)

Type	digital signal analysis for feedback identification
Filter	max. 10 digital notch filters per channel, programmable or as automatic feedback suppression system
Frequency range	20 Hz to 20 kHz
Bandwidth	1/10 to 1/60 oct.
Control range	0 to -60 dB

Digital Delay

Type	digital stereo delay
Max. delay time	300 ms, independently adjustable for each channel
Min. resolution	0.02 ms
Delay units	seconds, meters or feet

Level Meter

Type	digital level meter with simultaneous graphic display of peak and RMS values and virtual analog VU meter
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SPL Meter

Weighting	dB (A), dB (C) or OFF
Microphone calibration	-42 dBV/Pa to -6 dBV/Pa

Dynamics

Type	Expander or compressor with digital IGC (Interactive Gain Control)
Threshold	variable from 0 to -60 dB
Attack	0 to 200 msec
Release	20 to 4,000 msec
Ratio	1:1.1 to 1:100

Limiter

Type	Peak limiter (zero attack)
Hold	0 to 1,000 msec
Threshold	variable from 0 to -24 dB
Release	20 to 4,000 msec

Real-Time Analyzer

Type	digital 61-band FFT analyzer
Frequency range	20 Hz to 20 kHz, 61 bands according to ISO frequencies
Detectors	peak and average
Noise generator	pink noise, levels from 0 to -60 dB

Display

Type	320 x 80 dot-matrix LC display
Backlighting	LED, orange
Contrast	adjustable

Memory

Presets	64 memory locations with 16-character names, single modules can be recalled and saved
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Power Supply

Mains voltage	85 to 250 V~, 50/60 Hz
Power consumption	10 W typ.
Fuse	T 1 A H
Mains connector	Standard IEC receptacle

Dimensions/Weight

Dimensions (H x D x W)	44.5 x 482.6 x 215 mm (1.75 x 19 x 8.5")
Weight	approx. 2.24 kg (4.9 lbs)
Shipping weight	approx. 3.09 kg (6.8 lbs)

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