ULTRA-CURVE® PRO DSP8024

Tech. Specifications

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ULTRA-CURVE PRO

Digital Stereo Mainframe powered by two 24-bit High-Speed Signal Processors

- ▲ High-end Crystal 24-bit AD/DA converters for ultra-high dynamic range and resolution
- ▲ Open-ended & “future-proof” architecture allows for future Software Upgrades
- ▲ Ultra-musical Dual 31-band Graphic Equalizer with “True Frequency Response” characteristics
- ▲ Low / high / bell shelving tool with variable slope (3 to 30 dB)
- ▲ Real Time Analyzer with peak hold, variable integration, cursor read-out and 10 user-memories
- ▲ Automatic Room Equalization using mic input and internal noise generator
- ▲ Additional 6 bands of fully Parametric Equalizer / Notch Filter with up to 1/60th octave bandwidth
- ▲ Integral fully automatic FEEDBACK DESTROYER with intelligent Signal Analyzer for ultra-fast feedback suppression
- ▲ Integral digital “Brickwall” Limiter protects against any clipping and dangerous sound pressure levels
- ▲ Integral digital Noise Gate with BEHRINGER's unique IRC (Interactive Ratio Control)
- ▲ Integral Delay with up to 2.5 seconds delay time selectable in milliseconds, meter and feet
- ▲ Ultra-accurate Level Peak Meter with Peak Hold and selectable Reference Levels (+4 dBu / -10 dBV / Dig Max)
- ▲ Full MIDI parameter and snapshot control for realtime editing
- ▲ Free EQ-Design software allows for total remote control via PC (download at www.behringer.com)
- ▲ 100 User-Memories can be stored under any alphabetic name. Memory backed by a long-life battery
- ▲ Security Key Password can be installed for user selective RTA and EQ memory protection and unattended use
- ▲ EQ and Analyzer curves may be copied, compared, added or subtracted for extreme flexibility
- ▲ Crossfade feature to fade between two settings and Stereo Link facility to synchronize both channels
- ▲ 24-bit AES/EBU Interface for digital inputs and outputs at 32, 44.1 and 48 kHz (optional)
- ▲ Large High-Resolution LCD Graphic Display with high-contrast LED-backlight
- ▲ Servo-balanced Inputs and Outputs on gold-plated XLR and jack connectors for high signal integrity
- ▲ Relay-controlled hard-bypass with an auto-bypass function during power failure (fail-safe relay)
- ▲ High-quality components and exceptionally rugged construction ensure long life and durability
- ▲ Internal power supply design for professional applications
- ▲ Manufactured under ISO9000 certified management system

SPECIFICATIONS

Analog Audio Inputs

Connectors	XLR- and 1/4" jack
Type	servo-balanced Input with RF rejection
Impedance	50 kOhm balanced, 25 kOhm unbalanced
Max. Input Level	+21 dBu balanced and unbalanced
CMRR	typ. 40 dB, >55 dB @ 1 kHz

Analog Audio Outputs

Connectors	XLR- and 1/4" jack
Type	DC-decoupled, servo-balanced output stage
Impedance	60 Ohm balanced, 30 Ohm unbalanced
Max. Output Level	+16 dBu balanced and unbalanced

System

Bandwidth	20 Hz to 20 kHz (+0/-0.5 dB)
Signal to Noise Ratio	103 dB unweighted, 22 Hz to 22 kHz
THD+N	0.004 % @ 1 kHz / +4 dBu
Crosstalk	< -103dB, 22 Hz to 22 kHz

Bypass

Type	relay-controlled bypass

Reference Microphone Input

Type	servo-balanced Input
Impedance	2 kOhms
Nominal Operating Level	-60 dBu to 0 dBu
Max Input Level	+1 dBu
Phantom Power	+15 V

Digital Audio Input (Option)

Type	AES / EBU transformer-balanced
Impedance	10 kOhms balanced
Nominal Input Level	3 - 10 V peak to peak

Digital Audio Output (Option)

Type	AES / EBU transformer-balanced
Impedance	100 Ohms balanced
Output Level	5 V peak to peak

MIDI Interface

Type	5-Pin DIN-socket In / Out / Thru
Implementation	Refer to MIDI Implementation Chart

Digital Processing

Converters	24-bit Sigma-Delta
Sampling Rate	48 kHz, 44.1 kHz, 32 kHz

Graphic Equalizer (GEQ)

Type	Digital 1/3 octave Equalizer
Frequency Range	31 filters on ISO center frequencies, from 20 Hz to 20 kHz
Bandwidth	AUTO-Q, variable, gain dependent
Boost / Attenuation	variable from +16 to -16 dB in steps of 0.5 dB (true response)

Parametric Equalizer (PEQ)

Type	3 independent filters per channel
Frequency range	20 Hz to 20 kHz, adjustable in steps of 1/60 octave
Bandwidth	1/60 to 2 octaves, adjustable in steps of 1/60 octave
Gain	variable from +16 to -48 dB in steps of 0.5 dB

FEEDBACK DESTROYER (FB D)

Type	DSP-controlled Digital Signal Analysis
Filter	3 independent, digital Notch Filters per channel, user selectable as fixed or dynamic filters for automatic Feedback Suppression
Frequency Range	20 Hz - 20 kHz, adjustable in steps of 1/60 octave
Bandwidth	2/60 to 12/60 octaves, depending on the characteristic of the feedback
Attenuation	up to -48 dB, depending on the gain of the feedback

Time required to eliminate feedback	0.6 sec, typical at 1 kHz

Digital Delay

Type	digital Stereo Delay
Maximum Delay Time	2.5 sec, independently adjustable for each channel
Minimum resolution	0.1 msec
Delay unit	seconds, metres or feet

Level Meter

Type	digital Level Meter with simultaneous graphical display of Peak and RMS values
Attack / Decay (RMS)	50 msec / 20 dB
Attack (Peak)	0.1 msec
Decay (Peak)	1 sec / 20 dB

Noise Gate

Type	digital IRC (Interactive Ratio Control)
Threshold	variable from -44 to -96 dB in steps of 1 dB
Attack / Release	Processor controlled, program dependent

Limiter

Type	digital IGC (Interactive Gain Control)
Threshold	variable from 0 to -36 dB in steps of 1 dB
Release	500 to 5000 in steps of 250 ms

Real Time Analyzer (RTA)

Type	digital 1/3 octave Analyzer
Frequency Range	31 filters on ISO center frequencies, from 20 Hz to 20 kHz
Detectors	peak or R.M.S.
Decay	variable 1 sec, 250 msec, 65 msec or15 msec (per 20 dB)
Sine Wave Generator	frequency adjustable from 20 Hz to 20 kHz in steps of 1/60 octave gain adjustable from 0 to -48 dB in steps of 0.5 dB
Noise Generator	white or pink characteristic gain adjustable from 0 to -48 dB in steps of 0.5 dB

Display

Type	240 x 64 dot matrix, Liquid Crystal Display (LCD)
Backlight	LED Array
Contrast	adjustable

Memory

EQ Programs	100 memory locations, capable of storing all relevant settings for GEQ, PEQ, FB-D, and DELAY in addition to a program name with 12 characters
RTA Measurements	10 memory locations
Password Protection	2 levels, memory protect or security lock, both protected with an alphanumerical 12 digit password

Power Supply

Operating voltage	USA/Canada	120 V ~, 60 Hz
	U.K./Australia	240 V ~, 50 Hz
	Europe	230 V ~, 50 Hz
	General export modell	100 - 120 V ~, 200 - 240 V ~, 50 - 60 Hz
Power consumption	max. 30 W	
Fuse rating	100 - 120 V ~: **T 630 mA H**	
	200 - 240 V ~: **T 315 mA H**	
Mains Connection	Standard IEC receptacle	
Battery	Lithium CR 2032, 3 V, 180 mAh	
Battery Life	3 years, typical	

Physical

Dimensions (H * W * D)	app. 3 1/2" (89 mm) * 19" (482.6 mm) *12" (304.8 mm)
Net weight	app. 4.8 kg
Shipping weight	app. 6.0 kg

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