

## Multi-Effects Processors

# VIRTUALIZER 3D FX2000

### High-Performance 3D Multi-Engine Effects Processor

- 71 breathtaking new algorithms—true RSM (Real Sound Modeling) stereo and 3D effects
- Wave-adaptive virtual Room reverb algorithms for natural reverb and delay
- Awesome modulation, dynamic, psychoacoustic and EQ algorithms
- Authentic amp simulation, distortion and special effects
- 11 effect combinations with selectable serial/parallel configuration
- Up to 7 adjustable parameters plus 2-band EQ per effect
- 24-bit A/D and D/A converters with 64/128-times oversampling
- True stereo processing for realistic channel separation in stereo image
- 100 factory presets plus 100 user memory locations
- Extensive MIDI implementation
- Accurate LED level meters for perfect level setting and optimum performance
- Servo-balanced XLR and ¼" TRS inputs and outputs
- High-quality components and exceptionally rugged construction ensure long life
- Conceived and designed by BEHRINGER Germany

behringer.com



Get even more mind-expanding power for your keyboard, bass, guitar or vocals with the VIRTUALIZER PRO 3D FX2000 Effects Processor. This amazing rack unit has 71 incredible new algorithms, including true studio-grade stereo and 3D effects that will add a head-spinning new dimension to your sound, both live and in the studio. The FX2000 employs BEHRINGER RSM (Real Sound Modeling) technology to simulate acoustic environments with stunning accuracy. Effects options include powerful modulation, amp simulation, distortion and special effects, as well as effective dynamic and psychoacoustics processing.

Performance is further enhanced through user-addressable high and low EQ and wave-adaptive VIRTUAL ROOM reverb algorithms. The FX2000 has a total of 200 presets (100 factory / 100 user) that can be recalled or switched via an optional MIDI foot controller, such as our FCB1010.

### Reverbs & Delays

Because it is one of the most desired effects, the FX2000 provides 12 different reverb programs, so you always have the ideal reverb for your live performance or studio needs.



### Reverbs include:

- CATHEDRAL
- GOLD PLATE
- SMALL HALL
- ROOM
- STUDIO
- CONCERT
- STUDIO
- STAGE
- SPRING REVERB
- AMBIENCE
- EARLY REFLECTIONS

### Specialty reverbs include:

- GATED REVERB – reverb is synthetically turned off after a predetermined amount of time
- REVERSE REVERB – reverb envelope is reversed—it slowly gets louder

### Delays include:

- STEREO DELAY – delay is processed across the entire stereo image
- TAPE ECHO – simulates classic tape echo devices, pre-dating the advent of digital delays
- PING PONG – delay signal is “bounced” from left to right at an adjustable tempo

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# VIRTUALIZER 3D FX2000

## Much More than Just Reverb and Delay

The FX2000 has some of the best-sounding reverb and delay programs, but that's not all. It also provides excellent modulation effects (such as chorus, flanger and phaser), including special variations like musical pitch shifter, tremolo and even a rotary speaker simulation.

## Modulation and Pitch Shifter FX:

- STEREO FLANGER (originally generated by playing back two synchronized "reel to reel" tape recorders with a finger rubbing on the flange of one of the take-up reels)
- VINTAGE FLANGER simulates a guitar flanger stomp box
- JET STREAM FLANGER sounds like a classic analog flanger
- STEREO CHORUS (combines a slightly detuned signal with the original)
- ANALOG CHORUS simulates a guitar chorus stomp box
- VINTAGE CHORUS imitates a classic analog studio chorus
- ULTRA CHORUS creates the sound of an eight-person chorus
- STEREO PHASER (combines a second, phase-shifted signal to the original)
- VINTAGE PHASER represents a guitar phaser stomp box
- DUAL PHASER processes the left and right channels separately
- ROTARY (simulation of the rotating speakers typically used on an organ) – Slow or Fast
- PITCH SHIFTER (changes the pitch of the original signal) – can be used to create harmonies with the original signal or replace it entirely with the altered pitch. Choices include stereo, two and three vocal pitch shifter
- VIBRATO – the peak frequency of the tone is periodically and uniformly changed (quickly or slowly)
- TREMOLO (common vintage guitar amplifier effect) – a fast or slow periodic variation in volume

- AUTO PANNING – signal is automatically sent from one side of the stereo image to the other, either once or multiple times

## Dynamic FX:

- COMPRESSOR – reduces the dynamic range of the signal, maintains consistent signal level and thus avoids distortion associated with input levels
- EXPANDER – effectively broadens the dynamic range of source signals while reducing background noise
- GATED REVERB – helps reduce background clutter by turning reverb off below a predetermined threshold level. Particularly effective on drum mics and vocals
- ANA. KOMPR/LIM. — similar to COMPRESSOR but with Limiting functionality

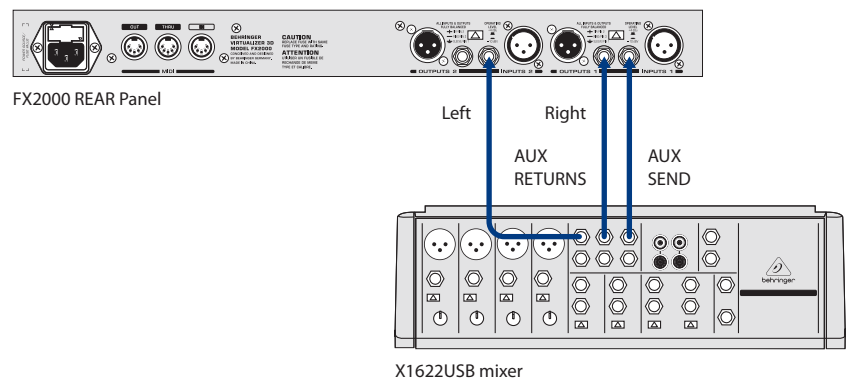
- ULTRAMIZER – analyses incoming signal and automatically applies compression across two independent frequency bands
- DENOISER – eliminates or reduces noise and other interference
- DE-ESSER – reduces or removes sibilance (Ssss sound) from signal
- WAVE DESIGNER – allows you to influence the envelope by adjusting Attack and Release of the signal

## Psychoacoustic FX:

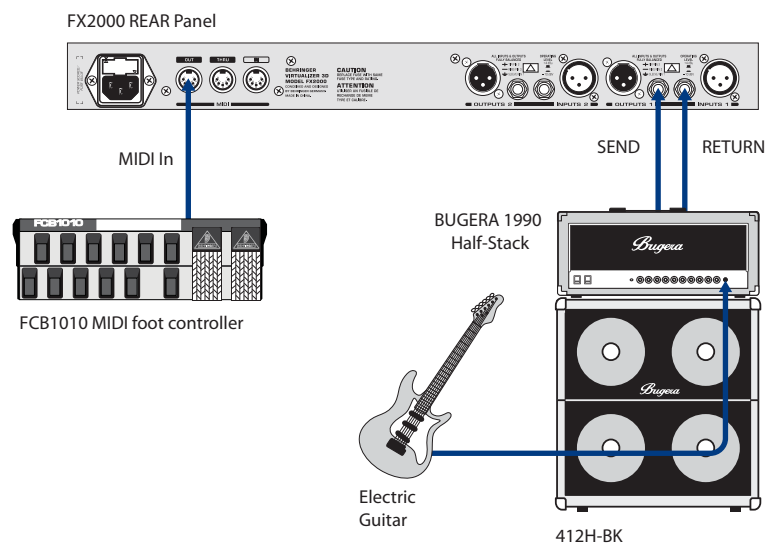
- EXCITER – adds artificially generated overtones to the original signal, increasing presence and perceived loudness without significant increase in signal level
- ENHANCER – functions much like a dynamic pitch equalizer

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## Studio Application (stereo return)



## Live Performance (mono)



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- **ULTRA BASS** – sub-harmonic processor combined with bass exciter and limiter
- **STEREO IMAGER** – divides the signal into middle and side signals, allowing individual signals to be amplified when desired and placed on the stereo image
- **ULTRA WIDE** – creates a broader stereo image
- **BINAURALIZER** – also creates a broader stereo image and compensates for crosstalk between both speakers

## Filter/EQ FX:

- **AUTO FILTER** – influences the frequency response of a signal. Two filters are included: low pass allows low frequencies to pass and suppresses high frequency content; high pass does the exact opposite
- **LFO FILTER** – Controls the rate of oscillation effects
- **PARAMETRIC EQ** – allows you to control the bandwidth, frequency and amplitude of a signal
- **GRAPHIC EQ** – the sound spectrum is divided into eight (8) adjacent frequency bands, which can be cut or boosted, bandwidth is predetermined

## Distortion FX and Amp Simulations

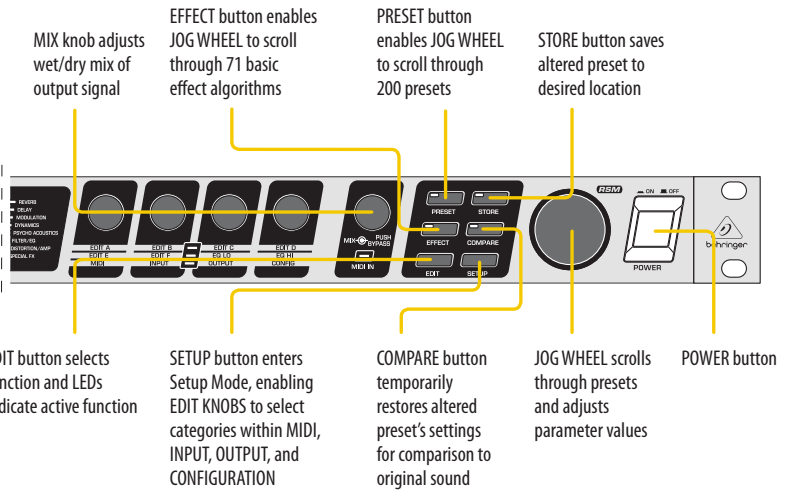
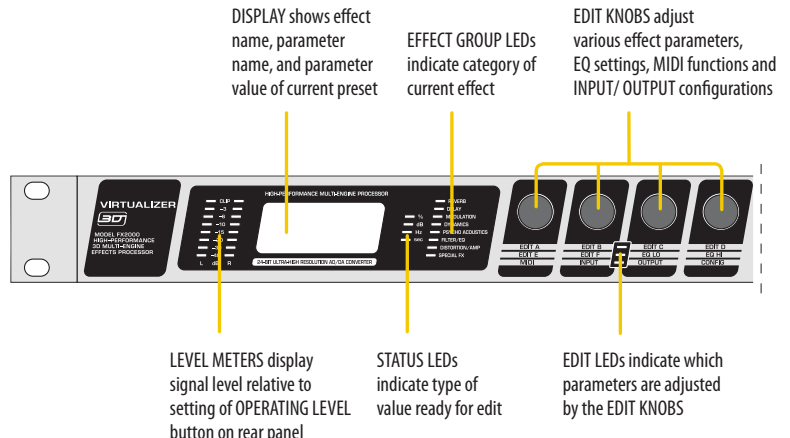
The FX2000 is also equipped with distortion, amplifier and speaker simulation including **VOCAL DISTORTION**, **TUBE DISTORTION**, **GUITAR AMP**, **TRI FUZZ**, **SPEAKER SIMULATION**, **RING MODULATOR** and **LO-FI**.

## Special FX:

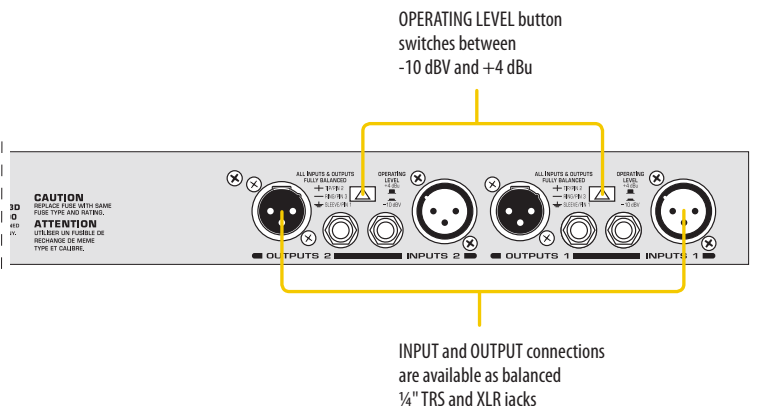
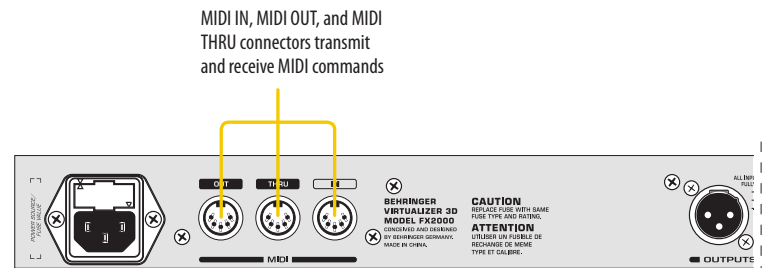
- **VINYLER** – adds clicks and/or noise to the signal, reminiscent of old vinyl records and tape machines
- **SAMPLER** – allows you to record and playback up to five (5) seconds of program material

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## Front Panel



## Rear Panel



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- **VOCODER** – allows the input signal to modulate another signal (usually a synthesizer sound), creating the familiar “talking synthesizer” effect
- **VOICE CANCELER** – removes mono vocal parts from stereo recordings for “instant Karaoke”
- **RESONATOR** – simulates an oscillating system that amplifies a specific frequency

## Our FX Combinations Go to 11

Sometimes you want to add a little (or a lot) of color to your reverb and delay patches. The FX2000 allows you to layer modulation effects like chorus, flanger, pitch or tremolo with your reverb or delay selections.

### FX Combinations include:

- Chorus & Reverb
- Phaser & Reverb
- Flanger & Reverb
- Chorus & Delay
- Leslie & Reverb
- Flanger & Delay
- Pitch & Reverb
- Pitch & Delay
- Delay & Reverb
- Tremolo & Delay
- Tremolo & Reverb

## Enhanced User Editability

Logical grouping of parameters, along with the combination of encoders, buttons, LEDs and an easily readable LED display, make operating the FX2000 a breeze. You are free to edit up to seven parameters per preset, and then save them for future use in the 100 provided memory locations.

### Value

With its extremely powerful processing capability and versatile array of features, the FX2000 will become the busiest tool in your audio arsenal. Stop by your BEHRINGER dealer today and find out why professional sound engineers all over the world are turning to the FX2000 as their primary FX processor—both in the studio and on the road.

## Specifications

Analog Inputs	
Connectors	XLR and ¼" TRS
Type	RF filtered, servo-balanced input stage
Impedance	80 k Ω balanced
Nominal Operating Level	-10 dBV or +4 dBu (selectable)
Max. Input Level	+15 dBu at +4 dBu nominal level, +1 dBV at -10 dBV nominal level
Analog Outputs	
Connectors	XLR and ¼" TRS
Type	Electronically servo-balanced output stage
Impedance	80 Ω balanced
Max. Output Level	+15 dBu at +4 dBu nominal level, +1 dBV at -10 dBV nominal level
System Specifications	
Bandwidth	20 Hz to 20 kHz, +/- 3 dB
SNR	91 dB, unweighted, 20 Hz to 20 kHz
THD	0.018 % typ. @ +4 dBu, 1 kHz, 0 dBu input, gain 1
Crosstalk	< -76 dB

MIDI Interface	
Type	5-pin DIN-socket IN / OUT / THRU
Digital Processing	
Converters	24-bit Sigma-Delta, 64/128-times oversampling
Sampling Rate	46.875 kHz
Display	
Type	4-digit 14 segment alpha-numeric LED-Display
Power Supply	
<b>Voltage/Fuses</b>	
USA/Canada	120 V~, 60 Hz
Europe/U.K./Australia	230 V~, 50 Hz
Japan	100 V~, 50 - 60 Hz
General export model	120/230 V~, 50 - 60 Hz
Fuse	100 - 120 V~: T 200 mA H 250 V 200 - 240 V~: T 100 mA L 250 V
Power Consumption	15 Watts max.
Mains Connection	Standard IEC receptacle

Physical	
Dimensions (H x W x D)	8.54 x 1.75 x 19.01" 217 x 44.5 x 483 mm
Net Weight	approx. 4.18 lbs / 1.9 kg

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For service, support or more information contact the BEHRINGER location nearest you:

**Europe** MUSIC Group Services EU GmbH  
Tel.: +49 2154 9206 4149 / Fax: +49 2154 9206 4199

**USA/Canada** MUSIC Group Services US Inc.  
Tel.: +1 425 672 0816 / Fax: +1 425 673 7647

**Singapore** MUSIC Group Services SG (Pte.) Ltd  
Tel.: +65 6845 1800 / Fax: +65 6214 0275

**Australia** MUSIC Group Services AU Pty Ltd  
Tel.: +61 03 9877 7170 / Fax: +61 03 9877 7870

**Japan** MUSIC Group Services JP K.K.  
Tel.: +81 3 5281 1180 / Fax: +81 3 5281 1181

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