

The Meyer Sound VX-1 is a two-channel program equalizer featuring three bands of minimum-phase boost or cut equalization per channel. Optimized for composite response shaping of stereo program material, the VX-1 utilizes a unique Virtual Crossover™ implementation, with two frequency breakpoint controls and separate gain controls for the Low, Mid and High bands.

The VX-1 occupies a single 1.75" standard rack space, and the clearly marked controls include a Master gain control, a single EQ In/Out switch and a convenient Mono switch. Single-pole, minimum-phase circuitry assures natural, graceful sonic characteristics, even at extreme settings. The dynamic range of the VX-1 exceeds 100 dB.

Input Connections

The VX-1 accommodates nominal input levels of +4 dBu (XLR connectors) balanced, or -10 dBV (RCA connectors) unbalanced, selected by a rear-panel recessed switch.

The +4 dBu XLR input circuitry employs Meyer Sound's exclusive ISO™ Input, affording exceptional immunity from ground loops and common-mode noise. The circuit makes use of custom transformers employing a high-inductance nickel core and Faraday shield, achieving 500 volts of common-mode isolation. All three input connector pins float from both circuit ground and chassis ground.

The ISO™ input circuit accommodates a wide variety of input wiring configurations with no change in gain. Figure 1 illustrates output polarity for various balanced and unbalanced connections.

Source Output Configuration	Wiring of ISO™ Input			VX-1 Output Polarity		
	Pin 1	Pin 2	Pin 3	Pin 1	Pin 2	Pin 3
Balanced	n/c n/c	- +	+ -	GND GND	- +	+ -
Unbalanced	n/c n/c	GND +	+ GND	GND GND	- +	+ -

Figure 1. ISO™ Input Polarity Table

Connect -10 dBV unbalanced signal sources to the rear-panel RCA connectors. These inputs bypass the ISO™ transformer stage, and the connector shells are tied to circuit ground.

Upon making input connections, check to be sure that the input selector switch is set correctly.

Output Connections

Signal outputs from the VX-1 are active balanced, at nominal +4 dBu operating level. The connectors may be wired bal-

anced or unbalanced, with maximum output levels before clipping of +25 dBu or +19 dBu, respectively.

AC Power Inlet and Voltage Selector

The VX-1 is equipped with an international standard IEC 320 Mains AC inlet that accepts a variety of power cord types to accommodate mains outlets worldwide.

Meyer Sound, or an equivalent that satisfies the requirements of the local safety testing agency.

The VX-1 must have the correct power cord, voltage setting and fuse for the AC power source in your area. To avoid electrical shock and damage, use only the cord specified by

To change the AC voltage setting, **first disconnect the AC cord.** Using a small flat-blade screwdriver, move the slide switches to the appropriate position as indicated by the adjacent panel legend.

AC Fuse

Primary protection for the VX-1 is provided by a 1 $\frac{1}{4}$ A SloBlo fuse located in a receptacle adjacent to the AC inlet. Before examining or replacing the fuse, **first disconnect the AC cord.**

To replace the fuse, insert a flat-blade screwdriver in the fuse cap and gently turn counterclockwise. The fuse will spring from its socket. Replace only with a fuse of the type and rating specified by Meyer Sound.

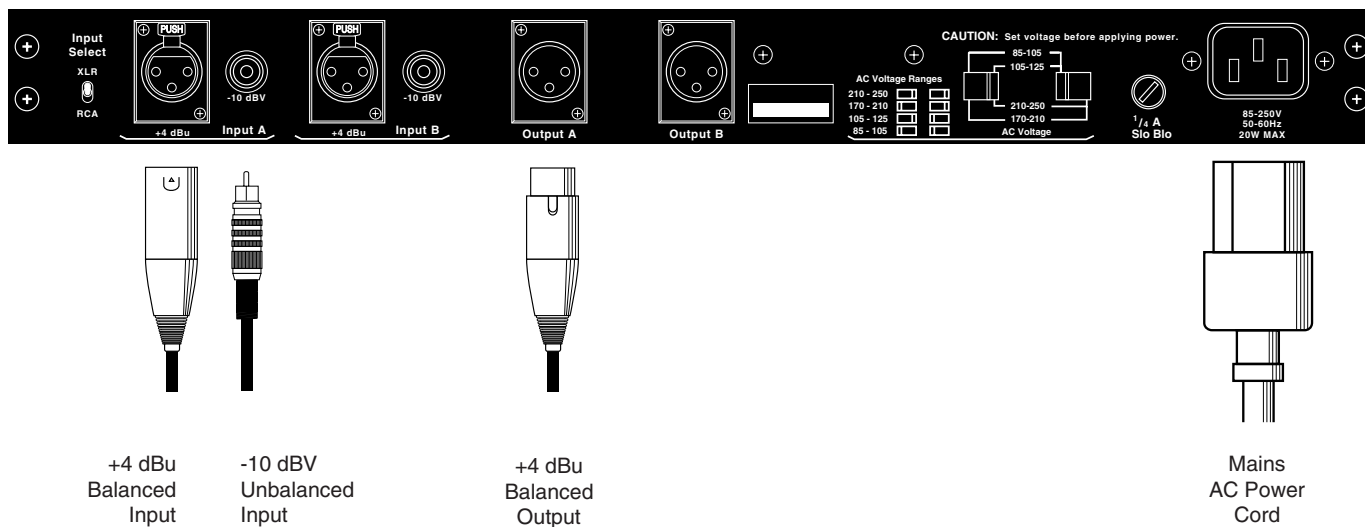


Figure 2. VX-1 Rear Panel Connections (one channel shown)

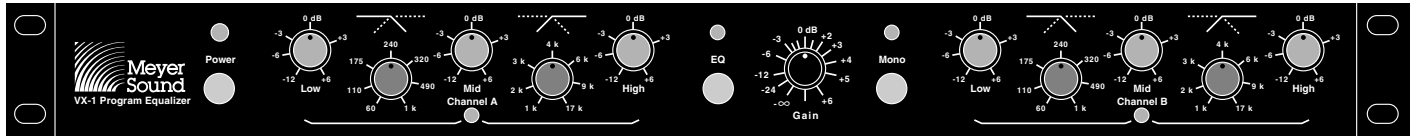


Figure 3. VX-1 Front Panel Controls

EQ In/Out Switch	The EQ In/Out Switch engages (in) or bypasses (out) the VX-1 equalization stages. When the equalization is engaged, the LED lights and the equalization controls are active.	When the equalization is bypassed, only the Master Gain control and Mono switch are active.
Master Gain Control	The Master Gain Control regulates the gain of the VX-1. Its range is from off to +6 dB, with 0 dB (unity) gain at the center position.	
Mono Switch	When the Mono Switch is engaged (in), the LED lights and the two input channels are summed and routed to both out-	puts with equal amplitude. When the Mono switch is disengaged (out), the VX-1 operates in stereo.
Signal/Clip Indicators	Centered directly under the equalization controls for each channel, the Signal/Clip indicators will flicker green when	their corresponding channels are passing audio. The indicators flash red to register signal clipping.
Equalization Controls	<p>The VX-1 features a unique, Virtual Crossover™ implementation which is well suited for tailoring the broadband response of program material. Operationally, it may be likened to a conventional active loudspeaker crossover.</p> <p>Each channel of equalization incorporates five controls: two frequency breakpoint controls, and three band gain controls. The left-hand frequency control regulates the frequency breakpoint between the Low and Mid bands, while the right-hand frequency control regulates the breakpoint between the</p>	<p>Mid and High bands. The gain controls affect the relative amplitude (boost or cut) within each frequency band, with a range of -12 to +6 dB.</p> <p>The VX-1 equalization sections are first-order (6 dB/octave) minimum-phase networks that provide gentle, natural sonic characteristics. Figure 4 illustrates typical response curves for various midrange control settings.</p>

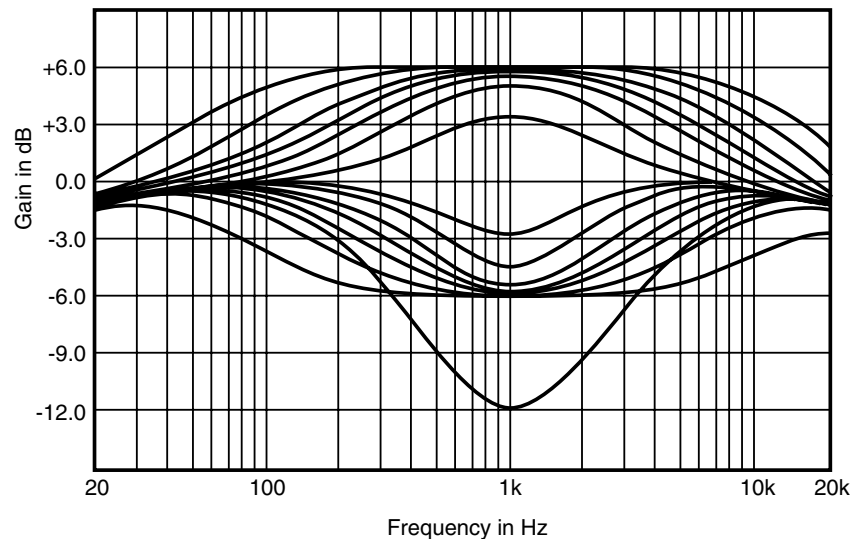


Figure 4. VX-1 Response at Various Midrange Settings

Specifications

Frequency Response ¹	
Equalization In (Controls set flat)	20 – 20,000 Hz +0, -0.5 dB
Equalization Bypassed	20 – 20,000 Hz +0, -0.5 dB

Total Harmonic Distortion² < .005%

Hum and Noise³ < –90 dBV “A” Weighted

Dynamic Range⁴ > 100 dB

Inputs

XLR

Type	Balanced, transformer-isolated ISO™ Input ⁵
Impedance	16k ohms, 8k ohms per branch unbalanced ⁶
Nominal Input Level	+4 dBu, 16 dB headroom
Maximum Input Level ⁷	+20 dBu

RCA

Type	Unbalanced active
Impedance	8k ohms
Nominal Input Level	-10 dBV
Maximum Input Level	0 dBV

Outputs

Type	Balanced active push-pull, pin 1 to chassis = 500 Ω
Impedance	300 ohms, 150 ohms per branch unbalanced
Nominal Output Level	+4 dBu
Maximum Output Level	+25 dBu

Controls & Indicators

Front Panel

Power	Locking pushbutton, red LED
EQ In/Out	Locking pushbutton, green LED
Mono/Stereo	Locking pushbutton, yellow LED
Frequency, Gain	31-position detented rotary controls
Master	Rotary control

Rear Panel

+4 dBu/-10 dBV select switch	Recessed toggle
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Connectors

Balanced Input, Output	3-pin XLR male, female
Unbalanced Input	Gold-plated RCA female

Power

100/120/220/240 VAC, 50/60 Hz (switchable), 20W

Physical

Dimensions	19" W x 1.75" H x 7.5" D standard rack mount
Weight	8 1/4 lbs (3.75 kg)

Notes:

1. Measured at 0 dB gain
2. +18 dBV input, 1 kHz
3. Unbalanced
4. “A” weighted noise floor to maximum RMS output
5. ISO™ input: Pins 1, 2 and 3 are transformer-isolated. Shell is connected to chassis/AC mains ground. Pin 3 positive for positive-going output at pin 3.
6. Pure resistive through-out audio band
7. Within operating band of each channel, this is the minimum worst-case level achieved before clipping.
8. 0 dBu \approx 0.775 vrms
0 dBV = 1 vrms

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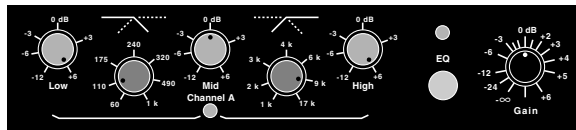
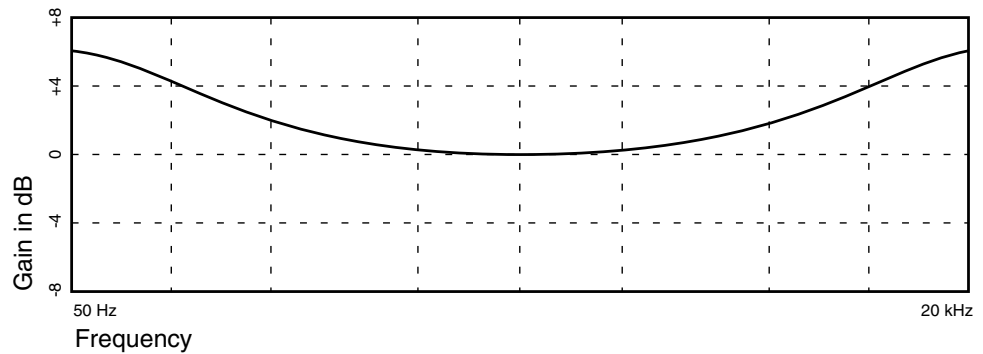
VX-1 Stereo Program Equalizer

Operating Instructions

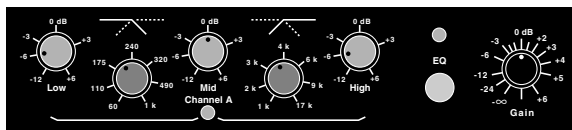
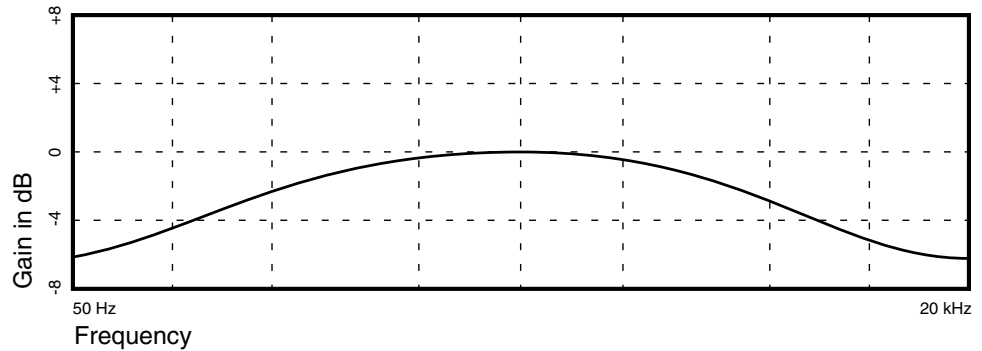
Examples of Program Equalization

The examples on this page illustrate typical response characteristics obtained with various settings of the VX-1 band gain and frequency controls.

The control settings (Channel A only) used to obtain a specific response are shown in the detail below the curve plot.



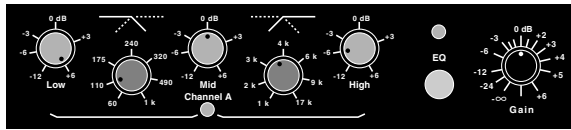
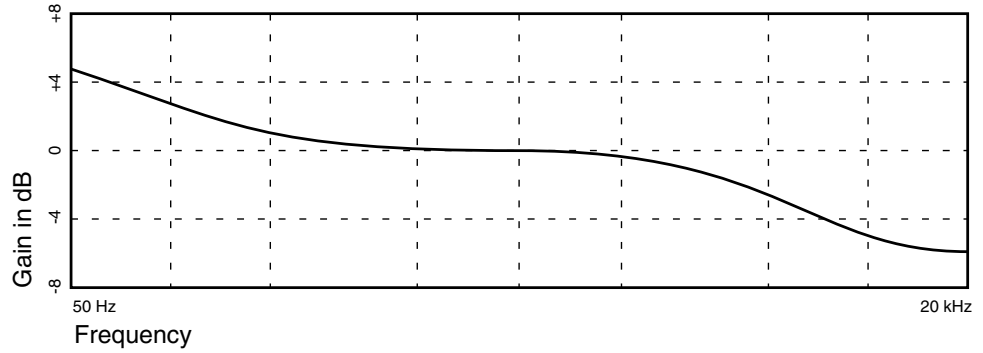
Symmetrical High- and Low-Frequency Boost



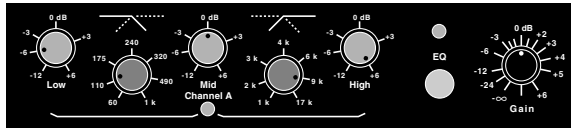
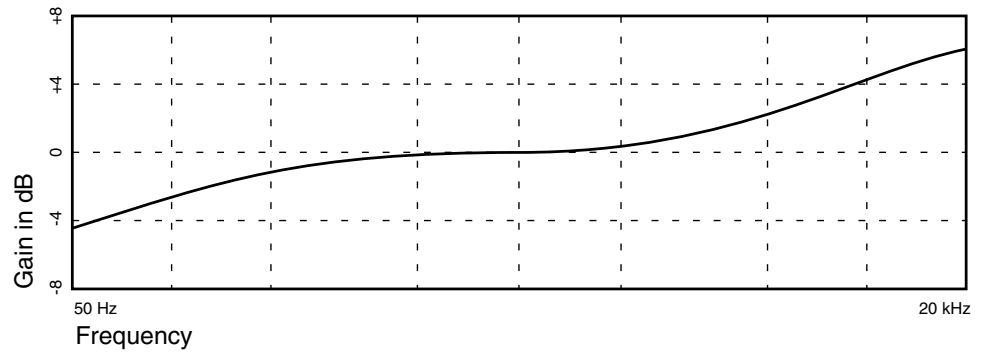
Symmetrical High- and Low-Frequency Cut



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Gradual Downward Tilt



Gradual Upward Tilt

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