

VIRGO III/ line stage


 constellation


Innovative new passive digital volume control

Improved, simplified signal path for even lower noise

Redesigned faceplate for more reliable remote control response

Separate power supply with discrete left, right and control feeds

Line Stage Gain Module circuit for ideal positive/negative signal balance

Virgo III is a subtle but significant evolution of our Virgo II line stage preamplifier. The new version introduces a unique, passive implementation of a digital volume control created by our “dream team” of world-reknown audio engineers. This new control works perfectly right from power-up and doesn’t need the warm-up time of the light-dependent resistors used in Virgo II’s volume control. It’s as electronically pure as it can be, essentially just two resistors per channel in the signal chain. It incorporates no gain and no extra amplification stages. The listener enjoys the precision of pure digital control—with the musicality of a traditional analog control.

Fortunately, the new control allowed us to simplify Virgo III’s signal path. This improvement further reduces noise

and improves on the sound quality of the original design, which one reviewer called “...competitive with and in many regards superior to anything I’ve yet heard at any price, tube or solid-state.”

We have also reworked the front panel slightly to improve operation of the remote control. A new sensor window lets the unit respond faster to the remote’s commands, and also allows the remote to be used at wider angles.

Separate, triple-output power supply

Virgo III uses a completely separate, dual-mono power supply. It provides separate R-core transformers for left and right channels in addition to a third transformer for the control circuits. This upgrade makes the channels more in-

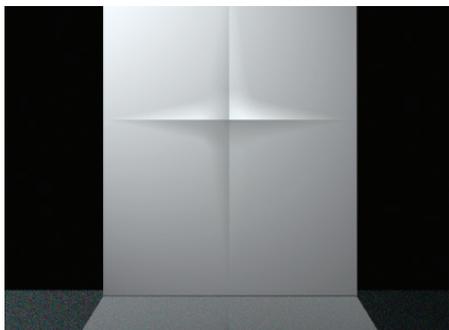
dependent, so extreme demands in one do not affect the other. It also improves channel separation, and thus imaging and soundstaging. High-current Hypertronics cables, originally developed for aerospace applications, carry the power from the supply to the main chassis.

While the power supply incorporates substantial DC filtration and regulation, our optional DC power filter takes the performance to an even higher level. It adds additional power storage and filtration to the included power supply, and fits neatly between the power supply and the main Virgo III chassis.

Perfectly balanced signals for impeccable musicality

The core of Virgo III is Constellation Au-

(more...)



dio's exclusive Line Stage Gain Module. This fully complementary, balanced topology uses separate mirror-imaged circuits to amplify the positive and negative halves of the audio signal. Through the use of our private stock of extremely low-noise field-effect transistors (FETs) and the innovative application of servo circuits, which adjust automatically to cancel any anomalies, the Line Stage Gain Module maintains essentially perfect positive/negative balance in the audio signal.

If you use Virgo III with a Constellation Audio amplifier, you can use our Constellation Direct interface. This connection bypasses the amplifier's own Line Stage Gain Module, reducing the complexity of the signal chain and thus increasing fidelity and musicality.

Mechanically isolated audio circuits

Analog preamp circuits can pick up vibration in the air and from the ground, creating spurious audio signals—called “microphonics”—that are passed down

to the amplifier and into the speakers. Only through exceptionally careful vibration control can microphonics be avoided.

The analog circuitry in Virgo III is built on a “raft,” a thick metal plate that floats on an elastomeric suspension that damps incoming vibration. Just as a raft floating on a lake is not affected by disturbances on shore, so Virgo III's analog audio circuits are isolated from external vibration.

We encase the circuitry in a heavy aluminium enclosure, with key components machined from solid aluminum to a minimum thickness of 8.2mm. This extremely robust construction helps block electromagnetic interference.

Sophisticated, simple operation

Virgo III continues with the touchscreen design developed for Virgo II, with large, elegant, easy-to-read fonts on its 432 x 230-pixel LCD touchscreen. This touchscreen provides easy, intuitive access to Virgo III's advanced features, such as input gain preset and home theater bypass.

The machined aluminum remote—its operation now enhanced because of the slight redesign of the preamp's front panel—controls the unit from a distance and operates all of the basic functions.

Granted, Virgo III isn't a huge upgrade from Virgo II, but it's one we're especially proud of. It took our engineering “dream team” a long time to create a digital volume control that sounds as good as (or perhaps even a little bit better than) a traditional analog control. But when you hear the Virgo III, we think you'll agree their effort was more than worth it.

SPECIFICATIONS

Inputs	4 XLR stereo, 4 RCA stereo
Outputs	2 XLR stereo, 2 RCA stereo
THD+N (RI >10 KΩ)	<0.001%, 20 Hz - 20 kHz @ 2V out <0.1%, 20 Hz - 20 kHz @ 10V out
Frequency response	10 Hz to 200 kHz, \pm0.5 dB
Output noise	\leq 20 μV dB, 20 Hz - 20 kHz
Input impedance (balanced)	200 KΩ
Input impedance (unbalanced)	100 KΩ
Output impedance	< 50Ω
Volume control resolution	0.5 dB from 0 dB to -90 dBFS
Weight, preamp	22 lbs/10 kg
Weight, power supply	15.75 lbs/7.1 kg
Dimensions, preamp	5.50 x 17.00 x 15.75 in (hwd) 140 x 432 x 400mm (hwd)
Dimensions, power supply	2.75 x 17.00 x 13.5 in (hwd) 70 x 432 x 343mm (hwd)

Constellation reserves the right to change designs, and / or specifications

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Audio That Inspires

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