

Monsalvat

PRO-6



Preliminary Datasheet

Verity Audio's Pro-6 Digital Processor is a unique device combining the functions of a preamplifier, a DAC, a digital crossover and a time alignment device. Its design gives no ground to compromise, as per Verity's traditional philosophy. The processor's architecture features state-of-the-art ADC/DAC circuitry and total galvanic isolation between the analog and digital domains, ensuring they remain perfectly isolated. The Pro-6 reaches the highest performance a "pure analog" preamplifier can attain while still offering the best you could expect of a reference digital signal processor.

The Pro-6 includes both analog and digital inputs. Analog inputs are digitized at a very high sampling rate and fed into the digital domain for processing, while digital inputs are processed directly. The results of digital processing are then transferred to the analog domain to be reproduced with perfect integrity.

The Pro-6 has three parts: the processor chassis, an external power supply chassis and a massive Verity anti-vibration platform. The chassis are built of thick anodized aluminum plates.

The Pro-6 truly is a state of the art sound-processing device. It comes bundled with the Monsalvat loudspeaker system, offering an amazing sound performance that respects the natural scale of each instrument and preserves their respective coherence, fluidity and musicality throughout their entire dynamic scale. In short, this new and unique processor unquestionably sets the new standard of superior performance in loudspeaker systems.

ANALOG DOMAIN

- Each analog output channel is completely independent and is driven by 8 parallel 32-bit DACs powered by 6 dedicated ultra-low-noise power supplies.
- Each analog input pair features a dedicated 32-bit ADC running at 384k samples per second and is powered by 5 dedicated ultra-low-noise power supplies.
- The analog and digital domains are separated through high-performance, high-speed galvanic digital isolators.
- A total of 48 ultra-low-noise power supplies power the analog domain.

DIGITAL DOMAIN

- The digital domain is centered on a powerful high-speed FPGA capable of 800+ billion multiply-accumulate operations per second (800+ GMAC/s).
- The Pro-6 also includes a 400 MHz SHARC processor for enhanced DSP capability.
- The 32-bit processing architecture (up to 72 bits internal calculations @ 98 MHz), enables compromise-free digital signal processing and superb digital filters featuring perfect characteristics and an ultra-low noise floor.
- The digital domain supports additional digital crossover and digital delay capabilities.
- 3 ultra-low-noise power supplies power the digital domain.

EXTERNAL POWER SUPPLIES

- In order to improve noise immunity, the Monsalvat Processor's main power supplies are located in a separate external stackable chassis. This chassis contains yet another 5 low-noise power supplies.

INTERFACES

- Analog Outputs
- Balanced outputs: 3 stereo pairs of male XLR connectors.
- Unbalanced outputs: 3 stereo pairs of RCA phono connectors.

ANALOG INPUTS

- Balanced inputs: 1 stereo pair of female XLR connectors.
- Unbalanced inputs: 1 stereo pair of RCA phono connectors.

DIGITAL INPUTS

- 1 USB 2.0 input accepts PCM data up to 32 bits at 44.1, 48, 88.2, 96, 176.4, 192, 352.8 and 384 kS/s and DSD at 2.822 MHz, 3.072 MHz, 5.644 MHz and 6.144 MHz.
- 2 AES/EBU on female XLR connector accept up to 24-bit PCM at 44.1, 48, 88.2, 96, 176.4 and 192 kS/s.
- 2 SPDIF on RCA phono connectors accept up to 24-bit PCM at 32, 44.1, 48, 88.2, 96, 176.4 and 192 kS/s.
- 1 I2S proprietary digital interface.

CHASSIS

- The power supply requires 100-120 or 220-240VAC (set at the factory). Maximum power consumption is 160 watts.
- Processor chassis:
- Dimensions: (W x D x H) 430 mm x 360 mm x 150 mm.
- Weight: 15 kg.
- Power supply chassis:
- Dimensions: (W x D x H) 430 mm x 360 mm x 80 mm.
- Weight: 22 kg.

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PRE-2



Preliminary Datasheet

Verity Audio's Monsalvat Pre-2 digital preamplifier is directly derived from our Monsalvat's breathtaking Pro-6, sharing the same topology, quality parts and configuration. However, it's built into a single chassis that includes a power supply.

The Pre-2 combines the functions of a preamplifier and a DAC. Its design gives no ground to compromise, as per Verity's traditional philosophy. The preamplifier's architecture features state-of-the-art ADC/DAC circuitry and total galvanic isolation between the analog and digital domains, ensuring they remain perfectly isolated. The Pre-2 reaches the highest performance a "pure analog" preamplifier can attain while still offering the advantages you would expect of a reference digital signal processors.

The Pre-2 includes both analog and digital inputs. Analog inputs are digitized at a very high sampling rate and fed into the digital domain for processing, while digital inputs are processed directly. The results of digital processing are then transferred to the analog domain to be reproduced with perfect integrity.



The chassis of the preamplifier is built of thick aluminum plates and is supported by a massive Verity anti-vibration platform.

The result is an astonishing ultra-low-noise preamplifier offering pure sound transparency and fluidity, an extended bandwidth and an ultra-high dynamic range. The new Verity Pre-2 redefines preamplification thanks to the advanced technologies available today.

ANALOG DOMAIN

- Each analog output channel is completely independent and is driven by 8 parallel 32-bit DACs powered by 6 dedicated ultra-low noise power supplies.
- Each analog input pair features a dedicated 32-bit ADC running at 384k samples per second and is powered by 5 dedicated ultra-low-noise power supplies.
- The analog and digital domains are separated through high-performance, high-speed galvanic digital isolators.
- A total of 27 ultra-low-noise power supplies power the analog domain.
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DIGITAL DOMAIN

- The digital domain is centered on a powerful high-speed FPGA capable of 800+ billion multiply-accumulate operations per second (800+ GMAC/s).
- The 32-bit processing architecture (up to 72 bits internal calculations @ 98 MHz), enables compromise-free digital signal processing and superb digital filters featuring perfect characteristics and an ultra-low noise floor.
- 2 separate ultra-low-noise power supplies power the digital domain.

INTERFACES

Analog Outputs

- Balanced outputs: 1 stereo pair of male XLR connectors.
- Unbalanced outputs: 1 stereo pair of RCA phono connectors.

Analog Inputs

- Balanced inputs: 1 stereo pair of female XLR connectors.
- Unbalanced inputs: 1 stereo pair of RCA phono connectors.

Digital Inputs

- 1 USB 2.0 input accepts PCM data up to 32 bits at 44.1, 48, 88.2, 96, 176.4, 192, 352.8 and 384 kS/s and DSD at 2.822 MHz, 3.072 MHz, 5.644 MHz and 6.144 MHz.
- 1 AES/EBU on female XLR connector accepts up to 24-bit PCM at 44.1, 48, 88.2, 96, 176.4 and 192 kS/s.
- 1 SPDIF on RCA phono connectors accepts up to 24-bit PCM at 32, 44.1, 48, 88.2, 96, 176.4 and 192 kS/s.
- 1 I2S proprietary digital interface.

Chassis

- The power supply requires 100-120 or 220-240VAC (set at the factory). Maximum power consumption is 60 watts.
- Dimensions: (W x D x H) 430 mm x 360 mm x 150 mm.
- Weight: 24 kg.

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AMP-60



Preliminary Datasheet

The Monsalvat System is the culmination of over 30 years of experience and 5 years of devoted and specialized research leading us to create new technologies. In order to achieve Verity's development objectives for the Monsalvat, our engineers developed a dedicated laboratory-grade power amplifier that could underpin the Monsalvat's exquisite sonic qualities. We found the resulting equipment to have such a promising performance, we immediately felt compelled to offer this new technology to our customers.

Verity Audio loudspeakers are defined by their high sensitivity and wide bandwidth, which led our design team to focus on dynamic and sound quality over sheer power. When designing our amplifier, our team strived to keep things simple, but perfect. No exotic class of amplification here; just thorough attention paid to the smallest of details. Our team began by building an oversized power supply of a type you would normally find in much larger and far more powerful amplifiers. This potent power supply pushes the new Amp-60 amplifier's dynamics beyond anything you've heard before.



The entire unit is built using only the highest-quality parts available, and our engineers have paid special attention to circuit topology and PCB design. Although a 2-layer PCB would have sufficed, Verity opted for a 6-layer model including special shielding and grounding circuitry, which greatly improves the amplifier's signal to noise ratio. Thicker PCB traces are used and cables are kept to the bare minimum length.

Beyond just a high-end amplifier, the Amp-60 is a shining gem befitting Verity's highest standards of quality and craftsmanship. It exemplifies Verity's know-how and joins the Monsalvat as a reference product in a league of its own.

FEATURES	
Input type	selectable
Balanced XLR	impedance of 18 kΩ
Unbalanced RCA	impedance of 12 kΩ
Protections	
Output short circuit	Yes
DC coupled	Yes
Soft clipping	Yes
Overload	Yes
Overheating	>70 °C (158 °F)
Chassis	The power supply requires 100-120 or 220-240VAC (set at the factory). Maximum power consumption is 1500 watts (max. 2 watts in standby mode)
Platform	Custom isolation platform with adjustable feet

SPECIFICATIONS

Bandwidth:	DC to 140kHz @ 3.0 dB
Sensitivity:	600 mV RMS
Gain:	32 dB
THD:	<0.04%
Power output:	60 watts per channel @ 8 ohms 120 watts per channel @ 4 ohms 180watts per channel @ 2 ohms
S/N ratio:	Greater than 100 dB
Break-in time:	75 hours (63%), 200 hours (99%)

DIMENSIONS & WEIGHTS

W x D x H:	8.3 x 17 x 24" (210 x 430 x 610 mm)
Weight:	154 lbs (70 kg)/pair