



DSPre

Stereo Preamplifier and Digital to Analog Converter

Convergence technologies have fueled the demand for the integration of multiple components into unified products. The DSPre is such a product, combining the award-winning digital-to-analog capabilities of the DAC8 into a fully balanced active analog Audio Research preamplifier. This combination of high performance and convenience in one chassis delivers incredible musical performance as well as great overall value.

The DSPre offers five digital and five analog inputs. Included in the digital input section are USB 2.0HS, AES/EBU, RCA, BNC and Toslink® – all capable of decoding up to 24 bit, 192 kHz resolution. Two balanced and three single-ended sets of inputs complete the analog section. There is a pair of balanced and single-ended outputs. The DSPre also has RS-232 connectivity for automation control as well as two 12 volt triggers for turning on other products such as the Definition series amplifiers.

The digital technology in the DSPre is derived from our award-winning DAC8. Utilizing a quad DAC architecture and dual low jitter master crystal oscillators, the decoding is state of the art and leading edge technology. The asynchronous USB design, in conjunction with Audio Research custom software drivers ensure bit perfect data transfer. Further, all S/PDIF inputs are eligible for upconversion via our sample rate converter, taking 44.1 and 88.2 kHz signals to 176.4 kHz, or 48 and 96 kHz signals to 192 kHz.

The preamplifier of the DSPre is all analog and pure class-A with zero feedback. The outputs are direct-coupled, and the design is fully differential from input to output. Frequency response extends beyond 200 kHz and the signal-to-noise ratio is 120 dB.

Sonically, the DSPre is simply captivating, with a transparent, extended, and relaxed presentation that is unlike other solid-state products—you will know that it came from Audio Research. The sound is spacious and focused, resolving so much information but without any brightness, grain or artifact. In fact you will be quite amazed at the capabilities of this unit as it far outperforms your expectations in both sound and ability. High Definition® from Audio Research.

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SPECIFICATIONS

Frequency Response: +0-3dB, 0.2Hz to 200kHz at rated output. 0.15dB 20Hz to 20kHz (Balanced, 200k ohms load)

Distortion: THD+N less than .006% at 2VRMS BAL output.

Signal-to-Noise Ratio: 120dB

Dynamic Range (AES17): 117dB

IMD (SMPTE): .007%

Gain: Max. Analog Gain: 18.1dB Balanced, 12dB SE. Max. Digital Gain: 30dB Balanced, 24dB SE. (Processor input: 0dB balanced)

Input Impedance: 120K ohms Balanced, 60K ohms SE. Inputs: Digital: 75 ohms BNC, RCA, 110 ohms AES/EBU, OPT 660nm TOSLink fiber 44.1 to 96kHz.

Output Impedance: 500 ohms Balanced, 250 ohms SE Main (2), 20K ohms minimum load and 2000pF maximum capacitance. Record 1K ohms to selected input.

Output Polarity: Non-inverting.

Maximum Input: 24V RMS BAL, 12V RMS SE.

Rated Outputs: 2V RMS 1Hz to 100kHz into 200K ohm balanced load (maximum balanced output capability is 15V RMS at less than 0.5% THD at 1kHz).

Digital Sample Rates: 44.1kHz to 192kHz, SPDIF and USB 2.0HS

Master Oscillator: 22.579MHz \pm 20Hz for 44.1, 88.2 and 176.4kHz. 24.576MHz \pm 20Hz for 48, 96 and 192kHz sample rates.

Intrinsic Jitter: <10ps

Controls: Rotary volume selector (104 steps) and rotary input selector.

Push buttons: Power, Mono, Enter, Menu, Sample, Mute, Invert.

Remote buttons: Display, Power, BAL L, BAL R, Filter, Pause/Play/Skip forward-backward, Mute, Mono, Invert, Menu, Enter, Sample, Proc, VOL UP, VOL DN, Bal1, Bal2, Bal3, SE1, SE2, SE3, AES, BNC, RCA, USB, TOS.

Power Supplies: R-core transformer & 7 low-noise regulators. Automatic 90 sec. warm-up/brown-out mute. Line regulation better than .01%

Noise: -96dB (volume at 1)

Crosstalk: -93dB

Power Requirements: 105-130VAC 60Hz (210-260VAC 50/60Hz) 27 watts maximum. Sleep mode 7 watts maximum.

Dimensions: 19" (48 cm) W x 5.75" (14.6 cm) H (standard rack panel) x 14" (35.6 cm) D. Handles extend 1.50" (3.8 cm) forward of the front panel.

Weight: 13.2 lbs. (6.0 kg) Net; 19.9 lbs. (9.05 kg) shipping.

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