

# Reference Phono 10

## Phono Preamplifier

---



Vinyl record playback has been an integral part of Audio Research since our founding in 1970. Think back to the great phono stages built into the defining preamplifiers of their day, among them the SP3, SP6, SP8, SP10, and SP11. Even after the introduction of the compact disc in 1982, phono sections remained a revered part of our preamplifiers. The first Audio Research phono preamplifier in a separate chassis was introduced in 1992.

The Reference Phono 10 embodies everything we know about phono playback, and incorporates many of the insights gained in the development of the Reference Anniversary and Reference 10 line-stage preamplifiers. The Reference Phono 10 is a true dual-mono design with totally separate signal paths for each channel, from the dual-mono power supply forward. There are separate high- and low-voltage transformers for each channel, and sufficient energy storage for a serious amplifier, fully twice the capacity of a Reference Phono 2, providing incredible dynamic headroom. There are twenty stages of electronic regulation, with separate vacuum-tube regulation for each channel. Dual umbilical cords connect between the power supply and the separate analog stage. The power cord inlet contains a 20A IEC connector.

The dual-mono audio circuits are fully discrete, pure Class-A, with zero feedback. The low gain audio section uses eight 6H30 tubes, four per channel. Rather than using a step-up transformer, special high-gain, extremely low-noise FETs are used in the high-gain section. This approach is costlier than using a transformer, but it is well worth the dramatic performance increase. The design is fully balanced, with an input circuit that allows its RCA inputs to operate in a balanced configuration without requiring an inverter. There are two sets of inputs with the same flexibility as the Reference Phono 2SE, including switchable Low and High gain, seven loading options including 47k, 1000, 500, 200, 100, 50 ohms, plus Custom which can be factory-set according to your needs. In addition to standard RIAA equalization, the Reference Phono 10 also includes early Columbia and Decca equalization curves.



## Specifications

**Frequency Response:**  $\pm .2$ dB of RIAA, 10Hz to 60kHz; 3dB points below 0.3Hz and above 300kHz.

**Distortion:** Less than .002% at 1.0V RMS 1kHz output.

**Gain:** Selectable 51dB (Low), 74dB (High) at 1kHz BAL; 45dB (Low), 68dB (High) at 1kHz SE. (MC & MM compatible).

**Buttons:** Front (2) Power, Mute

**Input Impedance:** 47k ohms and 100pF SE. Selectable loads: 1000, 500, 200, 100, 50 ohms and Custom.

**Phono Equalization:** (Selectable) RIAA, Columbia, Decca.

**Output Polarity:** Non inverting.

**Output Impedance:** 200 ohms SE, 400 ohms balanced. Recommended load 50K-100K ohms and 100pF. (10K ohms minimum and 2000pF maximum.)

**Maximum Input:** 250mV RMS at 1kHz (680 mV RMS at 10kHz).

**Rated Outputs:** 0.5V RMS 10Hz to 20kHz, 100K ohm load (output capability is 80V RMS BAL output at 1/2% THD at 1kHz, 40V SE.)

**Power Supplies:** Electronically regulated low and high voltage supplies. Automatic 40 sec. warm-up/brown-out mute. Line regulation better than .01%.

**Noise:** 0.22uV equivalent input noise, IHF weighted, shorted (Low Gain) input (73 dB below 1mV 1kHz input). 0.055uV equivalent input noise (High Gain) (65dB below 0.1mV 1kHz input)

**Tube Complement:** (8)-6H30P dual triodes, plus (2 each) 6550C and 6H30P in power supply.

**Power Requirements:** 100-135VAC 60Hz (200-270VAC 50/60Hz) 235 watts maximum. Standby: 0.8 watts.

**Dimensions:** Width 19" (48 cm)  
Height 7" (17.8 cm) (standard rack panel)  
Depth 15.5" (39.4 cm)  
Handles extend 1.5" (3.8 cm) forward of the front panels.

**Weight:** Audio Chassis: 22 lbs. (10 kg) Net; 34 lbs. (15.5 kg) Shipping.  
Power Supply Chassis: 35 lbs. (15.9 kg) Net; 43 lbs. (19.5 kg) Shipping.