



REFERENCE 3

VACUUM TUBE
STEREO LINE
PREAMPLIFIER

REFERENCE 3 Line-Stage Preamplifier

Introduced in the spring of 1998, the REF2 received a continuous stream of accolades from around the world. True to its name, it became *the* reference line-stage preamplifier, purchased new by a thousand music lovers and coveted by thousands more. With the MKII version having been introduced in 2000, it is time to push the performance envelope once again. We are proud to introduce the all new REFERENCE 3 line-stage preamplifier.

“Breakthrough” is an overused term, but it is the most fitting word to describe the REF3. As you can probably imagine, it is difficult to write about a new product like this without sounding clichéd, but the REF3 is *so* good that it is startling when you hear it in your system. How is its presentation superior to the great products that have preceded it? Simply, in every way. The REF3 is more musically transparent. It presents an immense soundstage that makes everything else sound one-dimensional. Voices and instruments have real body and weight, with pinpoint focus. The deep, powerful bass is fast, articulate, and controlled. It possesses a dynamic swing that is breathtaking. And, most importantly, there is a directness and immediacy that connects the listener with the performance. The results are simply thrilling.

Externally the same dimensions as its predecessors, the REF3 is new inside and out. The front panel marries the classic Audio Research look with a modern display and intuitive controls that will be appreciated. In the middle of the panel is a large display which can show the volume level (numerically and via line graph), input, and operating status (including BAL/SE, Mute, Mono, and Phase). Flanking the display are two knobs which control volume and input. Under the display are four soft touch switches controlling Power, Processor input, BAL/SE, and Mute. The remote controls all front panel functions plus the balance control, and also a display readout of the number of operating hours the vacuum tubes have been in service! It will be easy to integrate the REF3 with system controllers from companies like Crestron or AMX. Inputs are direct access, and there are discreet codes for power on/off, processor on/off, etc.

The rear panel is the same as the REF2 except for the deletion of the tape monitor input. The REF3 does not have the ability to listen to one source while taping another. Also, the IEC connector for the removable power cord has changed from 15A to 20A.

The remarkable level of performance has been achieved with all new audio and power supply circuits. There are four new circuit boards and two new transformers. The new audio circuit is pure tube, Class-A, with zero feedback, utilizing a total of four long-life 6H30 twin triodes. FETs are used for constant-current sources (outside the signal path), and the analog circuitry uses a long-tailed pair input stage to provide the same performance in either single-ended or balanced operation. Total gain is 12dB balanced, 6dB single-ended. The hybrid power supply has over 50% greater energy storage than its predecessors, greatly contributing to its tremendous dynamic capability. There are other improvements which can be seen on the bench and appreciated in the listening room. Bandwidth has increased from 60kHz to 200kHz; noise has been reduced by 12dB; headroom is much higher, with the maximum input increased to 20V balanced, and distortion has been lowered by 40%. The advancements of the REF3 are both audible and measurable. As you would expect, older REF preamps cannot be updated to the REF3.

It will be easy to hear and see how the REF3 extends the boundaries of preamplifier design. With its great build quality, versatility and the ability to musically transform every system, the REF3 also represents great value. Building upon the foundation of its famed predecessors, the REF3 will be a resounding success. Call your Audio Research dealer to schedule a personal audition.

REFERENCE 3 Specifications

FREQUENCY RESPONSE: +0-3dB, 0.2Hz to 200kHz at rated output (Balanced, 200k ohms load)

DISTORTION: Less than .01% at 2V RMS BAL output.

GAIN: Main output (SE or BAL input): 11.6dB Balanced output, 5.6dB Single Ended output. Tape output: 0dB. (Processor input: 0dB Balanced.)

INPUT IMPEDANCE: 120K ohms Balanced, 300K ohms SE . Inputs (7): Tuner, Phono, Aux 1, Aux 2, Processor (XLR and RCA connectors).

OUTPUT IMPEDANCE: 600 ohms Balanced, 300 ohms SE main (2), 20K ohms minimum load and 2000pF maximum capacitance. Outputs (3): 2 Main, 1 tape (XLR and RCA connectors).

OUTPUT POLARITY: Non-inverting.

MAXIMUM INPUT: 20V RMS maximum Balanced, (10V RMS SE).

RATED OUTPUTS: 2V RMS (1V RMS SE) into 200K ohm balanced load (maximum balanced output capability is 30V RMS at less than 0.5% THD at 1kHz).

CONTROLS: Volume (104 steps), Select Input. Push Buttons: Power, Proc, BAL/SE, Mute.

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

NOISE: 2.7uV RMS residual IHF weighted balanced noise output with volume at 1 (106 dB below 2V RMS output).

TUBE COMPLEMENT: (4) -6H30P dual triodes, plus (1 each) 6550C and 6H30P in power supply.

POWER REQUIREMENTS: 100-135VAC 60Hz (200-270VAC 50/60Hz) 125 watts.

DIMENSIONS: 19" (48 cm) W x 7" (17.8 cm) H (standard panel) x 15.5" (39.4 cm) D. Handles extend 1.5" (3.8 cm) forward of the front panel.

WEIGHT: 29.6 lbs. (13.5 kg) Net; 43 lbs. (19.5 kg) Shipping.

Specifications subject to change without notice.