

**LAMM**



**model LP2.1**

**Dual-monaural  
phono preamplifier**



Lamm Industries, Inc.

Model LP2.1 is the next generation of the original LP2 -- the first in the line of LAMM phono preamplifiers.

The LP2.1 features the following upgrades and modifications in comparison to the LP2:

- introduction of many technical solutions that had been implemented in the LP1 Signature (just like the ML2.2 single-ended power amplifier derived many of its technical solutions from the ML3 Signature power amplifier);
- introduction of the new tubes: 6C3P and 6C45P-E (same tubes that are used in the LP1 Signature phono preamplifier), and corresponding adjustments in the circuitry;
- significantly reduced output impedance;
- new parts that had been developed by various manufacturers since the introduction of the LP2;
- new pc-board material
- super low noise power transformer

The LP2.1 is a dual-mono vacuum tube phono preamplifier with two electrically and mechanically separated channels. It features a topology that brings out the most natural sound performance in the audio path, as well as graceful and sophisticated design.

The preamplifier operates in a pure class A mode from input to output. High-current drive capability, in combination with unique single-ended class A circuitry, enable the preamplifier to drive any cable and any reasonable real world load, while maintaining its practically inaudible sonic signature. When connected to the appropriate type of electronics, and especially LAMM amplifiers and preamplifiers, it assures the extraordinary transparency of perceived sound and recreation of a three dimensional soundstage in the home, recording studio, etc. without boundaries and limitations.

All amplification stages utilize high transconductance very low noise high-current vacuum triodes. No loop feedback is employed.

The LP2.1 features a very accurate passive RIAA EQ network. The preamplifier's audibly neutral power supply features a full-wave vacuum rectifier which, together with a choke-containing filter, helps reduce the hum and buzz to almost negligible levels and, in the end, ensures the verity of dynamic range without coloration. Solid-state analog voltage regulator is used as a heater supply. Other features include two sets of inputs for each channel and gain/selector switches for MM and MC cartridges.

A unique electronic protection circuitry mutes the outputs until the LP2.1 has stabilized upon being turned on; it also automatically mutes the preamplifier in case the AC line voltage drops or is interrupted, as well as at the turn-off of the unit.

Each preamplifier is carefully crafted with the hand selected components of the highest quality, some of which include military graded low noise DALE metal film resistors; 1% tolerance RCD wire-wound resistors; ELECTROCUBE and VISHAY/ROEDERSTEIN film capacitors; high frequency switching grade CORNELL DUBILIER electrolytic capacitors; FISCHER "Camac" connectors; specially selected military-graded low-noise long-life vacuum tubes; and a custom-designed super low noise power transformer.

The LP2.1 is especially effective in large systems with speakers of reference quality that make it possible to recreate the unique qualities of LPs. The LP2.1 is designed to be used as part of the truly hi-end audio system and is capable of reproducing the studio- or life-recorded musical event with reality approaching that of the concert hall. It is also designed for use in the recording studios as a reference preamplifier for the purpose of controlling the recording process itself and the quality of LPs.

The LP2.1 is available in two versions: standard and deluxe. In the deluxe version, the power supply stores more energy, all film capacitors in signal path are bypassed by polystyrene capacitors of the highest available quality, and a custom-designed massive damping panel significantly reduces all types of mechanical vibrations which, in turn, leads to a slightly more extended, coherent and natural bass reproduction.

The LP2.1 works on all world AC line voltages.

# SPECIFICATIONS

- **RATED OUTPUT VOLTAGE\***  
F = 1 KHz:  
MM input to output 0.125 Volts RMS.  
MC input to output 0.125 Volts RMS.
- **VOLTAGE GAIN\***  
F = 1 KHz:  
MM input to output  $100 \pm 2\%$  or  $40 \pm 0.2\text{dB}$ .  
MC input to output  $1000 \pm 2\%$  or  $60 \pm 0.2\text{dB}$ .
- **RIAA ACCURACY\***  
from 20Hz-20KHz: better than  $+0.0\text{dB}/-0.5\text{dB}$
- **PHONO OVERLOAD**  
F = 1 KHz:  
Phono MM 250 millivolts RMS.  
Phono MC 25 millivolts RMS.
- **TOTAL HARMONIC DISTORTION\***  
from 20Hz-20KHz; RIAA de-emphasis:  
  
V<sub>out</sub>=0.25 Volts RMS  
MM input to output no more than 0.07 %  
MC input to output no more than 0.07 %  
  
V<sub>out</sub>=10 Volts RMS  
MM input to output no more than 1 %  
MC input to output no more than 1 %
- **IM DISTORTION\***  
(60Hz:7KHz 4:1) SMPTE;  
RIAA de-emphasis:  
  
V<sub>out</sub>=0.25 Volts RMS  
MM input to output no more than 0.07 %  
MC input to output no more than 0.07 %  
  
V<sub>out</sub>=10 Volts RMS  
MM input to output no more than 1 %  
MC input to output no more than 1 %

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\* All measurements were taken with the 41 KOhm load connected to the preamplifier's output.

- INPUTS**  
**Single-ended:** gold plated, single-ended RCA connectors.
  
- INPUT SENSITIVITY\***  
**V<sub>out</sub>=0.125 Volts RMS, F = 1 KHz:**

MM input	1.25 millivolts RMS $\pm$ 2%
MC input	0.125 millivolts RMS $\pm$ 2%
  
- INPUT IMPEDANCE**  
**F = 1 KHz:**

MM input	47 KOhms shunted by 200 pF
MC input	400 Ohms
  
- OUTPUTS**  
**Single-ended:** gold plated, single-ended RCA connectors.
  
- CORRECTED OUTPUT IMPEDANCE** typically 2.8 KOhms.
  
- NOISE\***  
**signal-to-noise ratio, below 1 Volt RMS output,  
A weighted:**

MM input to output (shorted input)	typically 85.5 dB.
MC input to output (shorted input)	typically 84.5 dB.
MM input to output, with IHF dummy load in MM position	typically 83 dB.
MC input to output, with IHF dummy load in MC position	typically 82 dB.
  
- ABSOLUTE PHASE**

MM input to output	Non-inverting
MC input to output	Non-inverting
  
- OPERATING TEMPERATURE** -4 to +104 degrees Fahrenheit  
(-20 to +40 degrees Celsius) ambient.
  
- POWER SUPPLY**

Nominal line voltage:	100-240 Volts, 50/60Hz.
Input voltage range:	$\pm$ 10%.

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\* All measurements were taken with the 41 KOhm load connected to the preamplifier's output.

- POWER SUPPLY (continued)**

One power transformer, two filter chokes, one full-wave vacuum rectifier, one solid-state analog non-switching voltage regulator.

AC voltage intensively filtered by special RFT power line filter.
- POWER SUPPLY ENERGY STORAGE**

Regular version                      Approximately 125 Joules.  
Deluxe version                        Approximately 150 Joules.
- FRONT PANEL CONTROLS**

LED control.
- REAR PANEL CONNECTORS AND CONTROLS**

IEC320 power inlet (3 lug).

EARTHING post.

PHONO grounding post.

Two pairs of INPUT CONNECTORS RCA for PHONO inputs.

Two SELECTOR/GAIN switches.

One pair of OUTPUT CONNECTORS RCA.
- FEATURES**

Pure class A vacuum tube design. All stages are single-ended. No loop feedback is employed. High-current driving capability, in combination with unique single-ended class A circuitry, guarantee the preamplifier to drive any cable and any reasonable real world load, while maintaining its practically inaudible sonic signature.

Tremendous reserves of headroom and output drive capability are engineered into the LP2.1.

Specially designed damping panel installed in the LP2.1's deluxe version effectively isolates all sensitive electronic components from any induced resonances.

Absolutely outstanding signal-to-noise ratio makes the LP2.1 one of the quietest phono preamps available on the market.

This design is unique to Lamm Industries, Inc.

AC voltage selector                      100/120/220/230/240 Volts, internally switchable.

- SAFETY FEATURES**

Unique electronic protection circuit enables muting of the outputs until the preamplifier is stabilized after a turn-on, and automatic switching to muting in case the AC line drops or is interrupted.

AC voltage fuses:  
2 Amps slo-blow for 100/120 Volts,  
1 Amp slo-blow for 220/230/240 Volts.
- POWER CONSUMPTION**

Typically 75 Watts.
- BURN-IN TIME AT FACTORY**

Minimum 72 hours.
- DIMENSIONS**

4.5"(11.43cm)H x 19"(48.26cm)W x 13.875"(35.24cm)D  
[add 1.375"(3.5cm) of depth for front handles].
- WEIGHT, UNIT ONLY**

Regular version 22 Lbs (10 Kg).  
Deluxe version 41.5 Lbs (18.84 Kg).
- SHIPPING WEIGHT**

Regular version 43.1 Lbs (19.57 Kg).  
Deluxe version 62.6 Lbs (28.429 Kg).
- TUBE COMPLEMENT**

V101 – 6C3P / 6C3Π, left channel,  
first amplification stage.  
V102 – 6C3P / 6C3Π, right channel,  
first amplification stage.  
V103 – 6C45P-E / 6C45Π-E (original), left channel,  
second amplification stage.  
V104 – 6C45P-E / 6C45Π-E (original), right channel,  
second amplification stage.  
V105 - 6X4 full wave voltage rectifier.
- SUBSTITUTION TUBE TYPE**

6C3P: 6C3P-EV / 6C3Π-EB , 6C3P-DR / 6C3Π- DP,  
matched pairs available factory-direct from LAMM only.

6C45P-E: no substitution, matched pairs available  
factory-direct from LAMM only.

6X4: 6X4W, 6X4WA, 6202, EZ90, CV4005.



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