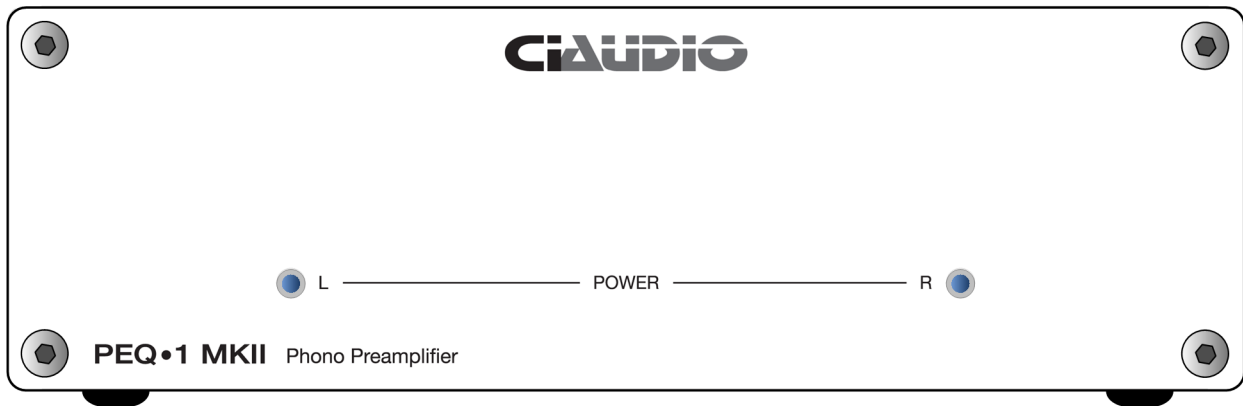




PEQ•1 MKII Dual Mono MM/MC Phono Preamplifier



Thank you for purchasing the **PEQ•1 MKII** Phono Preamplifier.

Please read the **Configuration** section of this document before installing into your playback system.

The PEQ•1 is a versatile design offering outstanding performance with a wide variety of phono cartridge types. Key features include:

- Ultra-Low noise
- Ultra-Low harmonic & intermodulation distortion (THD/IMD)
- Dual-Mono Design for low crosstalk
- Heavy steel faraday cage for high resistance to electromagnetic and radio frequency interference.
- Rear panel DIP switches for convenient configuration & adjustment

handcrafted in USA

Product Design

•Power

The internal design of PEQ•1 starts with a dual AC input (one for each channel).

When the outboard power supply is connected, the AC is fed to two independent filter/regulation circuits (1 per channel). These circuits feed the L & R audio stages with ultra-low noise on par with the best battery technologies, and without the inconvenience. There is also a Chassis Ground switch to optimize chassis shielding. See "Setup" for details.

The standard AC supply is an AC wall adapter type with a single winding feeding the L&R circuits. This supply is 120V input only.

Countries with 220~240V mains must use the AC•15 MKII Upgrade Supply.

The AC•15 MKII Upgrade Supply Features:

- Large Toroidal Transformer with dual outputs (1 per channel)
- AC Line Filtering
- Dual common-mode choke filtering (1 per channel)
- 120V/240V Selectable Input Voltage
- Rear Panel Power Switch
- Detachable AC Input & Output cables

• Audio Circuit

Input signals are connected via highest quality Cardas™ panel-mounted RCA jacks. The input jacks are routed to two independent mono circuits of identical layout. This assures exact performance from both channels and reduces crosstalk.

Circuit topology consists of an input gain stage with selectable resistive load, capacitance, gain, and subsonic filter. This gain stage is followed by a passive high frequency cut, then an active bass boost to create the RIAA equalization curve, then to the output jacks.

Careful layout yields a very short signal path from input to output, and a combination of star grounding power supply components/ground plane for the audio circuits, result in a silent background and immunity to EMI/RFI pickup. The entire circuit board is then housed in a heavy steel faraday cage to further reject outside interference, then inside the attractive aluminum outer chassis.

Highest quality components are used throughout:

Cardas™ jacks, Nichicon Muse™ NP power supply capacitors, Vishay™ 2% Polypropylene signal and bypass capacitors, Takman™ metal film & carbon films resistors, and Grayhill™ switches.

Configuration

Before connecting to your playback system, you will need to configure the PEQ•1 DIP switches to match your phono cartridge. Please refer to the owner's manual of your cartridge to determine proper settings. Selections can be made using the included DipStick™.

DO NOT use a pen, pencil, paper clip, or metal object. If you misplace the DipStick™, a simple wood toothpick is a good substitute.

• **Cartridge Load Impedance** (switches 1,2,3)

With switches 1,2,3 in the ↑ position, load impedance is 47KΩ . This is standard for MM cartridges and many High Output MC types. Only one selection should be used at a time.

Switch 1 ↓ is 10KΩ

Switch 2 ↓ is 470Ω

Switch 3 ↓ is 100Ω

• **Cartridge Load Capacitance** (switches 4,5)

Load capacitance is used to tame high frequency anomalies for some MM cartridges. Adding capacitance is usually effective for cartridges with an internal impedance of 800 ohms or higher. Being that the chosen capacitance is added to cable capacitance, this setting is *done by ear*.

Switch 4 ↓ is 100pf

Switch 5 ↓ is 270pf

Switches 4 & 5 ↓ is 370pf

• **Gain** (switch 6)

Standard gain options are 45dB and 60dB. For MM and high output MC, use 45dB. For low output MC, use 60dB.

Switch 6 ↑ is 60dB

Switch 6 ↓ is 45dB

Custom gain options are available at a nominal fee. Contact CIAudio for details.

• **Subsonic Filter** (switch 7)

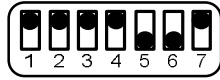
The subsonic filter can be used to reduce unwanted speaker cone movement due to record warp, etc.

Switch 7 ↑ is subsonic filter ON

Switch 7 ↓ is subsonic filter OFF

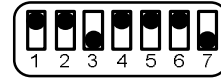
• Examples

Moving Magnet



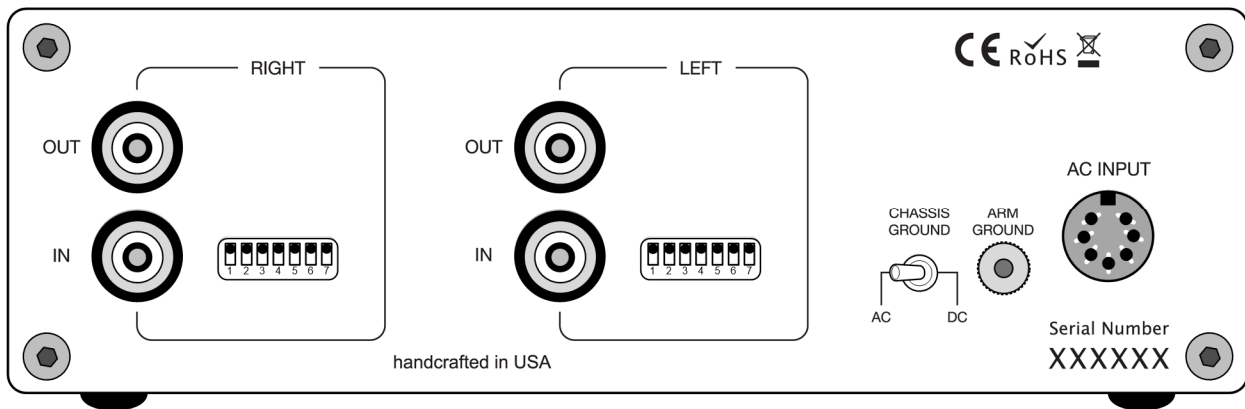
47K Ω •270pf•45dB gain•subsonic ON

Moving Coil



100 Ω •60dB gain•subsonic OFF

Connection



After configuring the DIP switches, you're ready to connect PEQ•1 to your playback system. First connect adequate cables from your turntable to the L & R input jacks of PEQ•1 (lower jacks).

Next connect a pair of cables from the PEQ•1 L & R output jacks (upper jacks) to a standard/AUX input of your pre-amplifier or receiver.

If your turntable is equipped with a ground wire, attach it to the ARM Ground terminal of PEQ•1.

Last, connect the power supply to PEQ•1, then to a suitable AC outlet. PEQ•1 is also equipped with a Shield Ground switch. When using the standard power supply, the switch should be in the DC position. When using the AC•15 MKII Upgrade Supply, the switch should be in the AC position. This optimizes the chassis shielding based on the power supply in use.

You are now ready to put on your favorite record and ***enjoy the music!***

Performance Specifications

- RIAA Accuracy: +/- 0.2 dB
- THD + Noise: < .002% (1kHz Unweighted/45dB gain/10mV)
- IMD: < .002% (SMPTE)
- Crosstalk: > 108dB
- Cartridge Loading:
 - Resistance: 47K Ω • 10K Ω • 470 Ω • 100 Ω
 - Capacitance: 100pf • 270pf • 370pf
- Gain: 45dB • 60dB
- Subsonic Filter: -3dB @ 18Hz
- Output Impedance: 100 ohms
- Operating Voltage: 120V AC Input • 14V AC Output (Standard Supply)
- Power Consumption: < 4.0 Watts
- Dimensions: 8.50"W x 2.75"H x 6.50"D
- Weight: 8.0 lbs. (actual), 9.0 lbs. (shipping)

- Options: AC•15 MKII Upgrade Power Supply
 - * Selectable 120/240V AC Input Voltage
 - * 2 x 14V AC Filtered Output Voltage

Warranty

Your CIAudio Product is covered by our 5 year Parts & Labor Warranty.
To obtain service, contact your dealer, distributor, or our factory.

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