

LeMay Audio Products

MK-I Preamplifier
Users Manual

The LeMay Mark One Preamp



Congratulations on purchasing one of the world's finest professional instrument preamplifiers! The LeMay MK-I preamplifier is a state of the art audiophile quality unit designed and built with the latest and best sounding technology there is. It's the ultimate "clean tone machine".

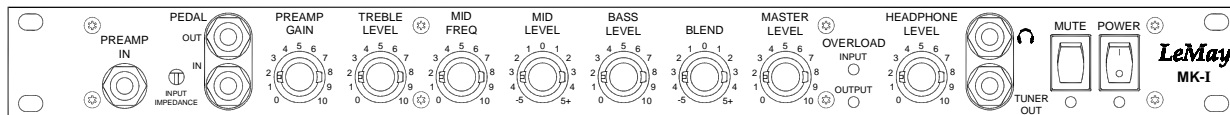
The LeMay MK-I preamplifier gives you dramatically better control of your sound. The result is transparent smooth clean sound with added sustain, tight bottom end and silky highs. It's just what you've been looking for!

MK-I Preamp Features:

- Superb string separation at all volume levels. No muddiness, ever!
- All pure analog. No digitization of your sound thru A/D or D/A converters.
- Has Pedal In/Out feature, Pre EQ.
- Adjustable input impedance control to fine tune your sound.
- Warm tube-like sound with crystal clear highs.
- Audiophile Pro quality parts used throughout.
- Ultra low noise – studio quality.
- Headroom to spare. High output level available on demand.
- Studio style effects send and returns. Can be used in stereo or mono.
- Input and Output Overload LED indicators.
- Special "Blend" EQ control for personalizing your tone.
- Special Power On/Off circuit to minimize "pops" and speaker damage.
- Built in high output headphone amp with separate volume control.
- Noiseless Mute circuit with LED indicator.
- Balanced XLR output for stage and studio use. Includes ground lift switch.
- Buffered output for tuner.
- Input jacks located both front and rear. Use only one or the other.
- Auxiliary input for home practice or solo gigs. For CD players or a second effects return.
- Durable construction throughout. Made for years of trouble free use.
- Proudly made in the U.S.A. by musicians and engineers.

MK-I PREAMP CONTROL FUNCTIONS, JACKS, & INDICATORS:

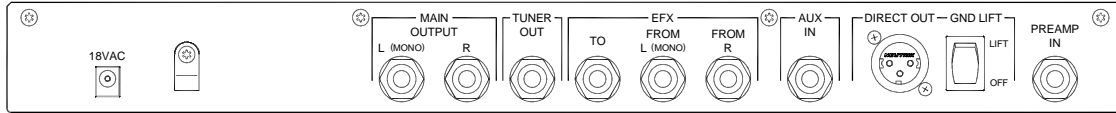
FRONT PANEL



Preamp In	There are two input connectors. Insertion of a plug into the front panel input connector auto-disconnects rear input connector. This reduces or eliminates possible noise sources.
Input Impedance Adjust	Set for best tone. If this function not desired, set to 12 o'clock (200 k ohms) for normal tone. Adjustment range is 20 k to 500 k ohms. See FAQ's.
Pedal In and Out	Allows volume pedals to be patched in after the input preamp stage but before the EQ. Only use line level signals. See FAQ's.
Preamp Gain	Sets the gain for the first audio stage. Start at 5.
Treble Level	Adjusts the high frequency level. CW boosts the level of highs. CCW cuts the level of highs. (CW is clockwise, CCW is counterclockwise.)
Mid Frequency	Sets the frequency at which the Mid Level control has an effect. 0 equals about 250 Hz, 5 equals 370 Hz, and 10 equals about 1100 Hz.
Mid Level	Sets a boost or cut in the mid range frequencies selected by the Mid Frequency control. -5 is equivalent to -16 db cut and +5 is equivalent to +16 db boost.
Bass Level	Controls low frequency response. Start at 5 (flat) and tweak to taste. CW is boost, CCW is cut.
Blend	Only set this control after you have set the others. This is to be used as a sonic "shading" control and, like any seasoning, a little goes a long way. Start at 12 o'clock. CW yields a "Mooney" bright aggressive sound; CCW gives you a mellow, darker tone.
Master Level	Sets the overall output level of the preamp. Use between 5 and 10.
Overload indicators	Red LED indicators only turn on in the rare instance of peaks being hit. Indication of soft clipping may occur you'll probably never hear it.
Headphone Level	This unit puts out up to half a watt per channel into 8 ohms – more than enough for any player at home. You can, if you wish, even drive a small pair of passive speakers.
Headphone Jack	1/4" stereo jack for headphones or a small pair of passive speakers. Use quality headphones such as Sony MDR 7505.
Tuner Out	Buffered output so it will not load down the pickup or the rest of the signal chain. May be used simultaneously with the Tuner Out jack on the rear panel.
Mute	Yellow LED comes on when muted. Tuner, Effects and Headphones remain on to allow for string replacement, tuning and effects adjustment. Power Amp and XLR feeds are killed in mute mode.
Power	Turns the unit on and off and is indicated by a blue LED. A time delay is built into the audio circuits to minimize "pop" when turning on or off.

MK-I PREAMP CONTROL FUNCTIONS, JACKS, & INDICATORS:

REAR PANEL



18 VAC	Power input. Use only the factory supplied power supply! European voltage version of the power supply is available at extra cost.
Main Outputs L (mono), R	Outputs have effects return mixed in. Use to feed power amp input. Use left output for mono feed.
Tuner Out	Same function as Tuner Out on front panel. Use for internal feed to rack mounted tuner. Both Tuner Outs may be used simultaneously. Can be used as second effects send.
To EFX	Mono send to effects unit input.
From EFX – L (Mono)	Return from left channel of effects unit (or use as mono only return). Return level is set by the effects unit (if it has one) or input level control of the effects unit, depending on the unit's design.
From EFX – R	Return from right channel of effects unit (if present). Return level is set by either output level control of the effects unit (if it has one) or input level control of the effects unit, depending on the unit's design.
Aux In	Use with 1/4" stereo plug to inject audio from a CD or MP3 player for home practice or live gigs. Can also be used as a second effects return. Use the player's level control to set music level or the effects unit's output level to get the right mix of effects. If used as an effects return, the rear tuner out can be used as an effects send. See FAQ sheet.
XLR Balanced Direct Out	Buffered post effects, post EQ signal for studio or stage use.
Gnd Lift	Ground lift switch for XLR direct out connector.
Preamp In	Same function as input connector of front panel. Front panel connector takes precedence over rear panel connector. Insertion of a plug into the front panel connector auto-disconnects this rear input connector. This reduces or eliminates possible noise sources.

FREQUENTLY ASKED QUESTIONS

- **How and when do I use the Input Impedance control?**

The input impedance control is used when a direct connection from the pickup on your instrument to the preamp input is desired. The volume pedal is then placed in the Pedal In/Out patch point on the front panel for low noise control of the instrument volume.

NOTE: Always set to maximum (fully rotated clockwise) if you choose NOT to use the Pedal To/From feature. This ensures the input will mimic the impedance of a pot pedal and maintain proper high frequency response.

To adjust the impedance control properly, start with the impedance control fully clockwise, and then adjust all the preamp tone controls for the best sound. Only after adjusting the controls to taste should you make slight adjustments to the impedance control. Rotating it fully counter-clockwise will equal approximately 20 000 ohms (20 k ohms), which is equal to the impedance of many conventional inexpensive pedals made for guitars.

Setting the input impedance control to the twelve o'clock position makes the input impedance approximately 150 000 ohms (150 k ohms), which is equivalent to the most popular or generally accepted setting for steel and jazz guitar electronic or "light style" pedals.

A setting of full clockwise will approximate the old AB pot pedals which were 500 000 ohms (500 k ohms).

Some musicians who have played for many years find their high frequency hearing response has degraded. Musicians under these circumstances may feel this control does not appear to do much or anything. In this case, it is recommended to just to leave it set at the twelve o'clock position for the benefit of your listeners.

- **What's a good setting to start with on the Preamp Gain control?**

Between "4" and "6" is a good starting point. The Master Gain control delivers plenty of level so be cautious in its use.

- **What are the frequencies covered by the Mid Freq control? Mid Level?**

Setting the "Mid Freq" control to the "0" position equates to about 250 Hz, "5" equates to about 370 Hz and "10" equals about 1100 Hz. The "Mid Level" control adjusts from -16 db cut at the "-5" position to a 16 db boost at the "+5" position.

- **What does the Blend control do?**

This control is used as an overall tone control to be used only after setting the other tone controls to your satisfaction. Rotating the knob clockwise yields a brighter more aggressive tone and counterclockwise results in a mellower, warmer tone. Straight up (zero) yields no change.

- **What's a good setting to start with on the Master Level control?**

Five is a good place to start. The Master Level control delivers plenty of level so be cautious in its use.

- **What kind of headphones should I use?**

Use low impedance (35-60 ohms) stereo closed or open style depending on personal preference. I recommend Sony MDR 7505 headphones for best fidelity.

- **Can I drive speakers with the headphone jack?**

Although it was designed for headphones, you can drive a small pair of computer style speakers for listening at home. The preamp will deliver up to half a watt per channel into eight ohms from the stereo headphone amp.

- **What do the red LED indicators show?**

The top LED shows when the preamp input stage enters soft clipping. The bottom LED shows when the output stage enters soft clipping. Although you might see them light up on rare occasions, you'll probably never hear the difference.

- **Tell me about the Tuner Out function.**

The Tuner Out jacks have a buffer stage and circuitry which isolates both outputs of the tuner from the rest of the circuitry eliminating a common source of noise. This circuit will not load down the pickup or any preamp stage. The front and rear panel jacks can be used at the same time. The Tuner Out can also be used as an effects send.

- **What does the Mute button do?**

When engaged, the mute function allows the tuner, headphone amp, and effects send and return to remain on while the power amp send and XLR direct out feed are killed. This way you can practice at home or in between songs on stage without your power amp on and still get a stereo feed to your headphones complete with stereo effects. Use it to mute your output while changing a string, tuning up or adjusting the effects unit.

- **Will pushing the Mute button send a loud “pop” into my speakers, headphones or the XLR Direct Out (the house feed) when I activate it?**

No, the preamp employs silent muting circuitry.

- **How do I use the Aux In feature?**

The Aux In may be used to input stereo rhythm tracks or background music from CD or MP3 players. The Aux In feature can also function like a second stereo effects return. It can be used as a way to inject practice music into the main channels and/or headphones or to add a second effects return. The amount of music or effects level is determined by the output level of the music or effects player.

- **Can I safely run phantom power into my Direct Out circuit?**

While it can be briefly connected to phantom power without damage, it is not a good idea to run phantom voltage into the Direct Out connector for any length of time.

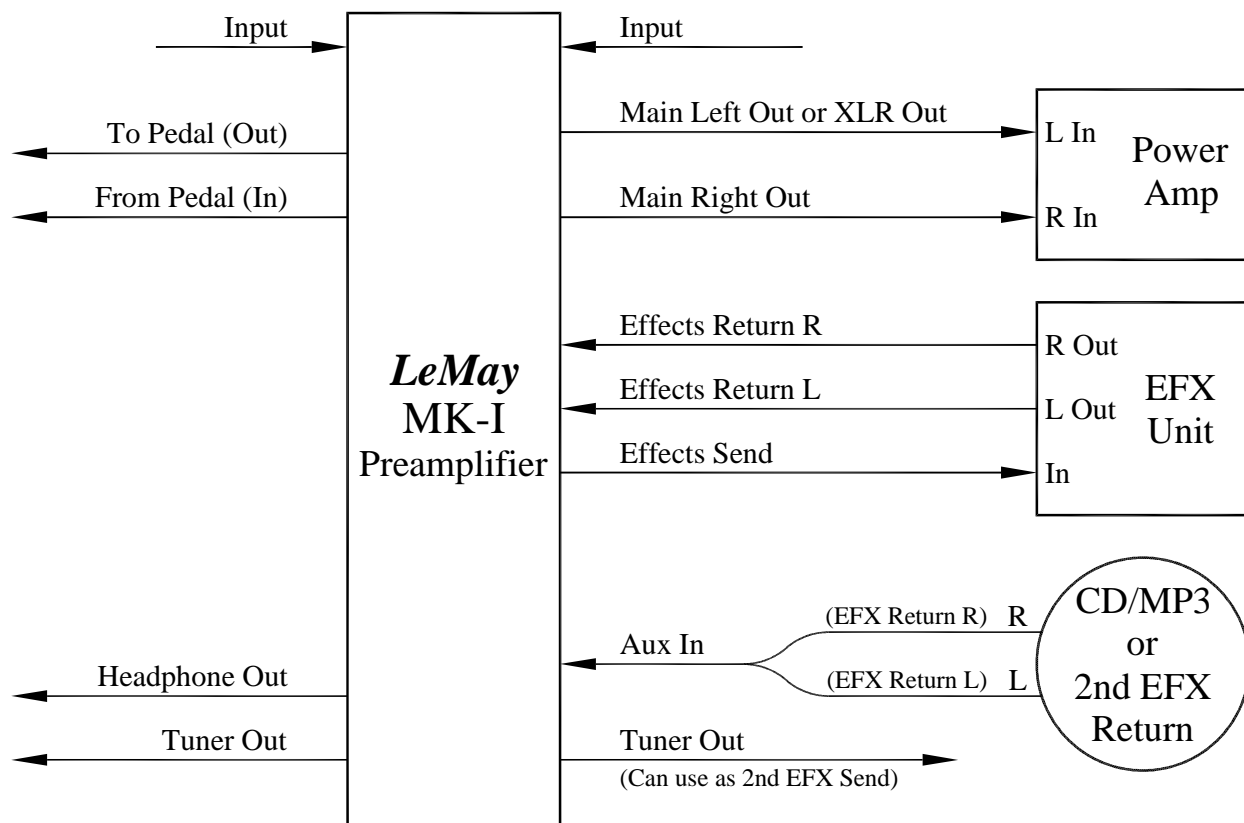
- **What output level can I expect to see from the Direct Out connector?**

Approximately the same as the main outputs, up to 7 volts maximum.

- **Where can I get more information and FAQ's about this preamp?**

Check the web site periodically for updates to the FAQ list at <http://www.john-lemay.com>.

BASIC HOOKUP DIAGRAM



NOTE: Aux In L & R are on a 1/4 in TRS jack: Tip is Left, Ring is Right, Sleeve is Ground

BUILT IN AUTOMATIC STEREO OR MONO SWITCHING

The MK-I incorporates a feature which automatically ensures that its internal stereo/monaural signal routing is correct by sensing which output connectors are connected to an external power amplifier.

If only the Left (mono) output jack is used, the MK-I mixes all EFX and AUX stereo signals to mono ensuring that all program material will be heard through the mono amplifier.

If both the Left and Right output jacks are employed, the MK-I routes EFX and AUX stereo signals appropriately, ensuring that they will be amplified as stereo, by the two power amplifier channels and the headphones.

MECHANICAL DATA

Chassis Material	Aluminum
Mechanical	No Paints or Powder coatings to flake or wear
Finish	Hard Anodized
Front & Rear Panel Markings	Laser Etched
Panel	Meets industry standard specifications
Panel Thickness	0.13 in. (0.33 cm)
Panel Height	1.70 in.(4.32 cm) typical 1.75 in. (4.45 cm) max
Panel Width	19.0 in. (48.3 cm) max
Internal chassis/cabinet width (including screws)	17.32 in. (44 cm)
Internal chassis/cabinet height	1.73 in (4.39 cm) typical 1.75 in. (4.45 cm) max
Internal chassis/cabinet depth	5.25 in. (13.3 cm)
Total protrusion of jacks beyond rear chassis apron (max)	0.235 in. (0.597 cm)
Total protrusion of knobs beyond front panel	0.72 in. (1.83 cm) max
Total weight	2.75 lb. (1.247 kg)