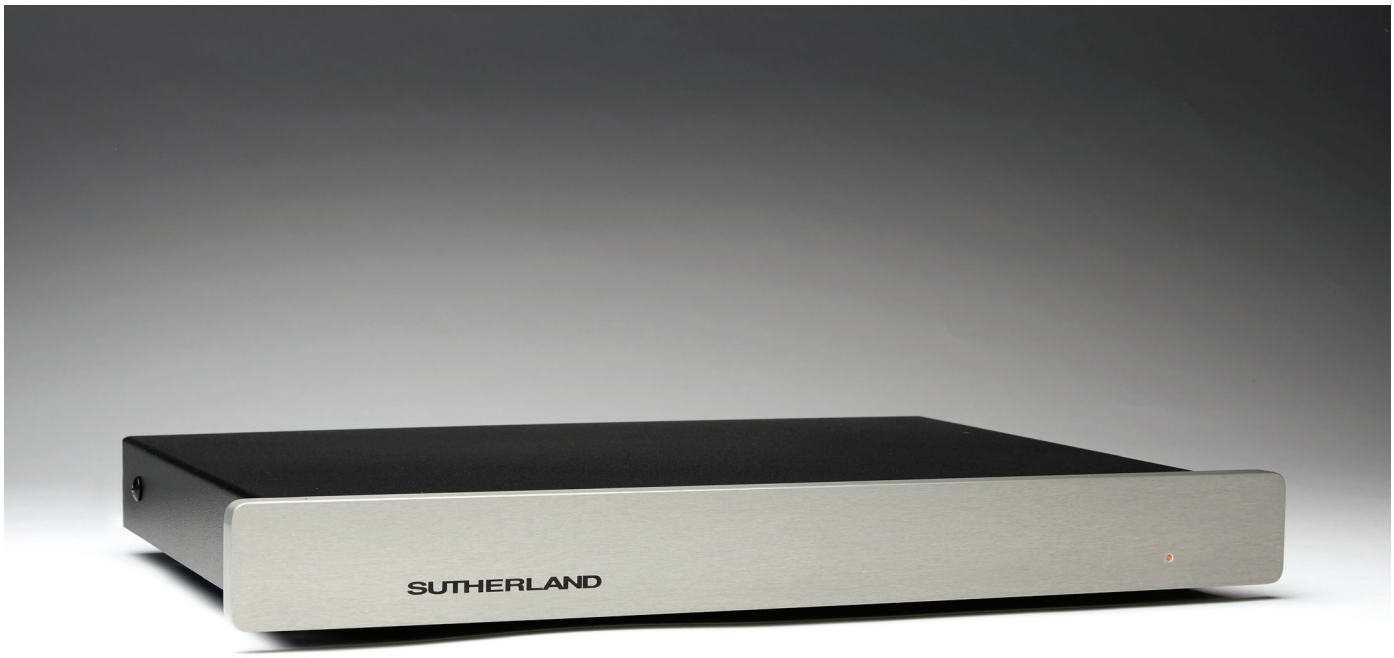
LITTLE

LOCO.

SUTHERLAND



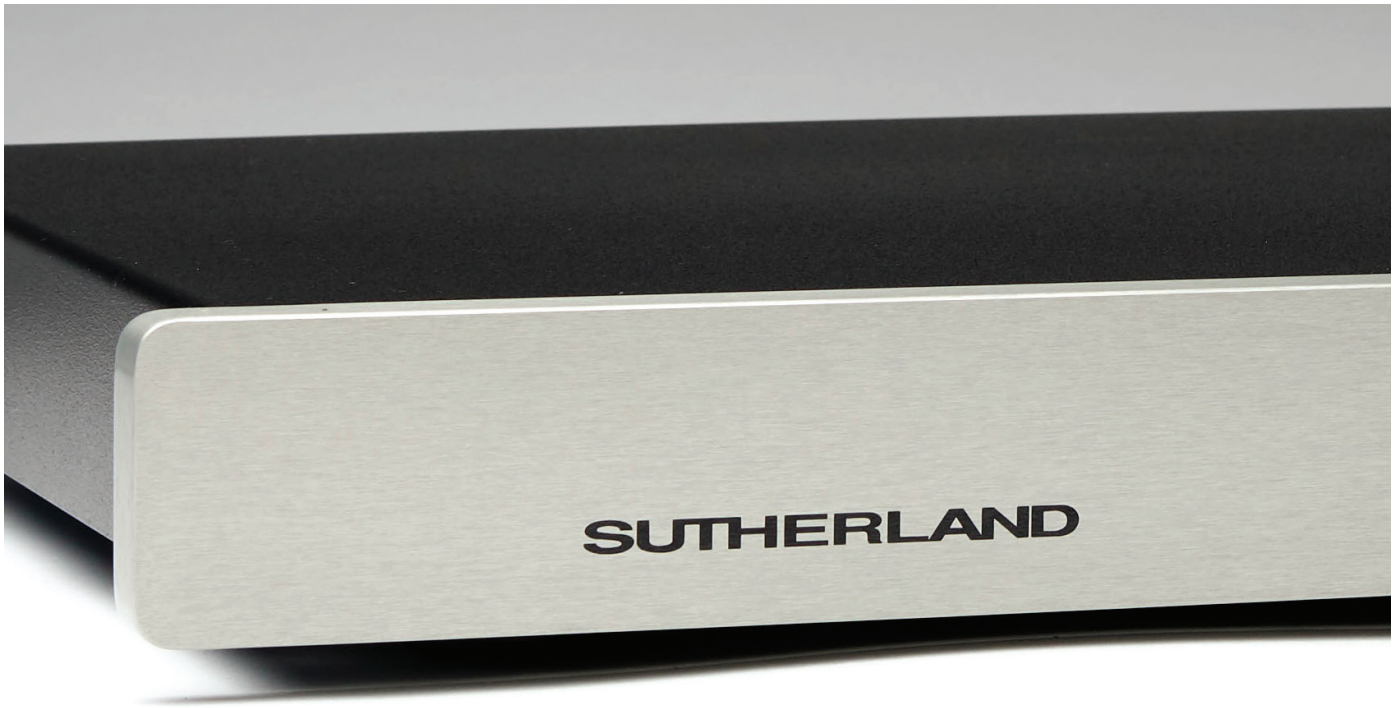
*You are about to celebrate your new **little LOCO** purchase. The direct experience of the **little LOCO** in your system will transcend any discussions we could have. I wish I could be there with you for a 'high five' moment.*

— RON SUTHERLAND

The first transimpedance phono preamp from Sutherland is the **PHONO LOCO**. It is an all out expression. Every design element was chosen for performance.

AND it performs beautifully.

There naturally followed the challenge to bring a big measure of that performance to a lower priced model. So there was a technology trickle down from **PHONO LOCO** to **little LOCO**. Glad to report the price went down quickly. The performance level will still seductively pull you into the music.

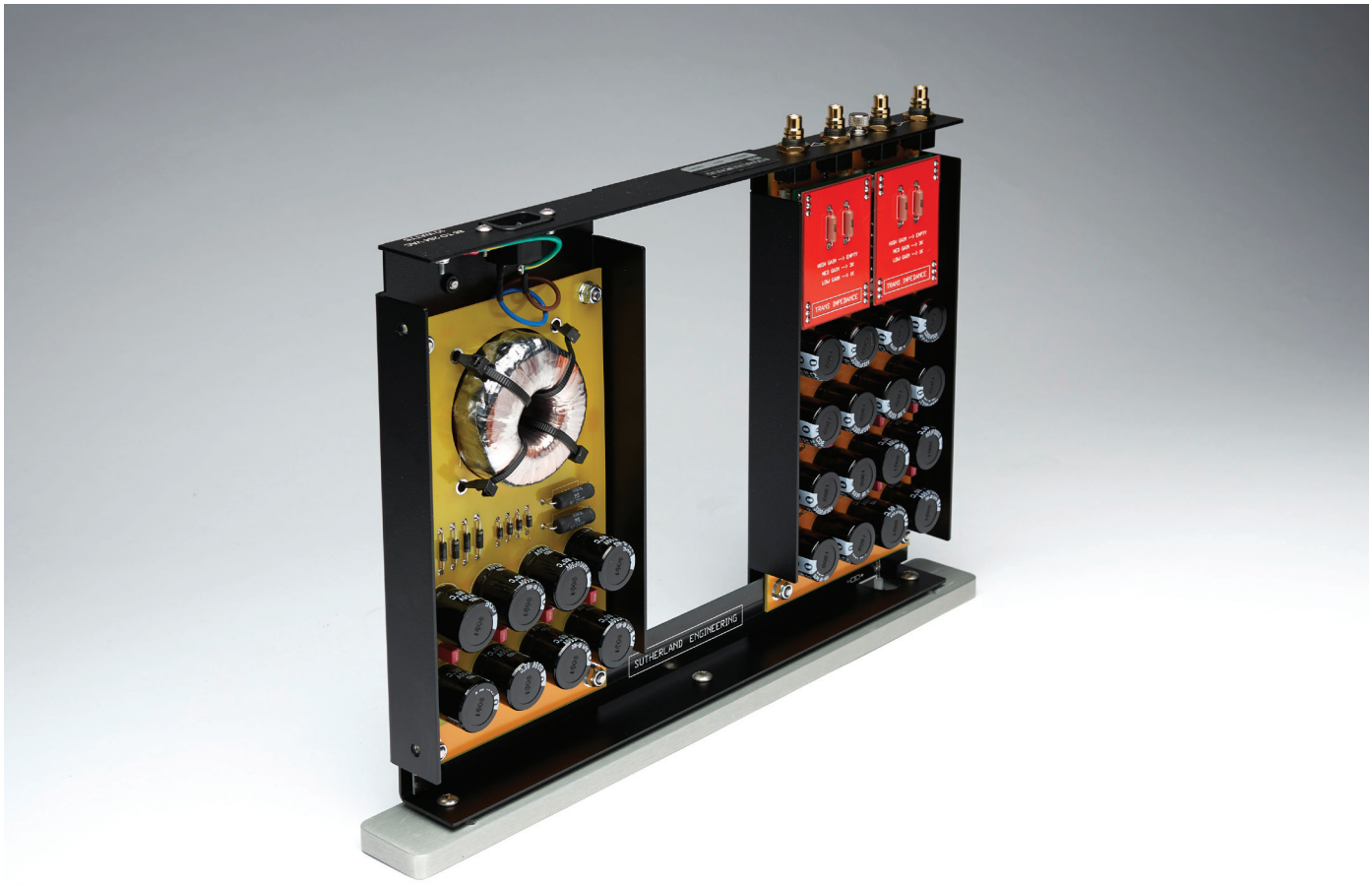


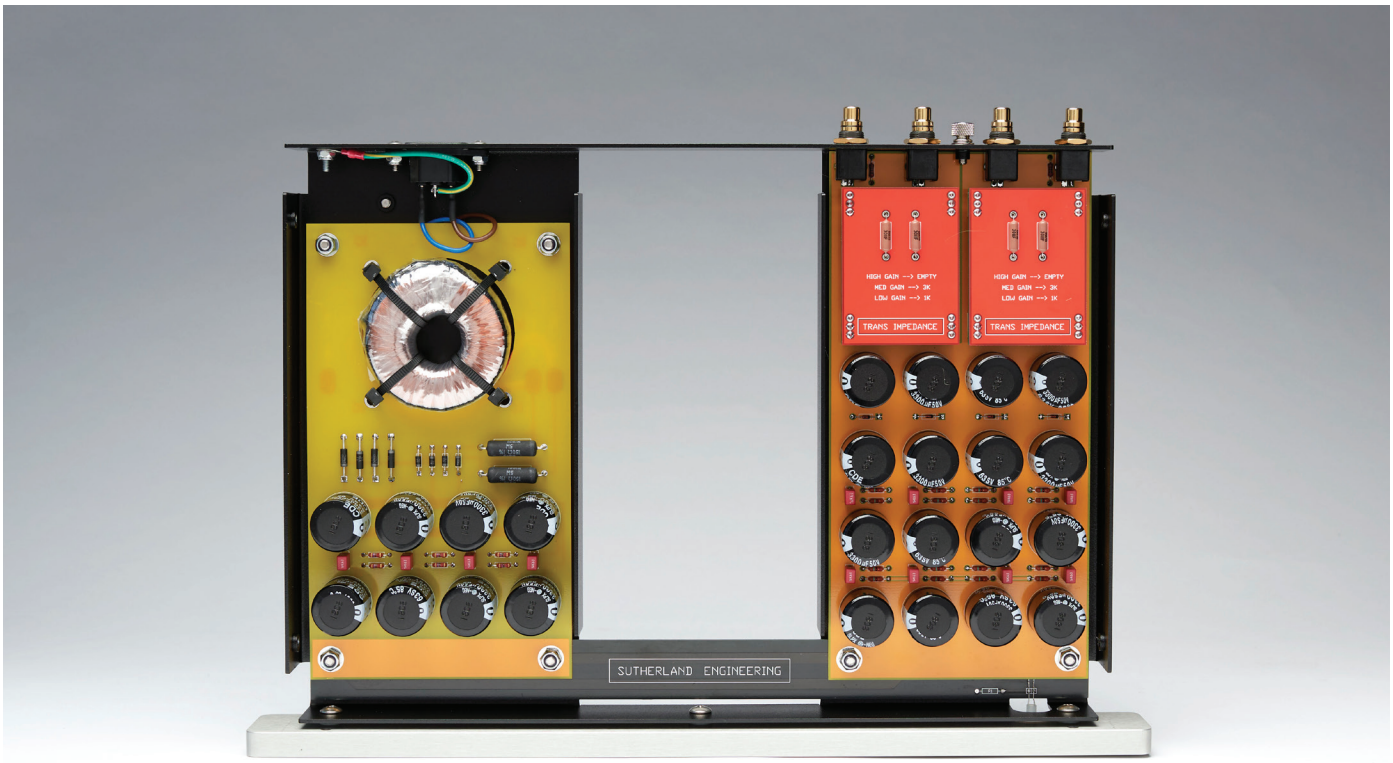
— *A Bit of History* —

Sutherland has been making phono preamps for a good long time. By focusing almost exclusively on phono preamps, our design and circuitry has benefited from continued refinement and improvement over the years. All of those designs were based upon voltage amplification.

The cartridge delivers a small voltage to the phono preamp input. This voltage is then multiplied to create a larger output voltage (along with RIAA EQ). A typical voltage multiplier of 1,000 can also be expressed as 60 dB.

One millivolt in → one volt out.



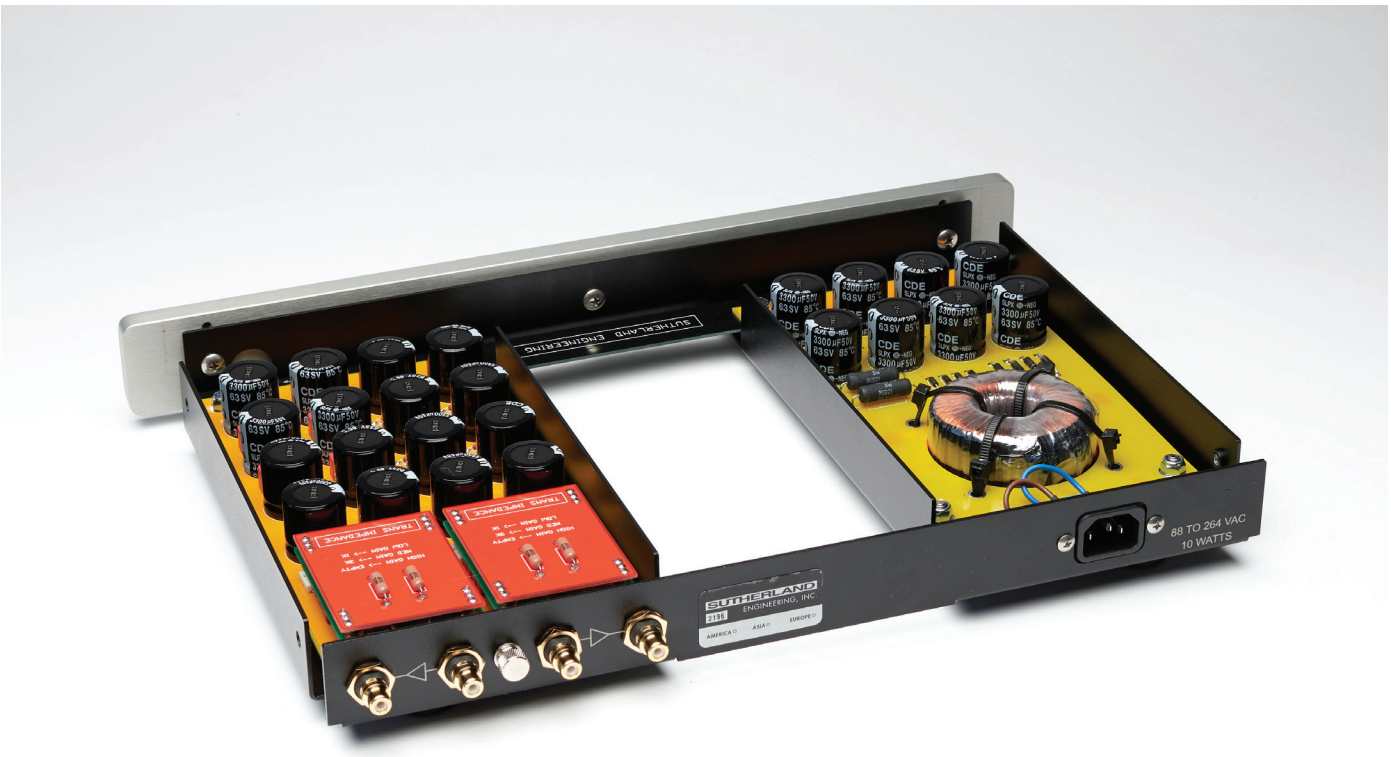


You may have also noticed a new kind of phono preamp design—usually referred to as 'current input'. Until recently, that approach has been very much in the background. But, listeners and reviewers are now giving it some serious consideration. And many love what they hear.

Current Input

In short, the input signal comes from the current flowing through the cartridge, NOT the voltage from the cartridge. That current information is the input for a transimpedance gain stage. I.e. the input signal is current and the output signal is voltage.

— LINKING INTO YOUR SYSTEM —



The connections on the back panel of the **little LOCO** appear totally conventional. There is the usual IEC input for the power cord, a ground screw for grounding the turntable, and two RCA jacks for the input signal from the turntable. Finally, two RCA jacks deliver an output signal to your line-level preamp.

There is, however, a requirement that both coil connections float with respect to ground. Turntable grounds and cable shields need to go to a separate ground wire. There must be no direct connection from either coil side to chassis ground.

A conventional hookup procedure works 99% of the time. If you should be in the 1%, your dealer will get you taken care of. And, you are always welcome to send an email to **ron@sutherlandengineering.com**

For more information and a deeper understanding, please go to Appendix A.

Load Settings

There are no loading adjustments in the **little LOCO**. Your cartridge will see a load of zero Ohms. The input signal will be the current your cartridge produces into that virtual short. No need to worry about or fuss around with loading.

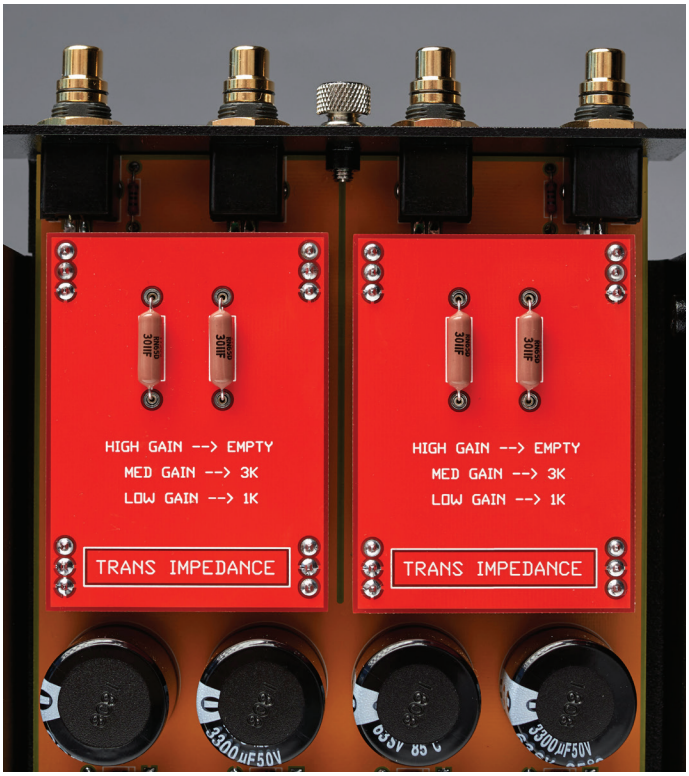
Gain Settings

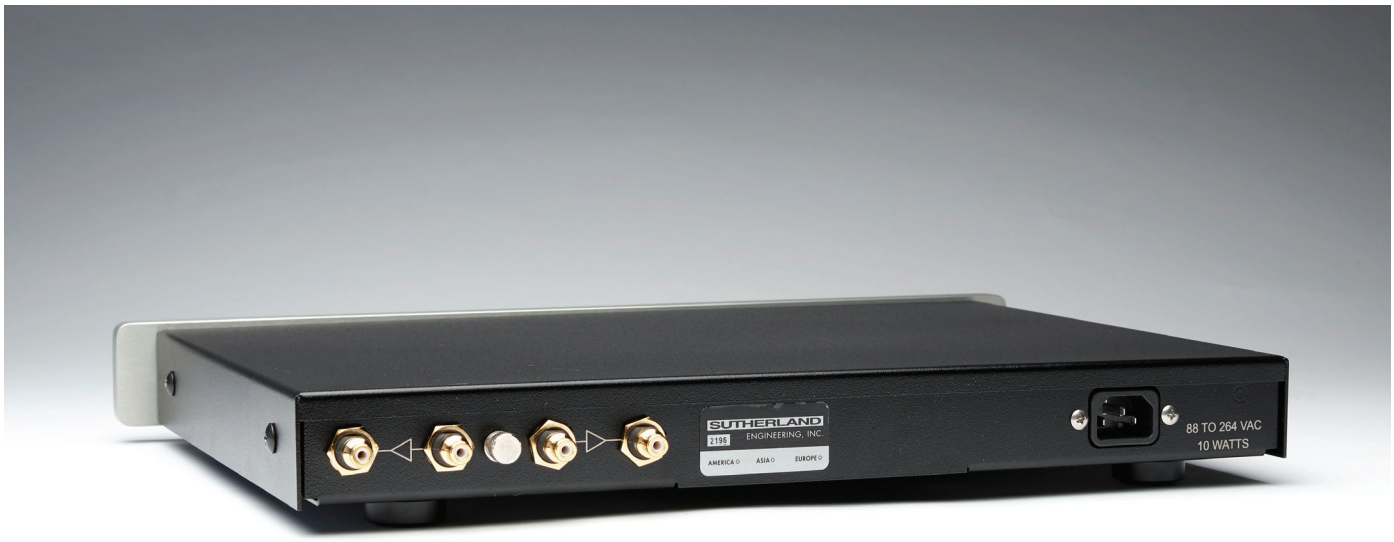
Your **little LOCO** is factory–set to medium gain. That should work very well in most situations. The usual concerns about cartridge output voltage do not apply here. Cartridges of varied output voltage specs tend to supply about the same level of drive current to a short. I.e. higher output voltages usually have higher resistance while lower output voltages usually have lower resistance. Into a virtual short, most deliver about the same current signal.

If your particular situation would benefit from a gain adjustment, you can change it. Inside, on the red circuit boards, you will see a place for gain setting resistors.

The **little LOCO** ships with 3k resistors installed for medium gain. You can boost the output voltage 6dB by removing those resistors. Or, you can reduce the output voltage 6dB by replacing the 3k resistors with 1k counterparts.

No matter which gain you select, all four installed resistors must be the same value.





Size

17” wide
13” deep
2” high

Shipping Box

22” wide
17” deep
9” high

Contact Info

Sutherland Engineering, Inc.
455 East 79th Terrace,
Kansas City, MO 64131
Phone: +1 (816) 718-7898
Email: ron@sutherlandengineering.com
Website: www.sutherlandengineering.com

Weight

Unit Weight: 15lbs
Shipping Weight: 18lbs

Operating Voltage Requirements

105 — 125 VAC, 12 watts
210 — 250 VAC units are available on special order
Note: operating voltage is NOT universal and cannot be field modified.

Warranty

5 years parts and labor. Transferable. Only valid for units that have not been modified or abused.

Appendix A

The design of the transimpedance gain stage's input **REQUIRES BOTH** signal leads from the cartridge's coil to float with respect to ground. The (+) coil terminal will go to the RCA connector center pin and the (–) coil terminal will go to the RCA's shell. That is completely in line with convention. Nothing new there.

The signal cables from the turntable will almost certainly have a shield to protect the delicate signal from ambient electrical noise/interference. To function properly, that shield should be grounded at either the turntable or phono preamp end. To work with the **little LOCO**, the shield ground must be made with a separate ground wire to the **little LOCO** ground screw.

The signal input cable for each of the two channels would optimally be a twisted pair for the two coil terminals going to the RCA center pin and shell. Enveloping the twisted pair, would be an electrically isolated shield.

This shield MUST NOT connect to the RCA shell, but will go to an isolated ground wire.

If these requirements are not met, your system won't be harmed, but you will get no output signal.