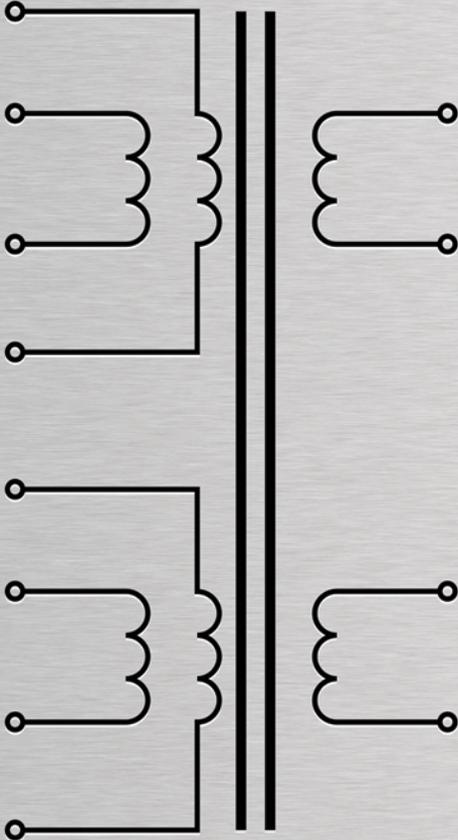


# MCX

OWNER'S MANUAL



**SUTHERLAND**



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“The new **MCX Phono Preamp** optimizes the inclusion of moving coil step transformers in vinyl playback.

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**– RON SUTHERLAND**

Like so many people, I had assumed that moving coil step-up transformers were a relic from the past. Well-designed, modern phono preamps can achieve plenty of gain at very low noise AND a very intimate connection with the music.

Adding a step-up transformer into the signal path seemed like an expensive, unnecessary, and detrimental complication.

But, contrary to this, the popularity of SUT (Step Up Transformer) is on the upswing. So many people were telling me how putting a good SUT in front of their phono preamp brought out a rich, lush and emotive character that was completely seductive. People were passionate about the sound quality.

*I realized it was time to take a serious look at the role a SUT could play in vinyl playback.*





## The Correct Question:

Since customers can always add a SUT in front of any Sutherland phono preamp, this approach is already available. Many people were doing just this and enjoying the results.

So the question became: *Is there better way?*

This question was further modified under the Sutherland Philosophy:

***Is there a more direct, less complicated, minimalist way?***

## The Appropriate Answer

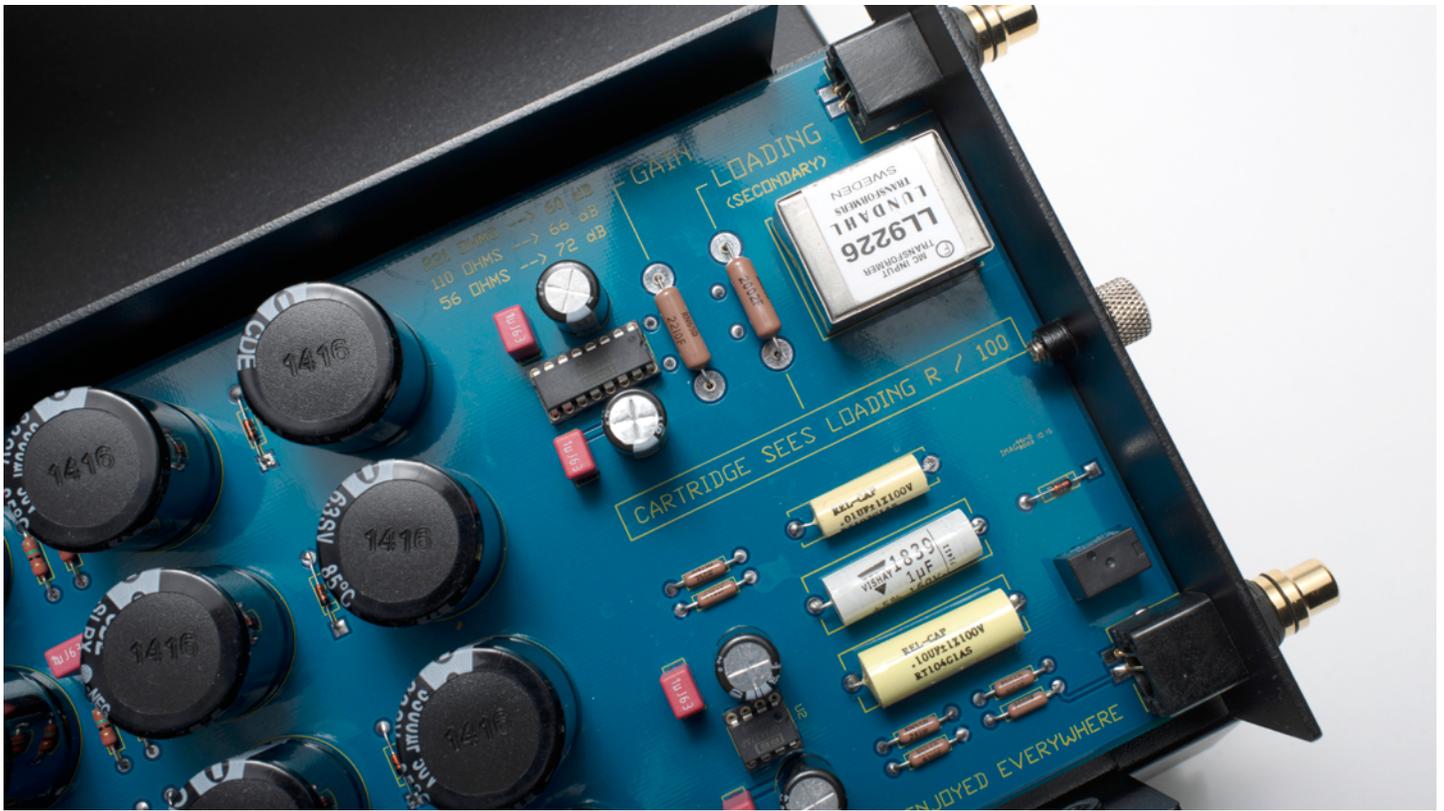
First, the SUT needed to sit directly on the preamp circuit board. This decision brought with it many advantages. The connections between the SUT secondary and preamp circuits were now as direct as physically possible. The distance was minimal. The inter-connecting cable was eliminated. Two sets of audio connectors were eliminated. The signal path was simplified and made more direct. Furthermore, the cost of cables, connectors, and transformer case was eliminated.

*But which transformer should be used?*

Although some preamp manufactures design and build their own SUT, that was never a serious consideration for this project. I would much prefer to incorporate the expertise of an established expert in the field. Lundahl has a well deserved reputation for good, solid engineering that delivers both quality and musicality.

Using a transformer in front of the first gain stage offered a chance for some circuit simplification. Then the following stage was revamped for the best overall musicality.





The question of how to offer loading and gain options is a tricky one. All solutions have advantages and compromises. For the **MCX** I decided on the most simplified signal path — along with flexibility in values — as the highest priority.

The loading and gain resistors plug directly into machined sockets on the circuit board. There are no *options* on the board. Only the resistors in actual use are on the board. The advantage is the most direct and uncluttered

signal path possible. Furthermore, the range of gain and loading options is virtually unlimited. Along with those advantages comes a small inconvenience. Plan on getting out some tweezers and a jeweler's loupe when changing resistors.

But, all things considered, this compromise is not so bad when compared to turntable and cartridge set up. For best possible performance, it seemed acceptable to sacrifice some convenience.



Lastly, the best stereo phono preamp is actually two mono phono preamps. With a stack of two mono phono preamps, all the most subtle space and dimensionality cues are preserved.

*The **MCX** is just such a mono phono preamp.*

**– LINKING INTO YOUR SYSTEM –**

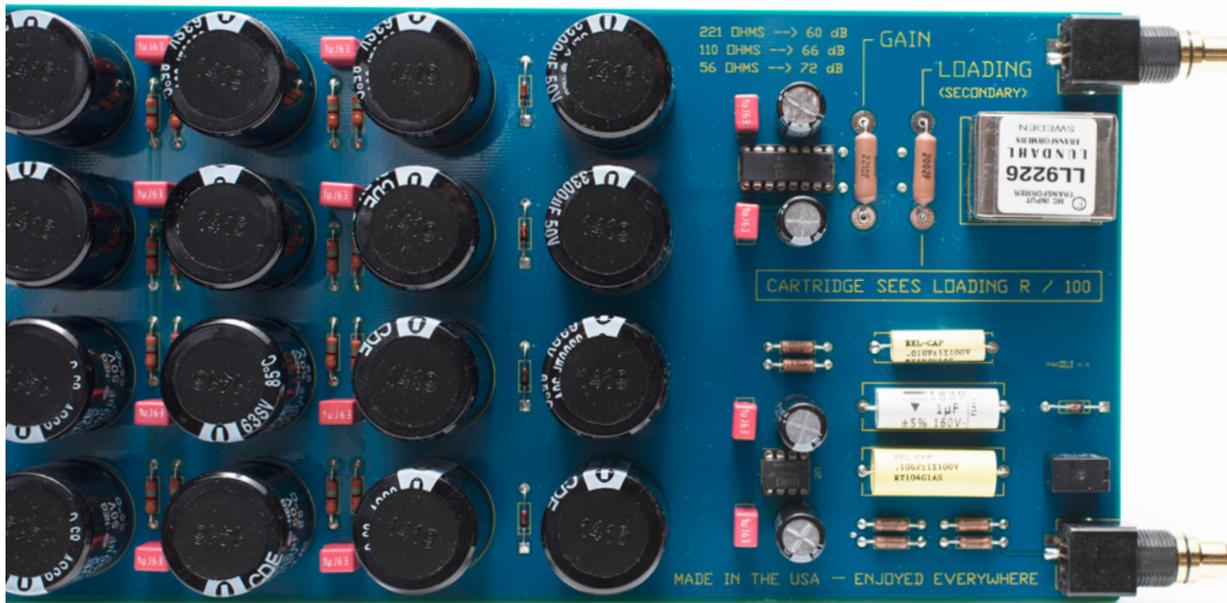


The **MCX** ships configured for a gain of 60 dB and a loading of 200 Ohms. This will be a good starting point for most systems. If you have different preferences, please refer to the GAIN and LOADING pages.

The two **MCX** are designed to be stacked on top of each other. Plug your turntable into the IN jacks. The interconnecting cables to your preamp go into the OUT jacks. Ground wires go to the knurled screw.

The **MCX** is designed to be powered on 24/7. The supplied AC power cords are just to get you started. Later you will probably want to experiment and invest in power cord upgrades.

The **MCX** has a universal power supply. That means it will adapt itself automatically and work with any AC power line voltage between 88 volts and 264 volts. No operating voltage set up is required.



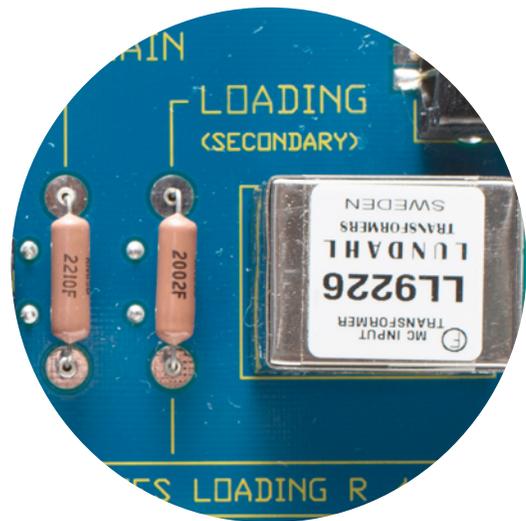
## Load Settings

Cartridge loading is determined by the resistor value installed in the LOADING resistor socket.

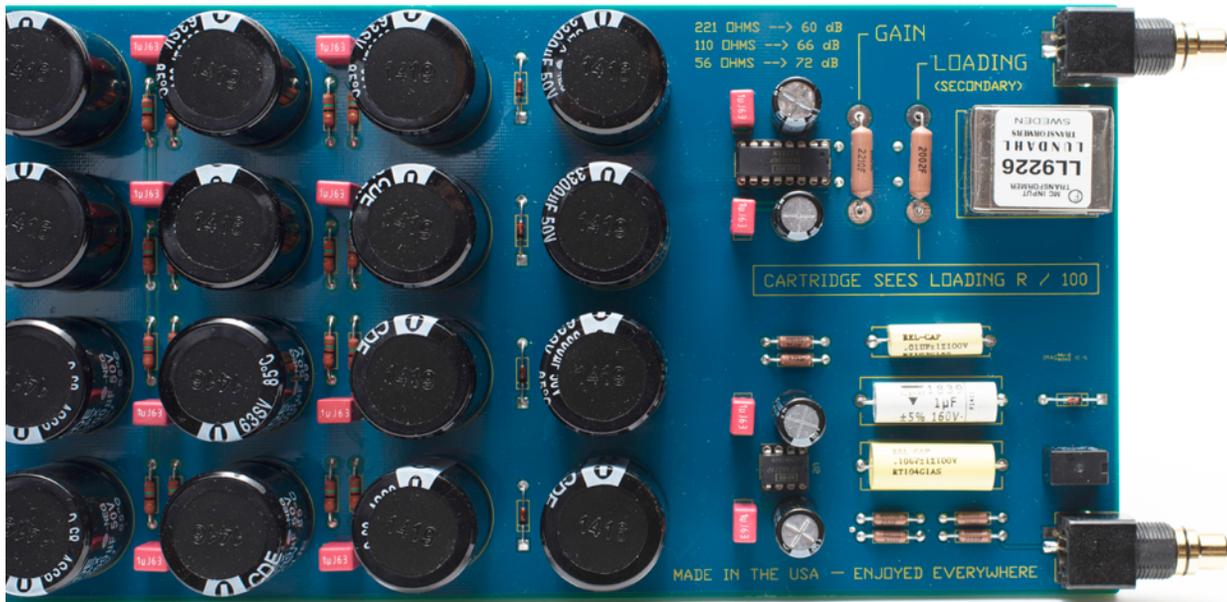
Dale/Vishay RN65-style resistors are included with the following values.

- 47.5k** for 475 Ohm loading
- 30k** for 300 Ohm loading
- 20k** for 200 Ohm loading
- 10k** for 100 Ohm loading
- 5k** for 50 Ohm loading

Your **MCX** ships with loading set to 200 Ohms.



*NOTE:* the loading resistors are positioned at the secondary of the step-up transformer. The actual value of loading applied to the cartridge will be the resistor's value divided by 100.



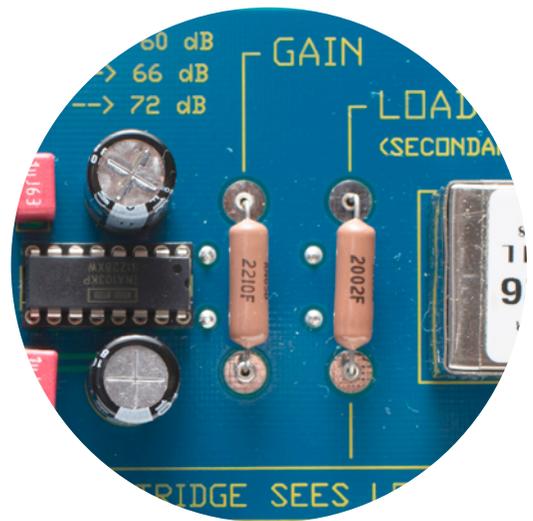
## Gain Settings

Gain is determined by the resistor value installed in the GAIN resistor socket.

*Dale/Vishay RN65-style* resistors are included with the following values.

- 221** Ohms for 60 dB gain
- 110** Ohms for 66 dB gain
- 56** Ohms for 72 dB gain

Your **MCX** ships with gain set to 60 dB.





## Size

17" wide  
12" deep  
2.5" high

## Shipping Box

24" wide  
24" deep  
11" high

## Contact Info

**Sutherland Engineering, Inc.**  
455 East 79th Terrace,  
Kansas City, MO 64131

## Weight

Net 11lbs each  
Shipping 19lbs each

## Power Requirements

88 – 264 VAC  
10 Watts each

*Phone:* +1 (816) 718-7898

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