



# The Phono Box

SUMIKO

2431 Fifth Street Berkeley, CA 94710 510.843.4500 [sumikoaudio.com](http://sumikoaudio.com)

In the past, all audio system control components (integrated amplifiers, receivers and system pre-amplifiers) had phono inputs. As digital mediums have become the primary source for most audio systems, these special phono stage inputs have disappeared from the majority of system control components. These phono inputs were different from all other inputs because of the unique output signal from any phono cartridge.

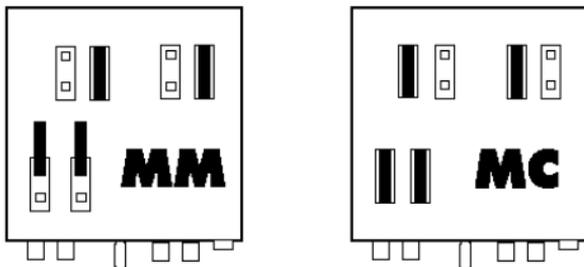
When a record is cut the bass is decreased and the treble increased so that the full stereo signal can be stored within the grooves of a record. The phono stage reverses this process by equalizing the signal to restore flat full frequency response. Equally important is the need to amplify the very small signal that comes from a phono cartridge, which is many times smaller than the output from a CD player, tuner or tape deck. A phono stage raises the output, or gain, so that it is equivalent to the output levels of standard output components. In addition, there are two types of phono cartridges: Moving Magnet (MM), typically high output; or Moving Coil (MC), typically low output, which may need as much as ten times the gain of a MM cartridge, unless described as a high output moving coil.

The Pro-Ject Phono Box is a complete phono stage, providing the necessary gain and equalization, that allows for the hook up of any MM or MC cartridge to any available standard level input.

The gain of The Phono Box can be adjusted for either MM or MC cartridges. Moving jumpers on the circuit board inside The Phono box makes this adjustment. **The Phono Box is configured for MM cartridges at the factory, so if a MM or high output MC cartridge is being used no changes to the settings are required.**

**MM setting:** this setting should be used with ALL moving magnet cartridges and any high output moving coil cartridge with a voltage output of 1.5 mV or HIGHER. Please consult your cartridge manual, looking on the specification page for the output voltage, or dealer for this information.

**MC setting:** this setting should be used with all low output moving coil cartridges (voltage output lower than 1.5 mV). Again, please consult your cartridge manual, looking on the specification page for the output voltage, or dealer for this information.



1. Remove the four screws on the side of The Phono Box and remove the top cover.
2. Adjust the jumpers to match your cartridge as indicated in the diagrams above.
3. Replace the top cover and screws.

With the Phono Box properly configured for the cartridge in use it can be installed into the system, following the instructions on the next page.

1. Connect the interconnect cables from the turntable to the left and right inputs of The Phono Box, and attach the ground wire to the terminal between the pairs of input and output jacks.
2. Connect a standard stereo interconnect between the output jacks of The Phono Box and any unused input (variously labeled aux., tuner, or tape) on the receiver, integrated amplifier or preamplifier.
3. Connect the power supply to The Phono Box, and then plug the power supply to a wall outlet.

## **Troubleshooting**

- If no output is heard, check to make sure that all connections, both signal and power, are properly made, and confirm that the selector switch on the system control unit is set to the correct input.
- Hum may be heard if the ground connector is not connected, or if the unit is placed on or near the power supply of other components. Be certain to connect the ground, and/or move The Phono Box to an alternate position among the equipment to eliminate any hum.
- Some users of cartridges at or slightly below 2.5 mV using the MM gain setting may find that overall volume is too low, that the volume knob must be positioned considerably higher than normal (where CD volume normally would be, for example), or that the sound is a bit thin. In these cases switching to the MC setting may prove beneficial. However, this may provide more output than may be desired, so if any distortion is heard, or if the range of volume available at the volume control becomes severely limited, returning to the MM setting is advised.

## LIMITED WARRANTY

**What is covered:** All parts defective in material and workmanship.

**For how long:** For two years from the date of original purchase by the original owner.

**What we will do:** We will, at our sole option, repair or replace any defective parts free of charge.

**What we will not do:** Pay shipping or transportation charges from you to us.

**What you must do:** Notify the Sumiko Service Center located at 2431 Fifth Street, Berkeley, CA 94710 (tel:510-843-4500) of any defect, malfunction, or nonconformity promptly upon discovery, Obtain from the Sumiko Service Center a return authorization number, Properly pack the product in the original carton for shipping (ask the Sumiko Service Center for packing instructions, if needed). Label and ship the product, freight prepaid and insured, to the Sumiko Service Center with the proof of purchase from an authorized Sumiko dealer, and **place the return authorization number** prominently on the outside of the carton. Cartons not bearing a return authorization number will be refused.

**Other conditions:** This warranty is not transferable from the original owner to any subsequent owners. THE PROVISIONS OF THIS WARRANTY ARE IN LIEU OF ANY OTHER WRITTEN WARRANTY, WHETHER EXPRESS OR IMPLIED, WRITTEN OR ORAL, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SUMIKO'S MAXIMUM LIABILITY SHALL NOT EXCEED THE ACTUAL PURCHASE PRICE PAID BY YOU FOR THE PRODUCT. IN NO EVENT SHALL SUMIKO BE LIABLE FOR SPECIAL, INCIDENTAL, CONSEQUENTIAL OR INDIRECT DAMAGES. This warranty does not cover a defect that has resulted from improper or unreasonable use or maintenance, accident, improper packing, or unauthorized tampering, alteration or modification as determined solely by us. This warranty is void if the label bearing the serial number has been removed or defaced.

**Other legal rights:** This warranty gives you specific legal rights, and you may also have other rights which vary from country to country or state to state. Some places do not allow limitations on implied warranties or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.