

COHERENCE ONE PREAMPLIFIER

OWNER'S MANUAL

TABLE OF CONTENTS

Introduction
Features
Unpacking Instructions
Installation
Phono Cartridge Loading
Basic Troubleshooting
Technical Specifications

Introduction

Congratulations on your purchase of the Jeff Rowland Design Group Coherence One Series II Preamplifier.

Please take a few moments to read this owners manual. Contrary to popular belief, there is actually quite a bit of useful information in an owner's manual. The Coherence One Series II offers tremendous interconnection flexibility regardless of the amplifier used. A thorough understanding of your preamplifier now can save you a lot of anxiety later.

PLEASE NOTE: THE COHERENCE ONE SERIES II IS IN NO WAY COMPATIBLE WITH EARLIER COHERENCE ONE PREAMPS. **DO NOT** INTERCHANGE OLD AND NEW POWER SUPPLIES FOR ANY REASON!

Features

- The preamplifier is designed to rest on top of its power supply so the user-friendly pair can be handled easily. Special shielding techniques allow for this configuration, and "hum field" contamination has been eliminated.

- Lighted, feather-touch mode switches electronically control signal. The front panel switches do not alter sonic integrity, since signal switching is accomplished at the preamplifier input stage. Absolute phase reversal and full muting are other essential front panel control functions.
- A selectable tape output section allows simultaneous recording from one source while listening to another. "Record Out: Off" position disconnects tape recorder inputs from tape out jacks, eliminating loading problems when tape recorder is not in use.
- Volume controls are chosen for their sonic neutrality. Separate right and left trim potentiometers provide 6 dB adjustment for full rotation, permitting precise channel balance.
- Input and output jacks are gold-plated, ground-fault protected connectors, which provide tight, corrosion-free connections. Simultaneous normal and inverting outputs allow for balanced cable operation.
- Extremely low-noise phono sections eliminate the need for extra circuitry when using low output moving coil cartridges. The phono modules of the Coherence One Series II have been optimized for use with moving coil cartridges; for moving magnet cartridges, a module exchange can be easily accomplished by the user. Please contact Jeff Rowland Design Group for more details.
- All main outputs are muted temporarily during initial power application, power drop or disruption. DC potential across outputs, regardless of source, will also cause a muted condition.
- All signal amplification utilizes high-voltage, high-current, Class A field effect transistor technology.
- All inputs and outputs are direct-coupled, thus eliminating the deleterious effects of capacitors in the signal path.
- Precise RIAA equalization is the result of a split-passive network in the phono section.
- Incorporation of two-stage power supply regulation: A separate outboard power supply provides tight regulation regardless of power company extremes. Additionally, this discrete component design is optimized for excellent transient behavior, thus providing very low output impedance beyond 100 kHz.
- DC power is routed, via a power cable with a locking connector, to the main preamplifier circuit board. Compensating for power cable and circuit board inductance effects, sixteen (16) feedback-free discrete regulators adjacent to each module complete DC power distribution. This total system, in addition to separate channel balance controls, provides dual mono operation and precise regulation at each stage throughout.
- Time-related distortion, particularly in low-level phono stages, is eliminated by a totally feedback-free design.
- Mil-spec circuit board material, with oxygen-free copper traces and high-temperature mask provides superior electrical characteristics.
- All signal switching is accomplished with hermetically sealed, gold- contact signal relays.
- AC power line filter offers excellent line noise rejection.
- All critical circuitry is encapsulated in a thermally-conductive epoxy to ensure excellent thermal stability, mechanical integrity and to facilitate ease of service

Unpacking Instructions

In the shipping crate you will find:

- AC Power Cord
- Replacement Fuses
- Phono Cartridge Loading Resistors
- Cartridge Loading Adjustment Tool
- Hex Key (for lid removal)
- Warranty Card (**This form must be completed and returned to Jeff Rowland Design Group [or its authorized distributor if outside the U.S.A.] within 14 days of purchase. Not only will your preamplifier be registered, but you will, in the future, be informed of new products and services.**)

We strongly suggest that you save all packing materials

The preamp can be lifted out of its crate while still wrapped in the plastic bag. The foam pieces can then be removed from the sides and from between the preamp chassis.

Installation

Please make sure that the preamplifier DC power cable is connected to the power supply before attaching the AC line cord.

Locate the preamplifier as close as possible to its final installation point. Allow access to the back panel for making connections.

All Jeff Rowland Design Group products are convection cooled, eliminating the need for a fan. When operating, the preamp should have at least 2 inches of space on all sides.

When the preamp is in position, the AC power cord should be inserted first at the inlet on the back panel of the power supply chassis, then connected to an appropriate power source. The preamplifier is equipped with a power switch, located and identified on the rear panel. The power switch should be turned on initially after plugging in the AC power cord. A few seconds after turning on the Coherence One, you will be able to use the lighted switches on the preamp's front panel. The rear panel power switch should be left on at all times, maintaining stable operating parameters and thereby improving performance, reliability and longevity. Power consumption in stand-by mode is less than 50 watts, providing low-cost operation.

If the front panel switches do not light, the preamplifier does not power up or a fuse blows, disconnect AC power, refer to the troubleshooting section of this manual or contact your dealer.

Phono Cartridge Loading

For a moving coil cartridge, the correct loading value of the preamp is generally determined by multiplying the DC resistance of the cartridge by ten (10). Usually this value is less than 200 ohms for a low output moving coil cartridge; there are times, however, that the optimum loading value must be determined empirically. Your Coherence One Series II preamp enables you to find this value and then, if desired, install a precision resistor at the phono input. Consultation with your local dealer and/or of your phono cartridge owner's manual can also be beneficial.

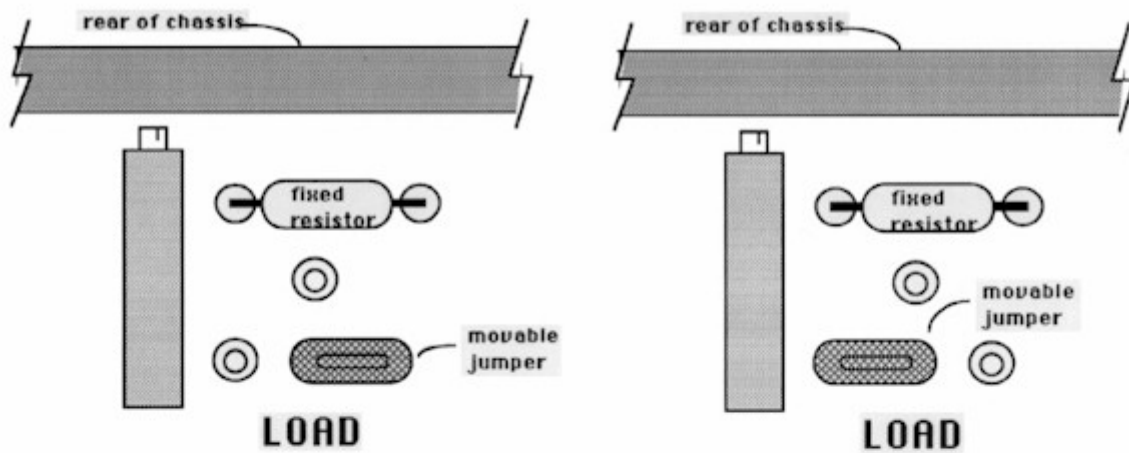
While facing the front of your Coherence One, remove the preamp lid. In the upper left hand corner of the preamp, at the phono input, you will see two (2) red jumpers (they look like little suitcases). You can choose from three (3) loading options by positioning the jumpers as shown on page 7.

In the *fixed load* position, a resistor is soldered across the turret terminals labeled "Load" on each channel. If you use a resistor other than one supplied by Jeff Rowland Design Group, make sure it is a high-quality, metal film resistor.

In the *variable load* position, you can adjust the loading of your cartridge, listen to the results, and then decide what value gives you the best sound. On the back of the preamp chassis, adjacent to the phono inputs, you will find two (2) small holes. By inserting the supplied adjustment tool and turning each potentiometer, you can change the preamp's resistance. When you have found the resistance that provides the best sonic results, measure this value at the phono input jacks. Then solder the correct value resistor across the inputs. (Your dealer can provide this service if desired.)

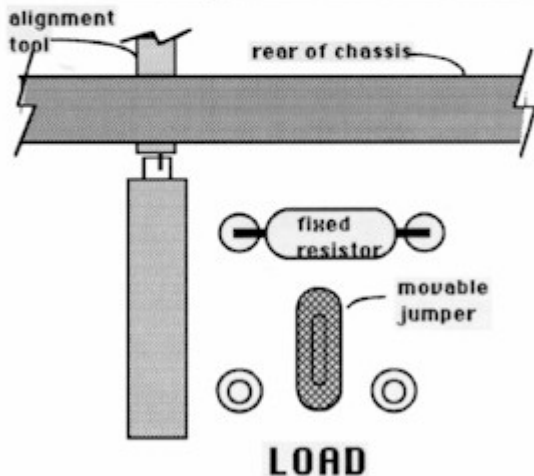
Of course, you could simply find the position that sounds best and not solder a resistor in. But for the best results, you should!

In the *47 k ohm load* position, an internal resistor provides the loading necessary for most moving magnet cartridges. If you want to go a step farther, place the jumpers in the *fixed load* position and solder in a high quality capacitor as a load for moving magnet cartridges. The resistive loading will still remain 47 k ohms in the fixed position.



Fixed Resistor Position - cartridge loading is determined by the value of the fixed resistor installed

47 KΩ Position - cartridge loading is set at high impedance position of 47 KΩ



Variable Loading Position - cartridge loading can be varied from 0Ω to 200Ω by adjustment through the variable loading access holes at the rear of the preamplifier. (Use the adjustment tool supplied with the preamplifier; range of adjustment is approximately 22 turns.)

Basic Troubleshooting

If your preamplifier does not turn on:

1. Make sure the power cord is connected to both the inlet at the back of the amp and an appropriate AC power source.
2. Check the fuse located next to the AC inlet; there are two fuses-one is a spare. A fuse can often look good even if it is actually bad. If possible, check it with a meter.

If your preamplifier shuts down after being turned on, with or without the presence of signal:

Disconnect the inputs from the preamp and see if it will power up again. Your preamplifier will generally only shut down if it senses DC, thus protecting your amplifier and speakers. Certain associated equipment can occasionally pass DC.

If the above suggestions do not work or you are having other problems, please contact your Jeff Rowland Design Group dealer.

Technical Specifications

Coherence One Series II

Phono Stage:	
Gain	60 dB
RIAA Accuracy	20 Hz to 20 kHz \pm 0.15 dB; +0, -3 dB, 200 kHz
Input Impedance	User selectable: 0-200 ohms adjustable, 47 k ohm fixed or any value.
THD and Noise	< 0.025% @ 1 kHz, 0.7 V RMS output
Max Output Level	18 V RMS
Line Stage:	
Gain	19 dB
Response	2 to 250 kHz, +0, -3 dB
Input Impedance	10 k ohms
Output Impedance	300 ohms (single-ended output) 600 ohms (balanced output)
THD and Noise	< 0.010% @ 1 kHz, 3 V RMS output
Max Output Level	> 9V RMS