

**OWNER'S MANUAL
PREMIER SIX
VACUUM TUBE PRE-PREAMPLIFIER**

**conrad-johnson design, inc.
703-698-8581**

Thank you for purchasing the conrad-johnson Premier Six vacuum tube pre-preamplifier. In it you have acquired the finest pre-preamplifier currently available. It has been designed and executed without compromise, providing ourselves and the industry with a reference standard. To fully realize the performance potential of your Premier Six it is important that you install it in accordance with the instructions provided here.

LIMITED WARRANTY FOR THE conrad-johnson PREMIER SIX

1. conrad-johnson design, inc. warrants to the original purchaser that the conrad-johnson Premier Six will perform to specifications as published in the owner's manual and that it will be free of defects in materials and workmanship for a period of three years from the date of original purchase.
2. conrad-johnson will repair defective units without charge for labor or parts (with the exception of the vacuum tubes) subject to the following conditions:
 - a) The unit must not have been altered or damaged through misuse, abuse, negligence, accident, or improper operation.
 - b) The purchaser must provide evidence of purchase at the time service is requested.
 - c) All repairs must be undertaken at the factory or other service center designated by conrad-johnson design, inc. Units submitted for warranty repairs must be shipped in the factory packing crate to conrad-johnson design or its designated service center, freight and insurance prepaid by the owner, and will be returned to the owner, freight and insurance prepaid by conrad-johnson design. Replacement packing is available from the factory.
 - d) Normal wear and maintenance are not covered by this warranty.
3. The above warranty may be transferred to subsequent owners provided that the warranty registration card has been returned to conrad-johnson design, inc. within 30 days of the original purchase and that the registered owner provides the factory with a signed notice giving the new owner's name and address and the model and serial number of the unit.
4. Where permitted by law, conrad-johnson design's liability shall be limited to that set forth in this warranty. No other warranty of any kind, expressed or implied, is made by conrad-johnson design, inc., and all implied warranties, including merchantability and fitness for a particular "purpose", which exceed the obligations and time limits set forth herein are hereby disclaimed. conrad-johnson design, inc. shall not be liable for incidental or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitation or exclusion may not apply to you.
5. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Questions about warranty service should be addressed to:

Service Department
2733 Merrilee Drive
Fairfax, VA 22031
ph: 703-698-8581

CIRCUIT DESIGN

The Premier Six pre-preamplifier employs nuvistors for its gain stage. Nuvistors are tiny, metal cased vacuum tubes designed for use in RF applications where low noise and wide bandpass are of critical importance. The Premier Six uses one nuvistor per channel as a simple triode amplifier which is direct coupled to a cathode follower output stage for low output impedance. Because the nuvistor is highly linear and because the signal levels are so low, low distortion is achieved without the application of inverting feedback. The dc supply voltage for the nuvistor plates is provided by a low impedance solid state regulator and the filament supply is heavily filtered and regulated, effectively isolating the sensitive gain stages from all line fluctuations.

The Premier Six has been executed with meticulous attention to detail. RF filters and traps are employed to minimize interference. Input and output connectors and tube sockets are gold plated to minimize contact rectification - a potential source of noise and distortion. All audio circuit resistors are deposited tin oxide on glass substrate. Our own CJD polystyrene capacitors are used for output coupling and plate voltage storage.

INSTALLATION

To minimize microphonics, the Premier Six printed circuit board is designed to be loosely suspended on an elastomer isolation cradle. To prevent shipping damage, the board is secured with four machine screws. BEFORE plugging in the unit, remove the cover and loosen the four screws securing the board. NEVER REMOVE THE COVER OF THE PREMIER SIX WHEN THE AC POWER CORD IS PLUGGED IN. The screws should be loosened until the board floats freely on its isolation cradle. Do not remove the screws. Reinstall the cover. NEVER OPERATE THE PREMIER SIX WITH THE COVER OFF.

The Premier Six should be located as far as possible from the speakers to prevent acoustical feedback. The audio cables from your turntable should be connected to the lower pair of phono jacks (labeled Inputs) on the back of the Premier Six. The ground wire from the turntable should be attached to the Premier Six binding post. Connect the upper pair of phono jacks (labeled Outputs) to the phono input of your preamplifier.

The input impedance of the Premier Six is established by two resistors in parallel; a permanently installed 47k resistor and a 2000 ohm resistor installed in spring clips on the circuit board. This load will prove suitable for most me cartridges. The user may evaluate alternative loads by changing the 2000 ohm resistor (removing it will give a 47k input impedance). Once the load resistors have been chosen, we suggest that they be soldered into the empty solder pins adjacent to the spring clips.

ABSOLUTE PHASE

Musical transients are positive going - that is they first create a pressure front in the surrounding air. It is important that your stereo system reproduces transients in the same way since the ear can distinguish between positive and negative transients. This means that on a transient the speaker diaphragms should first move toward the listener - creating a pressure front.

Each component in your system is either phase correct (non-inverting) or phase inverting. If you know the phase of each component in your system (your Premier Six is phase inverting) then correct absolute phase is obtained by the following simple rule:

THE TOTAL NUMBER OF PHASE INVERSIONS IN THE SIGNAL PATH SHOULD BE EVEN.

If the number of phase inverting components is either none, or even, then simply wire the speakers in a phase correct manner (amplifier C to speakers "-", amplifier 4, 8, or 16 to speaker "+".)

If the number of phase inverting components is odd, then one more inversion should be added. This may either be accomplished at the speaker by wiring amplifier C to speaker "+" and 4, 8, or 16 to speaker "-" or by reversing the positive and ground leads of the cartridge.

For installations using tuner and/or tape inputs or additional phono inputs you will want to make necessary phase corrections by reversing the hot and ground leads at the phono cartridge instead of at the speakers to maintain proper phasing on the other sources.

If you do not know whether each element of your system is phase inverting or not, you should try listening to the system with speakers hooked up both ways. When correctly phased, plucked strings and other sharp transients will sound noticeably better defined.

NOISE

The Premier Six is the quietest vacuum tube pre-amplifier currently available. Still, there will be a background broadband noise (rush) that will be audible with no source and with the system adjusted to normal listening levels with a MC cartridge of about .250 mv output. This noise level will be at about the level of record surface noise on a high quality pressing. All transformers (which are inherently noise free) and some transistor head amps will be quieter than the Premier Six. The objective, however, is the accurate reproduction of the musical content of records, not the quietest possible reproduction of the lead-in grooves. No head amp or transformer equals the Premier Six in harmonic accuracy, dynamics, imaging, and ambiance. For the reproduction of music it stands alone.

As the tubes age, they will gradually grow noisy. This can happen after several hundred hours of use. Accordingly, you should always turn your Premier Six off when not in use to preserve the tubes. When your Premier Six becomes noisy, merely replace the tubes. Replacement sets are available from your conrad-johnson dealer or directly from the factory.

SPECIFICATIONS

Input Impedance: 2000 ohms

Output Impedance: Less than 200 ohms

Voltage Gain: 28 db

Maximum Output: Greater than 5.0 volts into 50K load

Input Overload: Greater than 200 mv.

Total Harmonic Distortion: Less than .05% at 100 mv.

Bandwidth: 5 Hz to 100 kHz

Frequency Response: 20 Hz to 20 kHz +/- .1 db

Tube Complement: 4 6CW4

Dimensions: 19 x 3 ½ x 10 ¼ "

Weight: 6 lbs.

SERVICE

In the event your Premier Six pre-preamplifier requires service, repack it with the original packing material and ship freight charges prepaid via United Parcel Service (UPS) to:

conrad-johnson design, inc.
2733 Merrilee Drive
Fairfax, VA 22031

Be sure to enclose a note explaining the problem you are having in as much detail as possible. If the problem is intermittent, please indicate. If you do not have the original packing material, replacements are available from conrad-johnson design at a nominal charge.