

**OWNER'S MANUAL  
PV2  
VACUUM TUBE PRE-AMPLIFIER**

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

Thank you for purchasing the conrad-johnson model PV2 preamplifier. We believe that it will be one of the most satisfying purchases of audio equipment that you will make. The design and materials have been carefully selected to yield many years of unvarying, excellent performance. While the use of this unit is quite straight-forward, a brief reading of the following notes for the owner will enable you to better understand its features and will inform you of the services we offer.

## **LIMITED WARRANTY for the conrad-johnson preamplifier**

1. conrad-johnson design, inc. warrants to the original purchaser that the conrad-johnson preamplifier will perform to specifications as published in the owner's s manual and that it will be free of defects in materials and workmanship for a period of five 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, inc. Units submitted for warranty repairs must be shipped in the factory packing carton 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 cartons are available from the factory for a nominal charge.
  - 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  
conrad-johnson design, inc.  
2733 Merrilee Drive  
Fairfax, Virginia 22031  
phone: 703-698-8581

## **About conrad-johnson design**

We are a small company offering exclusively audiophile products designed for our own use as well as our customers'. We believe that our commitment to the purchaser of our products is nearly unique in the industry. The services we offer to conrad-johnson owners include:

- Information - Registered owners of conrad-johnson equipment will be directly informed of new equipment we have to offer. They will also be informed of any significant changes in the design of their equipment resulting from our ongoing development program.
- Factory updating - Should significant design changes be made, conrad-johnson design will, whenever practical, offer to update existing equipment. This service will be offered at a minimal charge to cover parts, labor, and handling.
- Factory service - Any conrad-johnson product may be returned to the factory for service. All equipment serviced at the factory will perform to its published specifications when returned. Factory service will be offered at reasonable rates.
- Transferable warranty - conrad-johnson design guarantees its products, not the owner. Should you decide to sell the product, the warranty may be transferred to the new owner. (See Registering the Warranty.)

## **Registering the Warranty**

Please return the enclosed card to the factory within 30 days to register the warranty. The warranty may be transferred to a new owner if it has been properly registered initially and if the registered owner sends a signed notice providing the name and address of the new owner and the model and serial number of the unit.

Proper registration of the warranty is important! Not only will it preserve transferability of your warranty, it will also enable us to inform you of any alterations in the design of a given model and of any new products we offer which are likely to be of interest to you.

## **Installation**

The Conrad-Johnson preamplifier may be installed either horizontally or vertically. In either case the unit should be supported by brackets on a shelf. Ventilation above and below the unit should not be obstructed. To minimize hum pickup, keep the unit well away from power amplifier transformers, and route power cords away from input cables.

THIS UNIT IS TO BE OPERATED ONLY ON AN AC LINE OF FROM 108 TO 120 VOLTS.

## **Connection**

### **Inputs:**

Phono - These inputs provide the additional amplification and RIAA equalization required by most high fidelity phono cartridges. The ground lead from the turntable should be connected to the binding post.

Tuner, Auxiliary, Tape 1, Tape 2 - These are all high level inputs and are electronically equivalent. The output of your tape recorder should be connected to Tape 1 or Tape 2.

### **Outputs:**

Record 1, Record 2 - Connect these to the *inputs* of your tape recorders..

Output 1, Output 2 - Connect to the *inputs* of amplifiers with impedance of 10k-ohms or greater.

### **Use of external tone controls or other external signal processing devices:**

Use Tape 1 and Record 1 for your tape recorder, as described in the preceding two paragraphs. Connect the *output* of the tone controls to Tape 2 and the *input* of the tone controls to Record 2. The Monitor 2 position of the monitor switch will insert the tone controls in the circuit; the Source position will provide flat, unprocessed response. This method of connection will permit the use of tone controls with tape playback by selecting Tape 1 in conjunction with Monitor 2.

**AC outlets:**

Four ac outlets are provided for your convenience: two, marked unswitched, are always live; the remaining two are switched by the preamp's power switch. THE TOTAL CURRENT REQUIRED OF THE SWITCHED OUTLETS MUST NOT EXCEED 5 AMPERES. This precludes the use of these outlets for high powered amplifiers. It is preferable not to switch power amplifiers by the preamplifier power switch in any case.

**Operation****Turn on:**

Because of the slow warm up characteristics of vacuum tube equipment, a time delay muting circuit has been included in this preamplifier. Output 1 and Output 2 are grounded for approximately 30 seconds after the unit is turned on in order to suppress warm up noise.

**Selector:**

Use the selector switch to choose an input from Phono, Tuner, Tape 1, or Auxiliary. The selected source will be available at the Source position of the monitor switch and at both Record outputs. The Tape 1 position permits dubbing from Tape 1 to Tape 2.

**Monitor:**

This switch permits you to compare source and tape while recording on either or both tape decks from the selected input. It is also used to select the input at Tape 2. You may wish to use Tape 2 and Record 2 to install an external signal processor such as graphic tone controls. Then, the Tape 2 position will choose the processed signal while Source will choose the pure signal.

**Mode:**

(The setting of this switch does not alter the signal at the record outs.)

**Stereo** - Normal stereo operation.

**Stereo Reverse** - Passes the left channel input to right channel output and vice versa.

**Mono** - Passes the sum of left and right signals to both channel outputs.

**Balance:**

This control is specifically designed to minimize its influence on the circuit when centered. It adjusts the stereo image gradually, permitting unusually precise control.

## Maintenance

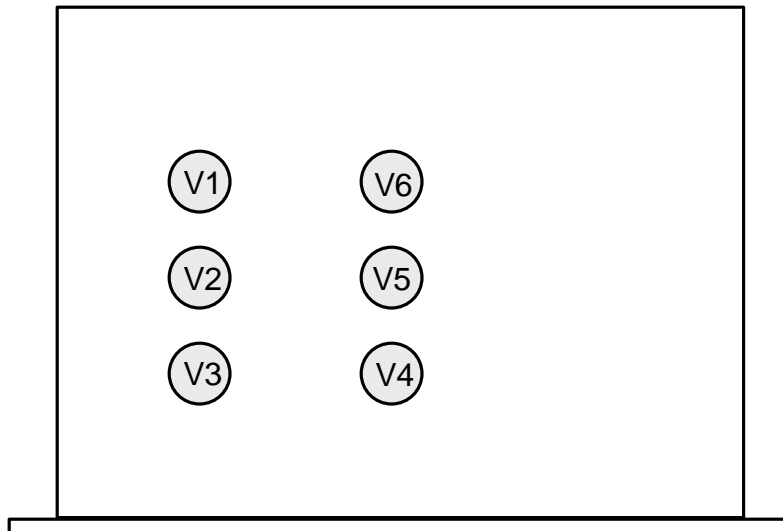
### Tubes:

Modern vacuum tubes have a useful life of more than a thousand hours; however, audible performance will be subtly degraded eventually. When replacement becomes desirable the tubes must be replaced with tubes of the same type. Tube V1 (see tube location diagram) is a 12AX7 type. Tubes V2 and V5 are type 5751. The 5751s provide a subtle improvement over 12AX7 types, but the latter may be substituted if 5751s are locally unavailable. V3, V4, and V6 are 12AT7s. Sonic performance is sensitive to tube brand. Tubes should be replaced with tubes of the brands recommended by conrad-johnson design.

### Fuse:

The AC line is fused to protect the transformer. This fuse will not fail in normal operation. Failure of the fuse is a symptom of a more serious problem, so the unit should be taken to a qualified service center. **IN NO EVENT SHOULD THE FUSE BE REPLACED WITH A FUSE OF DIFFERENT TYPE OR RATING THAN THAT SUPPLIED BY THE FACTORY.**

Tube locations (top view):



**Specifications:**

Gain: phono stage 34.5db  
high level 24.5 db

Output: maximum 25 v  
rated at 2.5 v

Phono overload: in excess of 500 mv, at 1 kHz

Response: bandpass 2 Hz to more than 100 kHz  
RIAA equalization  $\pm$ .25 db (20-20 kHz)

Total hum and noise (20-20 kHz)  
Phono inputs: 70db below 10mv input  
High level: 84 db below 2.5 volt output

Distortion: THD less than .05 %  
IM less than .05%

Output impedance: less than 1k ohms