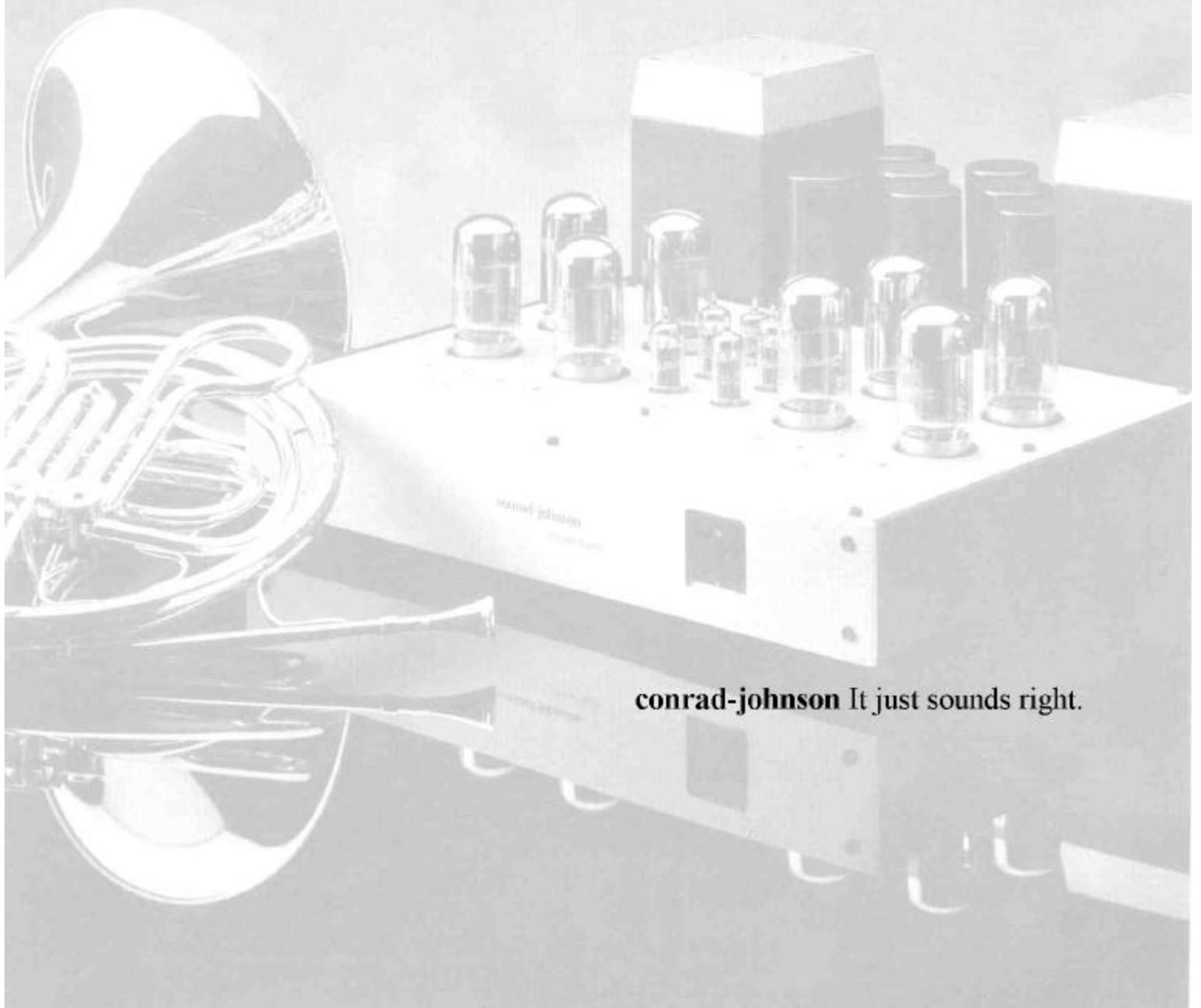


*Conrad-Johnson Owner's Manual:  
PV14L Vacuum-Tube Preamplifier*



**conrad-johnson** It just sounds right.

*Thank you* for selecting the PV14L as the control center for your audio system. Using it, we believe that you will hear more from your favorite recordings than ever before. Drawing on more than two decades of research at conrad-johnson into the reproduction of recorded music, the PV14L line-stage preamplifier excels at the recreation of the dynamics, textures, tonalities, and ambience of live musical performances.

At conrad-johnson, we expect our products to be a source of satisfaction and of pride to their owners for many years to come. Accordingly, circuit designs, parts and materials have been selected with a view to maintaining optimal performance over the years. Our reputation for producing among the industry's most reliable components is a natural consequence of this engineering approach.

Although the PV14L has been designed to operate in an intuitively apparent way, you will find useful information on installation and on operation in this manual. Please take a few minutes to read the manual to better understand the features and capabilities of your PV14L. Note that this unit is phase inverting. See the section entitled "Getting the most from your PV14L" for details on correct hookup in your system.

In closing, we'd like to welcome you to the family of conrad-johnson owners. We want you to enjoy your conrad-johnson product to the fullest. To this end, our staff stands ready to answer any questions you may have about the function and application of your PV14L, and to provide any needed service both during, and after the warranty period. Our goal is to heighten your enjoyment of recorded music.

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## **L**imited Warranty For Conrad-Johnson Components

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**conrad-johnson design, inc.** will provide service under warranty to the original owner on products sold new in the United States for the lesser period of three years from the date of purchase by the original purchaser, or five years from the date of shipment to the authorized conrad-johnson dealer. During the warranty period, conrad-johnson will repair defective units without charge for labor or parts (with the exception of vacuum tubes and batteries).

**Exclusions.** The following are not covered under this warranty:

- a) Units which have been damaged by misuse, abuse, or accident.
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- c) Units not purchased from an authorized conrad-johnson dealer in the United States for use in the United States.
- d) Normal wear.
- e) Incidental or consequential damages are not covered under this warranty. Some states do not allow the exclusion of incidental or consequential damages, so this exclusion may not apply to you.

**Obtaining Warranty Service:** To obtain warranty service, the unit must be shipped, along with evidence of purchase, in factory packing to conrad-johnson design (or designated service center) with freight and insurance prepaid by the owner. After repair, the unit will be returned with freight and insurance prepaid by conrad-johnson design to any destination in the United States.

All implied warranties, including merchantability and fitness for a particular purpose are limited in duration to the duration of this express warranty. Some states do not allow limitations on the duration of implied warranties so the above limitations may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Conrad-Johnson products purchased outside the United States are covered by warranty terms of the importing distributor in the country in which the product was originally purchased, which may differ from the terms set out herein. Importing distributors are not obligated to provide warranty service for products originally purchased outside their country. Conrad-Johnson will provide warranty service for products outside the

United States, but the customer must pay all shipping, handling and customs costs both to and from our Service Department.

Questions about this warranty can be sent by mail to:

Service Department  
conrad-johnson design, inc.  
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### ***Service***

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### ***Registering The Warranty***

Please return the enclosed card to the factory within 30 days of purchase to register the warranty.

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## ***I*nstallation**

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The PV14L dissipates approximately 20 watts of heat, and must be adequately ventilated. Mount the unit horizontally on a flat, hard surface, and take care that the ventilation holes in the bottom are unobstructed. Allow at least two inches of clearance above the unit and keep the cabinet or shelf open at the back. Vertical installation is not recommended.

All PV14Ls sold in the United States are configured for operation on a 60Hz ac power line producing between 108 and 126 volts. Export versions of the PV14L will have the correct operating voltage and frequency clearly marked on the back panel of the unit, near the ac power cord. In all cases, the actual line voltage should be within + 5/-10% of the nominal rated voltage.

### ***Electromagnetic Interference (EMI)***

Considerable care has been taken in the design of the PV14L to minimize its susceptibility to radio frequency interference and other forms of EMI. Choice of materials, physical layout, grounding practice, and power supply design have all been specified with a view to reducing the impact of electromagnetic fields on the performance of this unit. At the same time, however, our primary goal is the accurate reproduction of recorded music in the normal home environment, and we have elected not to compromise this objective by the application of heavy-handed RFI filters, or by using grounding practices that reduce RFI at the expense of degraded audio performance. We find that the approach we have taken has worked extremely well, resulting in only rare instances of EMI problems which could be treated locally as needed, rather than compromising the performance of our product in the 99.9% of installations where EMI is not a problem.

Care in installation can often avoid EMI induced problems. The following practices should generally be observed in any application, and will be especially important where EMI may be a problem.

Interconnect cables should be kept as short as possible (3 meters or less), and shielded cable should be used (cable which has two center conductors, and a separate external shield connected at only one end).

Physical location and cable "dress" can be an important factor in minimizing hum pickup. The installation should situate the preamplifier well away from the power amplifier, and power (ac mains) cords should be dressed to remain at least 4" (100mm) away from input/output cables.

## **Connection**

**SOURCES (AUX1/PH, TUNER, CD, VIDEO, AUX2):** These inputs are electrically equivalent. The load presented to the source varies with the volume control setting, but in no case will it drop below 39 kohms. Connect the corresponding source components to these inputs.

**EXTERNAL PROCESSOR LOOP (EPL1):** A set of line-level inputs and outputs are provided for the connection of external signal processors (eg. parametric equalizer, tone controls). These can also be used for the connection of a tape recorder. In this case, connect the EPL OUT to the recording input of your tape recorder, and the EPL IN to the output of your tape recorder. The EPL IN connection can also be used as an additional line level input.

**THTR/EPL2:** This is an external processor loop designed to conveniently accommodate the addition of a surround-sound processor (SSP) to a high-quality two channel system without compromising two channel performance. Connect the front left and front right channel outputs from your SSP to the THTR/EPL2 input. You can also connect the THTR2/EPL2 OUT to an input on your SSP, allowing you to do matrix processing on selected two channel sources. When this THTR loop is selected, the level controls are set to unity gain. Level and balance control is then accomplished via your surround sound processor.

**OUTPUT:** Connect to the input of your amplifier (or crossover in a bi-amplified system). We recommend the use of an amplifier with an input impedance of 20k ohms or higher. Since the PV14L inverts phase, it may be necessary to invert the speaker leads to maintain correct absolute phase. See the section on "Getting the most out of your PV14L" for an explanation.

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**power:** The red LED immediately below the power switch will be lit when the preamp is connected to the ac mains to indicate that the control circuits are powered. Press the button labeled *power* to switch the preamplifier on. A time delay auto-muting circuit is incorporated into the PV14L to eliminate transients generated at power-on and power-off. All outputs are grounded via relays for approximately 90 seconds after the unit is turned on in order to suppress warm-up transient noises. During this auto-muting period, the red mute indicator led will flash. All control functions are disabled during the auto-muting cycle. The muting circuit also grounds the outputs immediately at turn-off or in the event of any power line interruption.

*When first connected to ac mains, or after an interruption of power, the PV14L will turn on, after auto-muting, in a default mode with the level control set at 20 and the CD input selected. In subsequent sessions, as long as the ac mains has not suffered a power outage, the unit will turn on at the last used volume setting and input.*

**mute:** Pressing the mute button will silence the preamplifier's main outputs, and light the led labeled mute. Pressing the mute button again will restore normal operation.

**volume (up/down):** Level setting on the PV14L is achieved by using a programmed microprocessor to select combinations from among an array of high quality precision resistors. This arrangement allows a control with 100 steps of approximately .7 dB per step. The steps are numbered 0 through 99, with 0 being silence and 99 being maximum volume.

**source selectors (aux1/ph, tuner, cd, video, aux2):** Pressing any of these buttons will select the associated source, routing it to the EPL outputs, and to the line-stage if neither EPL nor THEATER is selected. The selected source will be indicated by an illuminated led.

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nected to the theater loop before being routed to the line stage. In theater mode the level will be set and locked at unity gain for both channels. Pressing the source button will connect the selected source directly to the volume control and line stage.

## Remote Control

All operations of the PV14L can be controlled by the hand-held wireless remote unit.

**MUTE:** Pressing the mute button will cause the main outputs to mute and the level display to be zero. Pressing it again will restore the last level setting. Pressing and holding the mute button for more than three seconds will switch the PV14L into standby mode (all tube circuitry switched off). Pressing the mute button when the unit is in standby mode will switch it back on.

**PH/AUX, TUNER, CD, VIDEO, AUX2:** You can directly access any input by pressing the associated button on the remote.

**EPL1, EPL2:** Pressing the EPL buttons will insert the associated external processor in the signal path. Pressing the button again will re-establish a direct connection to the selected source. Note that pressing the EPL2 button selects the THTR/EPL2 input, setting the level to unity gain.

**LEVEL - +:** Duplicates the function of the front panel *vol down*, *vol up* controls.

**BALANCE:** Allows attenuation of either channel independently of the other. Pressing the right balance button will reduce the left channel level setting by one step. Pressing and holding the right balance button will cause the left channel to cycle down through its level settings at an accelerating rate. Pressing the left balance button will attenuate the right channel in the same manner.

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The audio circuit of the PV14L uses two type 6C4 miniature triode vacuum tubes. The brand of tubes we supply has been chosen by first selecting those brands which are known to be most reliable, then by extensive auditioning of these acceptable brands with the final choices being made solely on the basis of sonic performance. We know of no vacuum tubes available which will improve the sonic performance of your PV14L. The tubes in your preamplifier have been tempered by a controlled burn-in procedure that permits them to perform for a greatly extended period without sonic degradation, then selected for minimum residual noise. Replacement tubes are prepared and selected in the same way. Therefore, we highly recommend that you purchase replacement tube sets from conrad-johnson design.

We anticipate tube life to accommodate two to three years of operation without degradation in normal use - if the preamplifier is switched off when not in use. If the preamplifier is left on at all times, tube life can be exhausted in a matter of a few months.

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## ***G*etting The Most From Your PV14L**

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### ***Warming Up***

The sonic performance of the PV14L improves noticeably as the unit warms up. The midrange becomes more lucid, the highs smoother, and the soundstage expands. The warm up period can be expected to last for about fifteen minutes to half an hour.

Questions: If you have questions about the installation or function of your PV14L do not hesitate to call Customer Service at (703) 698-8581, or e-mail us at [custserv@conradjohnson.com](mailto:custserv@conradjohnson.com).

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# Specifications

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**Gain:** 22 dB  
**Maximum Output:** 9V RMS  
**Bandpass:** 2Hz to 100kHz  
**Hum and noise:** 95 dB below 2.5V output  
**Distortion at 1.0 v output:** less than .1% THD or IMD  
**Phase:** inverts phase of all inputs at main out  
**Output impedance:** less than 200 ohms

**Mechanical:**

**Dimensions:** 13.75"D x 19"W x 3.315"H  
**Net Weight:** 14 lb..

## Fuses

The PV14L has one fuse on the ac power line (located in the IEC ac mains receptacle) and one fuse to protect each of it's transformers. Failure of any fuse is a symptom of a more serious problem, and a competent service technician should be consulted.

**In no event should these fuses be replaced with a value or type different than that originally supplied.** The correct fuse values are:

	100-120V mains	230V mains
ac mains fuse	T800MA 20mm	T400MA 20 mm
F1	1/2 amp fast blow 3AG	1/4 amp fast blow 3AG
F2	1/2 amp slo blow 3AG	1/4 amp slo blow 3AG

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**EXTERNAL PROCESSOR LOOP (EPL1):** A set of line-level inputs and outputs are provided for the connection of external signal processors (eg. parametric equalizer, tone controls). These can also be used for the connection of a tape recorder. In this case, connect the EPL OUT to the recording input of your tape recorder, and the EPL IN to the output of your tape recorder. The EPL IN connection can also be used as an additional line level input.

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## Controls

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*When first connected to ac mains, or after an interruption of power, the PV14L will turn on, after auto-muting, in a default mode with the level control set at 20 and the CD input selected. In subsequent sessions, as long as the ac mains has not suffered a power outage, the unit will turn on at the last used volume setting and input.*

**mute:** Pressing the mute button will silence the preamplifier's main outputs, and light the led labeled mute. Pressing the mute button again will restore normal operation.

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### ***Warming Up***

The sonic performance of the PV14L improves noticeably as the unit warms up. The midrange becomes more lucid, the highs smoother, and the soundstage expands. The warm up period can be expected to last for about fifteen minutes to half an hour.

Questions: If you have questions about the installation or function of your PV14L do not hesitate to call Customer Service at (703) 698-8581, or e-mail us at [custserv@conradjohnson.com](mailto:custserv@conradjohnson.com).

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# Specifications

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**Gain:** 22 dB  
**Maximum Output:** 9V RMS  
**Bandpass:** 2Hz to 100kHz  
**Hum and noise:** 95 dB below 2.5V output  
**Distortion at 1.0 v output:** less than .1% THD or IMD  
**Phase:** inverts phase of all inputs at main out  
**Output impedance:** less than 200 ohms

**Mechanical:**

**Dimensions:** 13.75"D x 19"W x 3.315"H  
**Net Weight:** 14 lb..

## Fuses

The PV14L has one fuse on the ac power line (located in the IEC ac mains receptacle) and one fuse to protect each of it's transformers. Failure of any fuse is a symptom of a more serious problem, and a competent service technician should be consulted.

**In no event should these fuses be replaced with a value or type different than that originally supplied.** The correct fuse values are:

	100-120V mains	230V mains
ac mains fuse	T800MA 20mm	T400MA 20 mm
F1	1/2 amp fast blow 3AG	1/4 amp fast blow 3AG
F2	1/2 amp slo blow 3AG	1/4 amp slo blow 3AG