

**OWNER'S MANUAL
MV45 AND MV75
VACUUM TUBE POWER AMPLIFIERS**

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

Thank you for purchasing a conrad-johnson power amplifier. 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 MV45 and MV75

1. conrad-johnson design, inc. warrants to the original purchaser that the conrad-johnson MV45 or MV75 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 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 design, 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 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
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 reasonable 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

Your new conrad-johnson power amplifier has been tested and adjusted at the factory with the tubes enclosed with the unit. It will minimize set up time if the tubes are installed in their marked sockets, i.e.: tube marker V2 (on box) installed in socket marked V2 (on chassis).

The conrad-johnson power amplifier must be installed in a location that provides adequate ventilation. At least four inches of clearance is necessary above the amplifier, and three inches on each side. Air flow should be unobstructed. To minimize hum pickup, the amplifier should be located away from the preamplifier, the turntable, and cables carrying low level signals, especially phono cables.

This unit is to be operated on an AC line voltage of 108 to 120 volts (120 volts nominal).

Connection

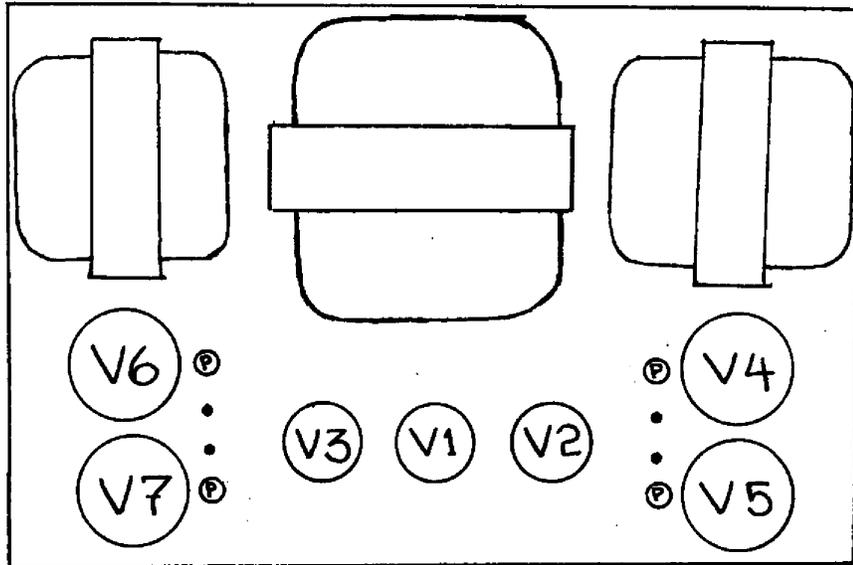
Stereophonic Operation. To operate as a stereo amplifier, connect the left and right outputs from the preamplifier to the amplifier inputs for channel A and channel B. Connect the leads from your speakers to the amplifier's output terminals so that one wire is connected to the screw terminal marked C and the other is connected to the 4, 8, or 16 ohm screw terminal, according to the impedance of your loudspeakers. The wire to the C screw terminal should go to the common (sometimes designated "c", "earth", "ground", or "-") terminal on the speaker and the wire to the 4, 8, or 16 ohm screw terminal should go to the positive ("+" or red) terminal on the speaker. For MV75, be sure that the switch on the amplifier is in the "stereo" position.

Monaural Operation. (MV-75 only) Set the switch on the amplifier to the "mono" position. Connect the output of your preamplifier to either input (only one input should be used; the other must be left *open* .) Connect the speaker to either output as follows: a 4 ohm speaker should be connected to the 8 ohm terminal, an 8 ohm speaker should be connected to the 16 ohm terminal, or a 16 ohm speaker should be connected to the 16 ohm terminal (in this case power will be considerably more than 75 watts but will not achieve 150 watts). A single jumper of heavy gauge wire should be connected from the selected impedance terminal (4, 8, or 16 ohm) to the same impedance terminal on the other channel's output. **Warning:** When the outputs are connected for monaural operation as just described, the stereo-mono switch must be in the mono position to avoid possible damage to the amplifier.

Tube Replacement and Biasing Procedures

The Conrad-Johnson power amplifier has been designed to make tube replacement as simple as possible. Because the output tubes are individually biased, the replacement tubes need not be matched pairs.

Unplug the amplifier from the AC line. Remove the top protective cover. Install tubes as shown in diagram below.



Tube Complements:

| | | |
|--------|------|-----------|
| MV 75 | | MV45 |
| V1 | 5751 | 5751 |
| V2, V3 | 6CG7 | 12AT7 |
| V4-V7 | 6550 | 6CA7/EL34 |

After installing new output tubes, the amplifier should be rebiased. Biasing the amplifier is a simple procedure that can readily be done by the owner. Only a screwdriver is required. After replacing the tubes, the amplifier should be connected to a load (your loudspeakers will work fine) and there should be no signal applied to the amp. It should be connected to your preamplifier with its volume control fully down. Turn amplifier on. After about one minute, turn each of the four screwdriver-adjustable controls (marked with a "p" in the diagram) counterclockwise until the associated indicator LED just goes off. Clockwise rotation may be necessary first to turn the LED on; do not turn the adjusting screw any farther in the clockwise direction once the LED has come on.

After the amplifier has warmed up for thirty minutes, the procedure just described should be repeated. Note: It is normal for these LEDs to flash or flicker when the amplifier is in use. This is no cause for alarm.

This biasing procedure should be performed whenever the amplifier's output tubes (V4, V5, V6 and V7) are replaced and also after each six months of average use.

SPECIFICATIONS

MV75:

Power: stereo: 75 watts per channel, minimum RMS at 4, 8, or 16 ohms from 30Hz to 15kHz, with no more than 1% total harmonic distortion or intermodulation distortion.

monaural: 150 watts minimum RMS at 4 or 8 ohms from 30Hz to 1kHz, with no more than 1% total harmonic distortion or intermodulation distortion.

Frequency Response: 20Hz to 20kHz to -.5db

Signal to noise ratio: 90 db

Tube complement: 1 5751, 2 6CG7, 4 6550

MV45

Power: 45 watts per channel, minimum RMS at 4, 8, or 16 ohm from 30Hz to 15kHz, with no more than 1% total harmonic distortion or intermodulation distortion.

Frequency Response: 20Hz to 20kHz to -.5db

Signal to noise ratio: 90 db

Tube complement: 1 5751, 2 12AT7, 4 6CA7/EL34

SERVICE

If service becomes necessary, the amplifier may be either returned to your dealer or sent to conrad-johnson for service. *In either case, a written description of the difficulties encountered should be provided by the owner.* To ship the amplifier,

MV75: remove the entire rack panel and protective cover assembly by removing the switch nut and three machine screws from each side of the chassis. Next remove, and separately box, the tubes. The amplifier chassis and the set of tubes must be packed in the original factory carton and packing materials. The amplifier should be shipped *without* its rackplate and cover.

MV45: remove the protective cover by removing two screws on each side of the chassis. Next remove and separately box the tubes in their individual boxes. Pack the boxed tubes into the tube carton and box the amp in its original factory carton and packing materials. (Shipping cartons and packing materials are available from conrad-johnson at a nominal charge.) Ship by United Parcel Service (UPS) to:

conrad-johnson design, inc.
Service Department
2733 Merrilee Drive
Fairfax, Virginia 22031