

Thank you for selecting the Sonographe SC26 as the control center for your audio system. The SC26 draws on two decades of research at conrad-johnson design into the reproduction of recorded music. The result is a preamplifier with a remarkable ability to recreate the dynamics, textures, tonalities, and ambience of live musical performances. With the Sonographe SC26, we believe that you will experience the excitement of discovery in hearing more from your favorite recordings than ever before.

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 for all our products are 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 operation of the SC26 is quite straightforward, please take a few minutes to read this manual for useful information on it's installation and operation.

We want you to enjoy your Sonographe 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 SC26, 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 Sonographe Components

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**conrad-johnson design, inc.** will provide service under warranty to the original owner on Sonographe 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 Sonographe 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.
- b) Units which have been modified, altered, or improperly repaired by anyone not specifically authorized by conrad-johnson design, inc.
- c) Units not purchased from an authorized Sonographe 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.

Sonographe 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 should be addressed to:

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

The Service Department can also be reached by phone at 703-698-8581, or by fax at 703-560-5360

### ***Service***

If your Sonographe audio component requires service, repack it using the original box and packing material and ship to the Service Department address above. Boxes and packing materials can be obtained from our service department for a nominal charge, if you no longer have yours. Include with the unit a note describing the problem you are having in as much detail as possible. It is especially important for our technician to know if the problem is intermittent. If you want an estimate of cost for out of warranty service, be sure to request it in this note. Be aware that requesting an estimate will delay service to your unit as we will have to contact you for your approval before commencing service.

### ***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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Because the SC26 dissipates very little heat, ventilation is not an important consideration, allowing greater flexibility for custom or built-in installations. Of course, reasonable judgement must be exercised to see that the SC26 does not obstruct ventilation required by amplifiers or other equipment in the system. In custom installations, the unit may be mounted either horizontally or vertically.

All SC26s 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 SC26 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 SC26 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**

**TUNER, CD, VIDEO, AUX2, TAPE IN:** These are high level inputs and are electrically equivalent. They present a 10k ohm load to the source. The **output** of your tape recorders should be connected to TAPE IN.

**AUX1/PH:** This input functions as an additional high-level input. If used, an external phono equalization amplifier should be connected to this input.

**TAPE OUT:** The tape output connects the selected signal to your tape recorder or external processing loop (eg. equalizer). The output signal is not affected by the level control. Connect "tape out" to the **input** of your tape recorder or external processor. These outputs are buffered so that any device connected to them will not alter the load presented to the source.

**MAIN OUT:** Connect this output to the input of your amplifier (or crossover in a bi-amped system). We recommend the use of an amplifier with an input impedance of 20k ohms or higher.

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## Controls

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**aux1/ph, tuner, cd, video, aux2:** These tactile switches allow the user to select an input. The selected source will be directed to the tape output and to the main outputs if tape is not selected. The led above the selected source will light.

**tape(epl):** This tactile switch allows you to select the tape or external processor for the main outputs of the preamplifier. When selected, the led above this switch will light.

**mute:** This switch disconnects the main output of the preamplifier, having the same effect as turning the volume control all the way down. The led above this switch will light when the output is muted. Holding the mute button down for approximately 3 seconds will put the SC26 into standby mode, turning off the display and muting the output. The only LED lit in this mode will be the mute LED. Pushing any button on front panel or remote will restore operation. Volume setting upon restoration of function will be the volume setting that was present when unit was placed into standby mode. All internal circuits remain powered up during standby.

**level:** The pair of push buttons to the right of the display control the level of both channels, providing 80 dB of attenuation and 20 dB of gain, available in 200 .5 dB steps. Holding the balance or level buttons down will cause the changes to occur at three progressively faster rates. To restore the slow mode of operation release button, then press again.

**balance:** The pair of push buttons to the left of the display will move the stereo image in the direction indicated. Maximum attenuation is approximately 64 dB, available in .5 dB steps. On the display .5 dB is indicated by lighting the decimal point.

### **Turn On:**

When AC power is first applied to the SC26 and when it is reapplied (for example after a power outage), the mute LED will blink, front panel controls will be inhibited, and output will be muted for approximately 20 seconds. When the mute LED stops blinking, push the mute button to

take unit out of mute. The level display will read 40. Unit will now operate normally.

**Remote Control:**

The remote control duplicates all front panel controls. Although the SC26 has only one tape/external processor loop, the remote has buttons for two (for compatibility with other conrad-johnson products). Pressing either EPL button on the remote will enable the SC26's tape/epl.

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## ***G*etting The Most From Your SC26**

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In a system of commensurate high quality components, the Sonographe SC26 offers a remarkable degree of sophistication and refinement in music reproduction. To get the best performance from any audio system, there are a number of important details which must be attended to.

### ***Absolute Phase***

Musical notes are heard through the ear's response to waves of alternating rise and fall of air pressure. Musical transients are almost exclusively positive: that is, the initial effect is a rise in pressure. The ear is capable of distinguishing these positive transients from the musically unnatural alternative of a negative transient (an initial fall in air pressure). In terms of your stereo system, these transients are created by your loudspeakers. If the speakers respond to musical transients by first moving out, they are creating a rise in pressure, and the system is said to be phase correct. If they respond by moving in, they create a fall in pressure and the system is said to be phase inverting. Each component in the stereo system either preserves the phase of the incoming signal, and is said to be phase correct, or inverts the phase and is said to be phase inverting. It is unimportant whether an individual component is phase correct or phase inverting, as long as the system as a whole is phase correct. This will be the case if the number of phase inversions is even (or zero).

The SC26 is phase correct (non inverting). If your system has an odd number of inversions then you must add one phase inversion. This is conveniently done by reversing the positive and negative connections to your speakers (be sure to reverse both channels).

If you are not sure about the phase of every piece in your system, you can establish correct absolute phase by careful listening. When the system is in correct phase, transients will be noticeably cleaner and more sharply defined. The effect is especially apparent on plucked string sounds. A final warning - not all recordings are phase correct (including some "audiophile" recordings), so listen to several before concluding your investigation of absolute phase.

### ***The Importance Of Wires***

Interconnect and speaker wires are an important element in your stereo system. Interconnects are available which will permit a reference quality system to blossom and fulfill its promise of musical reality. Others will strangle the system to the point where it becomes little better than average. To complicate matters, our experience suggests that the choice of interconnects will be system dependent - those that are top ranked on one system may be a poor choice for a different system. Consult your Sonographe dealer for recommendations for your specific system.

### ***Performance Tip***

Warm up the SC26 before listening: The sonic performance of the SC26 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 about fifteen minutes.

**Questions:** If you have questions about the installation or function of your SC26 do not hesitate to call Customer Service at (703) 698-8581.

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## ***S**pecifications:*

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### **SC26 Line-Stage Preamplifier**

**Gain:** 20dB

**Output:** 3 V RMS

**Phase:** Non-inverting

**Response:** 5 Hz to 100KHz

**Signal to Noise Ratio (20Hz-20KHz):** 100 dB

**Distortion:** less than .25% THD

**Dimensions:** 11.5"D x 17.125"W x 2.75"H

**Weight:** 11 lbs.

### ***Fuse***

The SC26 has a fuse on the ac power line to protect the transformer. Failure of this fuse is a symptom of a more serious problem, and a competent service technician should be consulted. **In no event should this fuse be replaced with a value or type different than that originally supplied.** The correct fuse value is:

If configured for 100 or 120V operation: 1/2 amp, fast blow

If configured for 220 or 240V operation: 1/4 amp, fast blow