

Congratulations. In the Sonographe SC25 you have acquired a precision audio preamplifier of extraordinary musicality. It is the result of more than fifteen years of research by Conrad-Johnson Design into the application of solid state devices to the reproduction of recorded music. The circuit design has been executed with quality component parts and each unit has been painstakingly hand assembled. The completed instrument has been subjected to a rigorous quality inspection program.

Every effort has been made to provide you with an audio instrument capable of achieving a believable illusion of live music when listening to high quality recordings. This manual contains many important suggestions on how to realize the full potential of your SC25. Please take a few minutes to read it.

## **LIMITED WARRANTY FOR SONOGRAPHE AUDIO COMPONENTS**

1. **conrad-johnson design, inc.** warrants that Sonographe audio components purchased from an authorized Sonographe dealer in the United States for use in the United States will be free of defects in materials and workmanship 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 dealer.
2. During the warranty period, conrad-johnson will repair defective units without charge for labor or parts 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 repair must be shipped in factory packing 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 to any destination in the United States prepaid by conrad-johnson design.
  - d) Normal wear and maintenance are not covered by this warranty.
3. 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 limitations or exclusions may not apply to you.
4. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.
5. 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***

In the event your Sonographe audio component requires service, repack it with the original packing material and ship to the Service Department address above. If you do not have the original packing material, replacements are available from conrad-johnson design for a nominal charge. Be sure to include a copy of your sales receipt from the original purchase, along with a note explaining the problem you are having in as much detail as possible. If the problem is intermittent, please indicate. 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. Proper registration of the warranty is important! It will 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.

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## **I**NSSTALLATION

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Because the SC25 dissipates very little heat (less than 10 watts) 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 SC25 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.

To minimize hum pickup, the SC25 should be mounted well away from amplifier power transformers. All ac power cords should be dressed away from input cables- especially phono cables.

The SC25 requires an ac power line providing between 90 and 130 volts at 50 to 60 Hz. The SC25 is also available connected for operation on 220 and 240 V, 50/60 Hz ac lines.

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## **C**ONNECTION

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**TUNER, CD, VIDEO, AUX2, TAPE:** These are high level inputs and are electrically equivalent. They present a 33k ohm load to the source. The **output** of your tape recorders should be connected to TAPE IN.

**AUX1/PH INPUT:** This input accomodates the optional SC22P phono circuit board, which provides the amplification and equalization required by moving magnet and high-output moving coil cartridges. If the optional phono board is not installed, this input functions as an additional high-level 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.

**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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## **C**ONTROLS

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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:** 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.

**BALANCE:** This control is an eleven position stepped attenuator, adjusting the channel balance in approximately .75 dB steps. The maximum attenuation is under 4 dB, so both channels will be present even in the extreme positions. In normal use the control will be centered.

**LEVEL:** The SC25 precision volume control is continuously variable, for full control of listening levels.

### ***Notes on Using Your SC25***

When ac power is first applied to the SC25, and when it is reapplied (for example after a power outage), the cd input, tape monitor, and mute will be automatically selected. The three corresponding leds will be lit. Auto-muting will continue for about 20 seconds, even if manual mute has been deselected.

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## ***G*ETTING THE MOST FROM YOUR SC25**

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The Sonographe SC25 offers a remarkable level of sophistication and refinement in music reproduction, but it cannot transform an inferior stereo system. Only high quality amplifiers and loudspeaker systems will be capable of fully revealing the capabilities of the SC25.

Given a system of high quality components, there remain 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 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 is either phase correct or phase inverting (including the source and speakers-these are normally phase correct). It is of no consequence if an individual component is phase inverting, as long as the system as a whole is phase correct. This will be the case as long as the number of phase inversions is even (or zero).

The SC25 is phase 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.

### ***AC LINE POLARITY***

Each piece of electronic equipment in your system is subject to minute ac leakage currents to the chassis. Since the chassis of components in a system are usually connected via the ground side of the interconnect wires, these leakage currents are superimposed on the musical signals. It is possible to minimize these current flows by carefully selecting the way in which each component is plugged into the wall outlet. Because the power cord on the SC25 is not polarized, it can be plugged in two ways. It will normally sound better in one orientation than in the other. The same will be true of any electronic device in your system.

### ***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 no better than average. To complicate matters, our experience suggests that the choice of interconnects will be system dependent- those that are ranked first on a given system may be a poor choice for a different system. Consult your Sonographe dealer for recommendations for your specific system.

### ***TIP***

**Warm up the SC25 before listening:** The sonic performance of the SC25 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 several hours. Consequently, we recommend that the SC25 be left on at all times. The very low power consumption of the unit makes this practical.

**Questions:** If you have questions about the installation or function of your SC25 do not hesitate to call Customer Service at (703) 698-8581.

## **SPECIFICATIONS:**

### **SC25 Line-Stage Preamp**

**Gain:** 21dB

**Output:** 7 V RMS

**Phase:** Phase inverting.

**Response:** 5 Hz to 100KHz

**Signal to Noise Ratio (20Hz-20KHz):** 94 dB

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

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

**Weight:** 12 lbs.

### **SC25P Optional Phono Stage**

**Gain:** 40 dB

**Phono Overload:** 100 mV

**Equalization:** within +/- .25 dB of RIAA standard

**Signal to Noise Ratio (20 Hz to 20 kHz):** 80 dB below 10 mV input