Navisonaudio
The natural sound

SE-MKII

STEREO PREAMPLIFIER OWNER'S OPERATING MANUAL

Introduction

Thank you for selecting the Navison audio SE-MKII line stage preamplifier as the control center for your audio system. The SE-MKII is capable of remarkably faithful recreation of the dynamics, textures, tonalities, and ambience of live musical perform-ances. Using it, we believe that you will experience the excitement of discovery in hearing more from your favorite recordings than ever before.

At Navison audio, 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 Navison audio products are se-lected with a view to maintaining optimal performance over the years. Our reputation for producing among the industry's most reliable compo-nents is a natural consequence of this engineering approach.

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

In closing, we'd like to welcome you to the family of Navison audio owners. We want you to enjoy your Navison audio 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 SE-MKII, and to provide any needed service both during, and after the warranty period. Our goal is to heighten your enjoyment of recorded music.

Limited Warranty For Navison audio Components

Navison audio 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 Navison audio dealer. During the warranty period, Navison audio 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 Navison audio design, Inc.

c) Units not purchased from an authorized Navison audio 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 Navison audio 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 Navison audio 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.

The warranty on the Navison audio of products is transferable to subsequent owners provided that the warranty registration card has been filled in and returned to Navison audio design, inc. within 30 days of the original purchase, and that the registered owner provides the factory with a signed notice giving model and serial number of the unit, and the new owner's name and address.

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

Navison audio 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. Navison audio will provide warranty service for products outside the United States, but in these cases, 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

Navison Audio Design, Inc.

1551 Shaw Drive San Jose CA 95118.

The Navison audio service department can also be reached by

- Email: custservice@navisonaudio.com
- Phone: 408-269-6800
- Fax: 408-269-6801

Toll free number

- 1-877-NAV-IZON or (628-4966)

Service

If your Navison 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.

Installation

The first step in preparing your SE-MKII preamplifier for use is to install the vacuum-tubes. To do this, remove the top plate of the machine by removing these screws securing on the top plate. The SE-MKII uses eight type 6H1-EB tubes it's similar 6922 tubes. After checking the pin orientation, insert one tube in each tube socket. Next, fit two of the included silicone rubber rings over each tube, spaced at roughly 1/3 and 2/3 distances. These rings will minimize the effects of air-borne microphonics on the tubes. Finally, reinstall the top plate of the machine.

Set up

To maintain proper ventilation, mount the SE-MKII 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 SE-MKII sold in the United States are configured for operation on a 60Hz ac power line producing between 100 and 120 volts. Export versions of the SE-MKII 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

Considerable care has been taken in the design of the SE-MKII to minimize it's 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 mini-mizing 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 (CD, TUNER, and AUX):

These high level inputs are electrically equivalent. The load they present to the source varies with the volume control setting, but in no case will it drop below 12 kohms. Connect the corresponding source components to these inputs.

OUT 1 and OUT 2:

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 SE-MKII 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 SE-MKII" for an explanation.

Controls

Power: Press the button labeled power to switch the preamplifier on. A time delay auto-muting circuit is incorporated into the SE-MKII to eliminate transients generated by the warm-up, and cool down cycles of the vacuum-tubes. 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 mute indicator led (located middle to the Vol up and Vol dn button) will flash. All control functions are disabled during the auto-muting cycle. The muting relay also grounds the outputs immediately at turn-off or in the event of any power line interruption. When the SE-MKII is turned off (by pressing the power switch again), the standby led (located in the display window) will be illuminated.

When first connected to ac mains, or after an interruption of power, the SE-MKII will turn on in a default mode (after auto-muting), with the level set at 25, and the CD input selected. In subsequent sessions, as long as the ac main has not suffered a power outage, the unit will turn on at the last used volume setting and input.

Function (cd, tuner, aux): Pressing the button labeled source will cause the unit to step through these five inputs, in the order displayed on the front panel. The selected input will be indicated by an illuminated led.

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

The level setting can be changed by pressing the vol dn and vol up buttons on the front panel. Each time a button is pressed, the level will move up or down one step. If a button is pressed and held, the level control will cycle through the steps at an accelerating rate. With each step, a slight "click" will be heard from the opening and closing relays inside the SE-MKII. Balance can only be set via the remote control.

Remote Control

All operations of the SE-MKII can be controlled by the handheld 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.

CD, TUNER, and AUX: You can directly access any input by pressing the associated button on the remote.

LEVEL - +: Duplicates the function of the front panel vol dn, 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.

Vacuum Tube Replacement

The SE-MKII circuit employs eight vacuum tubes (V1 – V8), all 6H1-EB tubes. The 6H1-EB offers low noise, low microphonics. The brands of tubes we supply have 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 SE-MKII. 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, and 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 Navison audio 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.

Getting The Most From Your SE-MKII

In a system of commensurate high quality components, the Navison audio SE-MKII offers an unparalleled level of sophistication and refinement in music reproduction. To get the best performance out of 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 alter-nating rise and fall of air pressure. Musical transients are almost exclu-sively 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 SE-MKII is phase inverting. If your system has an odd number of inversions, (for example, if the SE-MKII is the only phase inverting unit in the chain) 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 Navison audio dealer for recommendations for your spe-cific system.

Performance Tip

Warm up the SE-MKII before listening: The sonic performance of the SE-MKII 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 SE-MKII.

Don not hesitate to call Customer Service at 408-269-6800

Specifications

GAIN	: 24.5dB
MAXIMUM OUTPUT	: 15V
FREQUENCY RESPONSE	: 2Hz to 25KHz (- 2dB at 25KHz)
NOISE - UNWEIGHTED	: - 80dB
DISTORTION AT 1.0 V OUTPUT	: Less than 0.2% THD
PHASE	: Inverts
INPUT IMPEDANCE	: Approx. 50K ohms
OUTPUT IMPEDANCE	: Less than 1.8K ohms
POWER REQUIREMENTS	: 115V / 50-60Hz

Internally adjustable by qualified technician to operate on 230V / 50-60Hz

POWER CONSUMPTION	: Approx. 70 watts

MECHANICAL

DIMENSIONS	: 15.68"D x 21.84"W x 4,15"H
NET WEIGHT	: 35 Lbs total

Specifications are subject to change without notice

FUSES

The SE-MKII has two power transformers (one for the tube circuitry, one for the control circuits), each of which is protected by a fuse. A failure of either of these fuses 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 fuses are located on the input/output pc board at the back of the chassis. The fuses are identified as F1 and F2 on this printed circuit board.

If configured for 100 to 120V	:	F1	1 amp, fast blow
		F2	2 amp, slow blow
If configured for 220 to 240V	:	F1	1/2 amp, fast blow
		F2	1 amp, slow blow

FC **THIS PRODUCT COMPLIES WITH FCC STANDARDS**

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products for your audio system.

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