



MODEL SE-1S  
**ELECTROSTATIC  
STEREO HEADPHONES**  
WITH ENERGIZER

**marantz®**

We sound better.



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## INTRODUCTION :

Room acoustics and speaker placement play an important role in speaker sound reproduction. Because of this, speakers, in general, leave much to be desired. Headphones, on the other hand, are not affected by these factors.

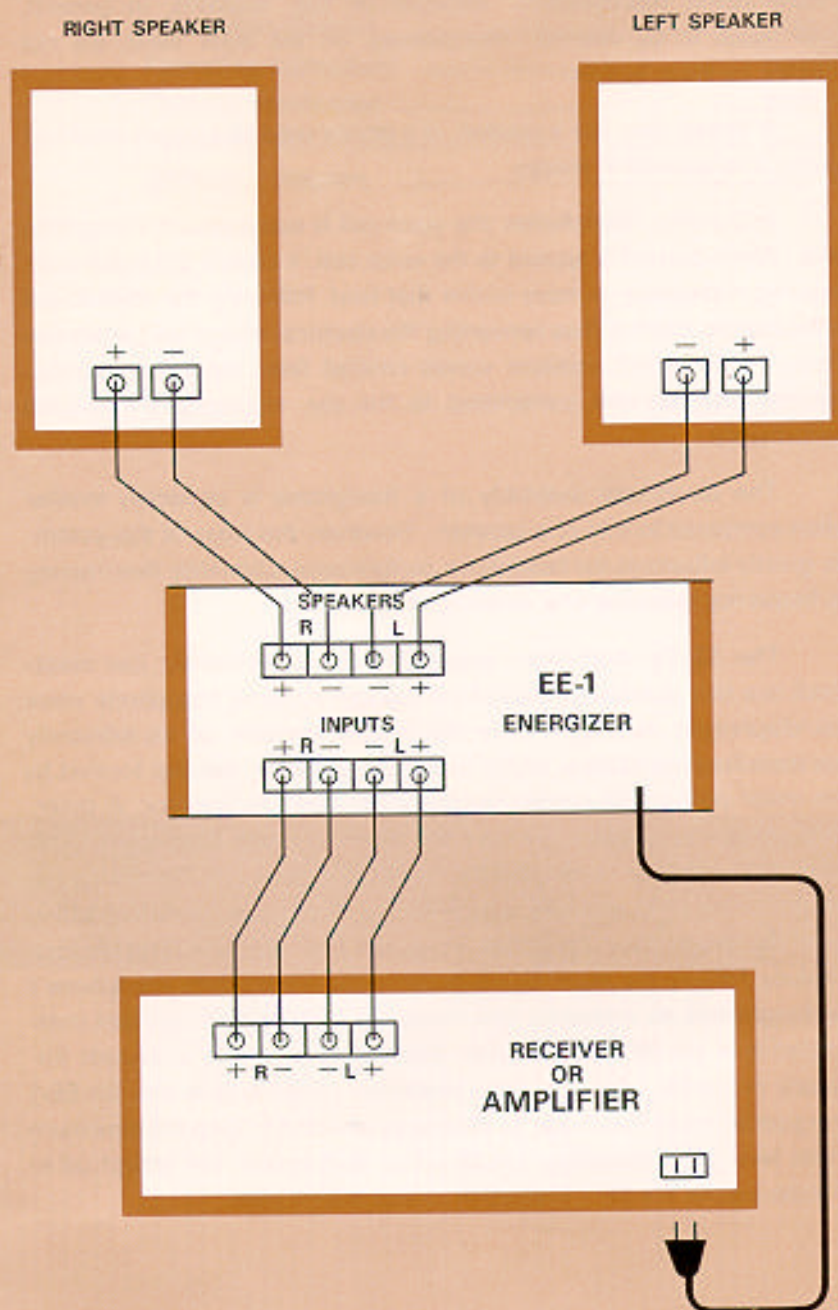
A headphone, like a speaker, is a device used to convert electrical energy into acoustical energy.

In Dynamic headphones, the voice coil is suspended in a magnetic field. When current is applied to the voice coil, it causes the voice coil/diaphragm assembly to move within that field, following the alternations of the applied current, thus converting the electrical energy into acoustical energy. The sound pressure waves emitted from the voice coil/diaphragm assembly are transmitted to the ear, recreating the original performance.

The diaphragm assembly of a headphone is physically smaller when compared to that of a speaker. However, the mass of this assembly greatly influences the headphone performance, ultimately determining its frequency response and sound characteristics.

The SE-1's diaphragm assembly has an extremely low mass—about one two-thousandth that of the average dynamic headphone voice coil/diaphragm assembly. The diaphragm consists of an extremely thin metalized membrane, which is positioned within the gap formed by two metal plates. The diaphragm and plates form a capacitor. A polarizing voltage is applied between the plates and the diaphragm. This polarizing voltage is modulated by the audio signals and the changes in the polarizing field intensity, which causes changes in the forces acting upon the diaphragm; resulting in diaphragm motion. This motion faithfully follows the input signal because the electrostatic headphone's diaphragm has an extremely low mass. The absence of resonant characteristics in the SE-1 electrostatic diaphragm results in a smooth frequency response. An automatic protection circuit is built into the EE-1 energizer to prevent damage to the headphone and to keep the maximum sound level from exceeding 115dB. The SE-1 system will accept up to 16 Volts before the EE-1 protection circuit is activated.

# CONNECTION DIAGRAM



(FIGURE 1)

## OPERATING INSTRUCTIONS

### REAR PANEL CONNECTIONS

Using No. 18, or heavier, lamp cord (zip cord), connect the MAIN speaker output terminals of your amplifier/receiver to the INPUT terminals on the Energizer unit. If you have a quadraphonic component, connect the FRONT speaker output terminals to the EE-1 Energizer. Be certain of the correct polarity when making these connections. See Figure 1. Once again, observing the correct polarity, connect the SPEAKER output terminals of the Energizer to your speakers. See Figure 1.

**CAUTION:** WHEN PLUGGING IN THE SE-1 HEADPHONE, BE CERTAIN THAT THE VOLUME CONTROL ON THE AMPLIFIER/RECEIVER IS SET TO MINIMUM. IF THE VOLUME CONTROL IS INADVERTENTLY SET TOO HIGH AND THE SE-1 IS PLUGGED INTO THE ENERGIZER, SERIOUS DAMAGE TO THE HEADPHONE IS LIKELY TO OCCUR. IT IS GOOD PRACTICE TO KEEP THE ENERGIZER'S POWER SWITCH "OFF" (OUT) BEFORE PLUGGING THE HEADPHONES IN.

- Step 1:** Be certain that the Volume Control on the amplifier/receiver is set to the minimum position (turned fully counterclockwise).
- Step 2:** Turn the amplifier/receiver power on.
- Step 3:** Be certain that the POWER Switch on the Energizer is "OFF" (out).
- Step 4:** Plug the SE-1 headphone into the Energizer.
- Step 5:** Actuate the Energizer's POWER Switch. The pilot lamp will illuminate to indicate that power is on.
- Step 6:** Depress the PHONES pushswitch to apply power to the SE-1 headphone(s).

When the PHONES pushswitch is depressed, power is applied to the headphone(s). In the "OUT" position, power is disconnected from the headphone(s). When the SPEAKER pushswitch is depressed, the speakers of your music system will operate. In the "OUT" position, power is disconnected from the speakers.

### OPTIONAL ACCESSORIES :

The EE-1 Energizer will accommodate two sets of SE-1 Marantz headphones. The additional SE-1 headphone is available separately from your local Marantz dealer.

The SE-1 headphone may be used with an extension cord having length of up to 15 feet, without impairing the SE-1S system.

## WARRANTY

Marantz Company, Inc., proudly warrants your Marantz product to be free of manufacturing defects in material and workmanship as follows:

From date of purchase	
Electronic Components and Receivers	PARTS - 3 years LABOR - 3 years
Headphones	PARTS - 3 years LABOR - 3 years
4-Channel Remote Control	PARTS - 3 years LABOR - 3 years
SQA-1 Adaptor	PARTS - 3 years LABOR - 3 years
Speakers and Cabinets	PARTS - 5 years LABOR - 5 years

TO VALIDATE YOUR WARRANTY, YOU MUST FILL OUT AND MAIL THE WARRANTY REGISTRATION CARD TO MARANTZ COMPANY, INC., P. O. BOX 99, SUN VALLEY, CALIFORNIA 91352, WITHIN TEN DAYS FOLLOWING THE DATE OF PURCHASE.

If your Marantz unit does not have a warranty registration card, you must retain your purchase receipt as proof of the purchase date.

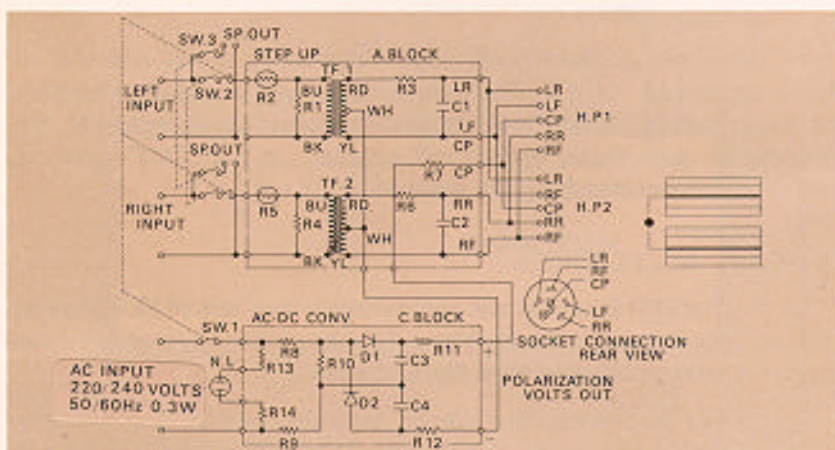
For Warranty repair, send this product to Marantz Company, Inc., 8150 Vineland Avenue, Sun Valley, California 91352, or to an AUTHORIZED Marantz Service Station. All shipping charges must be prepaid. Marantz will pay return shipping charges to any designated point within the United States.

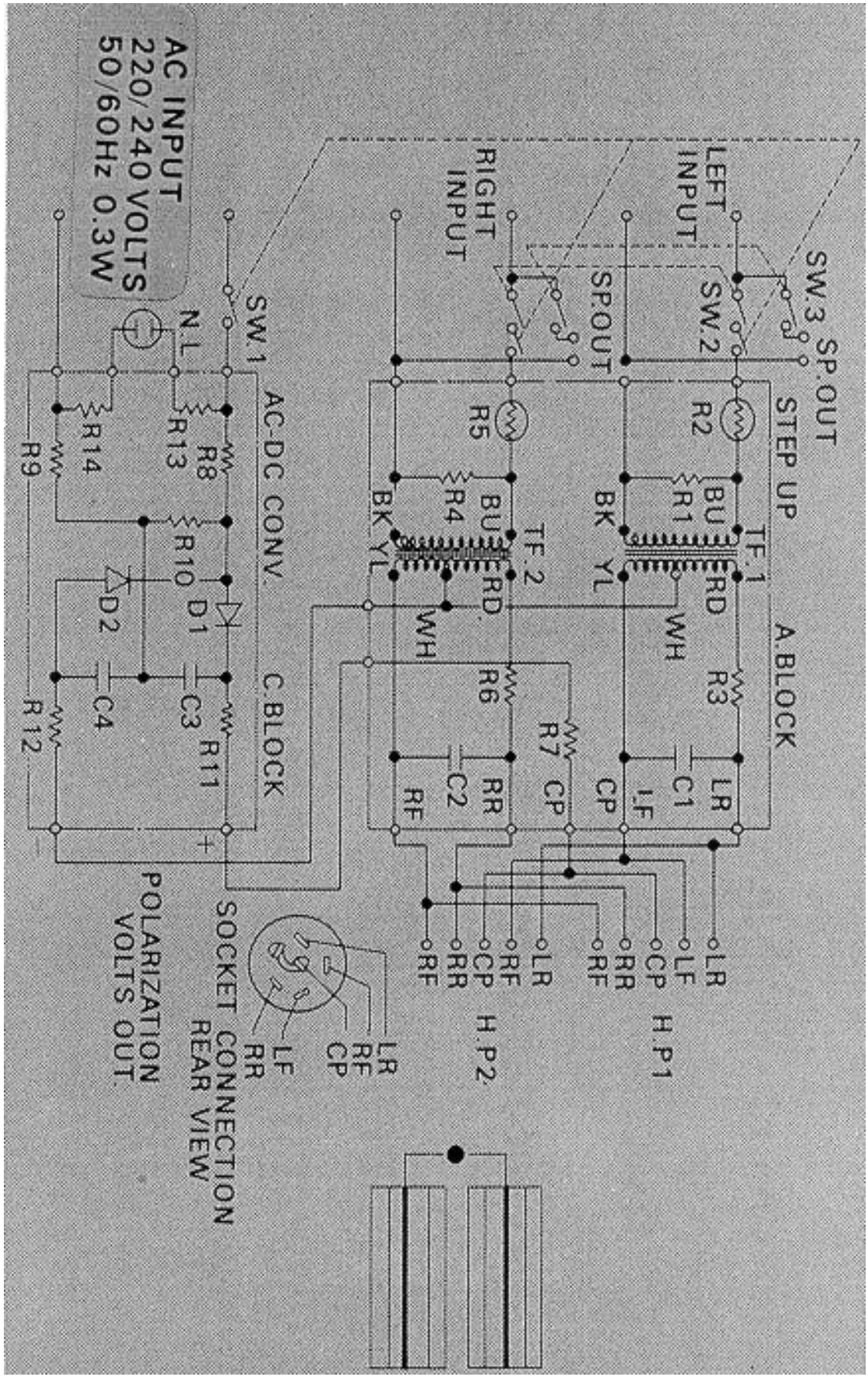
This Warranty is void if the serial number has been altered or removed; if the product is modified or repaired in any manner which Marantz believes may affect the reliability of the product; if the product is not operated in accordance with the instruction manual.

Marantz shall have no liability whatsoever for consequential damages. The sole responsibility of Marantz Company, Inc., under this Warranty shall be limited to the repair of the product, or replacement thereof, in the sole discretion of Marantz Company, Inc.

EXCEPT TO THE EXTENT THAT APPLICABLE LAW PRECLUDES A DISCLAIMER OF WARRANTY, THERE IS NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS WITH RESPECT TO THIS PRODUCT, NOR ARE THERE ANY OTHER WARRANTIES WHICH EXTEND BEYOND THE PROVISIONS OF THIS WARRANTY.

## SCHEMATIC DIAGRAM





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Marantz shall have no liability whatsoever for consequential damages. The sole responsibility of Marantz Company, Inc., under this Warranty shall be limited to the repair of the product, or replacement thereof, in the sole discretion of Marantz Company, Inc.

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## SCHEMATIC DIAGRAM

