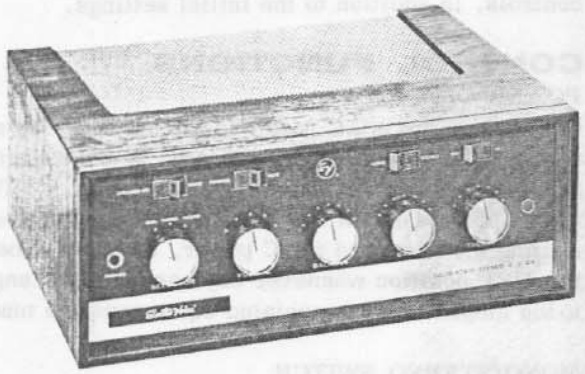
E-V 44 STEREO CONTROL AMPLIFIER



DESCRIPTION

Representing an entirely new and unique approach to the design of stereo high fidelity components, the Electro-Voice E-V 44 stereo control amplifier incorporates the latest "state of the art" electronic devices and circuitry. To ensure proper operation of the E-V 44, it is urged that the installation procedure be followed exactly.

The E-V 44 incorporates sixteen transistors, of which eight are silicon, and four silicon diodes in the power supply. Extremely cool operation is assured by direct conduction of the small amount of heat from the output transistors to the unit's heavy base plate. All components operate well within their rated temperature range, insuring long life and exceptional stability.

The use of highest quality transistors and careful chassis layout results in the virtual absence of hum, hiss, and noise. Wide frequency response, unusually low distortion, exceptional square-wave response, and other performance characteristics exhibit little or no deterioration throughout the entire power output range--up to, and including, full power.

The model E-V 44 incorporates an automatic low-frequency loudness compensation which maintains proper tonal balance at low-volume settings.

SPECIFICATIONS

Power Output: 40 watts IHF music power (40 watts per channel); 80 watts instantaneous peak power.

Frequency Response: ±1.5 db; 10 to 40,000 cps at rated power.

Channel Separation: 40 db minimum at 1000 cps.

Harmonic Distortion: Less than 0.5% at rated output.

IM Distortion: Less than 1% at rated output.

Hum and Noise:
High Level inputs--better than 70 db down at rated output.
Magnetic Phono input--better than 60 db down (reference, 10 mv input)

Input Sensitivity:
Magnetic phono -- 5 mv
Ceramic phono, tuner, aux, and tape monitor -- 100 mv.

Controls: Selector (phono, tuner, aux) Volume; Balance; Bass (+12 db, -16 db at 50 cps); Treble (+12 db, -16 db at 10 kc); Speaker (On-Mute)

Output Damping Factor: 50 at 8 ohms

Outputs: Speaker (4-8-16 ohms each channel); stereo tape recorder; stereo headphone.

Auxiliary AC Outlets: 2; one switched, one unswitched.

Power Requirements: 110 - 120 volts, 50 - 60 cycle AC

Dimensions: 4-3/32" x 12-3/16" x 9-3/4"

Net Weight: 8 pounds

FEATURES

- All-transistor, solid state circuitry - military type etched-circuit wiring.
- Cool operation provides maximum component life and greatly reduces ventilation requirements.
- Extremely flat, wide-range frequency response.

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CONNECTIONS

Note: The AC power cord should not be plugged in until all connections and initial control settings have been made.

1. Connect the right- and left-channel speakers to the right- and left-channel amplifier terminals, respectively. Ordinary #18 lamp- or "zip" cord is satisfactory. In order to ensure proper stereo effect, make certain that the speakers are phased correctly. Most speakers and speaker systems have one terminal coded red, T1, +, or otherwise marked for proper phasing. This terminal should be connected to the amplifier output terminal marked "4-8-16 ohms". The amplifier common terminal, marked "COM", should be connected to the black, T2, -, or unmarked speaker terminal. Care should be taken to keep the speaker wires from touching each other either at the amplifier or the speaker terminals. Although no harm will be done to the amplifier, a short circuit in the amplifier output will require the unnecessary and bothersome replacing of fuses.

2. Connect program source (tuner, phono, etc.) to the appropriate pair of input jacks on the rear panel. The left jack of each pair is the input for the left channel; the right jack of each pair feeds the right channel. If a monophonic source such as a mono tuner is employed, it may be connected to either channel input. If the record player has a magnetic cartridge, connect it to the MAG PHONO input. A ceramic cartridge should be connected to the CERAMIC PHONO input. Note: Connecting cartridges to both phono inputs at the same time will cause improper operation.

3. Normally a separate ground wire is required between an amplifier and a record player to reduce hum. This wire should be connected to the SYSTEM GROUND screw on the amplifier rear panel.

4. If a tape machine capable of recording is to be used in the system, the recorder's high level inputs should be connected to the amplifier jacks labeled OUTPUT TO TAPE RECORDER. High level output from the recorder should be connected to the amplifier input jacks labeled TAPE. The gain of this input is designed for tape recorders with built-in playback electronics; it will not operate directly from a tape head.

5. For convenience, two AC outlets are provided on the rear panel. Auxiliary equipment such as a tuner, record player, or tape deck may be connected to these outlets as long as the total power consumption of the additional units does not exceed 300 watts. The switched outlet is controlled by the amplifier on-off switch; the unswitched outlet is on at all times. Normally a mechanical device such as a record player or tape machine should be connected to the unswitched outlet so that it cannot be turned off at the amplifier with the mechanism engaged.

Before plugging in the amplifier, read through the following section to become familiar with front panel controls, in addition to the initial settings.

CONTROL FUNCTIONS

POWER ON/OFF

Controls the main AC power to the amplifier in addition to any equipment connected to the switched AC convenience outlet on the rear panel. This switch should be in the OFF position before connecting the line cord to AC power, and should be in the OFF position whenever any connection changes to the amplifier or associated equipment are made.

MONO/STEREO SWITCH

In the STEREO position, the left- and right-channel input signals are fed through the left- and right-channel amplifiers to their respective speakers. In the MONO position, the left- and right-channel inputs are combined and fed through both amplifiers, with the resulting signal routed to both the left and right speakers. Similarly, a mono source connected to either a left- or right-channel input will be fed to both amplifier channels and then to both speakers. Either position may be used initially, depending upon the program source available.

SOURCE/TAPE SWITCH

In the SOURCE position, the signal being fed to the speakers (phono, tuner, auxiliary) is selected by the SELECTOR switch. The TAPE position selects the tape input (regardless of the position of the SELECTOR switch) for playback from a tape recorder. NOTE: This switch may also be used to compare tape quality to material being recorded when used with a tape machine providing off-the-tape monitoring while recording. The tape recorder instruction book will provide additional details.

SPEAKER ON/MUTE SWITCH

In the MUTE position, the switch silences both speakers so that headphones may be used for private listening. Although no harm will be done to the amplifier if this switch is left in the MUTE position, it is suggested that the speakers be turned on after listening with headphones, so that a person unfamiliar with the equipment will have no difficulty operating the system.

PHONES JACK

Provides output for high-quality stereo headphones. Output is available at all times, regardless of the setting of the SPEAKER ON/MUTE switch.

SELECTOR SWITCH

Selects desired input signal in conjunction with the SOURCE/TAPE switch described above. Initially, this control should be set to select the program source to be used for system testing. The program source selected by the SELECTOR switch also is fed to the OUTPUT TO TAPE RECORDER jacks which are not affected by any other operating control. If it is desired to record a stereo source on a monophonic recorder, a "Y" connector (obtained locally) should be inserted between the amplifier output jacks and the recorder input jack.

VOLUME

Adjusts the gain of both stereo channels. Initially, the volume control should be set fully-counter-clockwise (minimum volume). After the system has been turned on, the volume control may be advanced until the desired listening level is reached. After the normal range of listening volume has been determined, it is not necessary to reduce the volume each time the unit is turned on. Because the amplifier employs an independent ON/OFF switch, all controls, including VOLUME, may be preset for use by members of the household unfamiliar with the various control functions.

BALANCE

Adjusts the relative volume of the left and right stereo channels. The center, or "12 o'clock", position of the control will provide normal balance in most instances. As the control is rotated to the left (counter-clockwise), the output of the right channel speaker is reduced, until at the maximum counter-clockwise position, only the left channel speaker is playing. The opposite effect occurs as the balance control is rotated to the right from the center position. When the MONO/STEREO switch is in the MONO position, the balance control may be used to direct the monophonic signal through the left, right, or both speakers. It may also be used to compensate for different speaker efficiencies if dissimilar speaker systems are employed in the two channels.

BASS AND TREBLE CONTROLS

Provide adjustment of low-frequency and high-frequency response, respectively. Normal or flat response is obtained with both controls in the center, or "12 o'clock", position. Counter-clockwise rotation increases the response. Each of these controls varies the response of both channels simultaneously.

OPERATION

After double-checking the initial settings of the controls, the system may be connected to a convenient AC power source. The position of the controls may be varied to compensate for room acoustics, speaker characteristics, and personal listening preferences.

Occasionally a "thump" or "pop" will be heard when the amplifier power switch is turned on. This is a natural result of the time constants employed in the power-supply filters, and will not harm either the amplifier or speakers.

CAUTION NOTES

If the amplifier connections have been made correctly, the E-V 44 amplifier should now be reproducing sound with the utmost fidelity---and will continue to do so for years to come. Inherently stable design combines with completely reliable fusing to provide the most rugged and foolproof equipment available.

An MDL-1.5 (1-1/2 amp) fuse is located in the output circuit of each channel amplifier to protect the speaker and output transistor stage from continued overload. The MDL-1.5 fuse provides maximum protection with a safety margin for any program material played through a speaker with 4-ohm or greater impedance. If additional speakers are desired, make certain that the combined impedance of all speakers connected to a channel is not less than 4 ohms. Effective output impedance lower than 4 ohms will cause excessive current flow and continual blowing of fuses.

If the amplifier is to be checked for sine wave power output, it is recommended that the output fuses be changed temporarily to MDL-3 (3-amp). At the conclusion of testing, MDL-1.5 fuses should be reinstalled to maintain maximum protection with program material. The AC primary circuit is protected by an AGC-1 fuse. This fuse should never blow unless component failure has occurred and the amplifier requires servicing. Neither of the AC convenience outlets is protected by the primary fuse.

METHOD OF INSTALLATION

The E-V 44 has been tested for proper operation for extended periods in high temperature environments. However, the advantages inherent in a transistor unit's cool operation will be partially negated if the E-V 44 is tightly enclosed or installed directly above a heat generating device such as a radiator or conventional tube-type equipment. Only a normal circulation of air is required; the oiled walnut case, (model CW1), which is available as an accessory item incorporates these ventilation considerations.

WARRANTY

The Electro-Voice E-V 44 stereo control amplifier is unconditionally warranted against defects in materials or workmanship for two full years from date of purchase. If difficulty should be encountered during or after this period, please write the E-V Service Department for return authorization and shipping instructions.

CUSTOMER SERVICE

In order to validate the warranty, the enclosed Warranty Registration Card should be returned to Electro-Voice within ten days of purchase. Returning this card also assures that a complete instruction manual for the E-V 44 will be sent as soon as it is available.

The E-V 44 stereo control amplifier is packed to provide maximum protection---well in excess of shipping requirements of the Interstate Commerce Commission. If shipping damage does occur, contact the carrier immediately, requesting inspection and instructions, or contact the dealer from whom the unit was purchased.

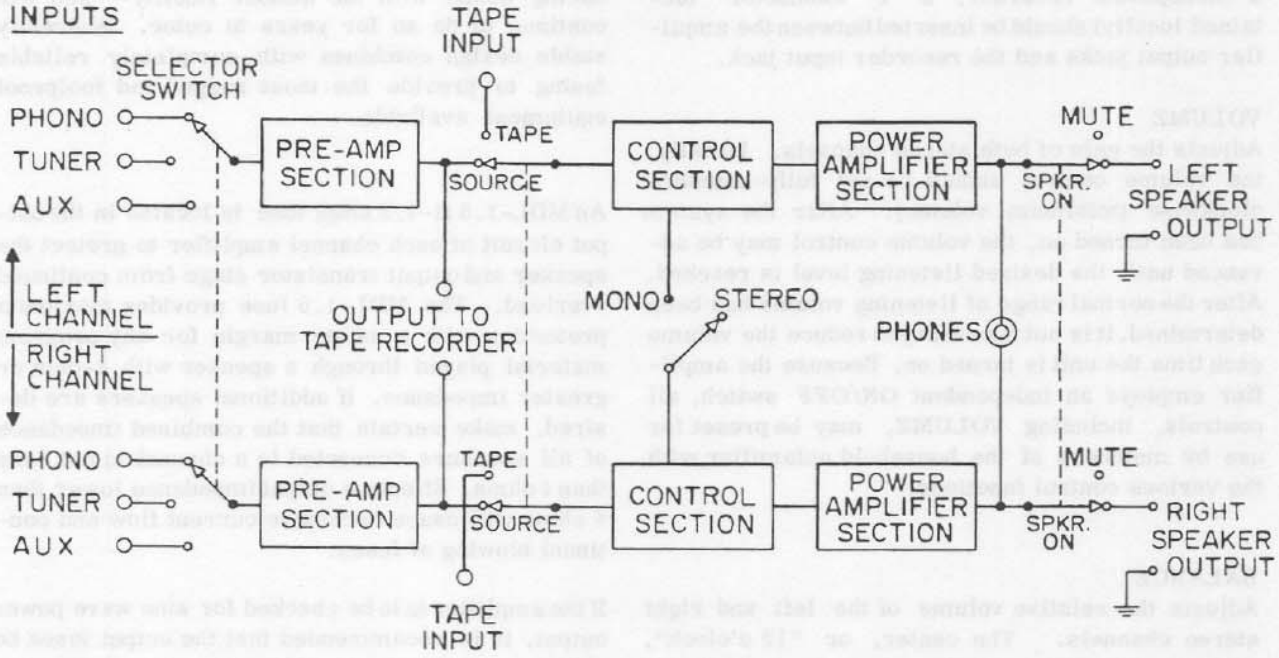

Figure 1 - Simplified Block Diagram

Switches set for playing stereo records with speakers on.

Part No. 531338

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