

Electro-Voice®

ELECTRONICS SERVICE MANUAL

E-V 1144A SOLID STATE AMPLIFIER
ALSO 1244



INDEX

	Page No.
I. INTRODUCTION	1
A. Specifications & Description	1
B. Features	3
C. Control Functions	3
D. Preparing for Operation	3
II. DISASSEMBLY	5
III. REPLACING LAMPS & FUSES	7
IV. TROUBLE SHOOTING CHART	11

INTRODUCTION

This service manual was designed with the technician in mind. It has been kept as brief as possible without oversimplification. All procedures are presented in a clear step-by-step manner. Although we have tried to anticipate all of your problems and questions, in special instances you may need additional guidance. Address any such inquiries to our Technical Service Department.

The sheets are punched to fit a three-ring binder so that any production changes and additional service tips can be easily added. This will keep your Electro-Voice Service Data as up-to-date as possible.

DESCRIPTION

Representing an entirely new and unique approach to the design of stereo high fidelity components, the Electro-Voice E-V 1144A stereo control amplifier incorporates the latest "state of the art" transistor circuitry in an exquisitely styled, remarkably small package. Despite its small size, the E-V 1144A delivers 65 watts IHF music power with low distortion.

In addition to superb styling and performance, the E-V 1144A amplifier offers many operating conveniences. A color-coded volume control allows simple operation, even by those unfamiliar with component stereo. Colorful indicator lights show at a glance the program source selected. The front panel stereo headphone jack is live at all times, while a speaker mute switch allows the speakers to be disabled at will without affecting headphone operation.



FIGURE 1

SPECIFICATIONS

POWER OUTPUT

IHF Music Power: 65 watts into 4 ohms
50 watts into 8 ohms

Continuous Sine Wave: 18 watts per channel

FREQUENCY RESPONSE: ± 1.5 db, 20-20,000 Hz at rated output
 ± 1.5 db, 20-30,000 Hz at 1 watt

HARMONIC DISTORTION: Less than 1.0% at rated output
HUM and NOISE

High Level Inputs: Better than 70 db below rated output

Magnetic Phono Input: Better than 60 db below rated output

CHANNEL SEPARATION: 40 db minimum at 1,000 Hz
INPUTS: Mag Phono—Tuner—Aux—Tape (high level)

INPUT SENSITIVITY

Phono: 3 mv

Tuner, Aux, Tape: 150 mv

CONTROLS (ROTARY)

Bass: +10 db, -12 db at 50 Hz

Treble: +10 db, -12 db at 10,000 Hz

Selector: Phono—Tuner—Aux

Balance:

Volume: With On/Off Switch

CONTROLS (SWITCHES)

Mode: Stereo/Mono

Tape Monitor: Source/Tape

Loudness: On/Off

Speaker: On/Mute

OUTPUTS

Speakers: 4—16 ohms per channel

Stereo Tape Recorder

Stereo Headphones: On front panel

OUTPUT DAMPING FACTOR: one switched

one unswitched

POWER REQUIREMENTS: 110—120 volts
50—60 cycle AC

DIMENSIONS: 3-3/8" high, 8-3/8" wide, 10-1/4" deep

FEATURES

LOUDNESS CONTROL: Compensates for decreased efficiency of the human ear to low frequencies at low listening levels. Only in effect below 12 o'clock position of volume control.

SPEAKER MUTING SWITCH: Disables speakers for headphone listening. Output is available at the headphone jack regardless of muting switch position.

COLORED INDICATOR LIGHTS: Show the input source selected—phono, tuner, auxiliary.

CONTROL FUNCTIONS

TAPE/SOURCE: Selects either tape (high level) or inputs controlled by selector switch. Allows you to monitor what has actually been recorded on tape.

STEREO/MONO: Allows either two-channel amplification of stereo signal source or combines input signals for monophonic reproduction through both speakers. Monophonic input plays back through both speakers with switch in mono position.

SPEAKER MUTE: Permits either simultaneous headphone and loudspeaker or headphone listening only.

LOUDNESS: Causes volume control to automatically boost bass at low setting which compensates for hearing deficiencies at low levels.

SELECTOR: Allows choice of signal source—phono, tuner, or other high level source (auxiliary).

BASS: Approximately 12 db boost and 16 db cut at 50 Hz (both channels) to compensate for speaker system characteristics and listening preference.

TREBLE: Approximately 12 db boost and 16 db cut at 10,000 Hz, both channels.

BALANCE: Allows choice of left or right speaker operation and provides method of compensating for other system imbalances.

VOLUME-OFF/ON: Controls listening level and, when used in conjunction with loudness control, maintains natural sound balance even at low volume levels.

PREPARING FOR OPERATION

1. Be sure power switch (on volume control) is "off" before plugging amplifier into wall outlet supplying 115–120 volts AC.

2. Connect left and right channel speakers at terminal block using diagram printed on bottom of amplifier. NOTE: AVOID SHORTING SPEAKER TERMINALS TO KEEP FROM BLOWING OUTPUT FUSES.
3. Connect outputs from tape recorder, turntable or changer and tuner to corresponding input jacks.
4. Set tape/source switch to source position and turn selector to appropriate input. Note: if tape player is used, put tape/source in tape position.
5. Turn unit on by advancing volume control until a click is heard. Advance control to a comfortable level and set tone controls at approximately 12:00.
6. Set balance control for equal output from both speakers.
7. Check speaker phasing by reversing leads to one speaker while standing mid-way between and in front of the speakers. The stereo/mono switch should be in the mono position for this check. Make final speaker connection with the polarity that delivers fullest bass and causes the sound to appear to come from the area between the speakers.

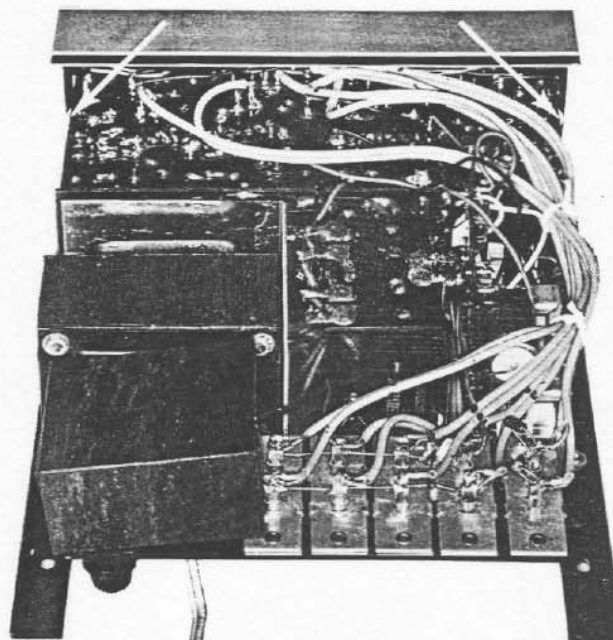
REMOVING BLACK METAL COVER

- [illegible]

2. Slide cover back and remove.

3. Remove phillips screw from each panel.
(See Figure 2 above)
4. Remove brass grounding strap.
5. Pull back firmly on panel to disengage metal clip.

6. Remove the control knobs by pulling forward.
7. Remove felt washers behind knobs.
8. Remove 2 nuts from threaded studs on front panel.
(See Figure 3 below)



9. Remove the front panel.

REPLACING LAMPS AND FUSES

REPLACING FUNCTION INDICATOR LAMPS

1. Follow Steps 1 thru 9 under disassembly.
2. Loosen silk tape holding fishpaper shield in place.
3. Bend shield back to gain access to bulbs. (See Fig. 4)
4. Replace defective lamp(s) and reverse steps above.

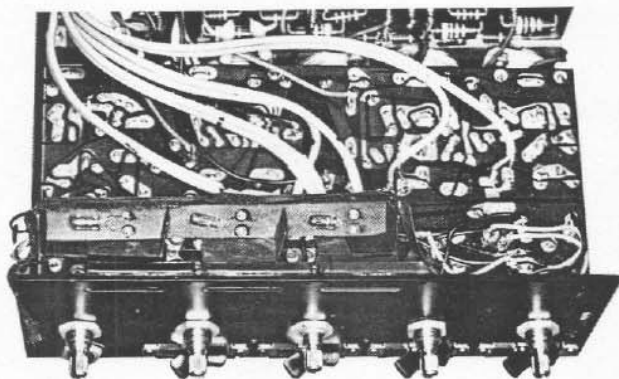


FIGURE 4

REPLACING OUTPUT FUSES (F2 & F3)

1. Follow Step 1 and 2 under disassembly.
2. Pry defective fuse from holder.
3. Replace with 1.5a SLO-BLO fuse and reassemble amplifier.

REPLACING POWER FUSE (F1)

1. Follow Steps 1 and 2 under disassembly.
2. Pry defective fuse from holder.
3. Replace with a 1.5a SLO-BLO fuse and reassemble amplifier.

PARTS IDENTIFICATION

TRANSISTORS

43054 Lo-Noise
43044 SE-6002
43045 SE-4002
43046 B10167

COMPONENTS

42407 2500 @25 vv capacitor
43067 750 @ 100 piv diode
15200 Driver transformer
15174 Power transformer

SWITCHES & CONTROLS

46415 Balance (25k)
46412 Volume (25k)
46413 Bass/Treble (100k)
56084 Selector switch
56075 Rocker switch

PRINTED BOARDS

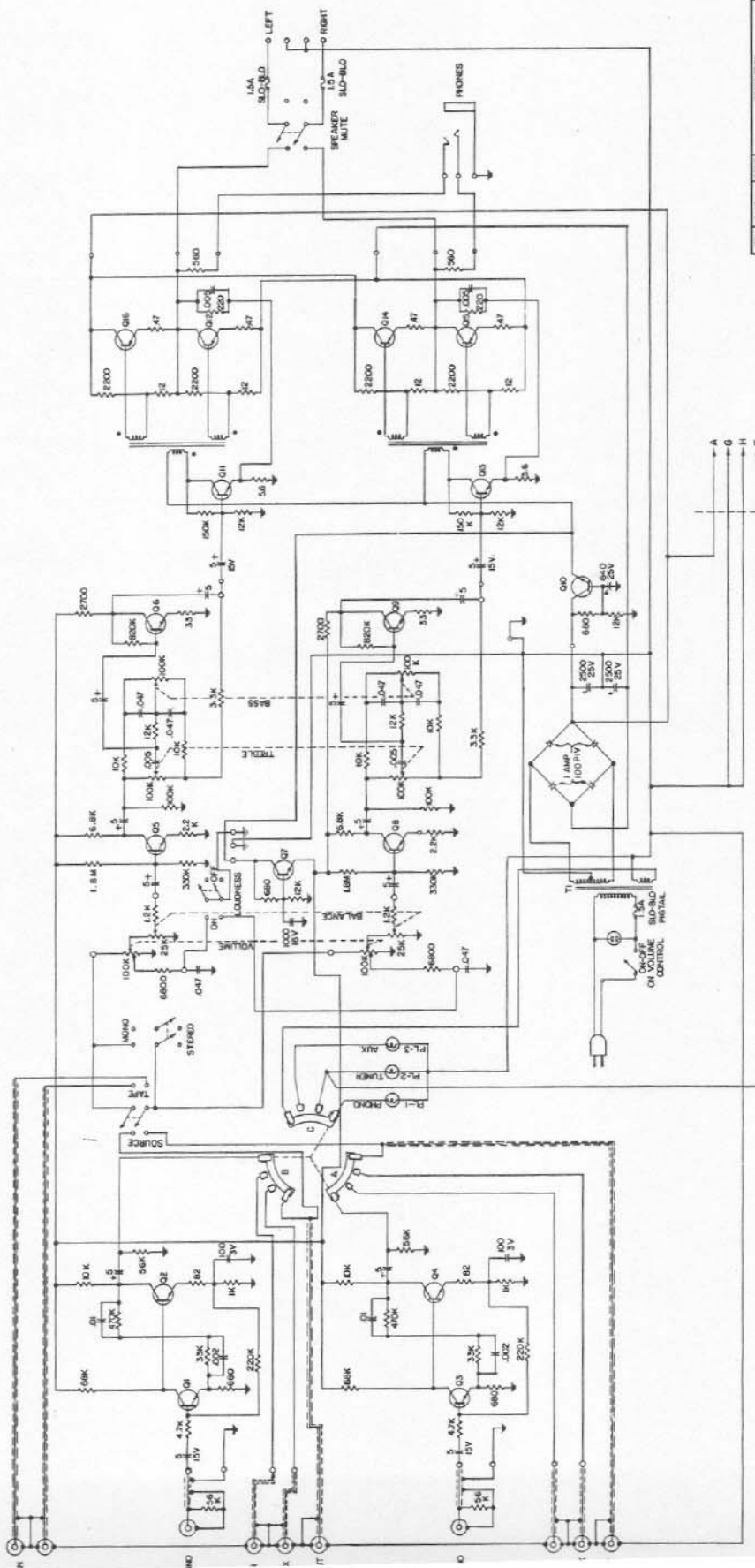
84949 PC-1 Preamp complete
84950 PC-2 Driver/Power Amp complete
84950 PC-3 Driver/Power Amp complete
84951 PC-4 Power Supply complete
77116 Power Supply (board only)

MISCELLANEOUS

17139 Phone Jack
17137 Phono Jack (dual)
20797 Strain Relief
27258 Speaker terminal strip
76660-BX Side Panel Clip
16412 Power Cord
20893 Heat Sinks
20747 Mica Insulator
77117 Fishpaper Lamp Board
77118 Ground Strap
43055 Bulb
38294 Felt Washer
A85081-ED Front Panel
A76484 Side Panel
A76489-JD Top Cover
A76499-RA Lens

KNOBS

76558-CX Volume On/Off
76557-CX Bass/Treble/Balance
76717-CX Selector Switch



BILL OF MATERIALS FOR ONE COMPLETE UNIT		REVISION		DATE		BY	
TITLE		DESCRIPTION		DATE		BY	
SCHEMATIC, AMPLIFIER		SCHEMATIC, AMPLIFIER		DATE		BY	
EV - 1144 A		EV - 1144 A		DATE		BY	
A. B. L.		A. B. L.		DATE		BY	

CONNECTION FOR
117B AND 117B
RECEIVERS

NOTES:
1. ALL RESISTOR VALUES ARE IN OHMS AND 1/2 WATT UNLESS OTHERWISE SPECIFIED.
2. ALL CAPACITOR VALUES ARE IN MFD UNLESS OTHERWISE SPECIFIED.

PL-1,2,3 — 1A4H, 6X4, 2A, 6E, 2B2

01,3 — FAIRCHILD 57105 or GE 2N3100A or MOTOROLA MP5-6321
02,3,5,6,8,9 — FAIRCHILD 5E-4002
07,10,11,13 — FAIRCHILD 5E-6002
02,4,5,16 — 6067