









EVANS CUSTOM AMPLIFIERS 448 Mohican Shreveport, LA 71106 (318) 798-2881

SUBJECT: PRINTED CIRCUIT BOARD CHANGE-OUT INSTRUCTIONS

Driver Board (DB-500)

Turn power off unit Discharge the filter capacitors (large blue caps/7200 uf) using a 2 watt 47 OHM resistor or less; may use 8 OHM 100 watt Remove the board from the chasis (one screw at the top of the board.)

Insert: new board.

Power Supply (PS-500) Turn power off unit Discharge filter capacitors Remove the board from the chasis (unplug from edge card connector.)

Power Transistors Turn power off unit Discharge filter capacitors Remove driver board as per notes above.

Remove the power transistors from the heat sink one at a time to prevent the wiring harness from getting loose. Use silicon heat sink compound (white) on the transistors and insulating wafers before installing the new transistors. Do this procedure until all transistors are replaced. At this time, check for continuity between the case of the transistors and the chasis ground using a VTVM or multimeter. If you read continuity during this check on any transistor you have a short from collector to ground and this unit will not perform. You must completely insulate each transistor from ground.

After these transistors are installed properly, you may turn the power on the unit, without the speaker connected.

When working on any power amplifiers, it is necessary to NOTE: use a ballast for protection against burn-outs. A ballast consists of a 100 watt light bulb wired in series with hot leg of the AC power line. If the bulb lights up bright, this means you still have a major problem. All unit turn ons need to be done without speaker load first; then measure for DC on the output buss (speaker jack). If there is no DC at this point, connect the speaker and the amplifier should perform. If not, CALL US...(318) 798-2881

DERRELL STEPHENS EVANS CUSTOM AMPLIFIERS 448 MOHICAN LANE SHREVEPORT, LA. 71106

STEPS FOR SETTING UP THE LV SERIES PRE-AMPLIFIER

1. VISUALLY CHECK ALL BOARDS FOR COMPONENT INSERTION MISTAKES.

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- 2. SET UP THE POWER SUPPLY WITH THE PREAMP BOARD INSERTED. THIS ALLOWS THE POWER SUPPLY TO HAVE A LOAD DURING CALIBRATION PROCEDURES. SET TO 48.0 VOLTS D.C., + 1.0 VOLTS, -0.2 VDC. TOLERABLE RANGE = 47.8 VDC THROUGH 49.0 VDC..
- 3. CONNECT THE RESISTANCE DECADE SELECTOR BOX AS FOLLOWS:
 - A. <u>BLACK</u> LEAD TO GROUND (SOMEWHERE ON PREAMP BOARD). B. <u>RED</u> LEAD TO THE POSITIVE SIDE OF THE "RS" CAPACITOR OR "EQUAL SCHEMATIC POINT". CONNECT THE SCOPE PROBE ON THE OUTPUT SIDE OF THE STAGE COUPLING CAPACITOR.
 - C. NOTE: SET THE PREAMP CONTROLS FULLY CLOCKWISE WITH THE EXCEPTION OF THE REVERB & MASTER GAIN CONTROLS (DEPTH & EXPAND - OFF

OPTIMIZE THE HEAD-ROOM OF EACH PREAMP STAGE BY INJECTING A mv LEVEL SIGNAL INTO THE INPUT OF EACH STAGE HIGH ENOUGH (600 mv typical) TO MAX OUT THE STAGE HEADROOM MEASURED ON THE O'SCOPE LEAD. MAX OUT MEANS CLIPPING WILL OCCUR ON THE SCOPE SIGNAL. USUALLY A SIGNAL WITH A 600 mv TO 1.0 mv AMPLITUDE WILL CAUSE THIS CONDITION. USE THE DECADE BOX TO SELECT THE MOST SUITED RESISTANCE TO BALANCE THE "CLIPPING" EFFECT OF THAT PARTICULAR STAGE...PARABOLLA SHOULD BE SEMETRICAL.

NOTE: THE PREAMP INPUT SIGNAL <u>MUST</u> BE ABLE TO WITHSTAND AT LEAST A 630 mv @ THE 1st STAGE AND REMAIN CLEAN BEFORE WE WILL USE THAT BOARD. MINIMUM HEADROOM FOR INPUT = 630 mv (0.630 VRMS @ 1KHz; INPUT JACK #1). ALSO, THE LAST STAGE OF THE PREAMP SHOULD BE ABLE TO WITHSTAND AT LEAST 700 mv CLEANLY.

4. AFTER THE PRIMARY STAGES ARE SET UP, THE REVERB DRIVE MUST BE ADJUSTED TO MEET OUR STANDARDS. CONNECT THE DECADE BOX LEADS BETWEEN THE INPUT OF THE REVERB DRIVE STAGE AND GROUND. SET THE REVERB DRIVE RMS VOLTAGE TO 11.0 - 12.0 VRMS...A REVERB PAN NEEDS TO BE CONNECTED TO THE REVERB LEADS. 5. SET THE PREAMP CONTROLS FULLY CLOCKWISE WITH THE EXCEPTION OF THE REVERB & MASTER GAIN CONTROLS (DEPTH & EXPAND - OFF), INJECT A 20 MV @ 1KHz SIGNAL INTO THE PREAMP AND ADJUST THE RMS VOLTAGE SIGNAL AT TP 0 TO 3.5 VRMS. MEASURE THE RMS OUTPUT VOLTAGES WITH THE FLUKE DVM.

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updated 11/11/93 dws

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