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**Product:** *A/V Receiver*

**Hardware Technical Bulletin:** *T743-H2004-01*

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**Date:** May 20.2004 **Subject:** Residual Noise

**Note:** Implemented in production from Serial number:  
1. From R44T74304001~4500  
2. From R44T74305861~6400  
3. From R44T74306601~Onwards

**Previous T.B.'s required:**

YES

NO

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**DESCRIPTION:** : *At high volume with no signal on an un-terminated input analogue input, there maybe some residual noise from one or more channels*

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**REASON:** *The residual noise is coming from the DSP PC board and power supply ground.*

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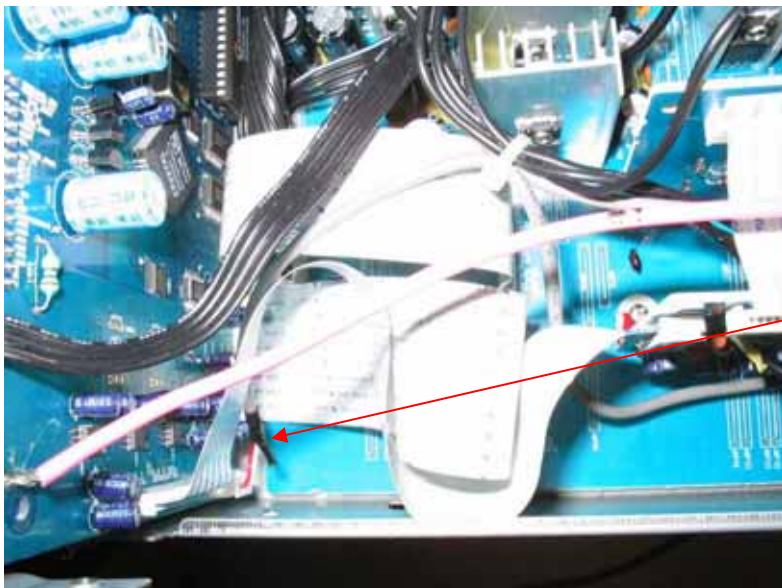
**SOLUTION:** *Perform the following ground changes to lower residual noise.*

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1. Cut the wire running to J701 located between JMP119 and JMP161 on the main pc board, located directly opposite U704 (a regulator tied to heatsink).

2. Cut the ground of the shielded cable J715 between Main board and DSP board, cut this at the DSP side plug. See figure 1.

Figure 1



Cut this black GND wire at the DSP side as shown



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3. Add a jumper from the Multi channel RCA connector to the Pre Amp RCA connector.  
See figure 2.

Figure 2



Multi-channel RCA connector  
to Pre Amp RCA connector  
GND wire.

**Contact:**

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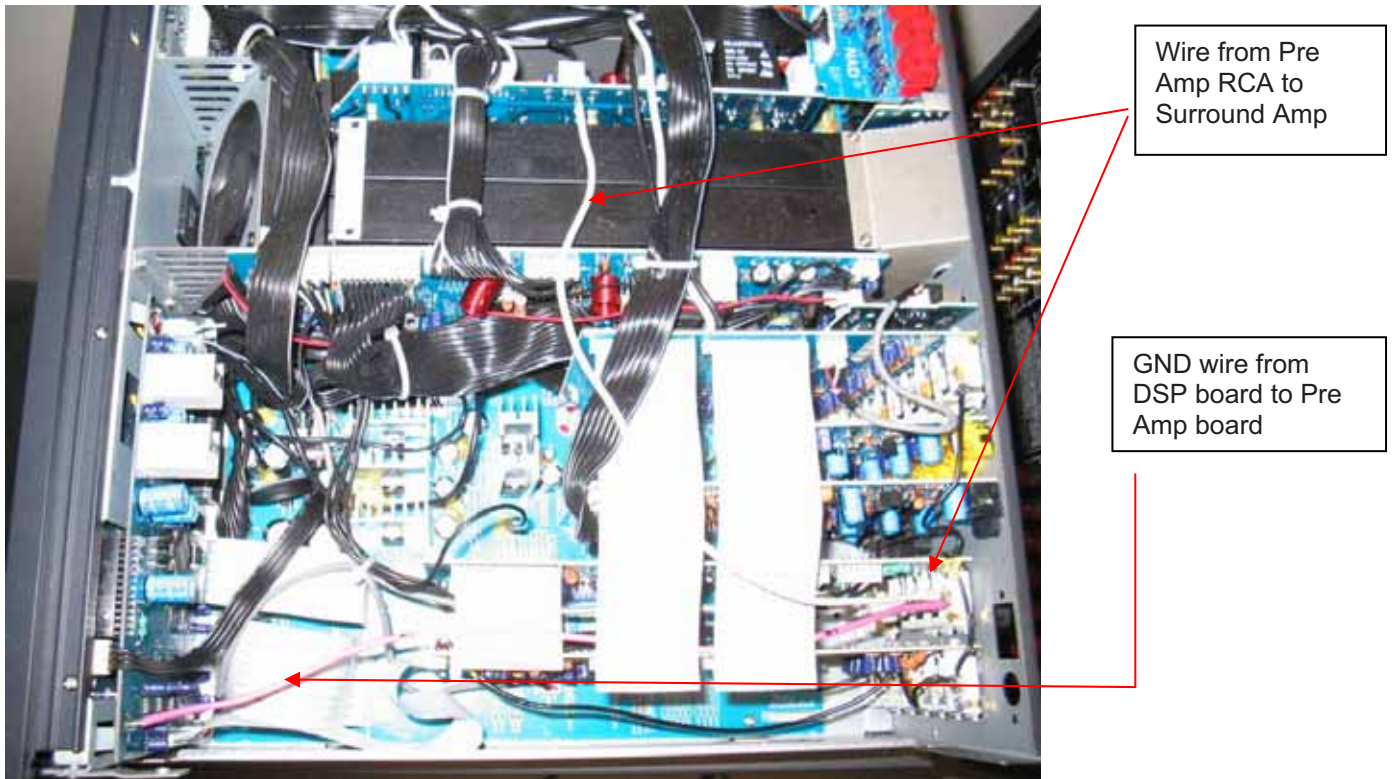
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4. Add jumper wire from the DSP board analog ground to the Pre Amp RCA jack. See figure 3.

5. Add jumper between Preout RCA jack and Surround Power Amp input ground See figure 3 and figure 4.

Figure 3



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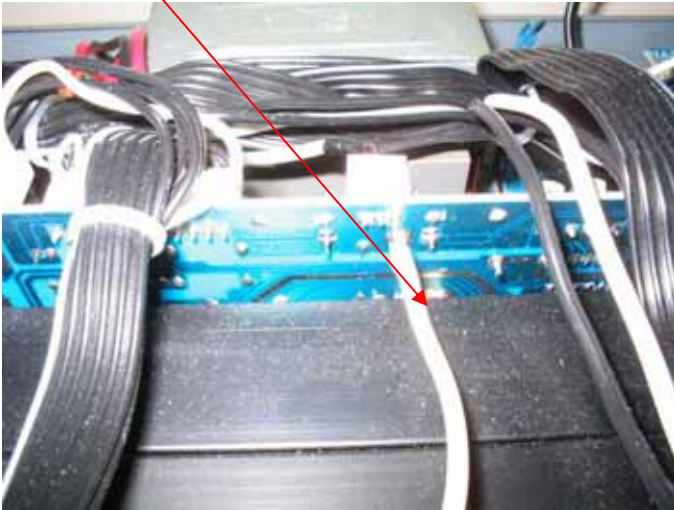
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**Figure 4**

Wire from RCA connector  
GND to Surround Amp GND.



6. Mount the keyboard cable jumper wire to the chassis using the nearest front panel mounting screw. This originally is tied to the DSP analog ground. See figure 5. Float the analog ground of the DSP board from chassis.

**Figure 5**



Isolate the PCB ground from chassis.

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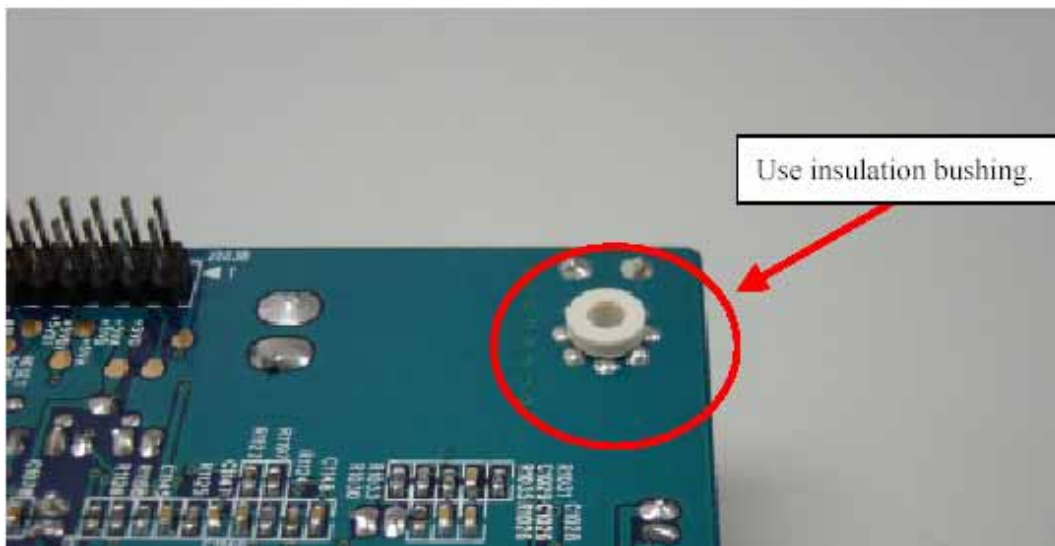
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7. There are 2 screws on the DSP board, the one located nearest to volume knob is the one that has to be isolated. Remove that screw and put an insulator between the PCB copper side and front panel chassis. See figures 5, 6.

**Figure 6**



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