

## S6 and S9 AUDIO MODIFICATION

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### Scope:

This document describes the modification required to reduce noise (motor boating) in a Magnum S6 or S9 radio. This only applies to S6's and S9's that have the new TDA2003 audio power amplifier on the new PCBX-0717.

### Applicability:

Table 1 lists the model and serial numbers affected. If your radio has a serial number higher than the ones listed; look at the rear panel of the radio and verify that the serial number tag or the revision tag (if installed) on the back of the radio does not have an "A" marked on it. If so, then this modification has previously been done. If there are no markings to indicate that this modification has been done, you can verify that you have the new TDA2003 audio power amplifier by removing top and bottom covers and with the component side up and the front of the radio facing towards you, look underneath the Echo/AMT board attached to the right side wall. If you can see a small (~1" x ~1") pc board mounted vertically to the motherboard, then you have a TDA2003 audio power amplifier. If there is not a vertically mounting pc board underneath the Echo/AMT board then you have older model, which does not require this modification.

| Model Number | Serial Number |
|--------------|---------------|
| S6-50        | S019101       |
| S6-80        | S019307       |
| S6-50-NX     | S015940       |
| S9-50        | S003896       |

Table 1: Affected Models and Serial Numbers

### Modification Procedure:

With the top cover removed and the solder side facing up, see Figure 1.

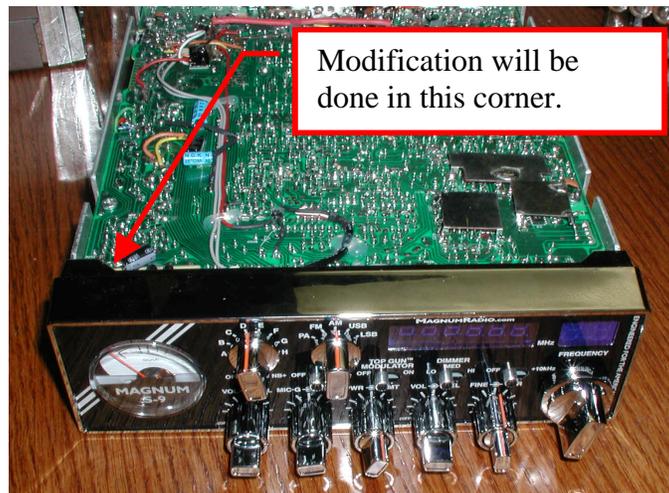


Figure 1: Solder Side of Radio

Add 220uF 16V capacitor positive side to third pin from edge and negative side to lead of R4 on Backlight board. See Figure 2.

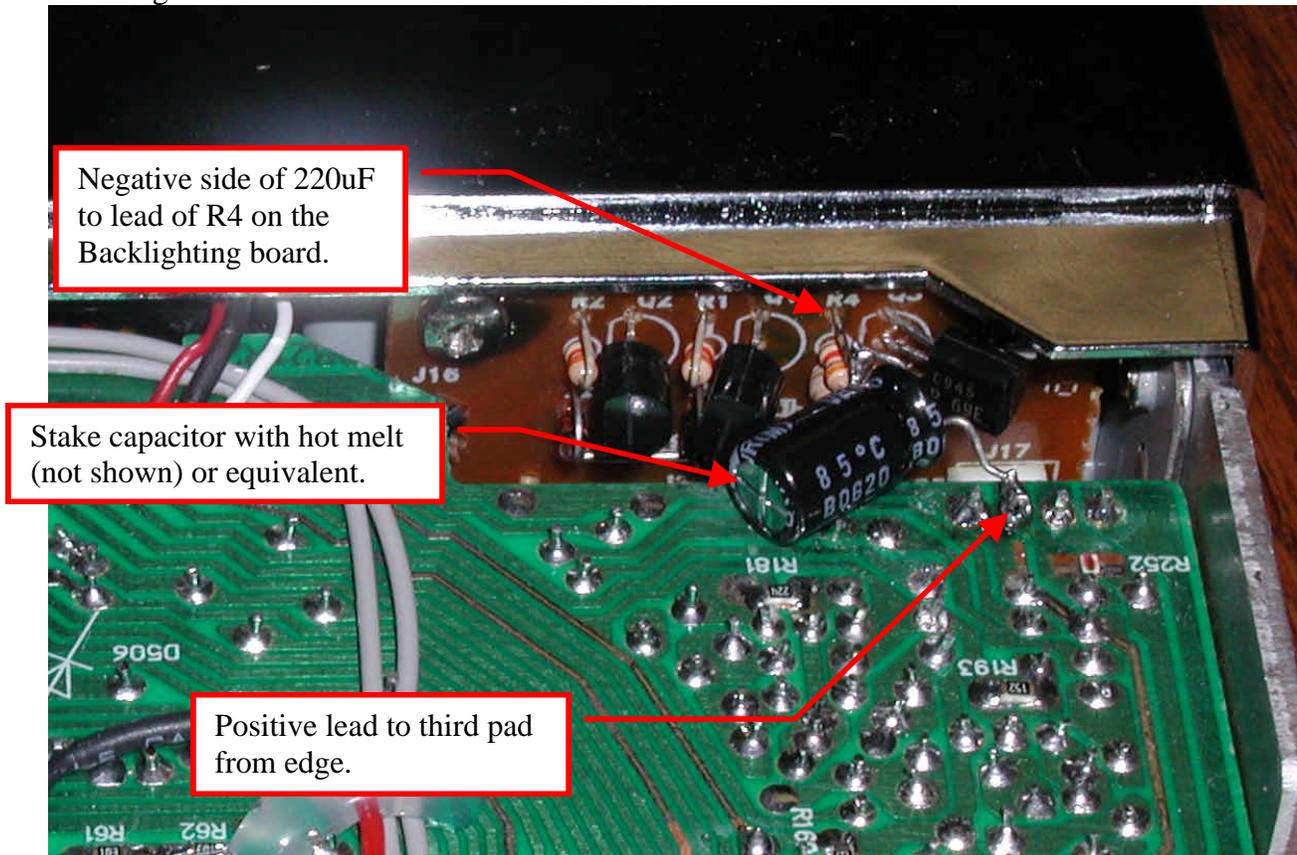


Figure 2: Installing the 220uF Capacitor

#### Verification:

After re-installing covers, turn radio on and receive a signal on any channel—verify it sounds ok. Tune to an unused channel and make sure squelch is closed (quiet) and adjust volume control up and down. No noticeable noise should be heard on the speaker. Set volume control to 12 o'clock and adjust the dimmer slide switch and verify no noticeable noise is present.

Modification complete: Re-install covers to radio and with a black pen (Sharpie, etc.), mark a capital “A” in the upper right hand corner of the serial number tag located in the back of the radio.