

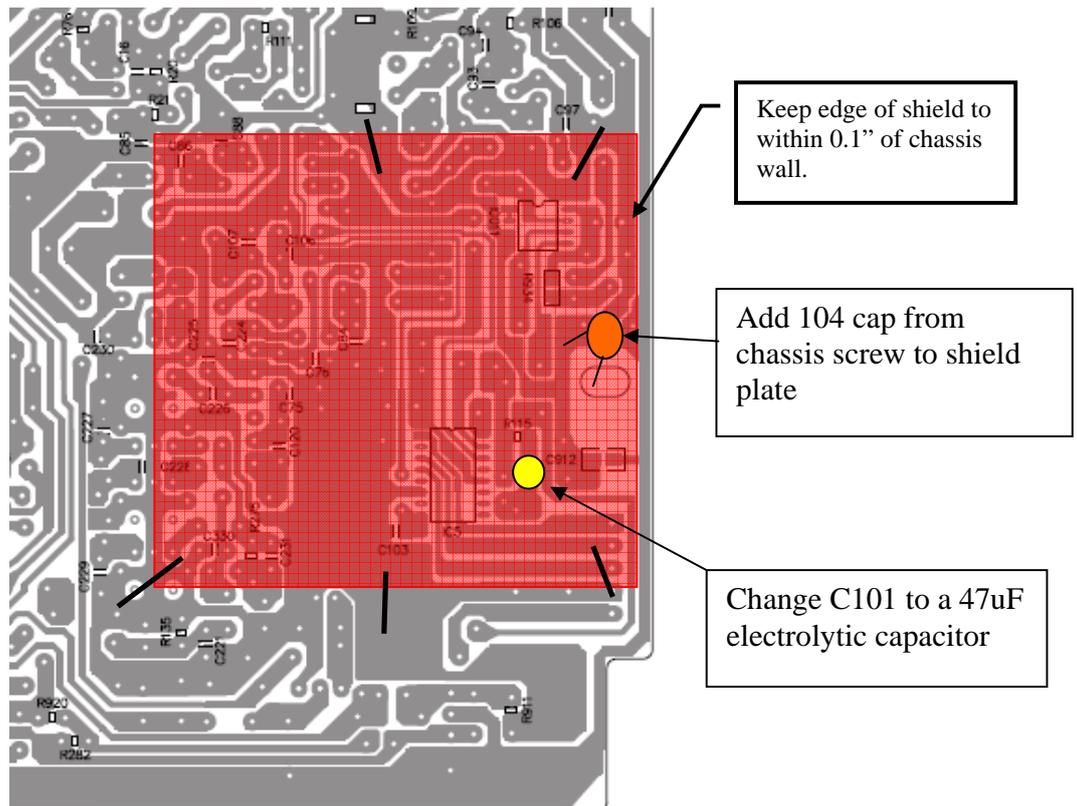
S980 Bias Setup Procedure
Prepared by: EDC Inc.
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Scope:

This document defines how to set the bias of the transmitter chain for the Magnum S980 radios.

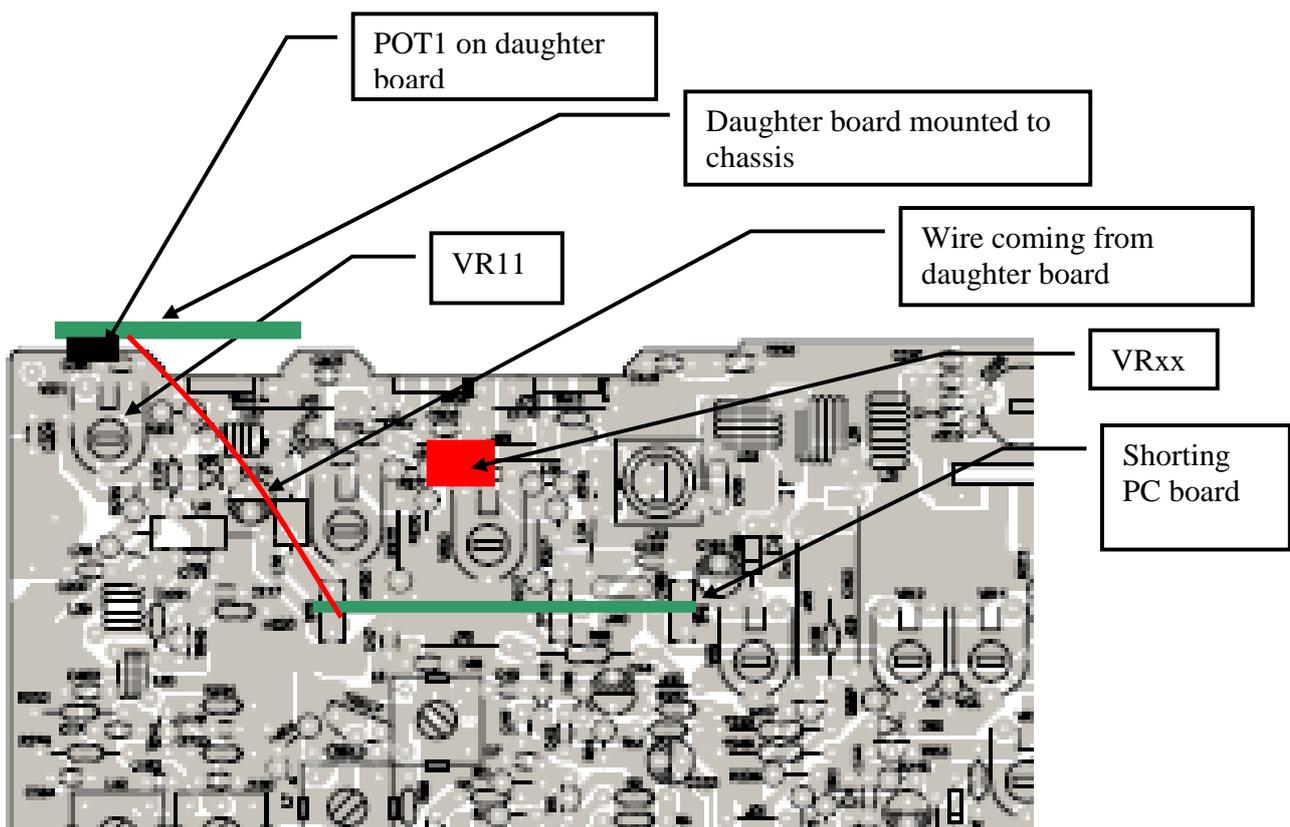
VCO Shield:

1. Orientate the radio so the solder side is up and the front of the radio is facing you.
2. Locate and remove the three smaller shields in the lower right hand corner of the board.
3. Replace the shields with bigger VCO shield supplied.
4. Solder as indicated in picture below. Use small lengths of wire or component leads to solder shield to board.



Driver FET Bias Adjustments:

1. Turn radio so component side is up with the front facing you.
2. Locate TP8 and TP9 and unsolder wire attached to shorting PC board and PC board itself.
3. Connect DC power supply set to +14.4 Vdc and connect dummy load to SO239 connector on rear of radio.
4. Insert MIC plug into radio. Verify Power Supply is turned off.
5. Connect current meter to TP9 (+ side) and TP8 (- side).
6. Turn on Power Supply and set volume knob on radio to “on” position, set band selector to “D” band, set mode selector to “USB”, turn MIC gain fully CCW, and PWR knob to fully CW.
7. While keying MIC, observe current meter and adjust VR11 to set current meter to 10mA.
NOTE: Reading will fluctuate around some and this is acceptable.
8. Un-key MIC and turn off Power Supply. Then move current probes to TP9 (+ side) and red wire coming from daughter board.
9. Turn on Power Supply and key MIC. Observe current meter and adjust POT1 on upper left hand corner of daughter board to set current to 50mA.
10. Un-key MIC and turn off Power Supply



NOTE: Some parts in above picture have been removed for ERF2030 modifications.

Final FET Bias Adjustment:

1. Turn radio over so solder side up and front of radio is facing you.
2. Un-solder right side of #16 AWG wire going across radio and connect current probes to wire (+side) and point where wire was removed (-side).
3. Set radio on side and turn on Power Supply and key MIC.
4. Adjust VRxxx 20k pot located near where the shorting bar was removed from TP8 & TP9. Set current to 100mA.
5. Un-key MIC, turn off Power Supply, and remove current probes. Re-attach wire to solder side of board.
6. Re-attach shorting board and wire to TP8 & TP9.

