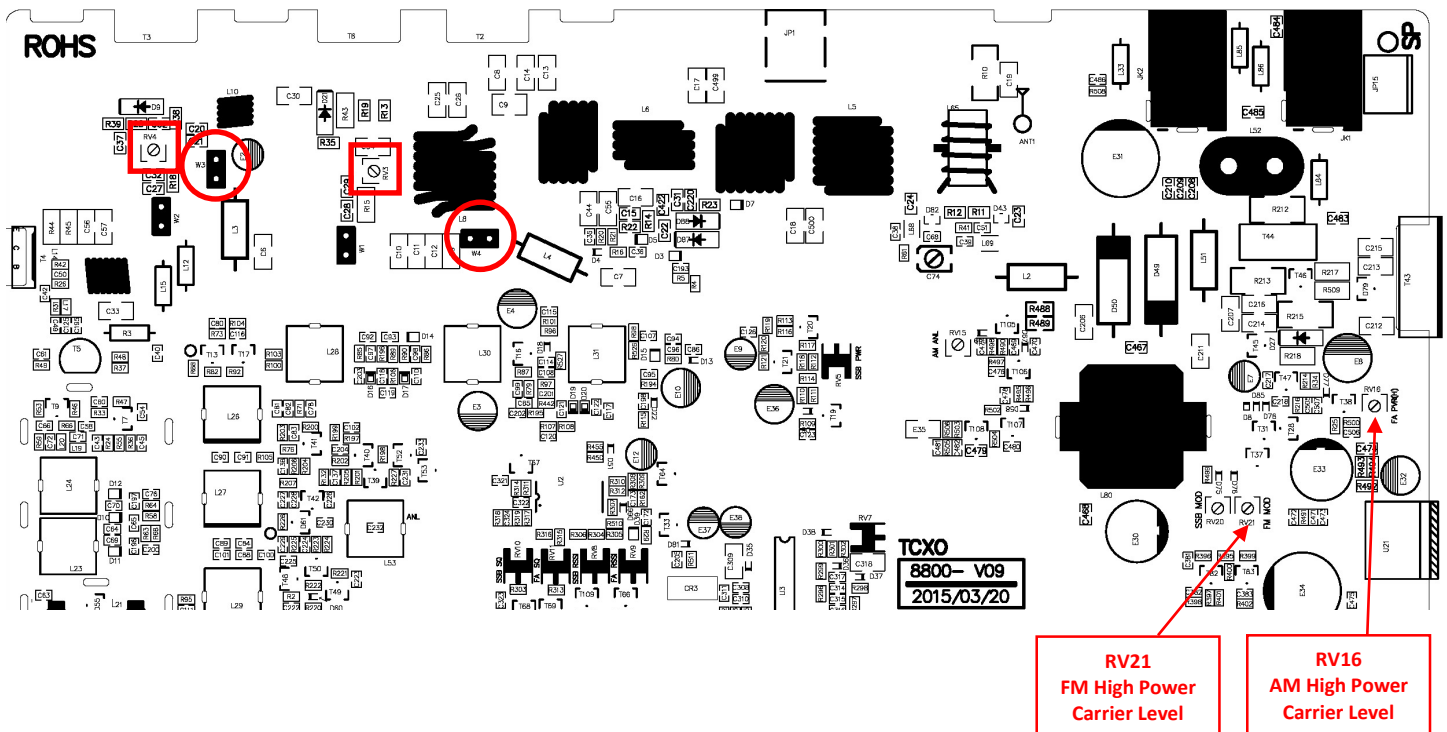
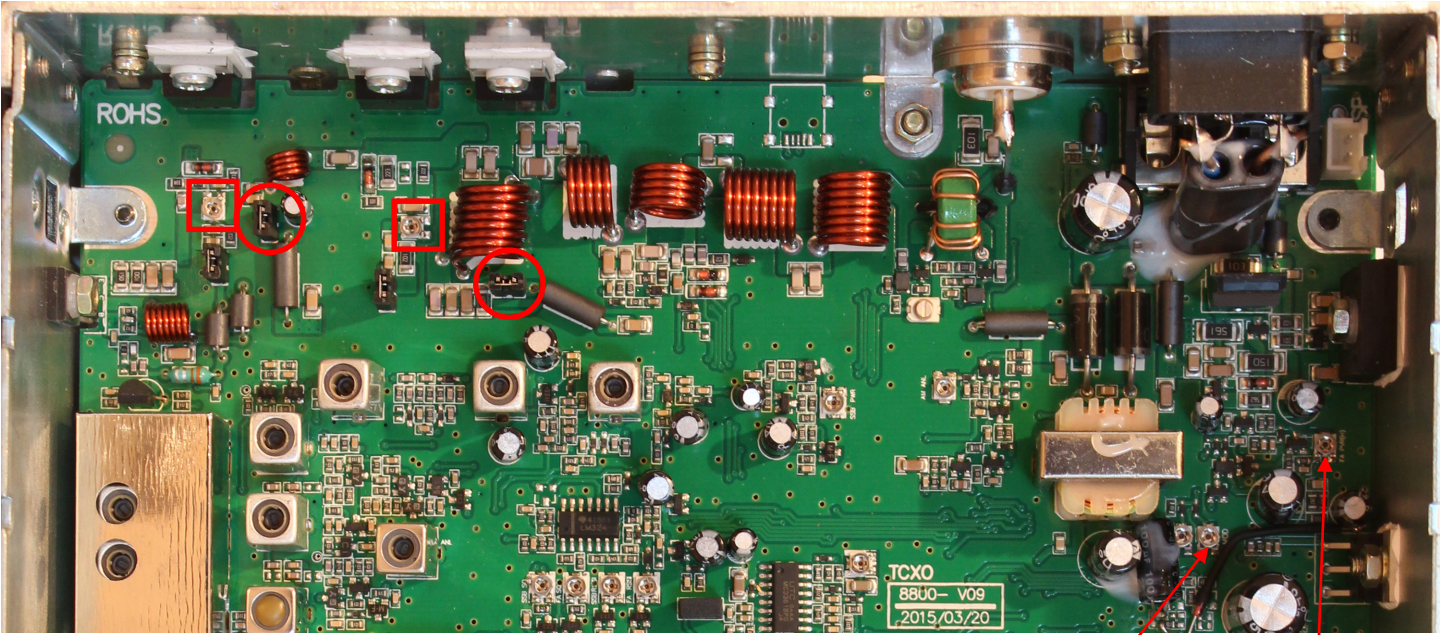


Magnum 1 Bias Setting for Driver and Final Transistors

A DVM (DC amp meter) is required for accurately setting the bias.

1. Connect Magnum 1 to regulated 12 VDC power supply and 50 ohm dummy load.
2. Set Magnum 1 to LSB (lower sideband) with the microphone gain turned off.
3. Remove header pins at location W3 and W4 (see red circles on diagram and photo below).
4. Connect DC amp meter (milliamp, mA setting) probes at W3. Connect positive probe to one pin and negative probe to other pin at W3. *Note: For bias setting purposes it does not matter which probe is connected to which pin. If the probes are connected backwards, the digital DC amp meter will show a negative symbol. The negative symbol should be ignored when setting the bias.*
5. Press the PTT switch to put the radio into TX and observe the DC amp meter.
6. While transmitting, adjust driver bias at RV4 (see red squares on diagram and photo below) with a non-conductive (plastic or ceramic) screwdriver until the amp meter measures 25mA. Release the PTT.
7. Next, move the DC amp meter to location W4.
8. While transmitting, adjust final bias at RV3 (see red squares on diagram and photo below) with a non-conductive (plastic or ceramic) screwdriver until the amp meter measures between 50 and 60mA. Release the PTT.
9. Disconnect the DC amp meter and reinstall the headers at W3 and W4.
10. After setting the bias it will be necessary to reset (adjust) the AM High Power carrier level and FM High Power carrier level. See RV16 and RV21 in diagram and photo below.
11. If not already, connect Magnum 1 to a RF power meter.
12. Set Magnum 1 to AM. Keep microphone gain off.
13. While transmitting, adjust RV16 to a maximum of 10 watts carrier. Release PTT.
14. While transmitting, adjust RV21 to a maximum of 15 watts carrier. Release PTT.





RV21
FM High Power
Carrier Level

RV16
AM High Power
Carrier Level