Munin2 Bias Setup

Preliminary Instructions:

NOTE: As indicated in the General Construction document, please check again that you have turned all Trimmer pots [R37, 38, 39 & 40] to their maximum value. Check with an Ohmmeter between pin 2 and pin 1 [pin 2 is always the center pin facing down, pin 1 is always the top right hand side] as marked on the board silkscreen to be sure they all are at or near maximum resistance. This keeps the amplifier Transistors from drawing too much current before they have been properly adjusted for linear operation.

You will need:

13,8V Power supply with Amp. meter (Or use an external Amp meter or DMM with a 10 Amp range).
Two (2) 50 Ohm Dummy loads or one and a 50 Ohm terminated signal generator.
One or more DMM's or VOM's to measure voltage and / or current

Proceedure:

Before any adjustments, turn all potentiometers to maximum resistance between pin 2 and pin1. Connect a dummy load to the output J2 and terminate the input to 50 Ohms, for ex. a signal generator with 0 output or a second 50 Ohm termination.

1. Connect a 13,8V Power supply with Amp. meter to Munin. (Or use an external Amp. meter or DMM with a 10Amp range). Note: The total current measured from the power supply will be cumulative. That will be over 3 Amps when you are finished.

2. Key Munin by shorting pin 5 on J3 (/PTT) to GND (pin 6). Note the current, it should be a few mA.

3. When the first stage with T5 is used, use R36 to adjust for a current of 200mA in T5. TP1 should show 1V [Also I_PRE, pin 3 on J3 to Gnd].

4. Next adjust R37 for 0,5A in T4 and R38 for 0,5A in T3. It is also possible to measure the voltage on I_DRIVER, pin 1 J3. 0,4V corresponds to 1A.

5. Finally use R39 and R40 to adjust the current in T1 and T2 for 1A each. The voltage on pin 2, I_PA, J3. 0,4V corresponds to 2A.

6. The outputs on J3 are not very accurate (+- 5%). They are meant for use by the software for bias settings but PowerSDR does not have this implemented.

CAUTION:
When using a DMM or VOM for current measurements DO NOT change ranges with the power applied !