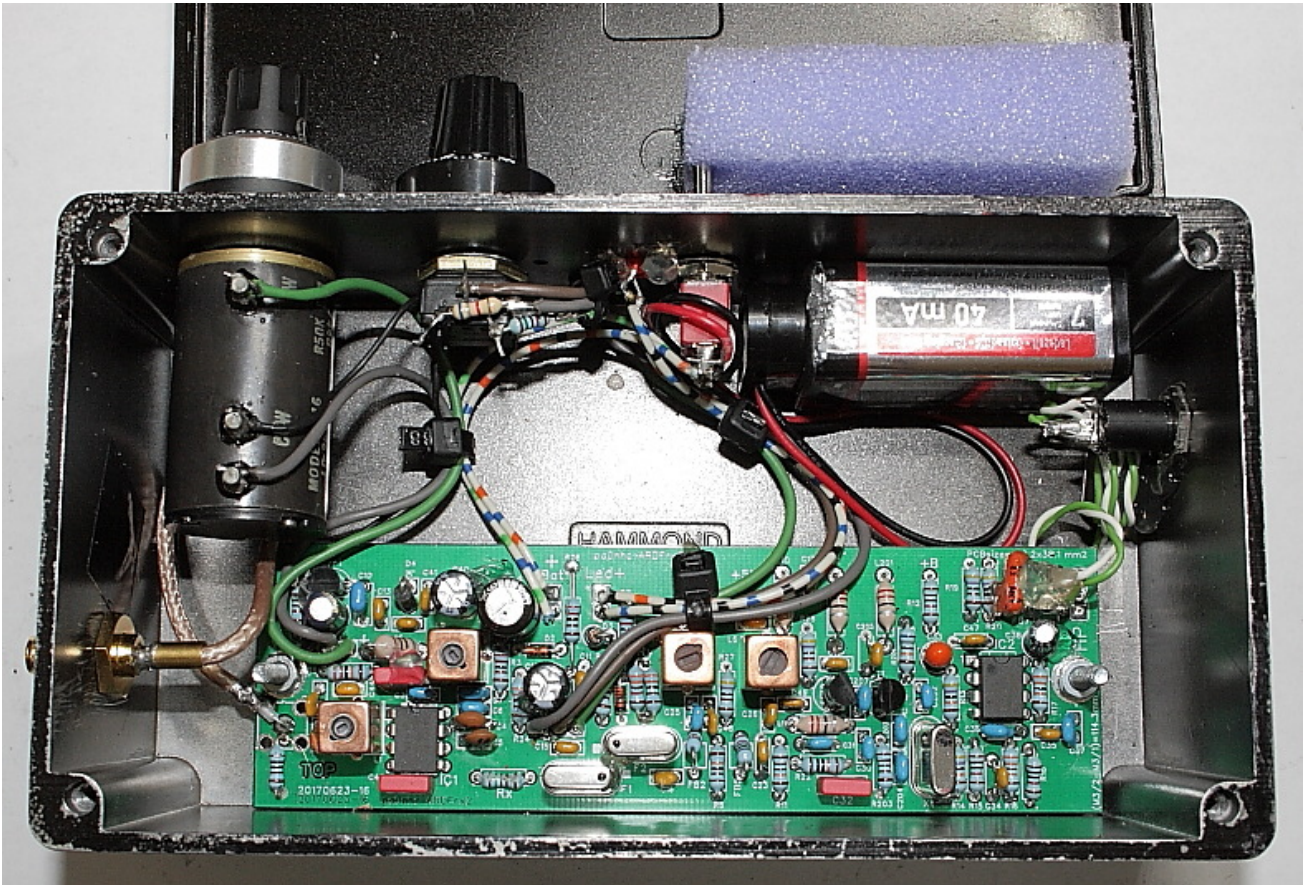


Pa0nhc ARDFrx2m PCB 20180123-14
Coil adjustment. 20200425.



After assembling, and checking all voltages, adjust the receiver for maximal sensitivity using a professional RF signal generator.

WARNINGS :

Cores break easily.

A broken core blocks the coil tuning.

The whole coil must then be exchanged for a new one.

DO NOT screw on coil cores until ordered.

ONLY use perfectly fitting trim keys, especially made for these coils.

DO NOT lock coils (wax). They lock them self.

Keep audio output from the receiver weak.

Keep readjusting the sensitivity for weak signal output at the headphone.

1. Check for correct frequency of the ARDFrx BFO :

Tune an external SSB receiver in USB mode, to 10.9985 MHz.

Connect a coax cable with a small loop to its antenna input.

Hold the loop near ARDFrx transistor T2.

You should hear a beat tone.

Check the frequency of the ARDFrx BFO, by tuning the external receiver to zero beat.

IF the BFO is not working properly, DO FIRST repair this problem.

Connect the signal generator to the ARDFrx antenna input, and a headphone to the ARDFrx headphone output.

2. Feed a strong 10.7 MHz signal to the ARDFrx antenna input.

Carefully adjust both IF coils L6 and L3 for loudest output.

If successful, DO NOT readjust afterwards.

REM : If a core is nearly fully at the bottom, change capacitor C26 (for L6) or C25 (for L3) to a 2 to 3 pF lower value. Re-adjust the core.

If a core is fully at the top, solder a small value 2 to 3 pF capacitor in parallel to C26 (for L6) or C25 (for L3). Re-adjust the core.

3. Turn the ARDFrx tuning knob fully for lowest frequency.

Feed a strong VHF signal to the antenna input.

Change the RF generator's frequency up and down between 130MHz and 150MHz, until you hear one or two signal responses in the headphone.

If you hear at two frequencies a signal, use the highest generator frequency.

Then carefully adjust ARDFrx oscillator coil L2 so, that at a generator frequency of 144.00 MHz, you hear the signal.

THEN DO NOT CHANGE THE CORE OF L2 ANYMORE.

4. Change the generator frequency to 144.40 MHz.

Tune the receiver to hear the signal

Adjust antenna coil L1 for maximal signal strength.

5. Check the tuning range and sensitivity.

Maximal tune able ARDFrx frequency should be abt. 144.85 MHz.

The sensitivity should be equal at frequencies of 144.0 MHz and 144.8 MHz.

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