

Fig. 5. Modification for full switching with the FT290

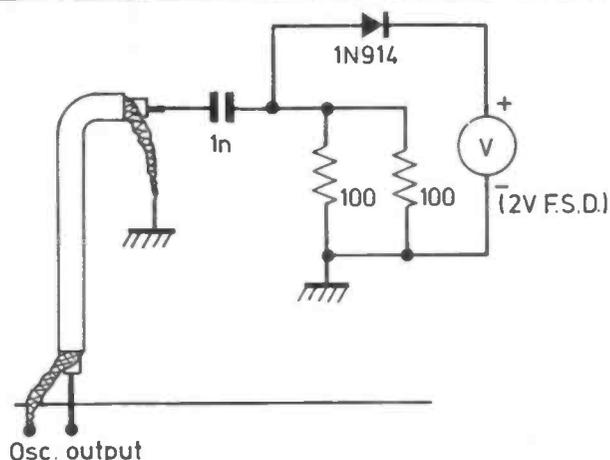


Fig. 6. Oscillator alignment

assembly is going to be mounted inside a cabinet (which is recommended as the already excellent output spectrum will be even better).

If the leads from the PCB to the sections of the capacitor are more than a few cm long, then a screen will need to be fitted so that the two leads cannot 'see' each other and spoil the action of the filter. Rigid 18 or 20 swg wire should be used for these connections.

When wiring the unit up, use screened audio cable for each of the +12V connections to the oscillators, and short lengths of miniature coaxial cable for the PCB RF interconnections.

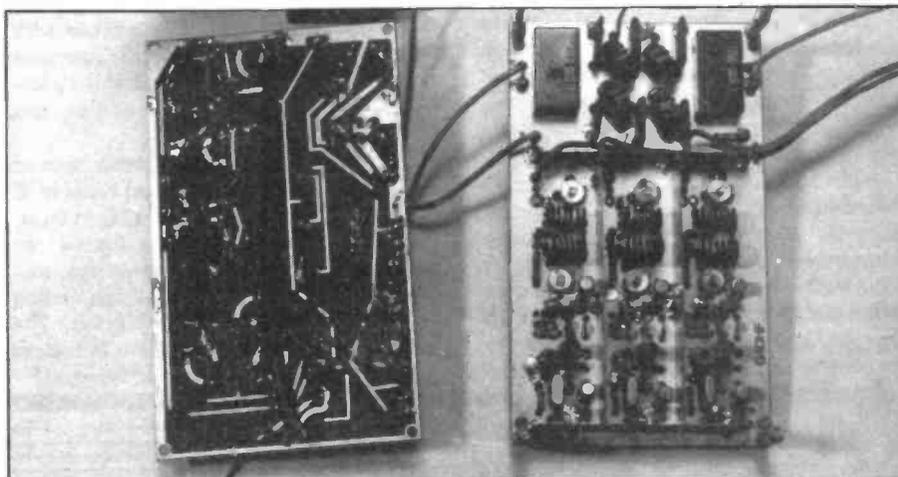
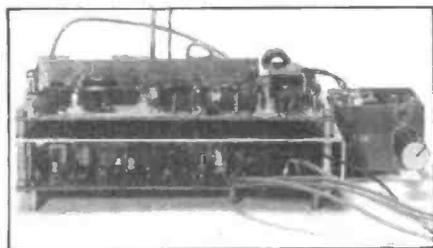


Fig. 7. (below) Assembly of PCBs.

### Alignment

You can get away with aligning the unit using received signals to peak the oscillator coils. A grid dip oscillator or wavemeter could be used instead of the frequency counter to check that oscillator chain operation is at the correct harmonic. If you can though, use the method given by G4DHF for best results.

### Additional attenuator pad details.

For 100mW o/p VHF rig, R1, 2 = 33R, R3 = 22R all 0.25 Watt

For 300mW o/p VHF rig, R1, 2 = 39R, R3 = 10R all 0.50 Watt

For a 10 watt o/p rig, use an additional outboard attenuator pad of 5dB with R1, 2 = 15R and R3 = 82R (use higher wattage resistors, or series/parallel connection of 1 watt resistors), and feed the output of this into the 30dB pad.

