

145.800 to cover the amateur 80 metre band of 3.500 – 3.800MHz. Similarly, 160m tunes 144.800 – 145.000MHz, and 40 metres 144.000MHz – 144.100MHz.

The oscillators use an overtone circuit (Q10) running at half the output frequency (70.5MHz for 80 metres) which is then doubled by Q11 and filtered through L5 and L6. The outputs are diode switched via D9, to give a low impedance output to the mixer.

The mixer output will contain sum and difference frequencies, and the correct one is selected by the preselector L1/2 and VC1. In the original, a dual gang 250pF capacitor was used, but a 450/500pF max version is required here to achieve the frequency coverage, together with a higher value for the torodial inductors. The preselector is active in both transmit and receive modes.

On receive, signals are routed through RLY3, and low pass filters, to the mixer, then up-converted to appear at 2 metres. No preamplification is required – the basic sensitivity of this transverter is that of your 2 metre rig less the

conversion loss of the mixer (7dB). Thus sensitivities of around 0.3 – 0.4 uV can be expected which are entirely adequate for the LF bands.

On transmit, signals are amplified up to a level of around 2-3 watts by the broadband amplifier chain Q5,6,7 and Q8/9.

This section of the circuit is much the same as the original, with a few component value changes. The Driver transistor Q7 has been changed from a 2N3553 to a BFY51, and the value of the compensation capacitors C50,51 increased.

