

A HIGH STABILITY OSCILLATOR UNIT

Ray Loveland, G2ARU, Lashburn, Wandleys Lane, Walberton, Arundel. BN18 0QR

In the 1960's the Felixstowe based firm of Electronique run by Ron Wilson G4RW, manufactured a wide range of excellent components specially for the radio amateur. Included in their range was a selection of high stability oscillator units intended for use in BFO and VFO circuits. These units consisted of a series tuned single inductance with large values of lumped capacitance. Although intended for use with valves, I have found them to work equally well with FET's. The circuit is a simple one, Fig. 1 being for valves and Fig. 2 for FET's.

I have duplicated the circuit for use in various constructional projects. It is very easy to get going and I have used it at frequencies as low as 100kHz and up to 28 MHz. The values of C1, C2 & C3 depend on the frequency involved. As a guide, I recently made a VFO for 3.5 to 3.8 MHz. And used 270pf for C1 with 560pF for C2 and C3. In the case of valve circuits instead of a triode a pentode such as the EF80 or EF91 can be used with the output taken from the anode. An ideal arrangement for construction is to use a screened coil former with the grid resistor and three capacitors included in the can. The 3/4" square former readily available some years ago is very suitable and can often be salvaged from old radios and TVs. Alternatively the circuit can be built directly on the circuit board.

The circuit provides a very stable oscillator with many applications.

