

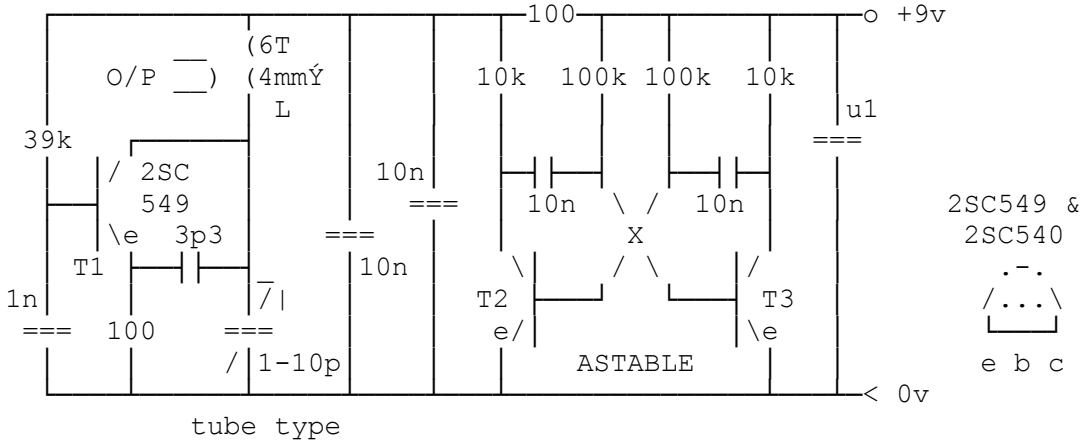
VHF Test Oscillator

By G8MNY

(Updated Jan 16)

(8 Bit ASCII graphics use code page 437 or 850, Terminal Font)

Here is the circuit of a VHF marker oscillator that was used for a club on the evening construction contest. (by G4VTD)



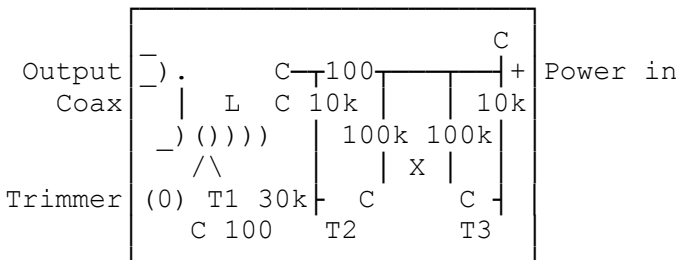
HOW IT WORKS

T1 is a ground base amp to form the VHF Colpitts Osc, with L tuned by the 2 current gain/tap caps 3p3 & 1-10pF & putting part of the Collector output back into the emitter. The 2x 10nF across the supply completes the high Q tuned circuit. Base current is from 39k & together with 100R emitter forms a stable osc bias.

Tone modulation is from the 1kHz 2 transistor (T2 & T3 2SC540) astable which T2 square wave collector current slightly varies the Osc supply via the 100R. The 2x 10n & 2x 100Ks set one-off ratio & frequency.

TIN CAN

A flat piece of tin plate 3 x 4cm or PCB is used to attach all the components.



COMPONENT MOUNTING

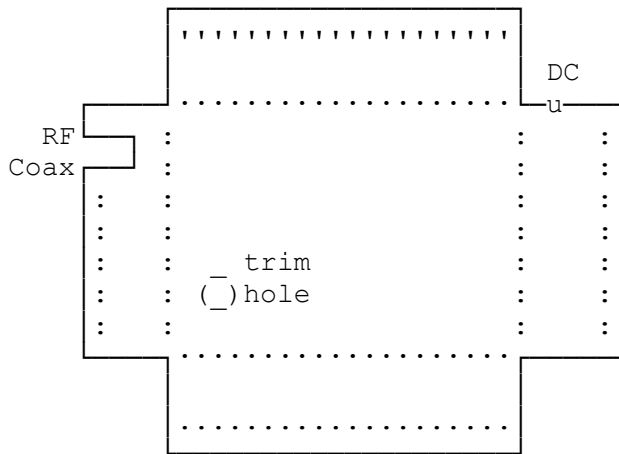
All were standard small components as the design is ugly constructed & the lead wires used to support all the components. All wire lengths kept at a minimum in the "best VHF practice" in the oscillator stage.

TESTING

The oscillator runs between 120-160MHz with this coil, & the trimmer can be set with a Rx or frequency counter from the nearby small coax pick up loop. The square wave oscillator is about 1kHz & provides a 1% power rail change to give AM/FM mod. Deviation is about 20kHz p-p of FSK. Output level around -20dBm for single turn pick up, & haronics are all >-30dBc.

FINISHING OFF

If all goes well & you want to box the unit, try adding a tin top cover...



Why Don't U send an interesting bul?

73 De John, G8MNY @ GB7CIP