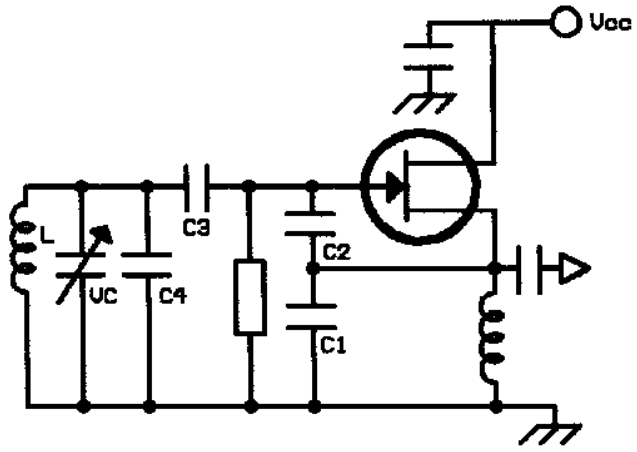

THE COLPITTS VFO
is commonly used in HF amateur radio circuits.
A typical Colpitts oscillator circuit is shown left.

L with VC/C4 for the tank circuit coupled to the oscillator via C3. C2/C1 are the capacitive feedback tap.

TYPICAL VALUES FOR L, VC/C4, C3, C2 and C1

BAND	L	VC/C4	C3	C2	C1
1.8MHz	11uH	200	1000	2200	2200
3.5MHz	5.5uH	120	510	1000	1000
7MHz	2.9uH	50	250	510	510
14MHz	1.4uH	30	120	250	250

NOTE: The value for VC/C4 is both capacitors in parallel. Adjust the relationship between VC and C4 to obtain the desired tuning range.

If L is not adjustable - C4 may be made from a fixed value in series with a smaller trimmer capacitor to pull the circuit to the desired range.

C1/2/3/4 should be capable of good temperature stability. Polystyrene, COG or NPO capacitors are advised. Capacitor values are in pF.

The values may be scaled to suit other frequencies. For example a 5 to 5.5MHz VFO for use with the typical 9MHz IF superhet would work as:

	L	VC/C4	C3	C2	C1
5MHz	3.9uH	75	410	680	680