

2-component Hartley Oscillator

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Although Elektor never actually launched a design contest under the name “low component-count oscillators” the author was challenged by ‘Three Component Oscillator’ published in July/August 2001. The result is shown here, representing a reduction in component count of no less than 33.3%! The audio field has been left though in favour of RF.

This Hartley oscillator can be built from just one FET and a coil. The coil has a tap to provide the amount of positive feedback the circuit needs to start and maintain oscillation. The stray capacitances presented by the FET gate and the coil wires are enough to make the circuit resonate at about

3.7 MHz with the coil data given in the diagram. The internal diameter of the coil is about 8 mm and no core was used. Moving the tap up towards the gate will reduce distortion but at some point the oscillator will throw in the towel and refuse to start.

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