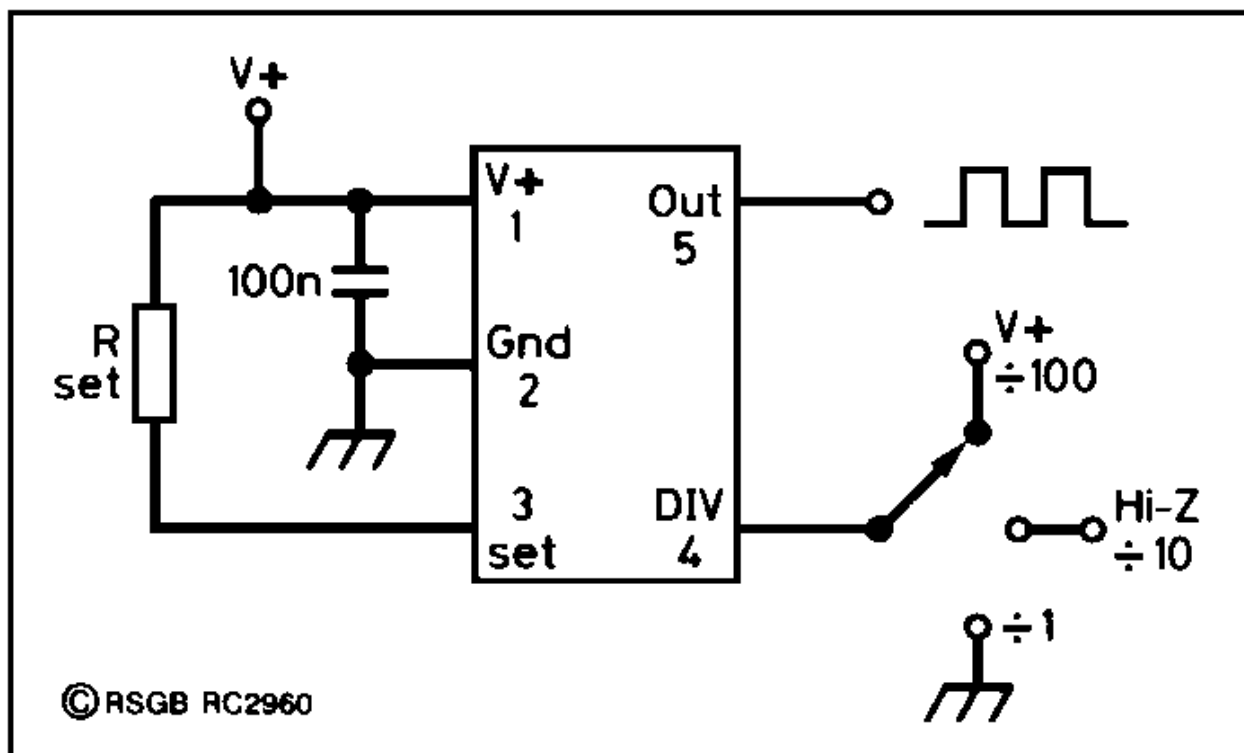


## 1KHz to 30MHz Oscillator



**Fig 1: Simple 1kHz to 30MHz oscillator using the LCT1799 chip. Frequency set by R with three-position divider switch.**

According to a news item in *Electronics World* (May 2001, p328), Linear Technology has announced a new IC device - LCT1700 - that can provide a handy oscillator between 1KHz and 30MHz: Fig 1..

With a five-pin SOT-23 package, the frequency is set within the range 100KHz to 30MHz by the value of a single resistor R, with the frequency and the value of the resistor having a linear relationship.

The square-wave output is then divided in the ratio of 1, 10 (10KHz to 3MHz) or 100 (1KHz to 300KHz) with an external switch

Claimed frequency error is +/- 2% or less between 5KHz and 20MHz (0°C to 70°C) with stabilisations of 40ppm/°C and 0.05%/V for temperature and supply

The chip runs from a supply voltage from 2.7 to 5.5V, although it will not reach 30MHz on the lower voltage.

Typically, it draws 1mA and has an output impedance of 100Ohms.

Linear Technology suggests that the chip is suitable for driving charge pumps, clocking switched capacitor filters, and replacing crystal and ceramic oscillators.