

Low-frequency generator

This waveform generator is based on the 8038 i.c. and provides sine, square, and triangular waveforms at spot frequencies of 0.1, 1, 10, 100 and 1000Hz. A steady bias may be added to the waveform so that the output is always one side of zero. The output will deliver up to 100mA and is short circuit proof.

The Motorola 1438 is used together with a 741 operational amplifier so that most laboratory loads may be driven. Resistors R_1 , R_3 and R_5 are adjusted so that the peak-to-peak amplitude of the three output waveforms are equal. Resistor R_4 is adjusted to give a symmetrical waveform and R_2 is adjusted to give minimum distortion of the sine wave output. Output amplitude is set by R_6 , and a d.c. level of between $\pm 14V$ may be added to the output by R_7 . Frequency of the waveform is switched in decades by S_1 . The power supply should be rated at 150mA.

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