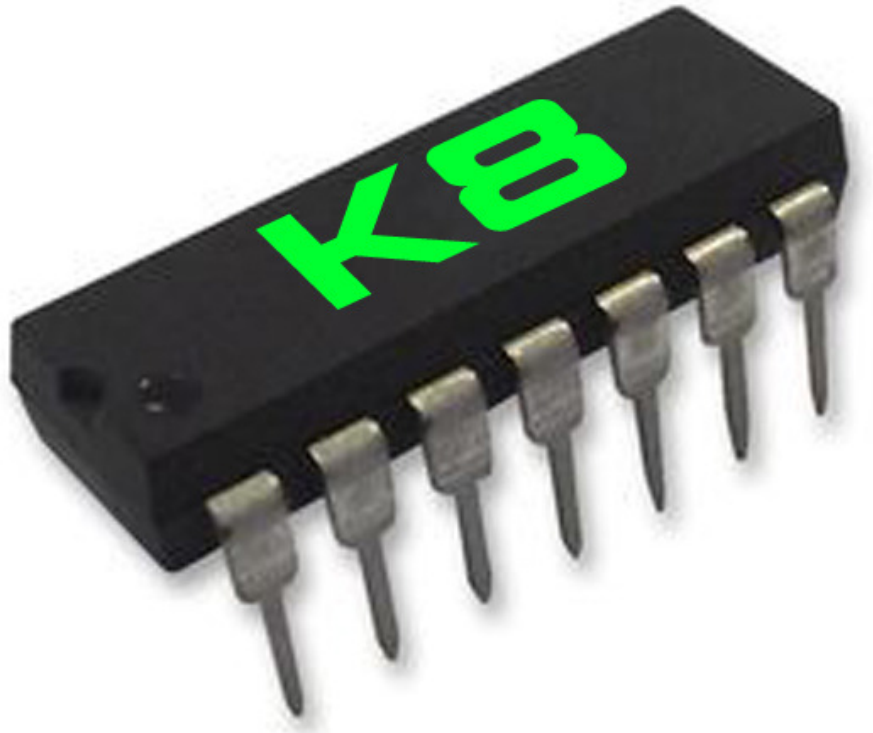
The K8 Harmonic VCO/LFO Chip



Application Manual v1.0

dsp SYNTHESIZERS

The K8 Harmonic LFO/VCO Chip

The K8 is a chip that contains 8 Sine oscillators in a 14-pin DIP package.

It has a fundamental oscillator with a range of 8 – 261Hz with a CV input 1v/oct.

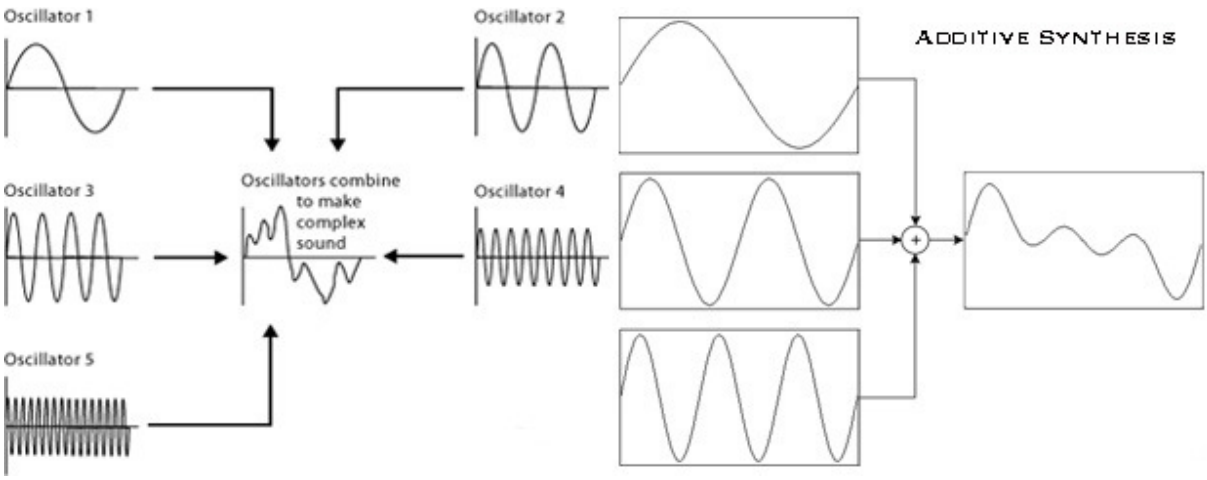
The 7 harmonic oscillators have a CV input for adjusting the harmonic level between 0 – 100%. Harmonics are the 1st to 7th overtone of the fundamental frequency.

This enables the synthesis of complex waveforms without using a filter.

A sync input is available for hardsync of the oscillator.

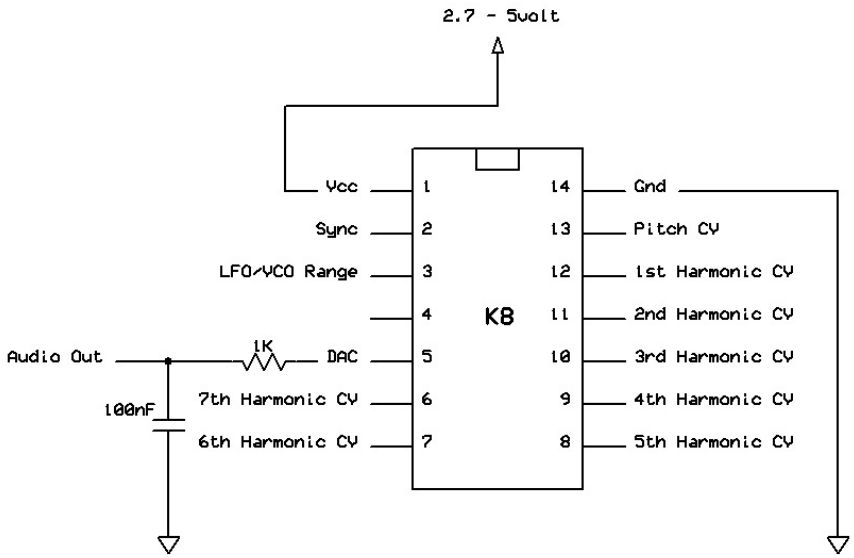
An input is available to select if the fundamental frequency is in the LFO range or VCO range.

The chip runs standalone from a 2.7-5 volt power source.



Example application circuit for the K8 chip

This is the minimum application circuit for the chip. Input levels are allowed between Gnd and Vcc. The output is analog and swings between Gnd and Vcc.



Technical Specifications

DSP platform	AVR ATmega 20 DMIPS
Supply power	2.7 – 5 volt
Supply current	~2.9mA
Input tolerance	2.7 – 5 volt depending on Vcc
Audio output	33.5 KHz 8-bit PWM DAC, 1 channel mono audio
Synthesis method	PCM Wavetable playback
Control method	1 Analog monophonic tune CV 1v/oct 7 Analog harmonic level CV inputs. 1 Sync input 1 Range select input

Contact & Support

For support and questions please use these contact addresses:
Website: http://www.dspsynth.eu
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