

μ VCO

3340·A

Description

μ VCO_{3340·A} is a voltage controlled oscillator micromodule, which provides three waveforms full of harmonics, well suited for subtractive synthesis. The unit is based on AS3340 integrated circuit, a clone of the famous CEM3340 chip by Curtis.

Features

- 3 independently accessible waveforms: triangle, sawtooth, pulse
- voltage controlled PWM
- audio signal amplitude 10Vpp ($-5\text{V} \div +5\text{V}$)
- 4 summed frequency control inputs 1 V/Oct
- additional $\frac{1}{2}$ V/Oct frequency control input for range selection
- additional 24 V/Oct frequency control input for fine-tuning
- linear FM modulation input
- synchronization input
- buffered signal outputs
- +12V, -12V power supply
- reverse voltage protection

Input/Output

pin	label	description	range [V]
1	\triangleright 1/2 V/Oct	frequency control input; for range selection	0 \div +10
2	\triangleright 24 V/Oct	frequency control input; for fine tuning	0 \div +10
3-6	\triangleright 1 V/Oct	frequency control inputs 1 V/Oct	0 \div +10
7	\triangleright LIN FM	linear frequency modulation control input	0 \div +5
8	\triangleright PWM	pulse width modulation control input	0 \div +5
9	\triangleright SYNC	synchroniazation input; connect to \triangleleft SAW of another μ VCO	-5 \div +5
10	\triangleleft PULSE	pulse wave output	-5 \div +5
11	\triangleleft TRIANGLE	triangle wave output	-5 \div +5
12	\triangleleft SAW	sawtooth wave output	-5 \div +5
14	+12V	positive power supply +12V	
15	GND	ground	
16	-12V	negative power supply -12V	

Typical connections

from	↔	attenuated	↔	to	comment
+5V	↔	yes	↔	▷ 1/2 V/Oct	manual tuning (coarse)
+5V	↔	yes	↔	▷ 24 V/Oct	manual tuning (fine)
+5V	↔	yes	↔	▷ PWM	manual pulse width control
◁ wave ¹	↔	maybe	↔	μVCF ▷ INPUT	routing audio signal to filter
KBD PITCH	↔	no	↔	▷ 1 V/Oct	pitch control
◁ SAW	↔	no	↔	μVCO' ▷ SYNC	synchronization of another μVCO
μVCO' ▷ SAW	↔	no	↔	▷ SYNC	synchronization by another μVCO
◁ SAW	↔	yes	↔	μVCO' ▷ LIN FM	linear frequency modulation of another μVCO
μVCO' ▷ SAW	↔	yes	↔	▷ LIN FM	linear frequency modulation by another μVCO
μADSR ▷ OUTPUT	↔	yes	↔	▷ 1 V/Oct	pitch envelope
μLFO ▷ wave ²	↔	yes	↔	▷ 1 V/Oct	vibrato

¹wave = TRIANGLE | PULSE | SAW

²wave = TRIANGLE | PULSE | SAW | INV SAW