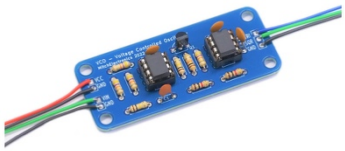
MitchElectronics Ltd.

VOLTAGE CONTROLLED OSCILLATOR

Electronic Kit | Data Sheet

PRODUCT IMAGE	SCAN FOR INSTRUCTIONS PAGE	SCAN FOR RESOURCE PAGE
		

MANUFACTURER	MitchElectronics
COUNTRY OF ORIGIN	United Kingdom
ROHS / REACH COMPLIANT	Yes
PRODUCT DESCRIPTION	The Voltage Controlled Oscillator (VCO for short), is a very practical circuit for generating square and sine waves. While these waves can be produced using the Simple Function Generator Kit, the VCO allows for controlling the output frequency with the use of a voltage signal instead of using a potentiometer. This means that the output frequency of the VCO can easily be controlled by microcontrollers and other analogue circuits which can create some pretty interesting results. For example, a 1V octave synthesiser can be built using this module whereby a 1V octave keyboard is connected to an exponential converter which feeds its output into the VCO to produce keyboard tones. This circuit can also be used in retro ways such as sensor data transmission where the voltage output of a sensor is converted into a frequency and the frequency of the output will be proportional to the sensor reading (a similar system was done in early satellites such as Sputnik).

PRODUCT SPECIFICATION:

- Component Count: 23
- Battery Powered?: No
- Operating Voltage: 5V to 16V
- Operating Frequency: 0Hz to 36KHz (at 5V)
- Output Voltage: VCC – 1.5V
- Output Current: N/A
- Dimensions (PCB): 60mm x 22mm
- Mounting Holes: Yes
- Prebuilt: No – Kit form
- Batteries Not Included

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PARTS INCLUDED:

- 2 x 8 DIP Socket
- 2 x LM358
- 2 x 1K Resistors
- 1 x 10K Resistor
- 4 x 47K Resistors
- 2 x 100K Resistors
- 1 x 1nF Capacitor
- 3 x 100nF Capacitors
- 1 x 2N3904
- 1 x Red Wire
- 1 x Green Wire
- 1 x Blue Wire
- 1 x Black Wire
- 1 x PCB

APPLICATIONS

The VCO is an ideal kit for those learning about oscillator circuits built around the LM358, and the ability to control the VCO with an external voltage source also makes the kit ideal for projects that have voltage-producing sensors. Applications for the VCO kit include synthesizers, function generators, matched square/triangle waveforms, switch-mode power supplies, and PWM generators.

KIT INSTRUCTIONS

https://mitchelectronics.co.uk/resources/voltage-controlled-oscillator-kit-instructions/

ELECTRONICS CONSTRUCTION MANUAL

https://www.mitchelectronics.co.uk/documents/electronicsConstructionManual.pdf

NOTES

Note that product specifics such as output frequency depend on the tolerance of the components. The numbers provided here are an approximation only. Also take note that the estimated delivery is not guaranteed (unless special delivery is chosen) and free delivery has a maximum waiting time of two weeks. Any product that is returned which is built using lead solder is ineligible for a refund.

All parts sold by MitchElectronics are compliant with RoHS and REACH directives which ensure that they can be used in commercial environments as well as complying with environmental laws.