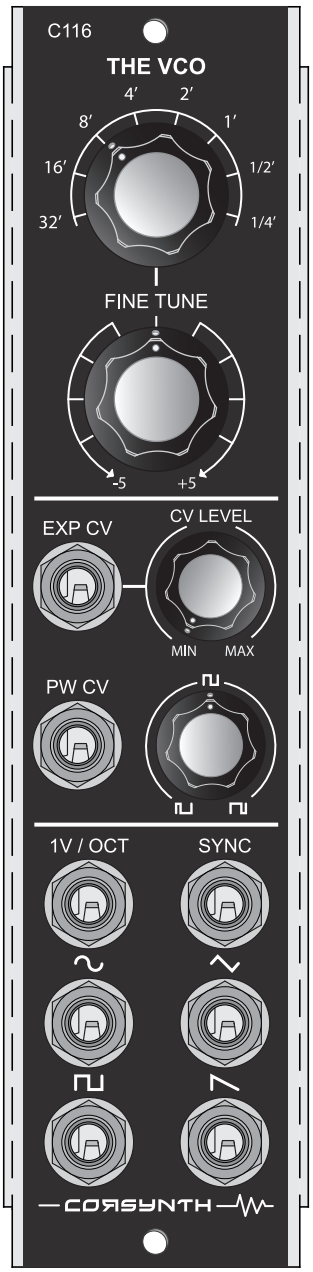
CORSYNTH

C116 THE VCO



USER MANUAL

C116 THE VCO

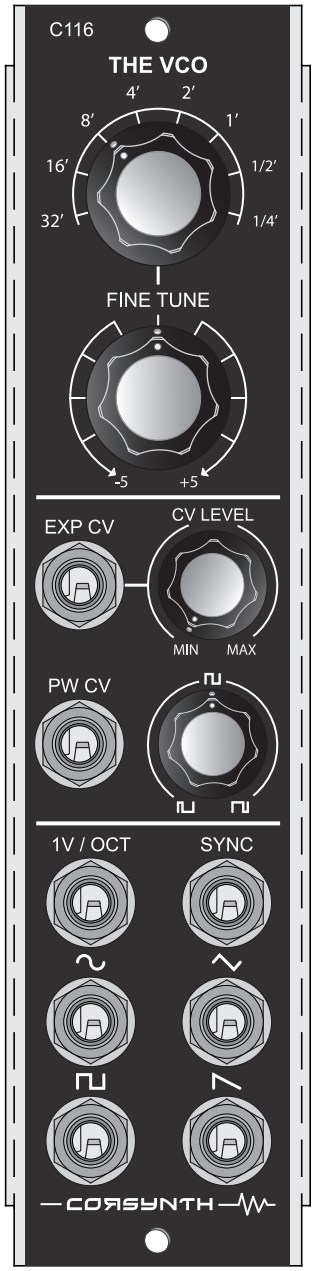
The C116 The VCO is a compact voltage controlled oscillator designed to provide all the essential features expected from an oscillator, without taking up too much space in your system.

While it is a saw-core oscillator, its design is completely different from the C104 Odyssey of Sound VCO.

The C116 also features diferent waveshaper circuits for the Sine and Pulse outputs. As a result, it produces a cleaner, more pure sine wave and a sharper, more aggressive pulse waveform.

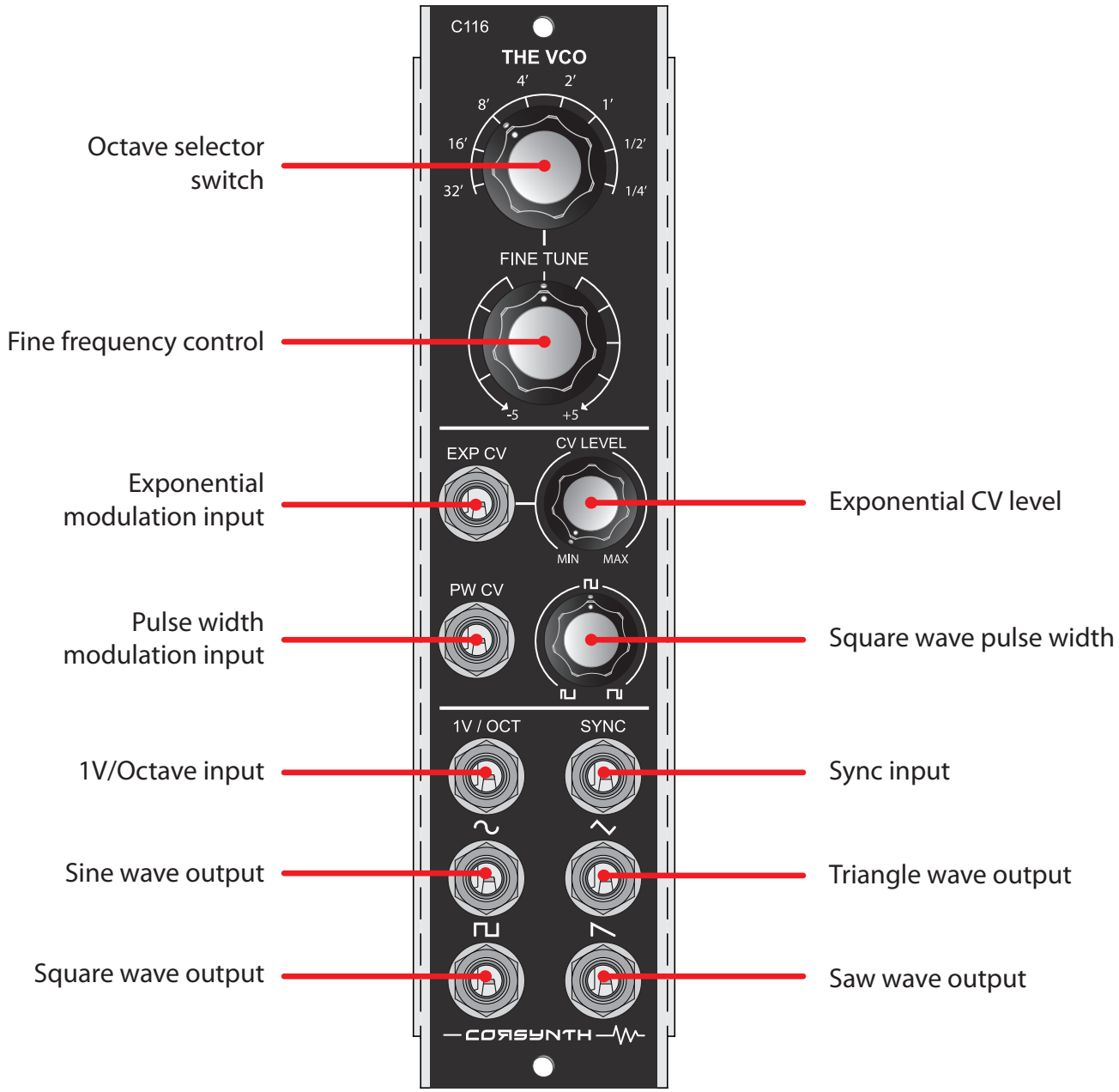
Main characteristics :

- Four simultaneous waveforms: sine, triangle, saw, and pulse
- Rotary octave switch with a 7-octave range (C0–C7)
- Pulse width range from 5% to 95%
- High-quality exponential converter for accurate tracking
- Dedicated 1V/Oct input
- Exponential FM input with level control
- Compact single-width format, ideal for small systems, as an auxiliary VCO, or for building multi-oscillator setups without taking up too much space

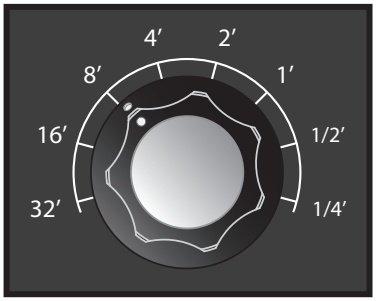


C116 The VCO

Front Panel

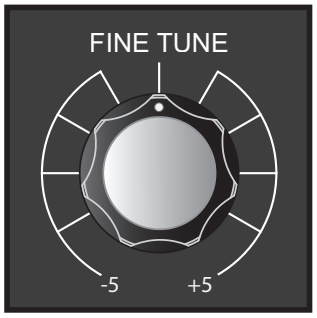


CONTROL DESCRIPTION



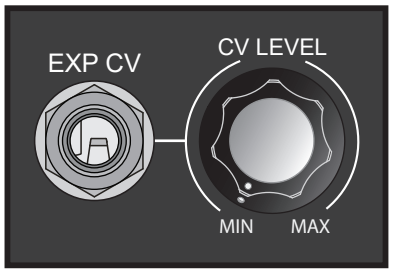
OCTAVE SELECTOR SWITCH

This rotary swtich sets the base frequency of the VCO. With the Fine Tune knob in the middle position and no other CV applied, the frequency range goes from C0 (16.35 Hz) to C7 (2093 Hz).



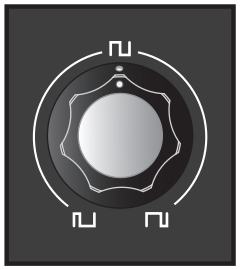
FINE TUNE

This control allows fine adjustments of the VCO frequency. The range of this control is +/- 7 semitones.



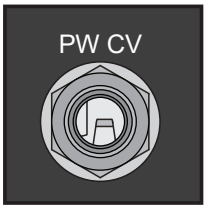
EXP CV

Exponential frequency modulation input. The LEVEL poteniometer sets the amount of modulation.The input allow positive and negative signals (+/- 5 Volts) .



PULSE WIDTH

This potentiometer sets the pulse width of the square wave. Using this control, the pulse width range goes from 5% to 95%.

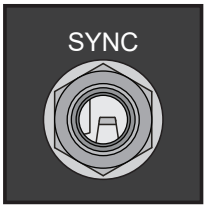


PW CV

Pulse width modulation input. The signal is added to the level set by the PULSE WIDTH potentiometer. If the pulse width is set to 50%, a +/-5 V signal will result in a pulse width range from 5% to 95%. If the pulse width is set to any other value, it is possible to overmodulate the pulse width and mute the square wave.

1V / OCT

1V / Octve exponential frequency control input. Accepts positive and negative CV. For each volt applied, the oscillator frequency increases or decreases by one octave.



SYNC

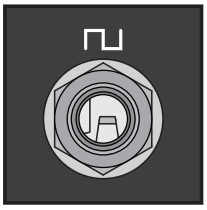
Sync input. Each time a trigger signal is detected, the VCO restarts the waveform at the beginning of its cycle.

SINE

Sine wave output

TRIANGLE

Triangle wave output



SQUARE

Square wave output

SAW

Saw wave output

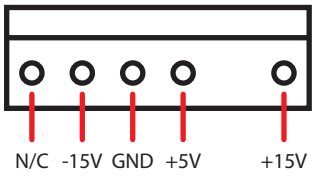
TRIMMERS AND POWER CONNECTORS

IMPORTANT !!!!

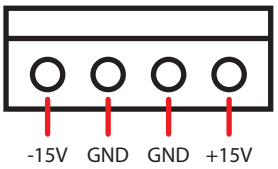
This module has two power connectors (MU and MOTM).
Only one is needed to power the module. (MU or MOTM).

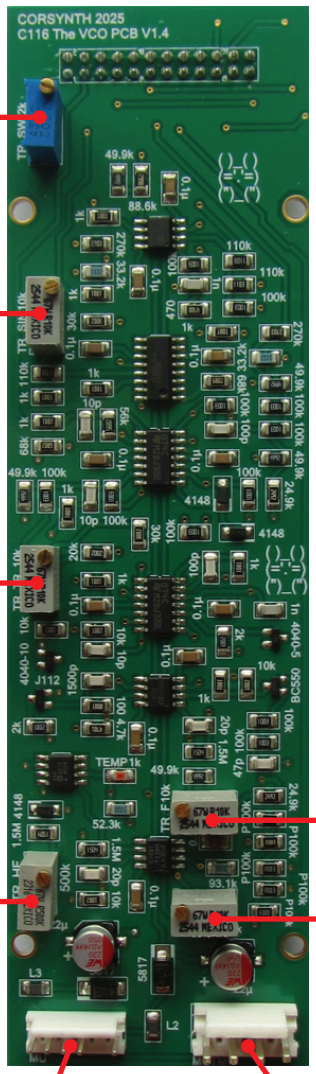
Never connect both at the same time.

MU



MOTM





Octave switch calibration

Sine wave purity

Triangle symmetry

High frequency tracking

Base frequency

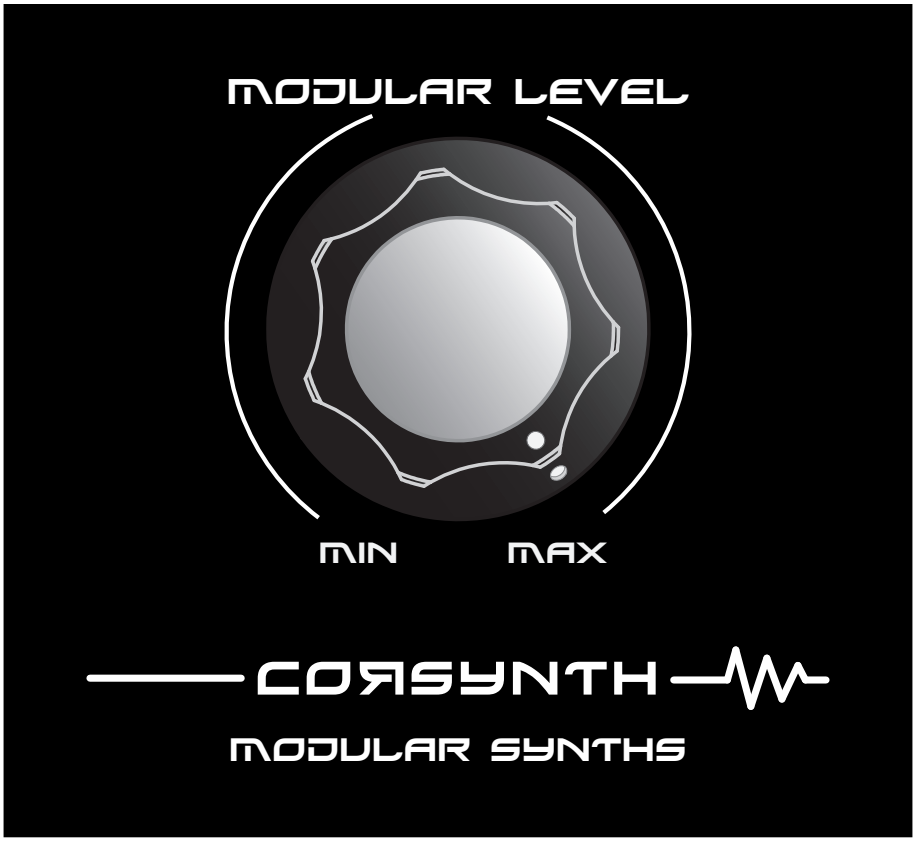
1V / Octave

MU power connector

MOTM power connector

TECHNICAL DATA

Module Format : 5U, MU format (Synthesizers.com, Moog)
Module Width : 1 MU (Moog unit)
Module Depth : 52 mm (2,05 inches)
Power : +15V32@mA , -15V34@mA
Power connectors : MU, MOTM (4 pin)
Signal Levels : 10 Vpp (-5V to +5V)


MODULAR LEVEL
MIN
MAX
CORSYNTH
MODULAR SYNTHS