The **MidiVolts Desktop** is a MIDI based 5 octave CV controller. The device contains 4 separate CV outputs with an associated Gate output. These CV outputs are called voices, and are named **V0**, **V1**, **V2**, **V3**. Each voice operates on the 1 volt per octave standard for eurorack and most hardware synthesizers. The device uses 6 different modes (**MONO, DUO, UNISON, POLY3, POLY4, CC**) to control each voice in different ways. See below for descriptions of each Mode. The device also contains a Midi to Clock output conversion and further customizations with SysEx midi messaging.

MIDI IN Jack: Connect MIDI Controller/ keyboard MIDI OUT to the MidiVolts Desktop MIDI IN (**Channel 1**).

CV Jack: 3.5 mm jack used to output 1 V/Oct Control Voltages. Due to the outputs low output impedance (5Ω), multiple oscillators may be connected to any CV and retain precise voltages.
Max. Output Voltage: 5V

MONO: Monophonic Mode

Voice 0 (V0) is Pitch CV for the key pressed.
Voice 1 (V1) is Velocity of key pressed.
Voice 2 (V2) is Aftertouch of key pressed.
Voice 3 (V3) is CC1. Default: Mod Wheel.

DUO: Duophonic Mode

Voice 0 (V0) is Pitch CV for first key pressed.
Voice 1 (V1) is Pitch CV for second key pressed.
Voice 2 (V2) is Velocity of first key pressed.
Voice 3 (V3) is Velocity of second key pressed.

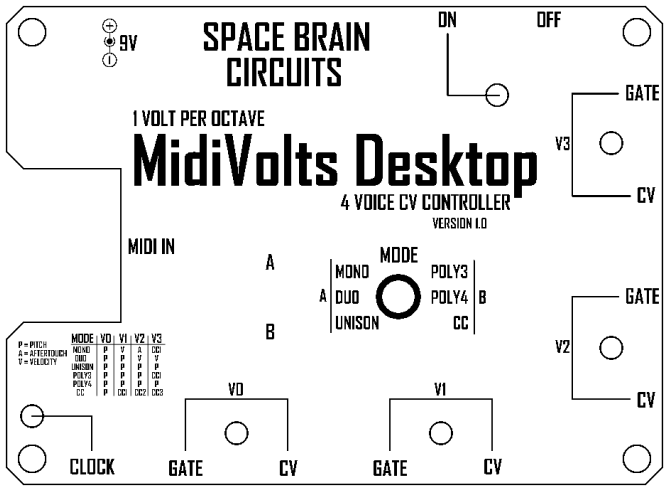
UNISON: Unison Mode

The purpose of this mode is to aid in the tuning of all connected oscillators.

Voice 0 (V0) is Pitch CV for the key pressed.
Voice 1 (V1) is Pitch CV for the key pressed.
Voice 2 (V2) is Pitch CV for the key pressed.
Voice 3 (V3) is Pitch CV for the key pressed.

GATE Jack: 3.5 mm jack used to output a 5V Gate Signal when a note has been pressed. (IKΩ Output Impedance)

CLOCK Jack: The device will begin outputting clock pulses when it reads a Start/ Continue message. (IKΩ Output Impedance)



Note: If more than the allowable amount of keys are pressed, the most recent pressed key will overwrite the previous, even if this key is still being held.

9V DC Jack: DC power supply not included. 2.1 mm barrel plug **(Center Positive)**

DIV Switch: Determines which Mode is used to operate MidiVolts. Options selectable by first choosing which column the Mode will access, as assigned by the **A | B** switch.

POLY3: 3 Voice Polyphonic Mode

Voice 0 (V0) is Pitch CV for the first key pressed.
Voice 1 (V1) is Pitch CV for the second key pressed.
Voice 2 (V2) is Pitch CV for the third key pressed.
Voice 3 (V3) is CC1. Default: Mod Wheel.

POLY4: 4 Voice Polyphonic Mode

Voice 0 (V0) is Pitch CV for the first key pressed.
Voice 1 (V1) is Pitch CV for the second key pressed.
Voice 2 (V2) is Pitch CV for the third key pressed.
Voice 3 (V3) is Pitch CV for the fourth key pressed.

CC: Continuous Control Mode

Voice 0 (V0) is Pitch CV for the key pressed.
Voice 1 (V1) is CC1. Default: Mod Wheel.
Voice 2 (V2) is CC2. Default: 74
Voice 3 (V3) is CC3. Default: 71.

The following may be adjustable with Midi SysEx messages.
Midi Channel : 1 - 16
CV Gain, **CV Offset** : These are adjustable per voice
Pitch Bend Up, **Pitch Bend Down** : Specify the number of semitones.
CC1, **CC2**, **CC3** : May be assigned 0 - 127 as desired.
Please go to **github.com/spacebraincircuits/midivoltsdesktop** for all operations and guide.

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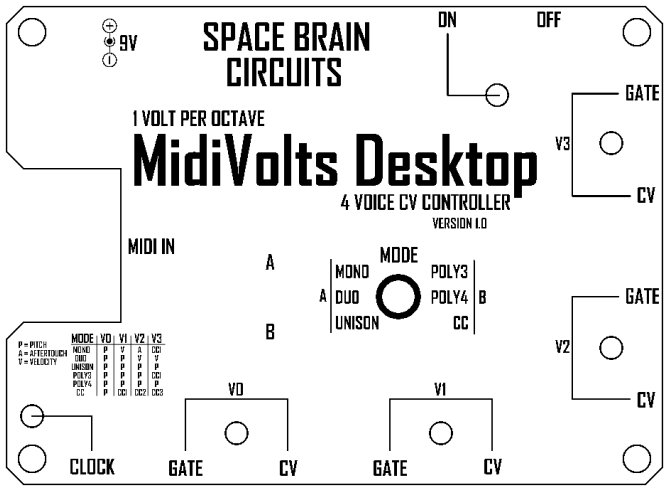

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USER MANUAL

POLY SEQUENCER

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