µCVC
User Manual
Early Adopter Revision

Introduction

Thanks for purchasing the µCVC Continuum Voltage Convertor Eurorack module from Evaton Technologies!

I especially want to thank you for purchasing one of the first µCVC's. The µCVC was first introduced at ContinuuCon 2017. Since then, a bunch of folks have been interested in the µCVC, and I have been building them by hand while I'm in the process of bringing a contract manufacturer on line.

At this time, this user manual is far from complete; please check back at www.evatontechnologies.com for updates to the manual. This "Early Adopter" edition of the manual covers just the basics. Please refer to the EaganMatrix / Continuum Editor manual for more details of how to configure the µCVC to work with your modular system. The µCVC behaves just like the full size CVC referenced in the manual, except that it only tracks a single finger, instead of four. Or two fingers, if you configure a pair of µCVCs for duophonic mode.

Specifications

- **Width**: 6 HP
- **Height**: 3U
- **Depth**: 50mm
- **Power**: +12V @ 9.0 mA, –12V @ 9.0 mA
- **CV Output**: +/– 10VDC pk–pk
- **Format**: Euro modular
- **Expandability:** Can be daisy–chained with a second unit for duophonic play.
- **Construction:** Made in USA of RoHS–compliant components
- **Compatibility**: Continuum (Full or Half Size) and ContinuuMini

Installation

Install the µCVC by first powering-down your modular synthesizer. Connect the supplied 16-to-10 pin ribbon cable to the 10-pin dual-row header connector on the µCVC. Note that the red stripe on the cable faces the bottom of the module, and the board is marked "Stripe" next to the pin where the stripe should go. **Be careful not to install the cable backwards, or off by one position, as this can cause damage to the µCVC or your synthesizer.**

Connect the other end of the ribbon cable to your synthesizer's power bus. The red stripe on the ribbon cable should face the -12VDC (negative) end of the power connector on the bus, typically also marked "Stripe". Once you are certain the power cable is connected properly (Check twice!), install the module into your rack with two M3x6mm screws. When powered on, the MSTR LED should light up.

Continuum Cable:

Plug the male MIDI 5-pin DIN plug on the supplied Y-cable into the MIDI OUT jack on your Continuum. Plug the 3-pin metal DIN connector into the jack labelled "HAKEN AUDIO continuum" on the µCVC. Thread the collar clockwise to secure the cable.

If desired, you can plug a MIDI device into the remaining DIN jack on the supplied cable; it duplicates the function of the MIDI OUT jack on the Continuum. In this way, you can use the µCVC and still hook up to the Continuum Editor or other MIDI device.

ContinuuMini Cable:

Plug the male 3.5mm stereo plug into the the Ped/Ext jack on the ContinuuMini. Plug the 3-pin metal DIN connector into the jack labelled "HAKEN AUDIO continuum" on the µCVC. Thread the collar clockwise to secure the cable.

You will need to select "i2C: CVC" on the ContinuuMini as follows: Press both the **Octave +** and **Octave -** buttons at the same time. Now, push **Octave +** until "**i2c**" is showing. Push **Preset +** / **Preset -** until the display shows "**i2c1**". Press **Octave +** and **Octave -** together again.

Operation

Turn on your Continuum. Once the Continuum powers up, the "F" LED should light up on the µCVC, indicating that the Continuum has detected the µCVC. If you now play the Continuum surface, the F LED should extinguish, and then will light any time a finger is touching the Continuum surface.

Jacks

There are five jacks on the µCVC:

F: Finger

This jack outputs an 8 volt gate signal whenever the F LED is lit (i.e. when a finger is touching the Continuum surface). This is regardless of the "W" mapping, so that a "finger present" gate signal is always available.

W, X, Y, Z:

These jacks output analog voltages corresponding to the W, X, Y, and Z parameters on the Continuum, for a single finger. Typically, W is mapped to "Finger is present" (and will output a 10V gate when a finger is present), X is mapped to pitch (1 volt per octave), Y is mapped to finger position front-to-back on the surface, and Z is mapped to depth or pressure into the surface. Note that all of these mappings can be changed in the Continuum Editor software, but these are typical mappings.
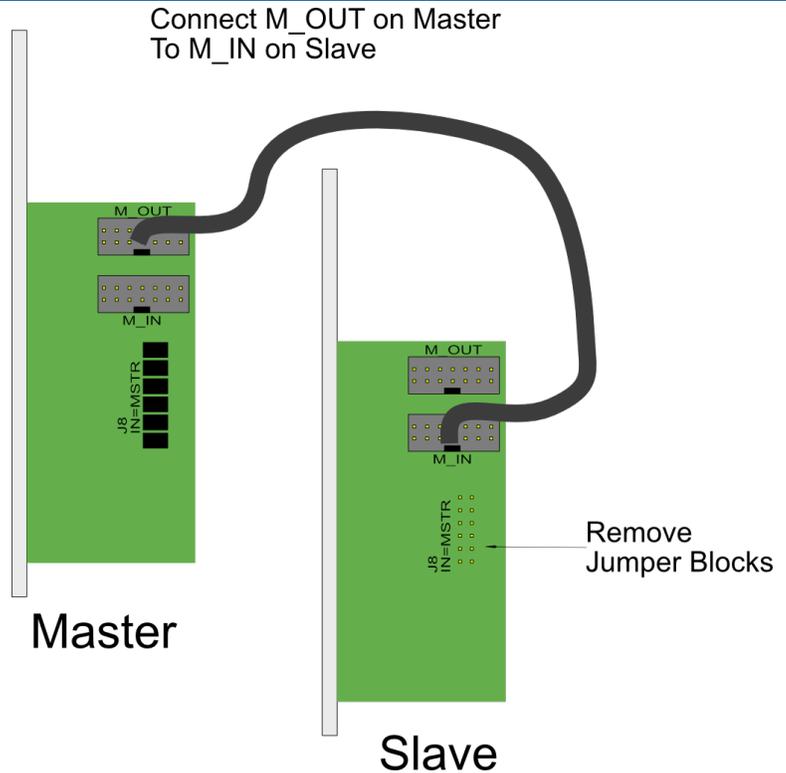
LEDs

F LED:

This LED lights whenever the µCVC detects that a finger is touching the Continuum surface. The F jack outputs an 8V gate when the F LED is lit.

MSTR LED:

The MSTR LED lights to indicate which µCVC is the "Master" in a two-µCVC daisy-chained configuration. The Continuum/ContinuuMini connection cable should only be plugged into the µCVC which has its MSTR LED lit. The other µCVC will receive its information over a behind-the-panel ribbon cable from the master µCVC.

Connect M_OUT on Master
To M_IN on Slave

Master

Slave

Remove
Jumper Blocks

Daisy-Chaining for Duophonic Play

A second µCVC can be installed next to an existing µCVC, and connected behind the panel for duophonic play. To do this, remove the 6 jumper blocks located at J8 (Also labelled "IN=MSTR"). This module will now be the "Slave". Then connect the supplied 14-pin keyed ribbon cable from the "M_OUT" jack near the top of the Master module (which still has its jumper blocks installed) to the "M_IN" jack (just below the "M_OUT" jack) on the Slave unit.

Note that both modules still need to be connected to the Eurorack power bus with their own cable.

Now, plug the Continuum connection cable into the Continuum jack on the Master module. When the Continuum powers up, BOTH modules' "F" LEDs will light up to indicate the Continuum has detected them both. Now, each µCVC will track its own finger on the Continuum surface, allowing you to play duophonic lines.

The method by which each µCVC gets assigned to which finger is determined by settings in the Continuum Editor. Please see the CVC section of the Continuum Editor manual, and bear in mind that when in duophonic configuration, the pair of µCVCs behave like a single full-size CVC, except with only two channels instead of four. (Two fingers' worth). Then, settings of "Last", "Newest", etc. will follow.

Continuum Firmware

Note that the µCVC requires support in the Continuum firmware, which is present in all editions of the Continuum firmware versions 8.5 and above. Please update your Continuum firmware if yours is older than that. All ContinuuMini already include µCVC firmware support.

Warranty Information

Every Evaton Technologies module is covered by a 1 year limited warranty. The product is warranted against defects in construction and materials during this period. Damage caused by incorrect power supply connection, incorrect power supply voltages, lightning discharge, or other causes determined by Evaton Technologies to be the result of abuse or improper application are not covered.

Evaton Technologies assumes no liability for consequential damages caused by the use of this product.

During the warranty period, contact Evaton Technologies prior to returning equipment for repair. Repairs will be made at no cost, although shipping to Evaton Technologies will be the owner's responsibility. Repairs required after the warranty period will be charged at the usual shop rate.

Please contact russ@evatontechnologies.com with any questions, concerns, or comments…

Acknowledgements

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