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Thank you for purchasing the WMD Micro Hadron Collider. We hope you enjoy its sound and features.

The uHC is a dual channel VCF with a mixer for blending and animating the two channels.

CV Controls

Each channel has knobs and voltage control over Frequency and Resonance. CV inputs are at the bottom, knob controls at the top. Mixer controls and CV inputs are the same.

The CV inputs are normaled from Filter 1 to Filter 2. A signal plugged into Freq 1 will appear at the Freq 2 jack to attenuated seperately.

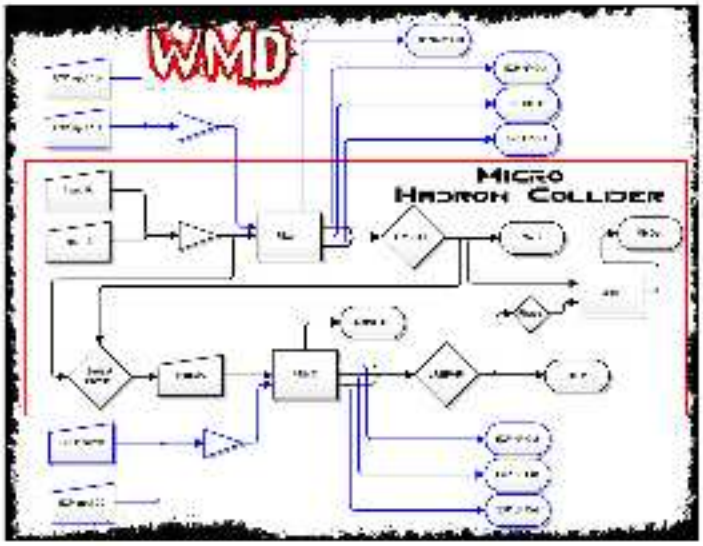
The Frequency and Resonance knobs serve as offsets for the CV inputs when patched.

The 1V/Oct input is normaled to the 2nd channel and may be disabled. This input is calibrated at the factory to standard 1 Volt per Octave exponential control.

Audio Routing

The below flowchart shows the audio routing. The arrows on the panel show the routing as well.

The output jack for each channel may be switched from the Lowpass, Bandpass, or Highpass outputs. This is also the filter mode going to the mixer from each channel.



Warranty

We guarantee the Micro Hadron Collider and expansion modules against manufacturer defects for 1 full year from date of purchase. Please let us know if you experience problems. We will always take care of you.

Mixer

The Mixer takes the output from each filter and mixes them together with CV control. The phase going into the mixer may be flipped on Filter 2 for frequency cancelation. The mixer may be controlled by DC to super-sonic frequencies.

Expansions

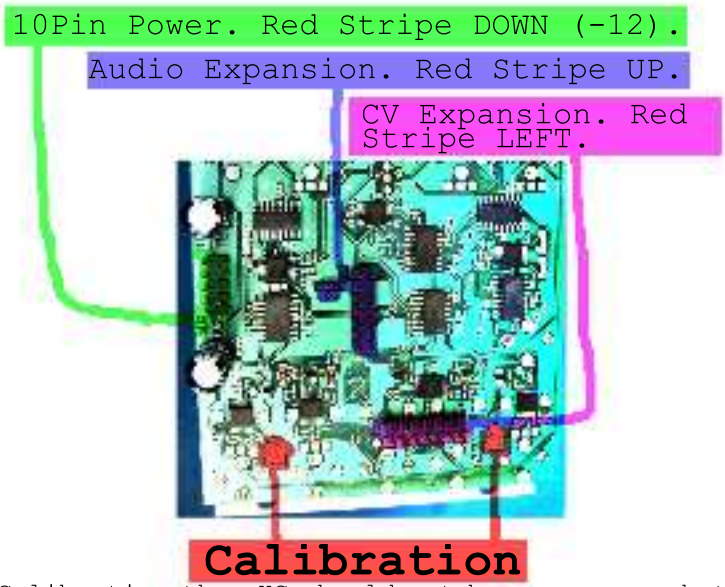
Expansion modules are available for additional CV inputs, including linear FM for frequency. The audio expansion module includes dedicated outputs for each channel and a notch output for Filter 1. Each expansion is 5HP.

Expansion Installation

To install the expansion modules, use the included 14 pin ribbon cable. The expansion headers are marked on the rear of the uHC. The red stripe on the expansion cable goes towards the ✱ on both the uHC, and the expansions. Make sure to connect only the CV expansion to the CV Expand header (horizontal, close to the bottom of the module). And to connect only the Audio Expansion to its header (vertical in the middle of the module).

Power & Construction

+12 Rail: 80-100mA up to 120mA with Audio Expansion Module
-12 Rail: 70-85mA up to 110mA with Audio Expansion Module
All inputs are 100k impedance. All outputs are 1k impedance



Calibrating the uHC should not be necessary, but the 1V/Octave scale can be calibrated by turning the trim pots behind each channel. Use bandpass output and sine-wave input. Match the frequency at C0 to get resonance boost, and check at C5. Adjust the freq knob to check resonance boost. If the boost is at higher frequency than played, turn the trimmer clockwise.

WMD