



- The LED to the right of the “1” knob will only light green when the output exceeds 2Vp. Orange to red colors indicate high output levels – bright red/orange indicates an output which *may* distort or clip when connected to other synthesizer modules.
- The “LINE” output is intended to be used with standard line-level input devices, such as an external audio mixer or amplifier.
- The jack labeled “OUT” is intended to be patched to other synthesizer module inputs and not to external line-level devices.

The Circuit Slices CS030 module is a quality, low-noise, audio and CV mixer for the Eurorack synthesizer format sold at an affordable price.

#### Specifications for the CS030 Mixer

Five inputs with attenuators (inputs 1 – 5)

One input with a fixed, unity gain (input 6)

One line-level output (LINE)

One synthesizer-level output (OUT)

Selectable AC or DC coupled output

Able to mix AC and DC input signals up to +/- 10V

Selectable linear or logarithmic (audio) response for each attenuator

Output offset voltage factory-set to zero

Line-level output user adjustable

High-quality audio amplifier chip (OPA1662 or equivalent) with:

Low noise level:  $3.3\text{nV}/\sqrt{\text{Hz}}$  @ 1kHz

Ultra-low distortion: 0.00006%

LED indicates output level (Output > 2V dim green;  $\geq$  5V bright green; >7V to 10V orange / red)

Power: +12VDC @ 7mA, -12DC @ 5mA

Input impedances: 100K

Depth: 33 mm (1.3”) with power cable plugged in

Panel width: 8 HP

### Features for the CS030 Mixer

High-quality, yet affordable Eurorack audio & CV mixer  
Selectable logarithmic or linear response for each potentiometer  
Zero DC offset -- critical for mixing pitch-control voltages  
Low power consumption  
Low noise using audio-quality amplifier chip  
Reverse power protection  
Modern SMT manufacture and single PCB design makes the module very affordable  
Very small depth -- great for use in "skiff" cases  
Includes power cable, case screws, and shorting jumpers

### Setup & Installation

Before installation, determine the jumper settings for the potentiometers (H1 to H5) and the jumper option for AC or DC output coupling (J9).

- If exclusively used as an audio mixer, move the shorting jumpers (H1 to H5) to the "AUDIO" position and the output coupling jumper, J9 to the "AC" position (blocks any DC voltages from being transferred to other modules or external equipment).
- If primarily used as a CV mixer, select "LIN" for H1 to H5 and select "DC" at J9.
- If used as a CV mixer OR audio mixer, position H1 to H5 jumpers to "LIN" and J9 to "DC" This is the factory setting. In this configuration, you can still mix audio signals; you only lose the audio-taper "feel" of the controls.
- The line-level output (LINE) is factory set to output about 1 Vpp with a 10Vpp (+/- 5V) signal input. You may need to adjust TRIM2 (Line Level) for your external device.

Route the ribbon-cable power connector to your power bus and mount the panel into your case using the supplied screws. While this module does include reverse power protection, please be careful making the connection to your power bus and double check your connection before applying power. The red stripe on the ribbon cable must be toward the -12V pin on your power bus.

### Mixer Use and Ideas

- Use the mixer as the final stage in your rack to mix-down to an external audio mixer or USB audio interface.
- Use as a CV mixer for a VCO, with keyboard CV patched to input 6 (no attenuation preserves 1v/oct tuning) and pitch-bend CV, and modulation CV, sent to the variable inputs, 1 and 2.
- Daisy-chain the output of one mixer to input 6 of another mixer for a 10-channel mix.
- Use two modules for a stereo audio mix.

This module is warranted for one year with parts, under normal use – not including the application of reverse or over-voltage power by customer. Return shipping to Circuit Slices from customer not included. Return to Circuit Slices, LLC for repairs. Circuit Slices, LLC reserves the right to replace the module if necessary. Please keep your receipt / packing slip for warranty information.

Circuit Slices, LLC, 10028 Windjammer Trail, Aurora, OH 44202