

Opal is a three-channel Switched Attenuverter and Summing Mixer, for audio and cv signals. It features a 3-position switch per channel that assigns the channel to the corresponding busses (χ/ψ) or muting the channel (middle). All channels can deliver an Offset-voltage of +/-10V max when nothing is plugged into the inputs. Also, channel 3 features a 2x voltage multiplier switch, able to double channels' voltage. Opal is great for rerouting combinations of signals on the fly, making it a perfect live performance tool!

Features:

- *3 channel Attenuverter/Offset/Summing Mixer.*
- *3-position switch per channel for bus* (χ/ψ) *assignment or muting.*
- If nothing is patched in input, each channel can generate -10V to +10V.
- Voltage doubler switch on Channel 3.
- Bipolar led indicators.

Tech Specs:

Depth: 25mm, Skiff Friendly! Power: 20mA @+12V / 20mA @-12V *Reverse polarity protected! 4hp*

Installation

Before installing this module disconnect the power from your system! Double check the polarity of the ribbon cable! The red stripe should be aligned with the -12V rail, on both the module (white bold line) and on the bus board.

<u>User Guide:</u>



- A. Channel 1 Attenuverter control.
- α . Bipolar indicator for Channel 1 signal.
- **1.** 3-position switch for assigning or muting Channel 1.
- 2. Channel 1 input signal.
- B. Channel 2 Attenuverter control.
- β . Bipolar indicator for Channel 2 signal.
- **3.** 3-position switch for assigning or muting Channel 2.
- 4. Channel 2 input signal.
- C. Channel 3 Attenuverter control.
- γ. Bipolar indicator for Channel 3 signal.
- **5.** 3-position switch for assigning or muting Channel 3.
- 6. Channel 3 input signal.
- **7.** Switch for doubling the voltage of channel 3.

8. Output for bus χ.9. Output for bus ψ.

Tips & Tricks

- You can mix 3 cv signals, add an offset and then swap destinations through switches on χ/ψ outputs. For example you can send 3 LFOs to the 3 inputs and then patch χ output to the frequency cv of an oscillator and ψ output to the frequency cv of a filter. You can tweak the amount of each LFO or invert them through the attenuverter knobs or you can change the destination of each LFO through χ/ψ switches. This is a perfect live performance technique.
- You can apply the above technique on audio signals too. You can route χ/ψ outputs to two different effect chains for example, so you can mix and reroute your audio signals.
- All channels have a dedicated mute switch when in middle position . This is great for instantaneously adding and removing a control voltage to the χ or ψ outputs.
- Channel 3 offers instant voltage doubling through the switch which is useful for instantly pumping up a CV's impact on a destination parameter.



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