NEKYIA

CIRCUITS

Wand

Voltage Processor

User Manual

OVERVIEW

Wand is a voltage processor based on the Buchla 257 design. It consists of three sections; a voltage controlled crossfader, an attenuverter and an offset generator. Crossfader section has the addition of a VCA to voltage control its level. The combination of the three sections through the sum output will provide a wide range of applications for processing both audio and control signals. A legendary utility module in only 4hp in order to fit in any rack!

Tech Specs:

Depth: 25mm, Skiff Friendly!

Power: 23mA @+12V / 24mA @-12V

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.

PANEL CONTROLS

1. Crossfader control.

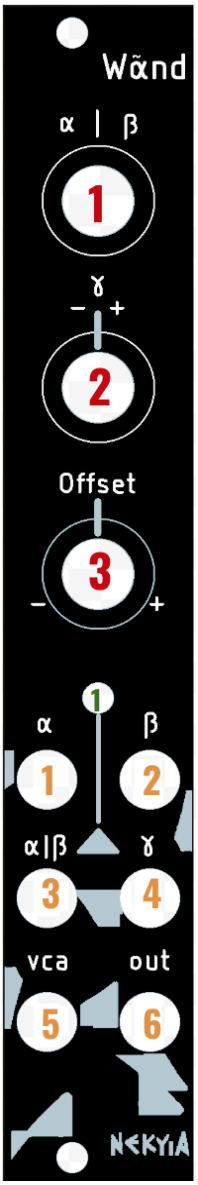
Crossfades between *α* and *β* input.

2. Attenuverter control for *γ* input.

3. Bipolar Offset generator control.

Range can be set to +/-5V or +/-10V with the jumper on the pcb.

1. Bipolar Offset amount LED indicator.



1. α signal input.
2. β signal input.
3. CV input for α/β crossfader. +/-5V.
4. γ signal input.
5. VCA CV input for crossfader level. 0-10V.
6. Sum Output of the three sections.

Tips & Tricks

- The top section can be used as a CV Crossfader with an extra linear VCA or as a Dual linear VCA! Patch a signal into the β input and set the α/β knob fully CCW. Patch a modulation source into the α/β CV input and you will achieve a linear VCA function instead of a Crossfader. In fact it can work as a Dual VCA as you can patch a second modulation source in the VCA CV input. Or you can use it as a Crossfader with an extra VCA by patching two signals in α and β inputs and a modulation source in VCA CV input!

- An obvious patch of Wand would aim to mix three audio or CV signals and take the Sum Output. For example, you could mix three LFOs through α,β and γ inputs in order to achieve your ideal waveshape, level and polarity by adjusting crossfader, attenuverter and offset control.

- Interesting controlled randomness of a sequence can be achieved with the Crossfader section. Patch a sequencer into the α input and a clocked random modulation into the β input. You can modulate a bit of random into your sequence using the α/β knob or the CV input. You can further modulate the total sequence result through the VCA CV input!

- Two trigger sequences can be mixed through the crossfader. With the use of the Offset generator you can attenuate/accent the resulting trigger sequence. You can also add a third trigger sequence on the γ input and attenuate/accent it to fit in the total sequence result.

- Boolean logic functions can be obtained with the Crossfader! Using the Crossfader as a linear VCA (as in the first tip above) can give you the boolean AND function. Patch a gate source into the α/β CV input, and a second gate source into the β input. The Output will be High when both inputs are High. You can also get a Boolean OR function by patching a gate source into the α input, and a second gate source into both the β and α/β CV inputs. When either source goes high, output will go high.

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