

# NEKYIA

CIRCUITS

## OZARK

*CV/Trigger Polyrhythmic Generator*



*User Manual*

## OVERVIEW

Ozark is a compact CV and Trigger Sequencer with nifty features aiming to instantly achieve musical polyrhythms! It consists of an Analog CV Sequencer with 3, 4 or 5 steps and a Clock generator (internal or external) with two Clock Dividers that feed a XOR/OR logic circuit which runs the CV Sequencer. The Advance input can be used to progress the CV Sequencer with external triggers in conjunction with XOR/OR triggers or it allows the CV Sequencer and the Clock Dividers/Logic circuit to work independently by setting the XOR/OR switch to middle position (Adv Input only). The two Clock Dividers and the XOR/OR logic offer individual Outputs which are useful to trigger other modules (e.g envelopes) in order to create rhythmically dependent patches! Additional rhythmic variations can be achieved by the Reset CV input or its manual Reset button. Ozark will be your secret tool to easily perform musical complex polyrhythms!

- *3/4/5 Step Sequencer*
- *3 Trigger Outputs (2 Dividers and XOR/OR Logic) and 1 CV Output*
- *Reset Input plus manual Reset button*
- *Internal/External Clock*
- *Advance Input for external triggers or to use CV Sequencer and Dividers/Logic independently*

### Tech Specs:

Depth: 25mm, Skiff Friendly!

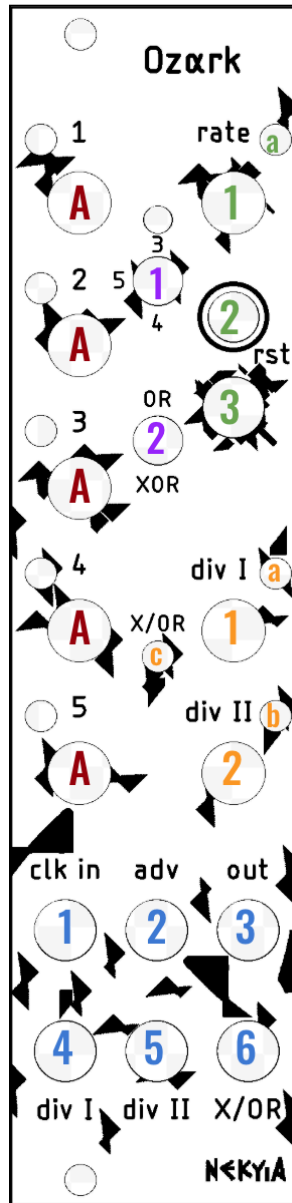
Power: 30mA @+12V / 10mA @-12V

6hp

### 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



**A.** 1-5 knobs set the CV level for each step (0-5V).

1. 3-position switch to set the sequencer steps to 3, 5 (middle position) or 4.
2. 3-position switch to select between OR and XOR logic to clock the Sequencer. In the middle position Sequencer will advance only through the Adv Input.

1. External Clock Input.
2. Advance Input.
3. CV Sequencer Output.
4. Divider 1 Trigger Output (5V).
5. Divider 2 Trigger Output (5V).
6. XOR/OR Trigger Output (5V). Choose between XOR or OR Output through the XOR/OR switch (2).

1. Rate controls the speed of the Internal Clock (10-1000bpm).

a. Internal Clock Rate indicator LED.

2. Reset Button resets the Sequencer to step 1.

3. Reset CV Input (>3V).

1. Divider 1 sets the division of the master Clock with values: 1, 2, 3, 4, 5, 6, 7, 8, 12, 14, 16.

2. Divider 2 sets the division of the master Clock with values: 1, 2, 3, 4, 5, 6, 7, 8, 11, 13, 15.

a. Divider 1 indicator LED.

b. Divider 2 indicator LED.

c. XOR/OR indicator LED.

## Tips & Tricks

XOR/OR switch selects between XOR and OR logic that processes the Divider 1 & 2 clock outputs in order to advance the Sequencer. You can use the Advance Input to combine the logic trigger result with an external trigger so they can both advance the Sequencer. When the switch is in the middle position, the Sequencer will expect an external trigger in the Advance Input in order to run. This can be useful when you want to use the CV Sequencer and the Dividers/Logic circuit independently!

A classic patch would be to patch the CV Sequencer Output in the V/Oct of an Oscillator and the XOR/OR trigger Output to an Envelope trigger input. The Envelope can then control a VCA or a Low Pass Gate. Interesting musical Polyrhythms can be derived by setting different values on Div 1 & 2. Additional variations will occur by using the Reset Input with a varying clock signal to randomize the reset to step 1 position. You can do it manually by pressing the Reset Button or by patching an external trigger to the Reset input.

CV Sequencer is not quantized which provokes unusual melodies. However, CV Sequencer is not only for Pitch control! You can patch it as a modulator to control various parameters in your system such as the Cutoff frequency of a Filter or the timbre characteristics of a VCO. Also, you can take advantage of the Div 1 & 2 Outputs to trigger/reset other modulators e.g envelopes/LFOs or other clock inputs to create complex dependent patches and control the timing of certain events.

Another interesting self-patch would be to use one of the Dividers output to trigger an Envelope which will control the Advance Input. In this case, a longer decay time will Hold the CV Sequencer on the same step until the decay time ends, expanding further the musical patterns possibilities! Alternatively, you can achieve a Hold event on the sequencer by patching an external Gate to Advance input.

Perfect match: Ozark and Ceremony as they pair great as a Synth voice! Patch the XOR/OR Output to the Input of Ceremony and the CV Output to the Both CV Input of Ceremony. Tweak the CV knobs of each step and the Dividers knobs over a simple 4/4 kick and you will be surprised with the amount and variety of musical patterns!

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