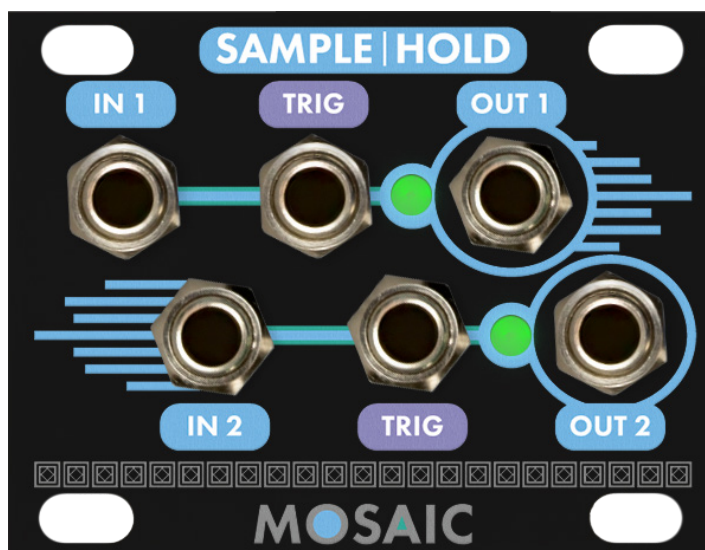


SAMPLE | HOLD

Manual



CONTENTS

Things To Know	1
Overview	2
Details	3

THINGS TO KNOW

What is 1U?

1U is a measurement of height in the 19" rackmount standard. Eurorack modules adhere to 3 rack units, or 3U. Mosaic tiles adhere to 1 rack unit in height, and require appropriate rails to mount in a rack or modular case.

What 1U format are Mosaic modules?

We ship our modules with [Intellijel 1U formatted front panels](#). If you use the Pulp Logic format, don't worry! You can purchase Pulp Logic replacement front panels on our [Replacement Panels page](#).

Mosaic Color Guide

Each color indicates a function across the Mosaic lineup.

Green: Audio Signals

Purple: Gate Signals

Blue: Control Voltage

OVERVIEW

Description

Sample | Hold is a two channel analog sample and hold circuit for the 1U format. S|H provides ultra low droop while maintaining an imperceptibly fast acquisition time. Generate perfect-pitch sequences from white noise, give your audio a lo-fi downsampling, and more with this handy utility circuit.

- Two independent sample and hold circuits
- Channel 1 is normalled to Channel 2
- Ultra low droop, useful for perfect pitch sampling
- LED voltage indicators
- Ability to downsample audio signals
- Input Range: +12V

Tech Specs

- Width: 10HP
- Depth: 38mm
- Front Panel: Ships in Intellijel format. Pulp Logic replacement panels available [here](#).
- Current Consumption: +12V = 5mA, -12V = 5mA

Installation

To install, locate space in your Eurorack case for your 1U module, and confirm the positive 12 volts and negative 12 volts sides of the power distribution lines. Plug the connector into the power distribution board of your case, keeping in mind that the red band corresponds to negative 12 volts. In most systems, the negative 12 volt supply line is at the bottom. The power cable should be connected to the module with the red band facing the front of the module.

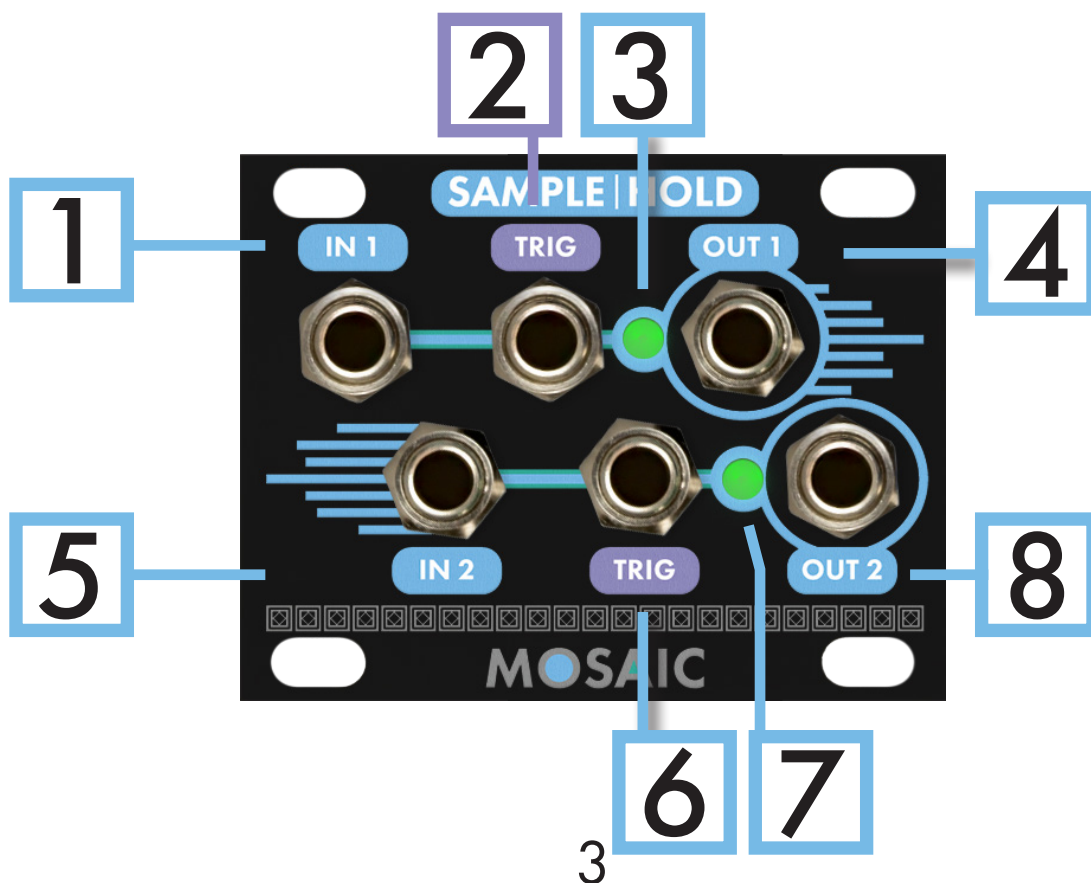
DETAILS

How It Works

Sample and hold refers to a specific type of circuit that is used to capture analog signals and hold it for enough time to be processed. In its simplest form, a sample and hold circuit is a capacitor and switch. The capacitor increases and decreases its voltage to match the input voltage, hence the "sampling" part of the circuit. Once the switch is opened, current flowing through the capacitor is halted, and the voltage remains constant due to the switch's resistance. This is the "hold" portion of the circuit.

In the case of Sample | Hold, the switch is opened via a gate signal allowing for unique sequenced sample and holds. For your first patch, we recommend sending white noise into your Sample | Hold, sending a steady gate signal to open the switch, and send the output to an oscillator's v/oct input! The possibilities are near endless with Sample | Hold, making it a handy utility to push your creative boundaries!

Diagram



DETAILS

1. In 1

Signal Input for Channel 1's sample and hold circuit. Channel 1 normals to Channel 2.

2. Trig

Gate input for Channel 1's hold switch. When sent a gate signal, Sample | Hold will hold the current input signal until a second gate signal is sent, where it will hold a new voltage level based on the sampled input signal. Trig 1 normals to Trig 2.

Threshold: 2.5V

3. LED

LED voltage indicator for Channel 1. Green indicates a negative voltage is present, and red indicates a positive voltage.

4. Out 1

Sampled voltage output for Channel 1.

Range: $\pm 12V$

Controls 1-4 are replicated for Channel 2 (5-8)