The AvonSynth User Guide

AVS-S&H-1 Sample & Hold

Thank you for purchasing from AvonSynth

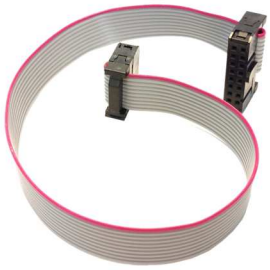
Congratulations on your purchase of a brand new AvonSynth AVS-S&H-1 Sample & Hold Eurorack Module. We trust that it will both serve and inspire you as you create beautiful music with it for years to come.

In order to get the most out of your module, please ensure that you read this User Guide in its entirety so that you fully understand all of its functionality, and that you follow all necessary safety directions during use.

Included in the Box

1 x S&H Module

1 x 10 pin to 16 pin flat-cable power cord



2 x M3 Mounting Screws

2 x Nylon Washers

Installation

Step 1: Power your system off. Place the module in your Eurorack-compatible rack in any convenient position. Affix the module to your rails using the included mounting screws and nylon washers. Neglecting to use these washers may result in unnecessary marking of the unit.

Step 2: Triple check the polarity of the power connector before connecting the power cord to your power supply. Ensure that the -12v line marked on the back of the module connects to the same end of the flat-cable that also connects to the -12v line on your power supply. While AvonSynth modules use shrouded connectors that make this process safer and more reliable, some systems do not conform to this polarity standard, so careful checking is **always** necessary. Connecting the module with incorrect polarity can result in irreversable damage done to the module which cannot be covered by warranty.

Step 3: Power up your system and start patching!

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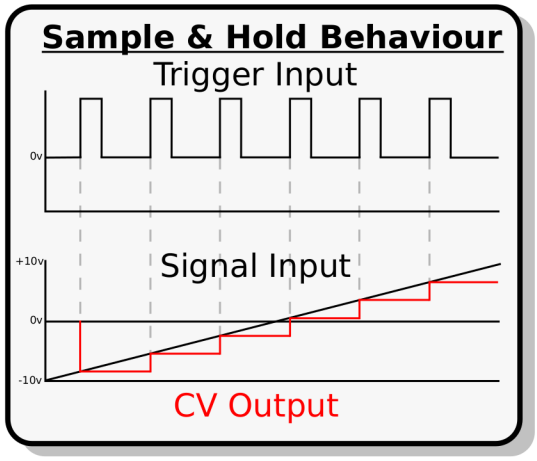
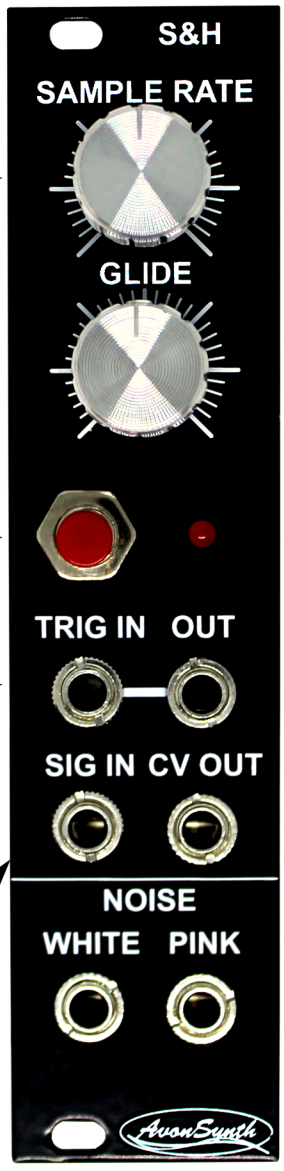
Features & Specifications

- Fully analogue Sample & Hold and Noise Generator Module
- 6 HP wide (30mm), 20mm deep
- Current consumption: +12V 18ma, -12V 18ma
- Built-in pulse-train clock oscillator with adjustable frequency, normalled to the Trigger Input
- Built-in white and pink noise generator, with white noise normalled to Signal Input
- Manual Trigger momentary push-button
- Adjustable Glide amount
- Trigger Output and buffered pass-through



Description of Functionality



Sample Rate
Controls the speed of the internal oscillator. When using an external signal in the Trigger Input, the internal oscillator is bypassed.

Manual Trigger
A press of this button triggers a sample event to occur, and holding it over-rides the internal oscillator or any trigger input. Manual triggers are also represented at the Trigger Output.

Trigger Input and Output
Patch a signal such as the trigger or gate output of a sequencer, or the pulse output of an LFO or VCO to the Trigger Input to clock the sample & hold operation. Doing so disconnects the internal oscillator from clocking the unit. Whichever trigger signal is clocking the module is reproduced as a trigger on the Trigger Output.

Signal Input
Patch the signal that you would like to sample to this input. When not patched, the White Noise acts as the signal input, producing random voltages at the output.

Glide
This knob controls the time constant of a lag circuit placed before the CV Out. The Glide control smooths the transition between the held voltages each time they are switched to new values.

LED Indicator
Indicates when the Trigger signal is high, blinking at the sample rate.

CV Output
Each time a trigger event occurs, whether by the internal oscillator, an external signal, or manual button-press, the instantaneous level of the CV present at the Signal Input is directed to the CV Output, and held until the next trigger event occurs.

White and Pink Noise Outputs
These two outputs provide two different varieties of audio-rate analogue noise, a useful ingredient in the creation of many sounds. The White noise output is normalled to the Signal Input by default.

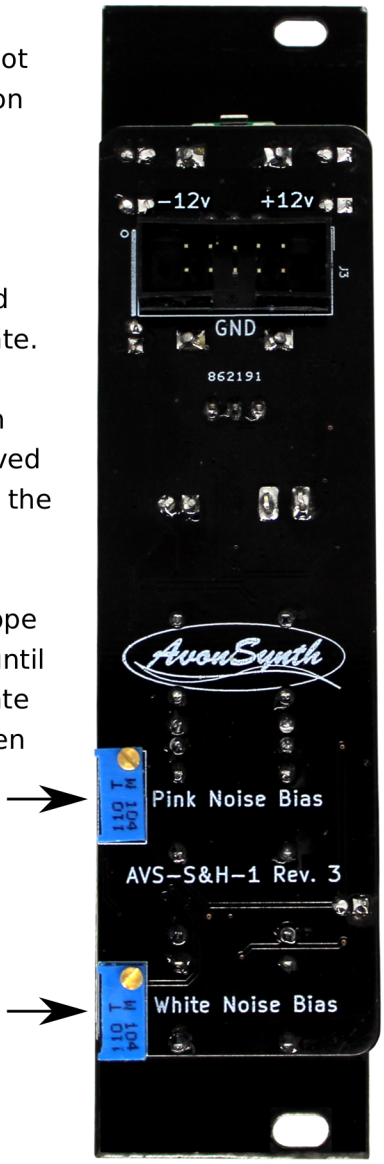
Calibration

The AVS-S&H-1 comes hand-calibrated from the workshop, and ideally should not need further calibration for some time. However, through use and transportation calibration may drift and need adjustment.

When the biasing of the Pink Noise and White Noise signals are not tuned, it can result in reduced audio quality from the Noise outputs, and since the White Noise output is normalled to the signal input, this can create inexpected signals from the CV output when the module is used in it's default normalled state.

The architecture of the module is such that the White Noise is generated from conditioning and amplification of raw transistor noise, and the Pink Noise is derived from the White Noise signal via filtering. Therefore, when calibrating, ensure that the White Noise is adjusted before the Pink Noise for optimum results.

Accurate calibration can be done by checking the Noise outputs on an oscilloscope and adjusting the multi-turn trimmer potentiometers on the rear of the module until the signals are balanced around ground on the scope. Alternatively, less accurate but still sufficient calibration can be done by ear by adjusting the White and then Pink Noise Bias trimmers until expected and optimum output is observed.



Safety Precautions

Please use this module in accordance with the following safety guidelines in order to maximize the life of the module and ensure warranty from AvonSynth.

Keep water and other conductive liquids and materials away from this module. It is not water proof, or even water resistant. Exposure to these can cause short-circuits that can render the equipment unusable.

Be sure to keep this equipment in an environment with an ambient temperature above -20℃ and below +50℃. Excessively hot or cold temperatures can be damaging to the electronic circuits used.

Modules with exposed circuit-boards are delicate. Take the utmost care when handling and transporting this equipment, making sure not to subject it to excessive forces. Ensure that the module is installed correctly while being transported and that the original packing materials are used when sending the module anywhere by post.

Warranty & Support

This product is covered by AvonSynth's warranty for one year from the manufacturing date. Within this timeframe, any manufacturing defect will be repaired or replaced by AvonSynth. Damage caused to the product due to not following the safety precautions above, unauthorized modification of the hardware, or misuse such as subjecting the unit to reverse or excessive voltages will void this warranty.

If you have any concerns about your AvonSynth hardware, please get in touch via **info@AvonSynth.com** to discuss any issues. We will do our best to assist you in getting your hardware operating correctly, and if necessary, we will provide an RMA (Return Merchandise Authorization) to send back the unit for inspection. Any postal costs incurred in this process will be the responsibility of the customer. Please do not send back merchandise before receiving this authorization.