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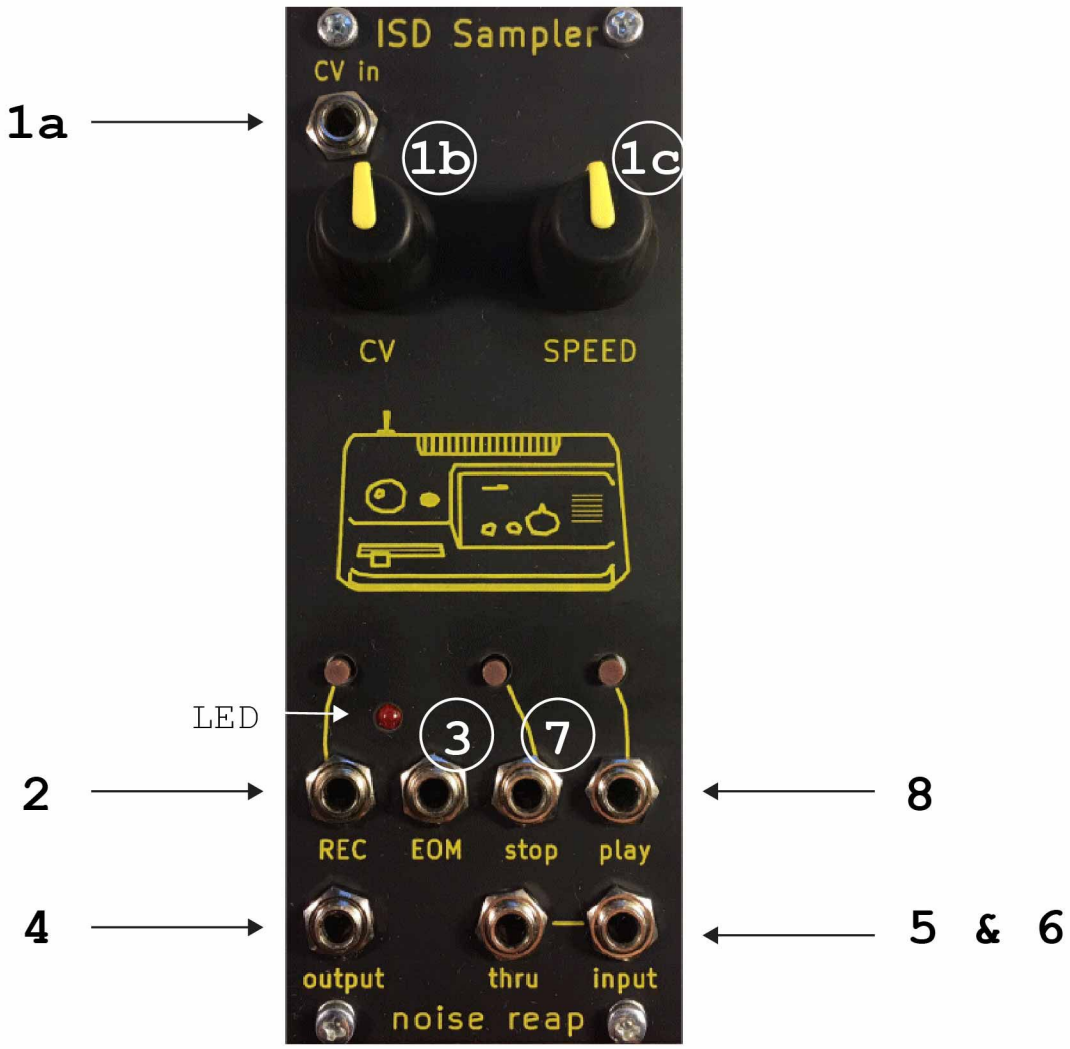
Intro

The ISD Sampler is a musical sampling device with 9+ seconds of low to mid-fi EEPROM sampling. Samples play in loops by default, but one-shot style playback is easily achieved. There is CV control over all parameters.

Straight from the Datasheet:

"The ISD patented ChipCorder technology brings analog data into the semiconductor memory world. This 'break through' EEPROM storage method allows analog data to be written directly into a single cell without A/D or D/A conversion."



1a. CV input
This control voltage input modulates the clock speed of the sampler. This is synonymous with changing the pitch of the sample. A 0 - 5V control voltage will completely sweep the clock speed from minimum to maximum.

1b. CV input Attenuator
This knob serves as a simple attenuator for the CV input. It ranges from fully closed to fully open.

1c. Clock Speed
This control changes the speed of the sample. It works both during playback and when recording samples. It is possible to record samples while simultaneously modulating their pitch, and store the modulated version.

In a fully clockwise position, the clock is at maximum speed, and the sampling audio quality is at its best. In a fully counter-clockwise position, the clock speed is at mimimum. With decreased clock speed, maximum sample length increases (past 9 seconds), but the quality of the audio likewise decreases.

2. RECORD Gate In
This control voltage input (and hand activated tactile control) starts a new sample recording. With this input HIGH, whatever is patched at the “input” jack will be recorded. The sample will record for as long as the REC input is HIGH. This input is a comparator type that will register HIGH at any input voltage greater than about 2V.

At maximum clockspeed, the maximum sample length is about 9 seconds. After nine seconds, the sample “rolls over”, and a brand new sample is started at 0 seconds. The minimum sample length is a quick fraction of a second.

The LED indicator is lit up when this input is HIGH, to indicate “recording in progress”.

Samples are stored after power down for up to 100 years.

3. EOM (End of Message) Trigger Output
The phrase End of Message, or EOM, is borrowed from the ISD manufacturers. A quick 5V pulse is output here at each end the of sample. This is helpful because it allows for at least some form of external syncing or clocking to other modules.

An unavoidable shortcoming of the circuit it that small errors in pitch occur very breifly during the EOM pulse. The degree of the pitch chage is dependant on the speed of the clock when the sample was recorded. All in all, this glitch is pretty minor, and more pleasant than unpleasant.

The LED indicator flashes once at each EOM pulse.

4. Output (+/-5Vp)
This is the mono output where the sampled audio is played.

5,6. Input & Thru
This is the mono input where the audio source is sampled. A thru jack is provided so you can pass the source signal on to a mixer or some other means of listening to the source audio as it is being sampled. The input and thru jacks are completely interchangable. They function as a simple two input mult.

The sample input is designed to record line and pro level audio signals directly without clipping. The module internally amplifies these signals to a rough Eurorack standard of +/-5Vp. To record Euro audio signals directly without excess distortion, the input amplitude should be trimmed externally. Patching synth signals dirctly to the sample input without attenuation will not result in an output greater than +/-5Vp, but it will distort the sample.

7. Stop input
This control voltage input and hand activated tactile control stops sample playback. Any voltage over 2V is considered HIGH, and will activate “stop”.

8. Play input
This control voltage input and hand activated tactile control starts sample playback. Any voltage over 2V is considered HIGH, and will activate “play”. Samples will play in a continuous loop until “stop” is activated, or the power is shut off.

Quick Start. Record a Sample - Two Methods

Method #1

1.) Activate “stop”, if the device is not already stopped.
2.) Activate “REC” for as long as sample is desired.
3.) Activate “play” when playback is desired.

Method #2

1.) Device is currently in playback mode.
2.) Activate “REC” for as long as sample is desired.
3.) Activate “stop”.
4.) Activate “play” when playback is desired.

Use as a Drum Sampler. Quirks and Tips

Utilization of the ISD Sampler for triggered playback of individual drum samples is easily done.

1.) Patch EOM into ”stop”. You are now in one-shot mode.
2.) Record the sample with the “speed” control knob at about noon position. Recording the sample at higher clock speeds may cause a noticable “pop” or thump at the transistion from stop to play.
3.) Activate “play” to trigger the one-shot sample. Not re-triggerable until sample is over.

Technical Specifications:

- 10hp Eurorack Format
- Current Draw 22mA @ +12V
- Current Draw 8mA @ -12V
- Input impedances ~100K
- Output impedances ~1K
- depth (measured from back of panel) ~22mm