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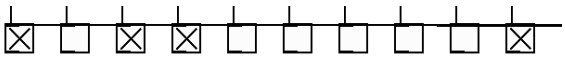
Pd Looper/Granular Synthesizer

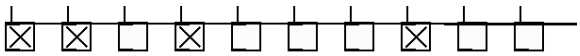
Functionality:

- **Record**: Record incoming stereo signals into tables. The length of a recording is determined by the Rec_Time parameter. The record function automatically toggles between the two internal recording buffers so that signals can be recorded into a buffer while playing the other buffer.
- **Freeze**: Freeze is a multi-function parameter that makes it easy to create a real time glitch effect. Turning on the freeze toggle button triggers the record button, and the dry/wet parameter is set to 100 when the recording stops. Turning off the freeze toggle button sets the dry/wet parameter to 0 (bypass).
- **Reverse**: Reverse the direction of audio playback.
- **Rec_Time**: The length of the recording buffer in the queue. The value is updated once the record button is triggered.
- **Speed**: Playback speed in percent.
- **Dry/Wet**: A linear crossfade between the dry (incoming: 0) and wet (internal: 100) signals.
- **Density**: The number of active voices. The density of 1 acts like a traditional looper while the higher density results in granular effects.
- **Density_Random**: Density_Random determines how often the voice allocation is randomized. The Density_Random of 0 randomizes the voice allocation every 10 loops while the Density_Random of 10 randomizes it every loop.

Voice allocation example 1 where density is 4 →



Voice allocation example 2 where density is 4 →



- **Pan_Depth**: The intensity of the panning effect, which is randomized independently for each voice when the voice allocation is randomized. The Pan_Depth of 0 maintains the original stereo image while the Pan_Depth of 1 results in a wider stereo image if Density is greater than 1.