SoMono Cloud

Cloud is a grain synthesis based synthesizer. It takes a wave file and plays back short parts of it with varying parameters that are chosen at random from a given range. Each such short part is called a grain. You can select it's length, starting offset into the wave file, envelope parameters, playback rate, etc.

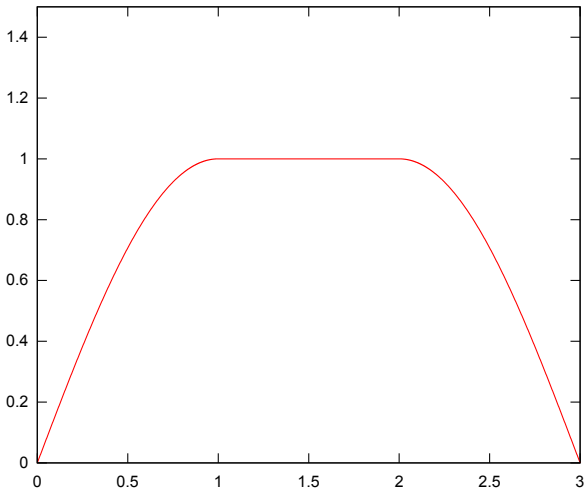

Figure 1 Envelope

In the figure the envelope used for the grains is shown. The envelope would look that way if skew was set to 50% and sustain was set to %33.

Parameter	Min	Max	Units	Meaning
Wave	1	199	Index	This allows you to pick a loaded wave file from a wave slot by name.
Offset Mean	0.0	100.0	%	The mean offset into the wave file. This is the percentage by which the playback is skipped in to the wave file. For example setting this to 50% will start the playback from the middle of the file for each new grain.
Offset Devi	0.0	1.0	Real	This and other devi (deviation) parameters let you adjust how much will the actual value deviate randomly from the mean value that you set using the mean parameters. For example if offset mean value ranges from 0% to 100% then setting Offset Devi parameter to say 0.1 and setting Offset Mean to say 50% then the actual value will be from the interval (40%, 60%) picked at random. This works the same way for all the other parameters.
Amp Mean	0.0	1.0	Real	Each grains output is multiplied by the value specified by this parameter thus scaling the volume down if it is set to something less than 1. You use it to either avoid clipping when alot of grains are playing at the same time or with the devi parameter to allow grains of different volumes.
Amp Devi	0.0	1.0	Real	Deviation value for the amp parameter.
Length Mean	10.0	1000.0	ms	The length for which each grain will be playing in miliseconds.
Length Devi	0.0	1.0	Real	Deviation value for the length parameter.
Sustain Mean	0.0	100.0	%	This value stands for the percentage of time (which was specified with the length parameter) that wil be spent in the sustain stage.
Sustain Devi	0.0	1.0	Real	Deviation value for the sustain parameter.
Skew Mean	0.0	100.0	%	Skew in this case means the amount of playback time that will be spent in the attack stage. If skew is set to 50% than it means that both attack and decay stages will be given equal time. If it is set to 20% it means that attack will be given 20% of the time that is left after accounting for sustain and release will be given the remaining 80% thus attack will be shorter than release. You get the picture.
Skew Devi	0.0	1.0	Real	Deviation value for the skew parameter.
Rate Mean	-4.0	4.0	Real	Playback rate for each grain - 0.0 means that each grain plays at the original rate, 1.0 means that the it is played twice as fast, -1.0 that it is played twice as slow etc.
Rate Devi	0.0	1.0	Real	Deviation value for the rate parameter.
Pan Mean	-1.0	1.0	Real	The panorama position of the grain. Here -1.0 means panning hard left and 1.0 means panning hard right, the other values cover the rest of the panorama spectrum.
Pan Devi	0.0	1.0	Real	Deviation value for the pan parameter.
Density	0.0	1.0	Real	Probability that a grain will be triggered for playback at each given processing cycle. The bigger this value the more grains playing at the same time.
Grain	1	64	Integer	The maximum number of grains that can be playing that the same time.