nineties

S F E
devices

AUDIO EFFECT · VERSION 1.4

WHAT IT DOES

nineties is a chain of four stages in a row: sampler, glitch, hall and tape. At 0 each stage leaves the signal almost unchanged. mix blends the dry input with all four stages, output sets the level after everything. The dry signal follows the delay of the tape, so the two do not cancel each other in between.

SAMPLER

bits	Resolution of the stage, 4 to 24 bits. At 24 the stage is off.
rate	Sample rate of the stage, 2 kHz to 48 kHz, held without any filter, so high notes fold back as metallic overtones. At 48 kHz the stage is off.

GLITCH

A memory holds the last ten seconds of the input (five at 96 kHz). A glitch replays a slice of it in place of the input. A glitch only starts while the input is sounding.

glitch	Chance that a glitch starts on a step of the grid, 0 to 100 %.
size	Length of the slice, 10 ms to 1 s. With grid on, it is rounded to a power of two of the step.
chaos	How wrong the memory is read, 0 to 100 %. At 0 a glitch repeats the most recent slice. Higher values add longer glitches, shorter and longer slices, older parts of the memory, reversed and octave shifted slices, above 50 % random transpositions, and data read in the wrong format.
glitch level	Level of a glitch against the input it replaces, -40 to +6 dB.
grid	When a glitch may start: 1/8, 1/16, 1/32 follow the song position of Live (120 BPM while the transport stops). free starts glitches at random intervals of one to four times size.
form	What a glitch does. stutter repeats the slice. tape stop slows the input to a standstill. ramp up and ramp down repeat the slice while its pitch rises or falls by an octave. mixed lets chaos choose among all of them.

HALL	
program	room, hall, plate, gated or reverse. gated cuts the tail off once the input has been quiet for a while (decay sets the hold time). reverse lets the tail swell up (decay sets its length).
decay	Reverb time, 0.2 to 20 s, until the tail has fallen by 60 dB.
hall tone	Damping, 500 Hz to 12 kHz. Lower values darken the tail the longer it rings.
space	Size of the hall, 0 to 100 %. 50 is the size of the program.
grit	Hardware limits of the hall, 0 to 100 %: input and output held at a lower sample rate without any filter, feedback cut to fewer bits. The tail turns grainy and still dies away.
hall	Balance between signal and hall at constant power, 0 to 100 %.

TAPE	
drive	Saturation, 0 to 100 %, set for tracks around -18 dBFS. A slow level match keeps the track about as loud as before.
wow	Slow pitch drift, 0 to 100 %. At 100 the pitch moves about 30 cents.
flutter	Fast pitch wobble at 6 to 10 Hz, 0 to 100 %. At 100 the pitch moves about 15 cents.
age	Wear, 0 to 100 %: the highs fall from 19 kHz to 2.2 kHz, the lows are cut up to 110 Hz, and above about 50 % the level drops out now and then.
hiss	Noise, 0 to 100 %, up to about -37 dB. It runs through the highs of age.

MIX AND OUTPUT	
mix	Dry input against all four stages, 0 to 100 %.
output	Level after all stages and the mix, -24 to +12 dB.

The stages run at the sample rate of Live and sound the same at 44.1, 48 or 96 kHz. The bit and rate reductions, the grit of the hall and the glitches are meant as they are; they are not cleaned up.