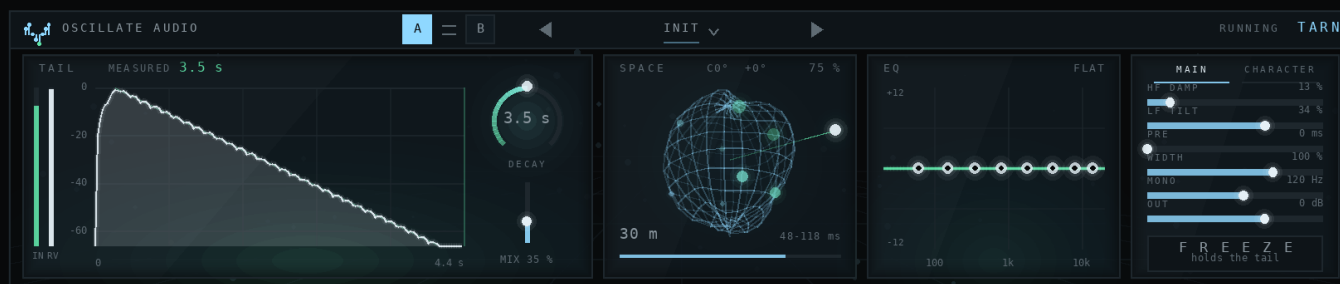


WHAT IT DOES

Tarn is a reverb for the long end: decays from 0.2 up to 60 seconds, a freeze that holds without drifting, and a density control that does not change the length of the tail. Drop TARN.amxd on any audio track. Keep tarn_ui.js in the same folder - the device looks for it next to itself.



Computed rendering of the interface, not a screenshot.

THREE FIELDS, AND EACH ONE IS ALSO THE CONTROL

01 TAIL DRAG X DECAY Y MIX OR THE RING

A level writer in decibels showing the actual wet signal leaving the reverb. Behind it sits a straight line: the decay you set. An exponential decay is a straight line in decibels, so you can see at a glance whether the tail is doing what the setting says. The ring on the right is DECAY as a knob - drag it up and down; the bar below it is MIX. Under freeze the line is horizontal.

02 SPACE X SIZE Y DENSITY DRAG THE LIGHT

A breathing wire body: its size is SIZE, DECAY stretches it, DENSITY smooths it, and the signal runs waves over its skin. The eight lights on it are the delay lines. The light outside on a thread is where the reverb sits - drag it left and right (azimuth) or up and down (elevation). With MOTION it circles by itself. Cmd-drag rotates the view.

03 EQ DRAG A HANDLE DBL RESET

Eight bands on the wet signal only, plus or minus 12 dB, fixed centres from 60 Hz to 14 kHz. The curve is computed from the same filter coefficients the reverb runs, not drawn. The dry signal is never touched.

Everywhere: hold Shift while dragging for ten times finer control, double-click to return to the default. The strip on the right holds HF damp, LF tilt, pre-delay, width, mono-below, output trim and freeze.



CONTROLS

SIZE	5 to 200 m, default 30 m. Modelled space. Sets the delay lengths, and with them how short the tail can get at all.
DECAY	0.2 to 60 s, default 3.5 s. The short end depends on size: a 200-metre space does not stop ringing in half a second.
HF DAMP	0 to 100 %, default 13 %. How much faster the highs decay than the mids, up to twenty times. A ratio, not a fixed corner frequency - change the decay and the colour stays.
LF TILT	-100 to 100 %, default 34 %. Bipolar. Below zero the bass rings longer than the mids, above zero shorter - up to four times either way. Real stone rooms sit in the minus.
DENSITY	0 to 100 %, default 75 %. How quickly the tail becomes dense. Does not change its length.
PRE	0 to 250 ms, default 0 ms. Delay before the reverb.
WIDTH	0 to 140 %, default 100 %. Mono to wide.
MONO	0 to 400 Hz, default 120 Hz. Below this frequency the reverb stays centred.
OUT	-24 to 12 dB, default 0 dB. Trim on the wet signal, before the mix. A sixty-second room collects about 8 dB - this takes it back.
MIX	0 to 100 %, default 35 %. Equal power. At 100 percent the dry signal is off.
FREEZE	Mutes the input, switches damping off and sets the feedback to exactly 1.0. The mixing matrix is a rotation and every read position is a whole sample, so there is nothing to lose.

PRESETS

Thirty-six named states. Click the name in the title bar and the whole list drops over the device: tools on the left, measured rooms in the middle, your own on the right - all of it at once, nothing to scroll. The arrows next to the name still step to the neighbour. Presets write real Live parameters, so they automate and undo like any other move. The bar shows CUSTOM as soon as one value differs - it cannot show a name the device is not actually on.

SAVE CURRENT asks for a name and keeps the ten values the factory presets carry. Your presets are stored in Documents/oscillate-halo-presets.txt, not inside the device, so an update cannot overwrite them and you can carry the file to another computer. Eight of them; cmd-click one in the list to delete it.

Init	Discrete	Terry's Warehouse	Nashville Church
Small Room	Mono Core	Bottle Dungeon	Clifford's Tower
Live Room	Send Return	Tyndall Monument	Typing Room
Plate	York Minster	Innocent Tunnel	Stairwell
Dark Plate	Hamilton Mausoleum	Creswell Crags	Sports Hall
Vocal Air	Maes Howe	Koli Forest	Hendrix Hall
Snare Room	Newgrange	Central Hall	Lime Kiln
Sixty	R1 Reactor Hall	Concert Hall	Trollers Gill
Open Field	Usina del Arte	Lady Chapel	Wheldrake Wood



EIGHT - BAND EQ

Centres at 60, 150, 350, 800, 1.8k, 4k, 8k, 14k. Bands 2 to 7 are peaks (Q 0.9), the first is a low shelf and the last a high shelf. Plus or minus 12 dB each, default flat. It sits after the reverb and before the mix, so it shapes the tail and leaves the dry signal alone - use it to take the mud out of a long room or to make a plate sparkle without touching the source. Each band is a Live parameter: automate it, map it, and it undoes like anything else. Double-click in the field to flatten all eight.

SPACE

Where the reverb sits, as heard on headphones: the far ear gets the sound later (up to 0.65 ms), quieter, and with the highs shaded by the head; sources behind you or above you lose a little air. On speakers it behaves as an equal-power pan. The dry signal stays where it was.

AZIMUTH	-180 to 180 deg, default 0 deg. 0 is straight ahead, positive is right, negative is left, 180 is behind. Automate it to walk the tail from left to right.
ELEVATION	-90 to 90 deg, default 0 deg. Up to 90 degrees above or below. Height is a subtle cue - it dulls the sound a little rather than moving it.
MOTION	0 to 2 rps, default 0 rps. Revolutions per second around you. 0 is still. The light in the SPACE field shows where the reverb is at any moment.

All three are neutral at their defaults - TARN with azimuth 0, elevation 0 and motion 0 is exactly the reverb it was before they existed.

CHARACTER (THE SECOND PAGE OF THE STRIP)

MOD	0 to 100 %, default 50 %. How much the delay lines drift against each other. 0 is a still room and the most realistic; 50 is where the tail stops ringing without any audible chorus; 100 is lush and slightly unreal.
DIFFUSION	0 to 100 %, default 70 %. How wide the diffuser in front of the tank spreads the first echoes. Low for percussion that should keep its transient, high for a wash.
EARLY	0 to 100 %, default 30 %. Level of the early reflections taken from the diffuser. 0 leaves only the tail.
ATTACK	0 to 100 %, default 30 %. Where the tank is fed from: 0 takes the first diffuser stage, a sharp onset; 100 takes the fourth, a soft bloom.
BASS XO	80 to 800 Hz, default 250 Hz. Crossover of the LF TILT: below this frequency the bass decays longer or shorter than the mids.



FREE AND PRO

FREE	Every control, decays to 12 seconds, the twelve tool presets. A complete reverb - no noise bursts, no time limit.
PRO	Decays to 60 seconds, FREEZE, A/B compare, the twenty-four measured rooms. Locked items stay visible with a small padlock.
UNLOCK	Click FREE in the title bar, enter your checkout email, then the serial TARN-PRO-XXXX-XXXX-XXXX-XXXX. Offline, no account. Saved to Documents/oscillate-licenses.txt - keep that file, it works on every computer you use.

Honest note: Max for Live devices are open patchers. The check keeps honest people honest; it is not copy protection, and it never phones home - nothing on a stage should depend on a server.

MEASURED

Decay	within 5.9% of the setting from 0.5 to 60 s
Tone	10.55 / 10.13 / 10.21 s at 125 Hz, 1 kHz, 8 kHz (10 s setting)
Freeze	-0.040 dB over 85 seconds
Density	8.04 to 8.16 s across the whole density range (8.00 s target)
Build-up	300 to 840 ms to full echo density

All of it from an impulse response at 48 kHz, produced by the reference implementation that ships with the source. No figure here was typed in by hand.

NOT MEASURED

CPU load. Until it has been read off Live's own meter it is not stated anywhere - not on the product page and not here.