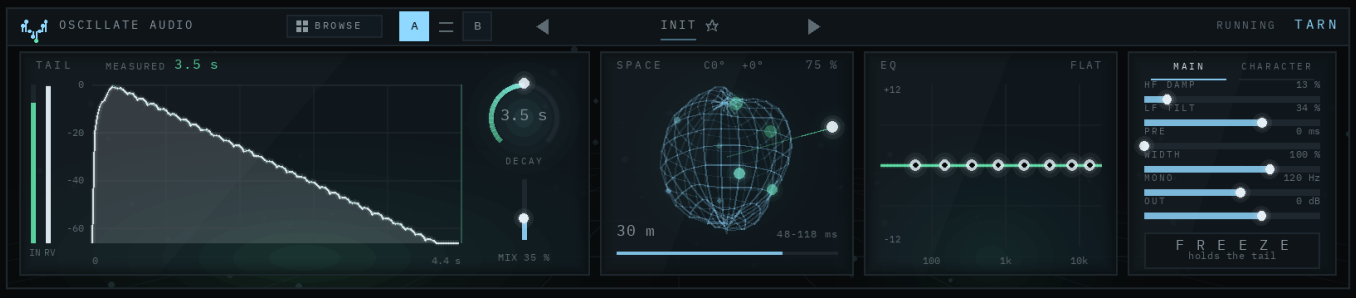
## WHAT IT DOES

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

Seventeen named states: twelve tools and five rooms from CAIRN - York Minster, the Hamilton Mausoleum, the R1 reactor hall, Maes Howe and the Innocent Railway Tunnel, rebuilt from the same measurements CAIRN is made of. Click BROWSE or the name in the title bar and the browser drops over the device: on the left ALL, STARRED, TOOLS, OPENAIR ROOMS, YOUR PRESETS and five sound groups; on the right a tile per preset with a small decay picture drawn from its own values (length = DECAY, gap = PRE, tick spacing = SIZE, tick count = DENSITY). Click loads and keeps it open, double-click loads and closes, CLOSE or a second click on BROWSE closes. The star on a tile or next to the name marks a favourite. 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 AS asks for a name and keeps the ten values the factory presets carry. Your presets are stored in a small text file in your Documents folder (oscillate-tarn-presets.txt), not inside the device, so an update cannot overwrite them and you can carry the file to another computer. Save the Live Set once before the first SAVE AS - that is how TARN finds your Documents folder. Eight of them; cmd-click one in the browser or load it and click DELETE to remove it. Stars live in a text file next to it (oscillate-tarn-favourites.txt, or Oscillate Audio/TARN/Favourites.txt if that folder exists).

| | | | |
|---|---|---|---|
| Init | Vocal Air | Mono Core | Maes Howe |
| Small Room | Snare Room | Send Return | Innocent Tunnel |
| Live Room | Sixty | York Minster | |
| Plate | Open Field | Hamilton Mausoleum | |
| Dark Plate | Discrete | R1 Reactor Hall | |

## 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 WHAT CAIRN ADDS

| | |
|---|---|
| **FREE** | Everything in this manual: every control, decays to 60 seconds, FREEZE, A/B, all seventeen presets. No serial, no account, no time limit, nothing locked. |
| **ROOMS** | The five rooms are numbers fitted to measured impulse responses (OpenAIR, University of York, CC BY 4.0) - TARN contains no recordings; credits in Licenses/OpenAIR.txt. CAIRN plays the real impulse responses of all twenty-five rooms and places the source in 3D: oscillateaudio.com/products/cairn.html |

## A / B

Two slots for the whole sound, left of the preset name in the title bar. Click B and TARN keeps what you had in A; click A and it comes back - switch as often as you like, nothing is lost. The double line between them copies the active slot onto the other, so both start from the same point.

## UPDATES

When a newer version of TARN exists, the title bar says so: UPDATE x.y · FREE ↗, framed in green, between the preset bar and IDLE/RUNNING (while a message is shown it steps aside). Every update is free.

| | |
|---|---|
| **Click** | Opens the download page on oscillateaudio.com in your browser - normally your account at oscillateaudio.com/my. |
| **Hover** | A label under the title bar tells you what is new. |
| **Cmd-click** | On the notice: stops checking for updates. |
| **Switch** | Click BROWSE to open the preset browser. Bottom left: UPDATES: ON or OFF - click to switch. |
| **Often** | At most once a day, a few seconds after loading. It never holds up Live; without internet nothing changes. |
| **Sent** | Nothing about you. TARN only asks for the number of the latest version; the comparison happens on your machine. Your choice is kept in a small text file in Documents. |

Support: hello@oscillateaudio.com · oscillateaudio.com · This manual describes TARN 1.0.0.