ORRA AUDIO · PRODUCT MANUAL

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ORRA SPACE

REVERB & TAPE DELAY

Five reverb spaces and a tape delay, cross-pollinated.
Clean at the core. Vintage on top. Blended to taste.

Orra Audio LLC · 2026

Welcome

Orra Space is a **dual-engine space processor**: five distinct reverb algorithms running in **parallel** with a tape-style delay. The two engines are not stacked in series — both are fed from your dry signal at once, and a single **BLEND** control crossfades between them. A kick of reverb, a long tape echo, or any mix of the two sits under your source, balanced exactly where you want it.

The reverb is genuinely five engines, not one engine with presets: **Room**, **Chamber**, **Plate**, **Hall**, and **Spring**, each with its own bespoke DSP. A global **Character** switch — Vintage or Modern — sets the overall voicing, and **Motion**, **Age**, and **Shimmer** take it from pristine to worn. The core is built to sound clean and modern; the vintage flavour is added on top with saturation and tape wow-and-flutter, so you choose how much of it you want.

The two engines can **cross-pollinate**. **X-Feed** feeds the delay's output back into the reverb, or the reverb's tail into the delay, for blooming, evolving textures neither engine makes alone. On the output, the wet signal has its own tilt **TONE**, stereo **WIDTH**, low/high cut, a **DUCK** that keeps the source up front, and a **FREEZE** that holds the tail forever.

Everything is shown on one large analyzer with five views — predicted decay and delay taps, the live wet spectrum and EQ, a stereo vectorscope, the ducking history, and an animated signal-flow map. The ducker can key from the track itself, the host's sidechain, or any **Orra Link** channel, so the reverb can step out of the way of a vocal on a completely different track. See the *Ducking & Orra Link* chapter.

This manual runs front-to-back: start with the *Interface Tour*, read *How the Two Engines Work* for the one idea that makes the rest obvious, then skim *The Controls*. Later chapters cover the five reverb spaces, the analyzer views, ducking with Orra Link, and a tips section.

System Requirements

Formats	VST3, Audio Unit (AU), and AAX (Pro Tools).
macOS	10.13 or later (Universal 2: Apple Silicon + Intel).
Channels	Mono or stereo (input and output matched), with an optional mono or stereo sidechain input bus for ducking.
Latency	Zero. Orra Space reports no added latency in any mode — including when ducking is keyed from an Orra Link channel.

Interface Tour

The window is organised top-down into four horizontal regions on a brushed-bronze faceplate. The header and the control cards are raised out of the plate; the analyzer is recessed into it.

1. Header

Spans the top. On the left, the **ORRA SPACE** wordmark — click it any time to open the licence & info panel. Next to it, the **Character** selector (Vintage / Modern). In the centre, the preset browser: **<** and **>** step through patches and the name in the middle opens the full list (an edited preset is marked with a dot until you save). On the right, the **UI scale** selector (75–200 %) and the circular **?** tips toggle, which turns hover tooltips on and off.

2. View Tabs

A raised strip just below the header carries five tabs — **TIMING**, **TONE**, **STEREO**, **DUCK**, and **FLOW**. They switch what the analyzer shows; the active tab is underlined in gold. Each view is tied to a group of controls, so the analyzer always reflects the part of the plugin you are working on. See *The Analyzer*.

3. Analyzer

The large recessed screen is the visual centre of the plugin. Depending on the selected tab it shows the predicted reverb decay and delay taps over a musical grid, the live wet spectrum and EQ curve, a phosphor stereo vectorscope, the ducking gain-reduction history, or an animated map of the signal flow. Most views are displays driven by the knobs below — but the **TONE** view is a live EQ you shape by dragging directly on it (see *The Analyzer*).

4. Control Cards

Three raised cards along the bottom group the knobs by job. **REVERB** holds the space selector plus SIZE, PRE-DELAY, MOTION, SHIMMER, and a **STEREO** input toggle. **DELAY** holds the delay mode and sync controls plus TIME, FEEDBACK, AGE, and WIDTH. **OUTPUT** holds the two engines' balance and the wet finishing controls — BLEND, MIX, X-FEED, WIDTH, TONE, LO CUT, HI CUT — plus FREEZE and the DUCK section. Each card's most important knob — **SIZE**, **TIME**, and **MIX** — is drawn larger as its hero control. **Double-click** any knob to return it to default; **double-click its value** to type an exact number.

How the Two Engines Work

It is worth thirty seconds on the core idea, because the rest of the plugin follows from it.

Most reverb-and-delay plugins run the two effects **in series** — the delay feeds the reverb, or vice versa, in a fixed order. Orra Space runs them in **parallel**. Your dry signal is sent to the reverb engine and the tape delay at the same time, and a single **BLEND** knob crossfades between their two outputs: fully left is pure reverb, fully right is pure delay, the middle is an equal mix. The blended result is the plugin's *wet* signal.

A second knob, **MIX**, sets how much of that wet signal you hear against your dry input (an equal-power crossfade, so the overall level stays steady as you turn it). So BLEND chooses *which* ambience, and MIX chooses *how much* — two independent decisions instead of one tangled one.

The two engines can also feed each other. **X-Feed** (crossfeed) injects one engine's output into the other's input: turned toward the reverb, the tape delay's repeats spill into the reverb and bloom into a wash; turned toward the delay, the reverb tail re-enters the delay and is chopped into rhythmic echoes. At centre the engines run cleanly in parallel. Small amounts add life; large amounts build evolving, self-feeding textures.

Finally, the **Character** switch and the **Age** and **Motion** controls add the vintage layer. The DSP underneath is voiced clean and modern; Vintage mode, tape Age, and the wow-and-flutter that Motion drives are applied *on top*, so "vintage" is a dose you dial in, not a colour baked into the sound.

Signal flow

dry input → **reverb engine** (Room / Chamber / Plate / Hall / Spring) and **tape delay**, in parallel → X-FEED cross-feeds one into the other → **BLEND** crossfades the two into the wet bus → wet TONE / WIDTH / LO CUT / HI CUT → DUCK → **MIX** against the dry → output. PRE-DELAY offsets only the reverb onset; the delay is not delayed by it.

The Controls

Grouped across three cards plus the header. All knobs are automatable, double-click to default, and double-click-to-type. Ranges below are the user-facing values shown on each control.

CHARACTER (header)

Control	Range	Purpose
Character	Vintage / Modern	The global voicing of both engines. **Modern** is clean, smooth and open, with longer, brighter tails. **Vintage** adds saturation, darkens the tone, and deepens the wow-and-flutter for a more worn, characterful sound. It is an orthogonal axis — every space and every preset can be either.

REVERB

The space, its length, and its movement. The space selector is the headline control — it chooses one of five distinct algorithms (see *The Reverb Spaces*).

Control	Range	Purpose
Reverb type	Room / Chamber / Plate / Hall / Spring	The reverb algorithm. Five bespoke engines, not presets of one. Switching crossfades smoothly so you can audition spaces while playing.
Size	shows RT60 in seconds	Reverb size and decay length. The value read-out shows the **real RT60** decay time of the *currently selected* space — so the number means the same thing in a Plate as in a Hall, and it changes when you switch spaces. Type a time to match it exactly. *Hero knob.*
Pre-Delay	0 to 120 ms	The gap between the dry hit and the reverb onset — the sense of a room's size and the distance to its walls. Affects the reverb only; the tape delay is not offset by it.
Motion	0 to 100 %	A movement macro. It modulates the reverb tail for a living, breathing space *and* drives the tape delay's wow-and-flutter. Low for a still, modern tail; high for organic drift and vintage wobble.
Shimmer	0 to 100 %	An octave-up pitch-shifted voice recirculated inside the reverb. A little adds sparkle to the tail; high settings bloom into a sustaining, choral drone. Works in all five spaces.
Stereo	on / off	Reverb input routing. **On** (the default) feeds the reverb in true stereo, so a panned or wide source keeps its position and width in the tail. **Off** sums the input to mono first — the classic, guaranteed mono-compatible behaviour and a tighter, more centred wash. The tape delay is unaffected; it has its own Mode.

DELAY

A tape-style delay with its own routing, timing, and wear. The mode and sync controls live in the card header; the knobs set time, regeneration, and tape age.

Control	Range	Purpose
Mode	Mono / Stereo / Ping-Pong	**Mono** is one centred delay line; **Stereo** runs independent left and right times; **Ping-Pong** bounces the repeats between the channels.
R-Ratio	×0.50 to ×2.00, or Link	Sets the right-channel time as a multiple of the left (so you can put a dotted or triplet value on one side). **Link** makes both sides equal. Has no effect in Mono mode.
Sync	on / off	Locks the delay to the host tempo. When on, the note-division selector beside it takes over from the TIME knob.
Division	1/16 to 1/1 (incl. dotted & triplet)	The tempo-synced note value used when SYNC is on — from 1/16 up to a whole note, including triplet (T) and dotted (.) values.
Time	40 to 1200 ms	Delay time in free-run (SYNC off). The DELAY card's hero knob. *Hero knob.*
Feedback	0 to 98 %	How much of each repeat is fed back for the next — from a single slap to long, regenerating trails. High settings interact with AGE for self-saturating tape build-ups.
Age	0 to 100 %	Tape wear on the delay: progressive bandwidth loss and saturation on the repeats, so each echo is darker and softer than the last. 0 % is a clean digital delay; high settings are an old, worn machine.
Width	0 to 100 %	The stereo width of the delay's output (mid/side). 100 % is full width; 0 % collapses the repeats to mono. Independent of the reverb and of the OUTPUT width.

OUTPUT

Where the two engines are balanced and the wet signal is finished. BLEND and MIX are the two big decisions (see *How the Two Engines Work*); the rest shape and place the wet tail. FREEZE and DUCK sit in the card's top row. The DUCK section is covered in full in *Ducking & Orra Link*.

Control	Range	Purpose
Blend	Reverb ↔ Delay	Crossfades between the reverb and tape-delay engines. Fully left is pure reverb, fully right is pure delay, centre is an even mix.
Mix	0 to 100 % (dry ↔ wet)	Overall dry/wet balance, equal-power. Use it on an insert; leave it high (or full wet) on an aux/send. *Hero knob.*
X-Feed	→ Verb / → Dly (OFF at centre)	Cross-pollination between the engines. Turned toward the reverb (→ **Verb**) the delay's repeats spill into the reverb for washes and blooms; turned toward the delay (→ **Dly**) the reverb tail is chopped into rhythmic echoes. Centre is OFF — the engines run cleanly in parallel.
Width	0 to 200 % (100 % = unchanged)	Stereo width of the whole wet signal (mid/side). 0 % is mono, 100 % is unmodified, above 100 % widens. Mono-safe — it never moves the dry signal.
Tone	dark ↔ bright	A tilt EQ on the wet signal, pivoting around 650 Hz. Left darkens the tail, right brightens it, centre is flat — a fast way to sit the ambience in a mix.
Lo Cut	OFF, 20 Hz to 2 kHz	High-pass on the wet signal. Clears low end out of the tail so it doesn't muddy the mix. OFF at minimum.
Hi Cut	1 kHz to 20 kHz, OFF	Low-pass on the wet signal. Darkens and tames the top of the tail. OFF at maximum.
Duck	0 to 100 %	Ducks the wet signal under a key source so the dry stays up front, recovering as the source pauses. The **KEY** selector beside it chooses what triggers it — see *Ducking & Orra Link*.
Freeze	on / off	Captures and holds the reverb tail indefinitely — an infinite pad. The input is muted into the reverb while frozen, so the held wash stays clean. A latching, automatable switch.

The Reverb Spaces

The **Reverb type** selector chooses one of five algorithms. They are genuinely separate engines with their own DSP — not a single reverb re-tuned — so they respond differently to SIZE, MOTION, and Character. Switching crossfades smoothly, so you can compare spaces on a held sound.

Space	Character
Room	A multi-tap early-reflection front-end feeding a short tail. Tight, fast, and believable — for adding dimension and depth without an obvious "reverb" sound. The shortest decays live here.
Chamber	Dense all-pass diffusion into a band-limited medium tail. Smooth and even, between a room and a hall — a natural, uncoloured ambience that flatters vocals and acoustic sources.
Plate	A studio plate modelled on the classic steel-plate sound: bright, dense, and immediate, with a fast build and no early-reflection gap. The go-to for vocals, snares, and pop sheen. (Its natural decay never drops to zero, so even the smallest SIZE keeps a short, lush tail.)
Hall	The signature engine — a large feedback-delay-network hall with frequency-dependent decay and a low-end bloom. Lush, three-dimensional, and able to go from a concert hall to an enormous, slow wash. The default space.
Spring	A physically-modelled multi-spring tank voiced toward a smooth studio reverb rather than a guitar amp: five springs of different lengths with inter-spring coupling, dispersion, and flutter. Characterful and retro, with the springy "drip" available when you push it.

Tip: SIZE reads as RT60 seconds, and the same knob position gives a different RT60 in each space — a Room at "1.0 s" and a Hall at "1.0 s" are genuinely the same tail length, just with different character. Use the read-out (or type a time) to match decays across spaces.

The Analyzer

The recessed screen shows one of five views, selected by the tab strip above it. Each is tied to a part of the plugin, so the picture always matches what you are adjusting. Four of the five are displays driven by the knobs below; the **TONE** view is a live EQ you can shape by dragging directly on the curve.

View	What it shows
Timing	A prediction of the ambience over time on a musical grid. The gold curve is the reverb's decay envelope; the cyan bars are the delay taps, laid out by mode (one train for Mono, two mirrored trains for Stereo, an alternating bounce for Ping-Pong). A dashed marker shows the RT60 point, and the read-out names the space, RT60, delay time and nearest note value, mode, blend, and host tempo. Driven by the controls, not live audio — it updates the instant you turn a knob.
Tone	The live wet spectrum (gold, with a slow peak-hold) behind the combined wet **EQ response** curve (cyan) of LO CUT, HI CUT, TONE, and a built-in **three-band parametric EQ**. This view is **interactive**: drag any of the three numbered bell points to set its frequency (left/right) and gain (up/down), scroll on a point to tighten or widen its Q, and double-click a point to flatten it. The LO CUT and HI CUT markers drag too. The bells start flat, so they colour nothing until you move one — ideal for surgically notching a resonance out of a tail. Everything here mirrors the footer TONE / LO CUT / HI CUT knobs and is fully automatable.
Stereo	A phosphor vectorscope (goniometer) of the wet output with afterglow, plus a correlation meter beneath it. A vertical trace is mono; a wide spread is stereo; a strong tilt warns of phase issues. Use it to check mono-compatibility of the tail.
Duck	The ducking gain-reduction history, scrolling left to right, with a live read-out of the current reduction. Shows how hard, and how rhythmically, the wet is being pulled down by the key source.
Flow	An animated map of the signal routing: IN feeding the REVERB and DELAY engines and on to OUT, with particles flowing along the active paths. Line thickness tracks BLEND and MIX, a labelled arrow shows the X-Feed direction and amount, and a dry path shows the MIX balance. The clearest way to understand how the plugin is wired at a glance.

The ? tips toggle in the header turns on hover tooltips for every control and for the analyzer — handy while you are still learning the layout.

Ducking & Orra Link

The **DUCK** control on the OUTPUT card pulls the wet signal down while a key source is playing and lets it recover as the source pauses — the classic trick for keeping a vocal or lead clear of its own reverb. The **KEY** selector beside it chooses what triggers the duck. It is a **multi-select**: tick any combination, and the sources are combined by *maximum* (the duck follows whichever is loudest at each moment).

- **Internal** — the default. The duck keys off the signal passing through Orra Space (the track it sits on). Insert it on a vocal and the reverb ducks under that vocal automatically.
- **Sidechain** — the host's dedicated sidechain bus. Route any track to Orra Space's SC input in your DAW and it drives the duck.
- **Link 1 – Link 36** — one of 36 cross-DAW channels fed by the companion **Orra Link** plugin. Key the reverb from a track that isn't feeding it at all — duck a big hall under the lead vocal, or keep a wash out of the way of the kick — even in hosts whose routing won't allow it.

The Orra Link companion plugin

Orra Link is a tiny sender-only plugin shared across the Orra range. It broadcasts a track's audio onto a numbered channel in a shared bus that every Orra plugin in the project can read. Its controls are a **CHANNEL** selector (Unassigned, then Link 1–36), a **SEND** toggle (mute the broadcast without giving up the channel), and an **OUTPUT** gain for staging the trigger feed. Drop it on a track, pick a channel, then tick that channel under KEY in Orra Space.

To key off several discrete tracks at once, put each on its own Link channel and tick them all — Orra Space combines them. (Putting two Link instances on the *same* channel will not sum them; give each its own.)

Notes

No added latency. Ducking is forgiving of a sub-block timing offset, so Orra Space reads the latest audio from a Link channel without delaying your signal — it stays a zero-latency plugin even with a Link key.

Sandboxed hosts. A few DAWs run AU plugins in sandboxes that can block the shared-memory connection. If the bus can't be opened, Link sources simply read as silent — keep **Internal** ticked (or use the host's Sidechain bus) as a fallback that always works.

Tips & Workflow

Choose the space first

Pick the reverb type before anything else — Room for depth, Chamber for natural ambience, Plate for sheen, Hall for size, Spring for character. SIZE, MOTION, and Character all behave differently per space, so the space is the decision the rest hang off.

BLEND chooses the flavour, MIX chooses the amount

Set BLEND for the reverb/delay balance you want, then set MIX for how present the whole effect is. On an aux or send, push MIX to full wet and control the level with the send. On an insert, MIX is your dry/wet.

Use the RT60 read-out to match decays

SIZE shows the real decay time of the selected space. To match a delay to the room, or to A/B two spaces at the same length, read (or type) the RT60 — "2.0 s" means the same tail length in any space.

A little X-Feed goes a long way

Start X-Feed near centre and add a touch. Toward the reverb it blooms the delay into the reverb for evolving washes; toward the delay it turns the reverb tail into rhythmic echoes. Watch the **FLOW** view to see the direction and amount as you turn it.

Keep the source clear with DUCK

On a vocal or lead, raise DUCK with KEY on **Internal** so the reverb steps back while the source sings and blooms in the gaps. To duck a reverb under a *different* track, send that track over Orra Link and tick its channel under KEY.

Tuck the tail in with TONE and the cuts

If the reverb muddies the mix, pull LO CUT up to clear the low end and ease TONE darker; if it disappears, brighten TONE and lift HI CUT. The **TONE** view shows exactly what you're doing to the wet spectrum.

Freeze for pads and transitions

Engage FREEZE to hold the current tail as an infinite pad — great under a breakdown or to catch a chord and let it ring. The input mutes into the reverb while frozen, so the held wash stays clean. It's automatable, so you can drop a freeze on a downbeat.

Use the “?” tips toggle

The circular **?** button at the far right of the header turns hover tooltips on and off. With tips on, hover any control to read what it does — handy while you're still learning the plugin.

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