VEIRA

VINTAGE DIGITAL REVERB

VEIRA Reverb Blue

User Manual

The vintage digital one of the four VEIRA colour reverbs: the lush, chorused halls and plates of the classic early-1980s digital rack reverbs, with ERA, the converters from a clean late-80s unit to the grainy 12-bit sound of the first ones.



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Welcome

Thank you for choosing **VEIRA Reverb Blue**. It brings back the sound of the classic early-1980s digital rack reverbs: the lush, chorused halls and plates that filled the ballads, snares, electric pianos and synth pads of that decade. Inside it is a ring of diffusers and delays whose read points wander at random, so the tail moves and choruses instead of ringing, heard through converters (ERA) that go from a clean late-80s unit to the band-limited, grainy 12-bit sound of the first ones. It is the blue one of the four VEIRA colour reverbs (White, Red, Gold and Blue), and it is painted like VEIRA Comp Blue, Limiter Blue, EQ Blue and Gate Blue.

What makes it different

- **Five programs**, as on the classic units: HALL, PLATE, CHAMBER, ROOM and CONCERT, each its own ring of stages and its own early reflections.
- **A tail that sings.** The ring's delays wander at random, never in a repeating cycle, so the tail choruses gently (MOD DEPTH, MOD RATE); on a steady tone, the wander takes 1–3 dB off the small rings' most persistent peaks.
- **The decay of the era.** DECAY in the mids, LOW X and CROSSOVER for the lows, and HIGH CUT darkening the tail at every pass round the ring, as the classic units did. Measured, the reverb time is on average within 3.4 % of the design from 63 Hz to 8 kHz.
- **ERA: the converters.** From a clean 16 kHz, 24-bit unit to 10 kHz and 12 bits that change their range with the signal, as the first units did, so the grain follows the music down.
- **Clean at the edges.** No latency. At MIX 0 % the output is the input, bit for bit. Changing the program or any control while you play doesn't click, and when the music stops the tail ends in true digital silence.

How this manual is organised. *Getting started* covers installing and activating. *The panel at a glance* names every part of the window. *How a digital reverb works* is a short primer. *Controls* and *Displays* explain every knob, button and graph with drawings. *Inserts and aux sends* covers routing, *Which colour reverb to choose* compares the four, and *Presets*, *Recipes*, *Specifications* and *Troubleshooting* close the manual.

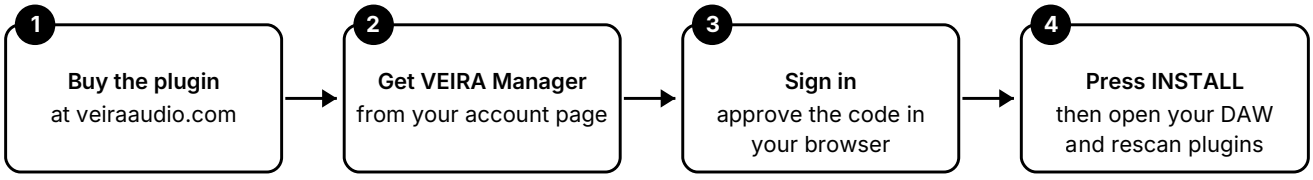
Getting started

What you need

macOS	macOS 11 Big Sur or later. Native on Apple silicon and Intel Macs (universal).
Windows	Windows 10 or 11, 64-bit.
Plugin formats	VST3 (macOS and Windows), Audio Units (macOS), and a standalone app. Pro Tools (AAX) versions arrive once they are signed for Pro Tools.
Hosts	Any DAW that loads VST3 or Audio Units: Logic Pro, Cubase, Nuendo, Ableton Live, Studio One, Reaper, FL Studio, Bitwig and others.
Account	A VEIRA account at veiraaudio.com, and the free **VEIRA Manager** app.
Internet	Needed to install and to refresh the licence. The plugin itself never goes online.

Install with VEIRA Manager

VEIRA plugins are not downloaded from the website one by one. You install them with **VEIRA Manager**, the free VEIRA app that installs, updates and activates everything you own. Its own manual covers it in full; the short version is:



One account works on up to three computers. Updates are free for life.

FIGURE 1 From purchase to first sound in four steps.

1. **Buy** VEIRA Reverb Blue at **veiraaudio.com**. It's a one-time purchase: you own it for good, with free updates.
2. **Download VEIRA Manager** from your account page (or veiraaudio.com/manager) and install it.
3. **Sign in.** VEIRA Manager shows a short code and opens your browser; confirm the code there. Your password is never typed into the app.
4. Find VEIRA Reverb Blue in the list and press INSTALL. When it says SHOW, it's installed. Open your DAW and let it rescan its plugins.

After installing, VEIRA Reverb Blue appears in your DAW under the manufacturer **VEIRA** (in Logic Pro: Audio Units ▸ VEIRA ▸ VEIRA Reverb Blue).

Activation and the licence

VEIRA Manager keeps a licence on your computer that the plugins check. It is refreshed every time VEIRA Manager opens and stays valid for 30 days offline, so you can work without internet as long as you open VEIRA Manager now and then.

Without a valid licence, VEIRA Reverb Blue still loads and works, but **its sound fades out for 1.5 seconds every 30 seconds**, and a strip along the bottom of its window says why (for example, *NOT ACTIVATED ON THIS COMPUTER. SIGN IN WITH VEIRA MANAGER.*). Clicking the strip opens your account page.

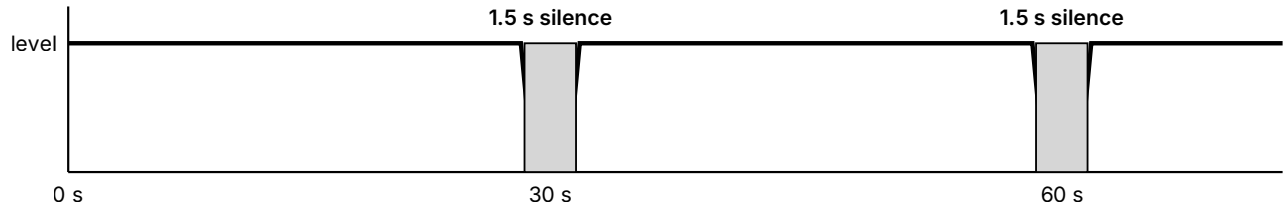


FIGURE 2 What an unlicensed copy does. With a valid licence the audio is never touched.

- **Activating while your DAW is open** takes effect within about two minutes. You don't need to reload the plugin.
- **"Not activated on this computer"**: open VEIRA Manager and sign in.
- **"Expired"**: open VEIRA Manager while online; it renews the licence at once.
- **"Not included"**: the signed-in account doesn't own VEIRA Reverb Blue. Check that you're signed in with the account you bought it with.

Formats and where the files go

VEIRA Manager puts every format in the standard place, so you never need to copy files by hand:

Format	macOS	Windows
VST3	`~/Library/Audio/Plug-Ins/VST3` (just for me, the default) or `/Library/Audio/Plug-Ins/VST3` (all users)	`C:\Program Files\Common Files\VST3` (all users, the default) or `%LOCALAPPDATA%\Programs\Common\VST3`
Audio Units	`~/Library/Audio/Plug-Ins/Components` or `/Library/Audio/Plug-Ins/Components`	(Audio Units are macOS only)
Standalone	`~/Applications/VEIRA` or `/Applications/VEIRA`	`C:\Program Files\VEIRA` or `%LOCALAPPDATA%\Programs\VEIRA`

You choose *just for me* or *all users* in VEIRA Manager's install settings.

The standalone app runs VEIRA Reverb Blue on its own, with your audio interface's input and output, which is handy for trying presets without a DAW.

The panel at a glance

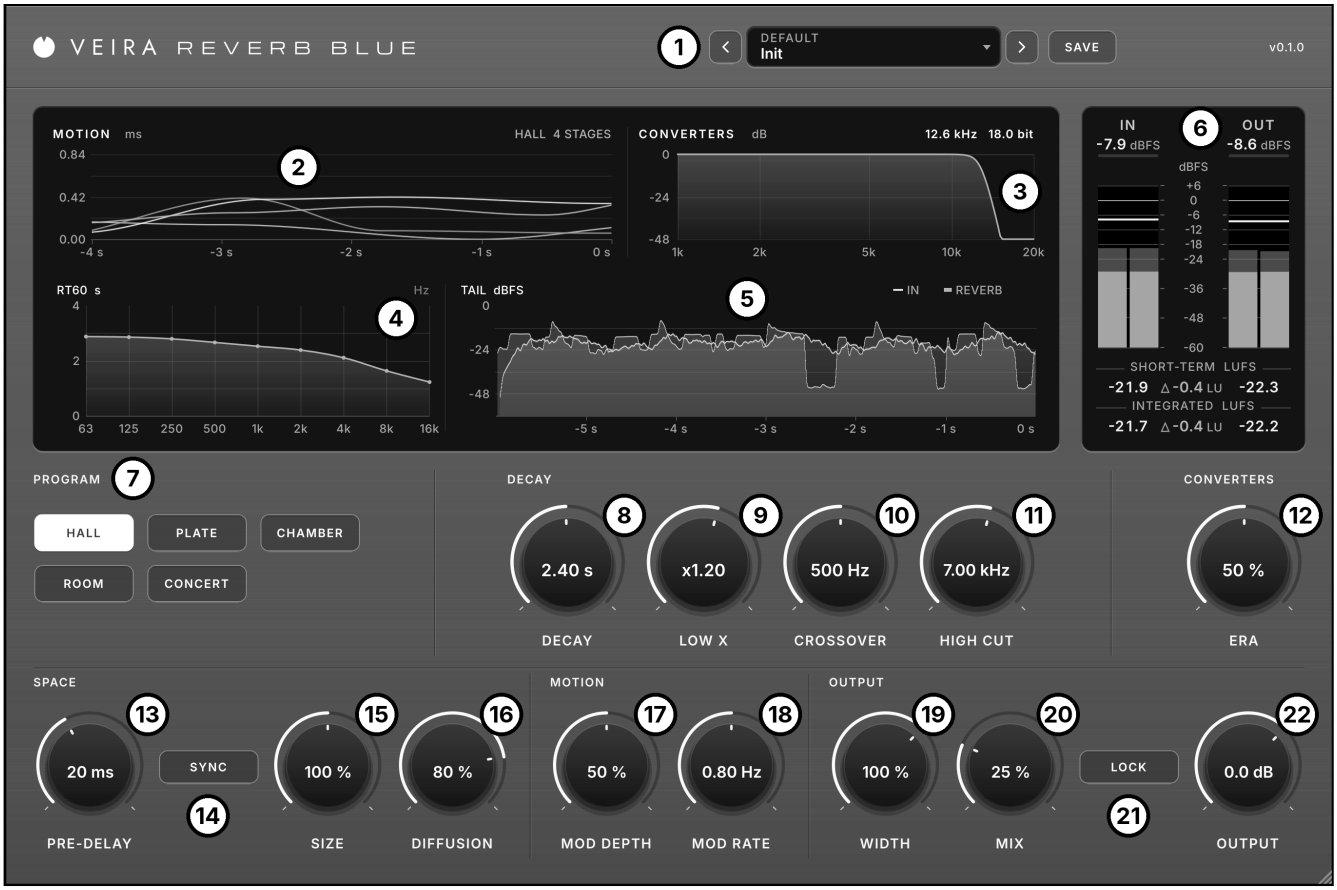


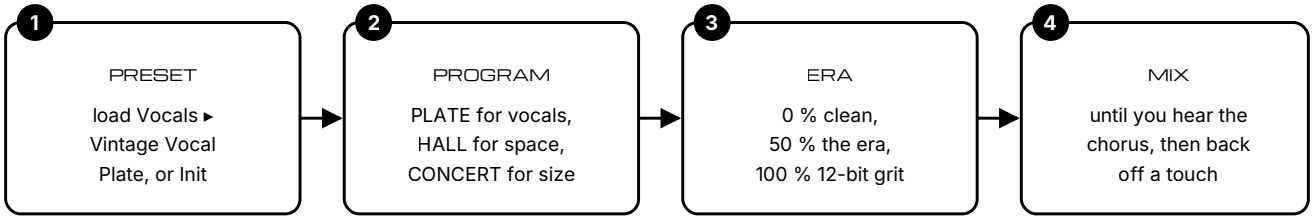
FIGURE 3 VEIRA Reverb Blue, the steel-blue unit, with its default HALL on a vocal with snare hits.

	Part	What it does
1	Preset browser	Steps through and saves presets. See *Presets*.
2	MOTION	How far each stage of the ring has wandered over the last 4 seconds.
3	CONVERTERS	The response of the converters ERA sets.
4	RT60	The reverb time per octave band.
5	TAIL	The last six seconds of the input and of the reverb.
6	Meter bridge	IN and OUT meters with short-term and integrated loudness.
7	PROGRAM	HALL, PLATE, CHAMBER, ROOM or CONCERT.
8	DECAY	The reverb time in the mids.
9	LOW X	The reverb time below CROSSOVER, times DECAY.
10	CROSSOVER	Where LOW X starts.

	Part	What it does
11	HIGH CUT	The tail darkens above it.
12	ERA	The converters: clean late-80s to grainy early-80s.
13	PRE-DELAY	The gap before the reverb (NOTE with SYNC on).
14	SYNC	The pre-delay follows the song's tempo.
15	SIZE	The size of the program's ring.
16	DIFFUSION	How fast the echoes blur into the tail.
17	MOD DEPTH	How far the ring's delays wander.
18	MOD RATE	How often they turn.
19	WIDTH	The reverb's stereo width.
20	MIX	The dry sound against the reverb.
21	LOCK	Presets leave MIX where it is.
22	OUTPUT	The final level.

The window has the MOTION and CONVERTERS displays across the top, RT60 and TAIL under them, and the meter bridge at the right. The controls sit in two rows under the captions PROGRAM, DECAY and CONVERTERS (top) and SPACE, MOTION and OUTPUT (bottom).

Quick start: an 80s vocal in four moves



On an aux instead: set MIX to 100 % and switch on LOCK (see Inserts and aux sends).

FIGURE 4 The quickest way to the sound. *Default* ▸ *Init* is a neutral start: HALL, DECAY 2.40 s, LOW X ×1.20 below 500 Hz, HIGH CUT 7.00 kHz, 20 ms of pre-delay, MOD DEPTH 50 % at 0.80 Hz, ERA 50 % and MIX 25 %.

Using the controls

Every VEIRA plugin is played like a piece of hardware. The same few parts appear on every panel:

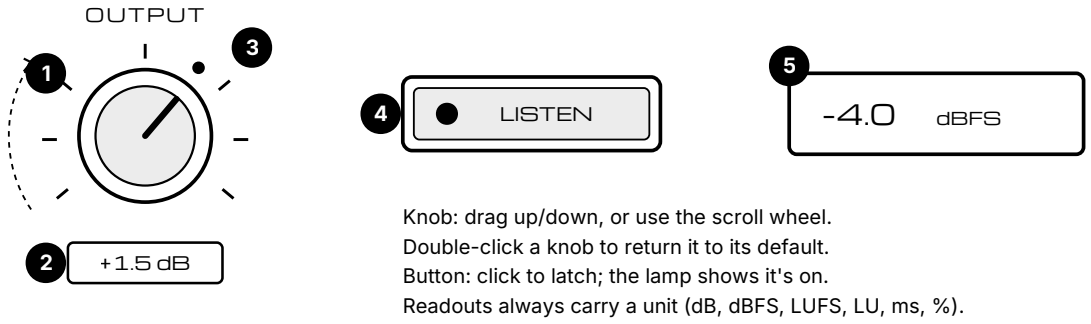


FIGURE 5 The parts you'll find on every VEIRA panel (the labels are examples).

- 1 **Knob.** Drag up to turn it clockwise, down to turn it back, or use your mouse wheel. **Double-click** returns it to its default. The engraved pointer and the small dot on the scale show where it's set.
- 2 **Value window.** The backlit window under each knob shows its exact value with its unit.
- 3 **Silkscreen label.** The control's name, as it appears in your DAW's automation list.
- 4 **Push button.** Click to switch on; the lamp lights and the cap sits lower in its bezel. Click again to switch off.
- 5 **Readout.** Live numbers update ten times a second so you can read them while the meters move. A value over 0 dBFS shows as a warning.

Tooltips: hover over any control or display for a short explanation. On displays, the tooltip depends on where you point.

Automation: every knob and button is a host parameter, so you can automate it in your DAW and control it from a MIDI controller or control surface that your DAW maps.

Units: VEIRA never shows a bare number. **dBFS** is level against digital full scale (0 dBFS is the loudest a digital signal can be); **dB** is a change in gain; **LUFS** is loudness as streaming services and broadcasters measure it; **LU** is a difference in loudness (1 LU = 1 dB).

On VEIRA Reverb Blue's panel the parts look a little different from the drawing above:

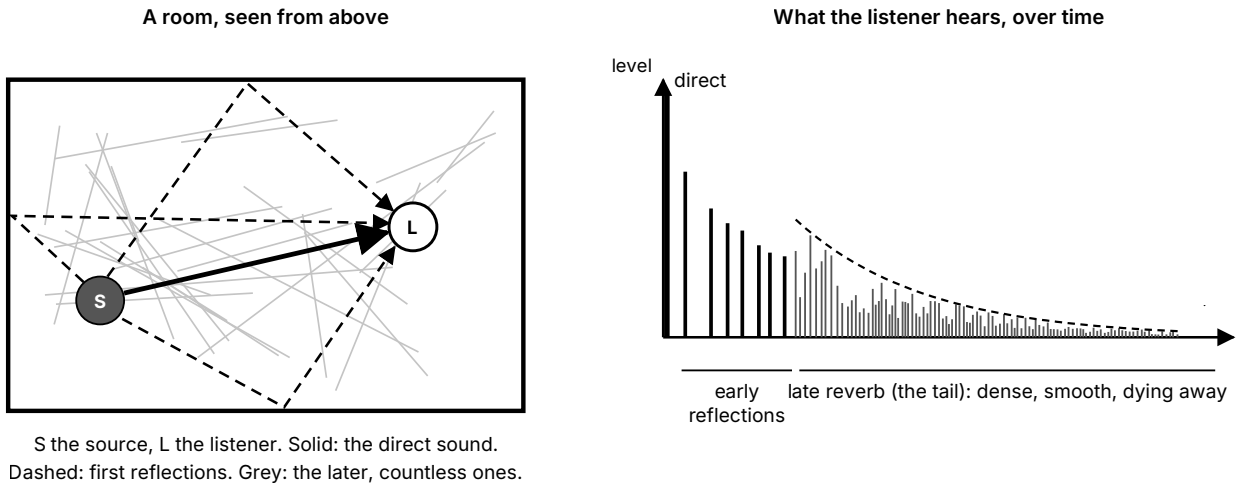
- **Knobs show their value in the middle** (2.40 s, x1.20, 500 Hz, 50 %): the knobs are black, and a ring printed in cream on the paint around each one (in print, the light arc) shows how far it is turned. The control's name is printed under the knob.
- **Type a value:** right-click a knob (Control-click on a Mac), type the new value and press Return: **3.5** for a 3.5 s DECAY, **6k** for 6 kHz, **open** for HIGH CUT. Press Escape to leave it unchanged.
- **Buttons have no lamps:** the selected PROGRAM, and SYNC and LOCK when they are on, fill with cream with blue lettering (in print, a light button); off, they are outlined wells in the paint.
- SYNC **swaps a knob:** with SYNC on, the PRE-DELAY knob gives way to NOTE in the same place.
- **Resize the window:** drag its bottom-right corner. It scales from 75 % to 200 % of its normal size (1360 × 900 points) and keeps its proportions. Your DAW saves the size with the session.
- **The face:** 1970s steel-blue paint with cream print and black knobs; the displays and the meter bridge are dark screens set into the paint. Every label on the paint stands at least 4.5:1 against it (WCAG AA).

How a digital reverb works

If you already know the classic digital reverbs, skip to *What happens inside VEIRA Reverb Blue*. If not, these pages make every control obvious.

Reverb in a room

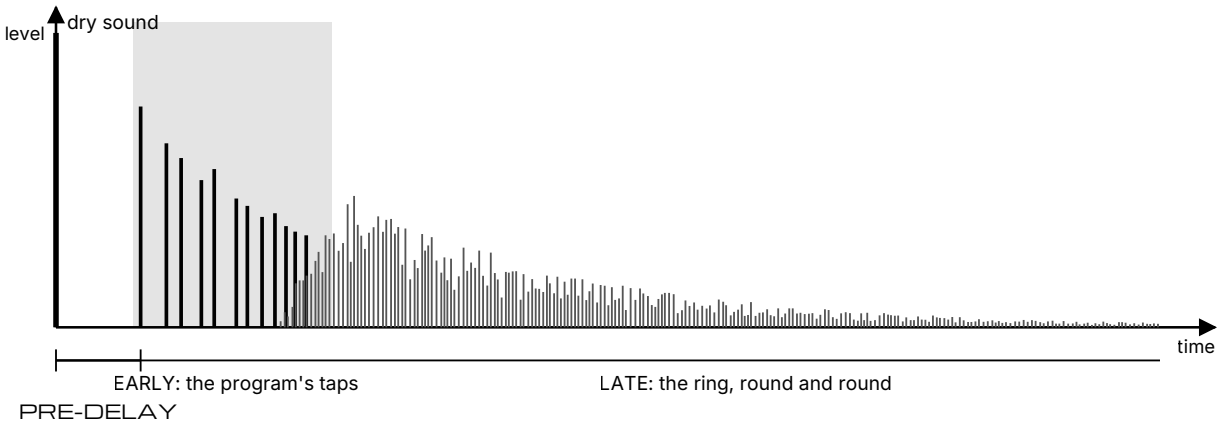
Sound in a room bounces off the walls, the floor and the ceiling. The first few bounces arrive as distinct echoes (the **early reflections**); after a few tens of milliseconds there are so many that they merge into a smooth wash that slowly dies away (the **late reverb**, or tail).



S the source, L the listener. Solid: the direct sound. Dashed: first reflections. Grey: the later, countless ones.

A reverb recreates the right-hand picture: the gap, the first distinct echoes, then a dense tail that dies away.

FIGURE 6 Reverb in a room. Every path but the direct one is a reflection; together they make the reverb.



Pre-delay, then the early reflections (shaded; none on PLATE), then the tail from the ring.

FIGURE 7 An echogram: the level of each reflection against time. The dry sound is the tall line at the left.

The length of the tail is the **reverb time**, or **RT60**: the time it takes to fall by 60 dB. DECAY sets it in the mids; LOW X and HIGH CUT shape it below and above.

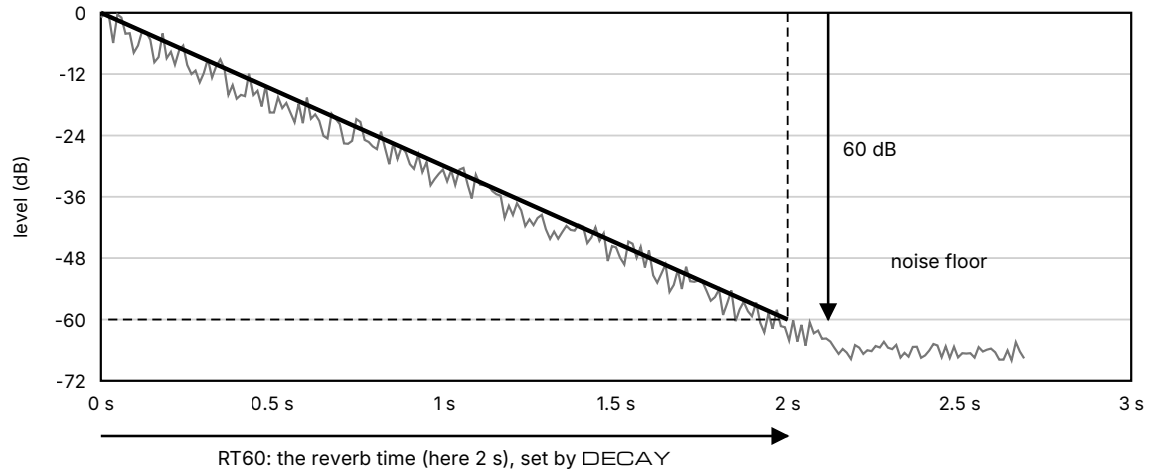


FIGURE 8 On a decibel scale a natural decay is a straight line; its slope is the reverb time. Here it falls 60 dB in 2 s.

The classic digital reverbs

The first digital reverbs of the late 1970s and early 1980s didn't try to model a room wall by wall: there wasn't the processing power. Instead, they passed the sound round a **ring** of short delays and **allpass diffusers** (filters that smear a click into a cloud of echoes without changing the tone), losing a little on each pass, and read the output from several points along the ring. To stop the ring's fixed delays from ringing, they let some of the delays **wander** slowly, which also gave the tail its famous lush, chorused movement. And they did it all through the **converters** of the day: bandwidths of 10 to 16 kHz and, in the first units, 12-bit converters that switched their range with the signal.

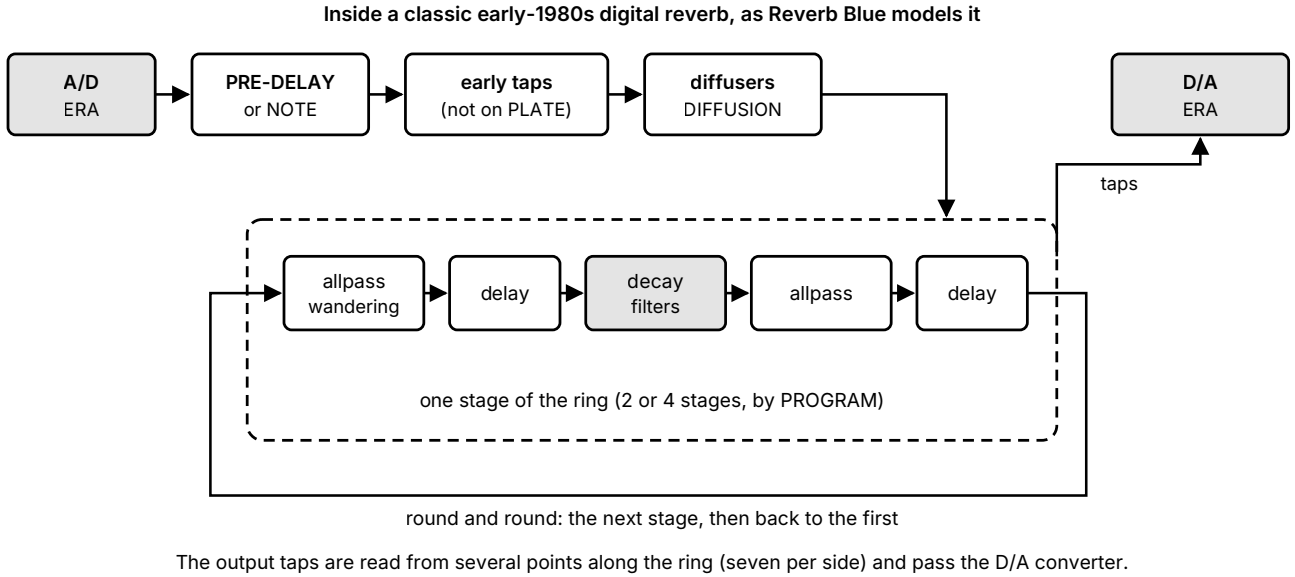


FIGURE 9 The signal path of a classic digital reverb, as Reverb Blue models it: converters at both ends, early taps and diffusers on the way in, and a ring of stages that the sound goes round and round.

That design is why these reverbs sound the way they do: smooth and dense but clearly *not* a real room; wide; a little dark at the top; and gently moving, so a held chord seems to shimmer.

What happens inside VEIRA Reverb Blue

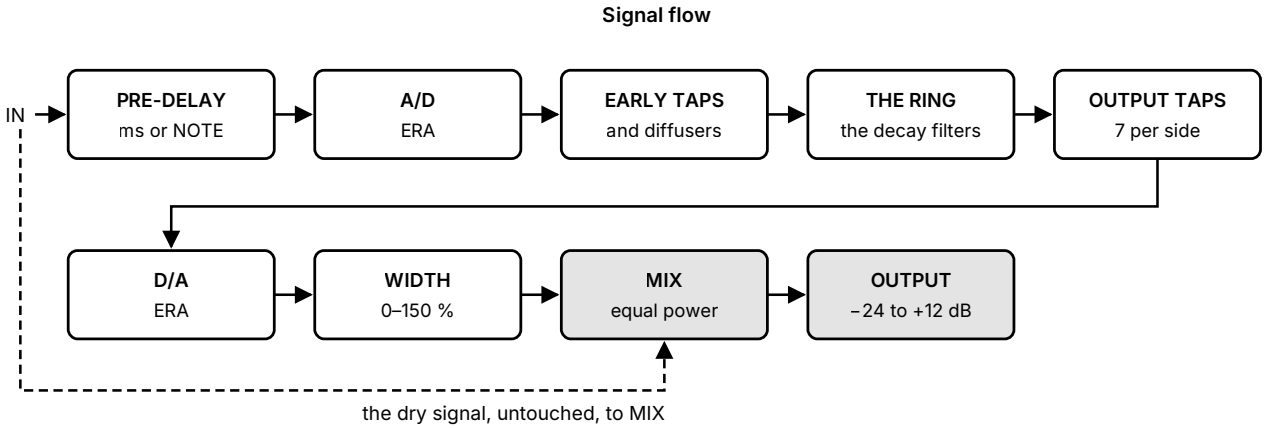


FIGURE 10 Signal flow. The input, summed to mono, goes through the A/D converter, the early taps and diffusers into the ring; the output taps go through the D/A converter, then WIDTH and MIX.

1. **Pre-delay**, crossfaded over 20 ms when it moves.
2. **The A/D converter:** a steep low-pass at ERA's bandwidth, then, with ERA up, the rounding to fewer bits in 6 dB ranges.
3. **The early taps** (not on PLATE) and four **input diffusers**, whose strength DIFFUSION sets.
4. **The ring:** two or four stages, each a wandering allpass, a delay, the decay filters (LOW X at CROSSOVER, HIGH CUT), a second allpass and a second delay. Every stage takes the input, so the energy is spread round the ring from the start. The ring itself loses nothing, so the reverb time per band is exactly what the decay filters set over the time round it.
5. **The output taps**: seven per side along the ring, through **the D/A converter**.
6. **WIDTH, MIX and OUTPUT.**

The reverb is linear: the only non-linearity is ERA's rounding, done (as in the hardware) after the A/D filter and before the D/A filter, so its grain stays inside the band and nothing aliases. Every program returns pink noise at about the same level (−4.1 to −4.2 dB at DECAY 2 s), so changing PROGRAM doesn't make the reverb jump louder or quieter.

Controls

PROGRAM

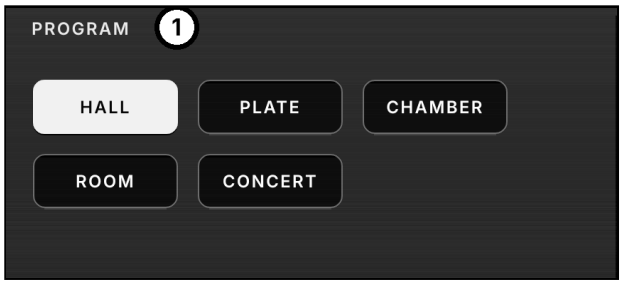


FIGURE 11 1 PROGRAM: HALL (selected), PLATE, CHAMBER, ROOM and CONCERT.

Program	The ring	Character
HALL	four stages, about 1.0 s round at SIZE 100 %; early reflections at 11–58 ms	A gentle build, wide and smooth. The default.
PLATE	the classic figure-of-eight tank of two stages, 0.73 s round; no early reflections	Dense from the start, bright and smooth.
CHAMBER	two smaller, denser stages (0.41 s); early reflections at 5–36 ms	Dense, warm and close.
ROOM	two short stages (0.21 s); a cluster of early reflections at 3–26 ms	Close reflections and a short, natural tail.
CONCERT	a bigger ring of four stages (1.25 s) whose delays wander too	Big, slowly building, deeply chorused.

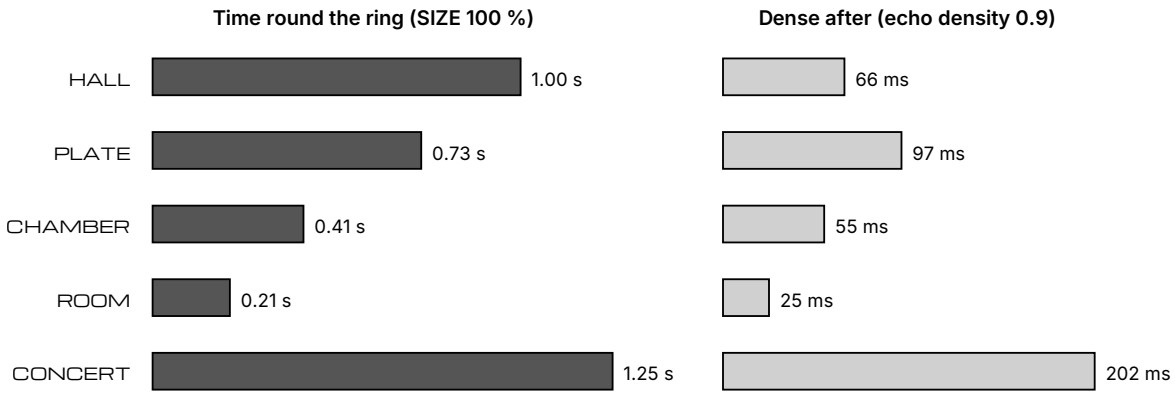


FIGURE 12 Each program's ring: its time round, and how soon its tail is fully dense (echo density 0.9, at DECAY 2.5 s, ROOM 1.0 s).

The program is the biggest choice you make on Reverb Blue: the classic units were known for their programs as much as for their sound.

- PLATE for vocals, snares and anything that should sound bright and immediate.
- HALL for vocals, guitars, keys and strings that need space.
- CHAMBER for toms, organ and brass: dense, warm, close.
- ROOM for kits, funk guitar and dialogue: short and natural.
- CONCERT for pads, big lead lines and long, deeply chorused tails.

Changing PROGRAM (or SIZE) starts the new space and lets the old one ring out over 0.8 s; if you change again while the last one still rings, it is finished in 30 ms first. Nothing clicks.

DECAY: DECAY, LOW X, CROSSOVER and HIGH CUT

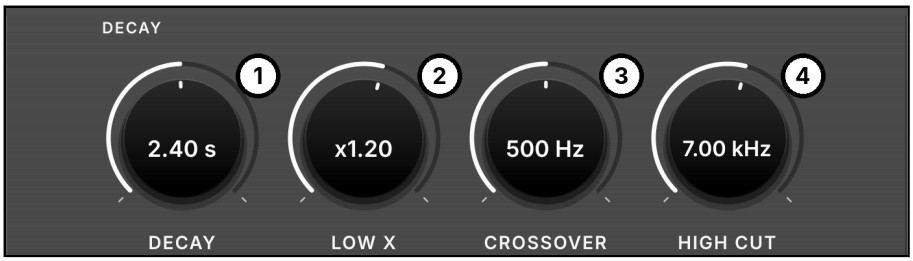
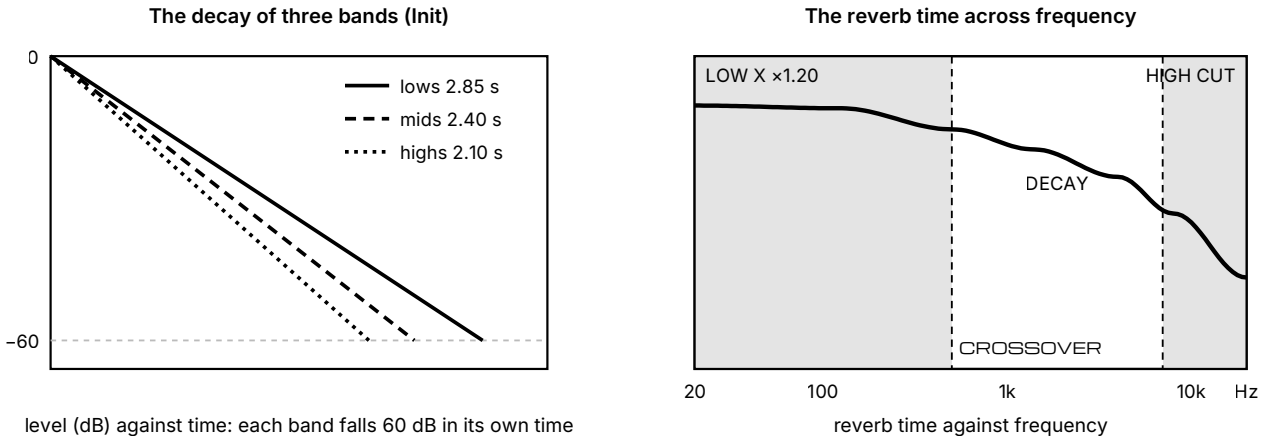


FIGURE 13 1 DECAY, 2 LOW X, 3 CROSSOVER and 4 HIGH CUT.

Control	Range	Default	What it does
DECAY	0.20 to 20.0 s	2.40 s	The reverb time in the mids (between CROSSOVER and HIGH CUT).
LOW X	×0.25 to ×4.00	×1.20	The reverb time below CROSSOVER, times DECAY.
CROSSOVER	100 Hz to 2 kHz	500 Hz	Where LOW X starts.
HIGH CUT	1.5 kHz to 19.5 kHz, OPEN	7.00 kHz	The tail darkens above it.



The default HALL, as PRESETS lists it: 2.85 s at 125 Hz, 2.40 s in the mids, 2.10 s at 4 kHz.

FIGURE 14 Per-band decay. Below [CROSSOVER] the tail lasts [LOW X] times [DECAY]; above [HIGH CUT] it darkens with every pass round the ring, so the highest notes die soonest.

DECAY is the reverb time in the mids. Typical settings: 0.5–1.2 s for rooms and kits, 1.5–2.6 s for vocal plates and halls, 3–4 s for ballads and backing vocals, 6–8 s for pads and choirs, up to 20 s for effects (*Creative* ▸ *Infinite Concert*).

LOW X and CROSSOVER. Above ×1 the lows ring longer than the mids: warm and big (*Organ Chamber* ×1.30 below 300 Hz; *Dark Bass Bloom* ×3.00 below 250 Hz as an effect). Under ×1 they die sooner: leaner, and the classic choice for vocal and snare plates (*Snare Plate* ×0.70). [CROSSOVER] sets where the lows start.

HIGH CUT is the classic units' treble decay: a gentle low-pass in every stage of the ring, so the tail darkens as it goes round, and the higher the note, the sooner it dies. That's different from an EQ on the return: the start of the tail is bright, its end is dark. 6–9 kHz is the vintage sound; 3.5–5 kHz is dark and distant; [OPEN] (fully right) leaves the tail as bright as the converters allow.

[DECAY], [LOW X] and [CROSSOVER] move smoothly, so you can turn them while the reverb rings.

CONVERTERS: ERA

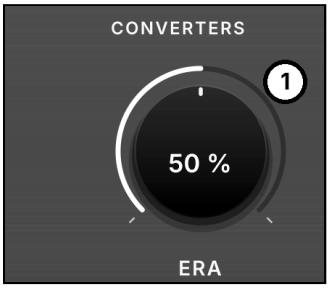
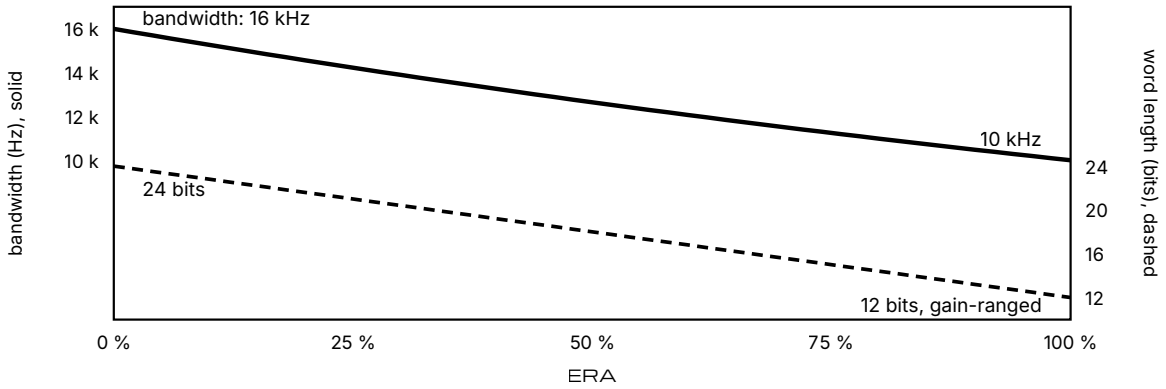


FIGURE 15 1 [ERA].

Control	Range	Default	What it does
[ERA]	0 to 100 %	50 %	The converters: 0 % a clean late-80s unit, 100 % the early-80s units' 10 kHz bandwidth and gain-ranged 12-bit converters.

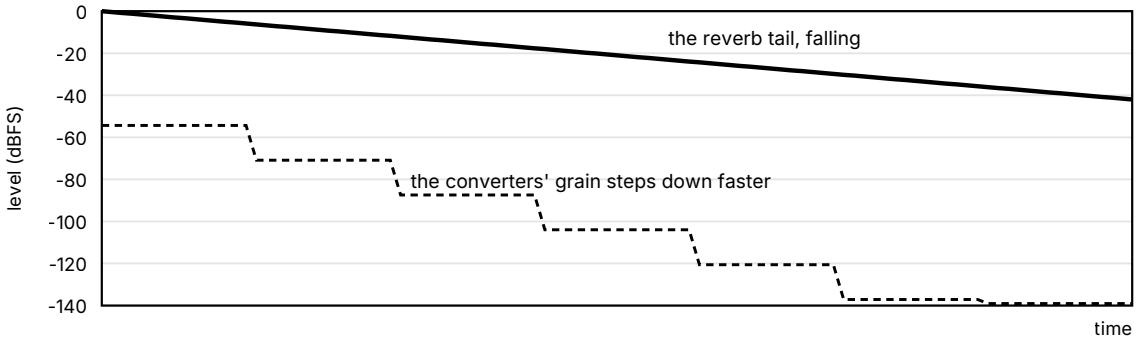
[ERA] chooses the converters the reverb is heard through, and with them, the decade:



0 %: a clean late-1980s unit. 100 %: the first early-1980s units. Measured −3 dB points: 14.9, 11.8 and 9.3 kHz.

FIGURE 16 What ERA sets: the converters' bandwidth (solid) and word length (dashed). The CONVERTERS display shows both in its title row.

- **0 %:** a clean late-80s unit: 16 kHz bandwidth, 24 bits. Smooth, with no grain.
- **50 % (the default):** about 12.6 kHz and 18 bits: the sound of the era, slightly soft at the top.
- **100 %:** the first units: 10 kHz bandwidth and 12-bit converters that change their range in 6 dB steps with the signal (**gain ranging**). Dark, with a fine grain on the tail.



With ERA, the converters change their range in 6 dB steps with the signal (gain ranging). Measured at ERA 100 %: the grain sits 64.8 dB under the return at −6 dBFS and 107 dB under it at −30 dBFS.

FIGURE 17 Gain ranging: as the tail falls, the converters switch to a more sensitive range, so their grain falls with it rather than staying at a fixed floor.

The grain is made where the hardware made it, between the converters' filters, so it stays inside the band and never aliases. With ERA up, the rounding also ends the tail in digital silence sooner. *Creative* ▸ *Twelve-Bit Grit* and *Grainy Echo Room* use 100 %; *Clean Modern Plate* uses 0 %.

SPACE: PRE-DELAY, SYNC, SIZE and DIFFUSION

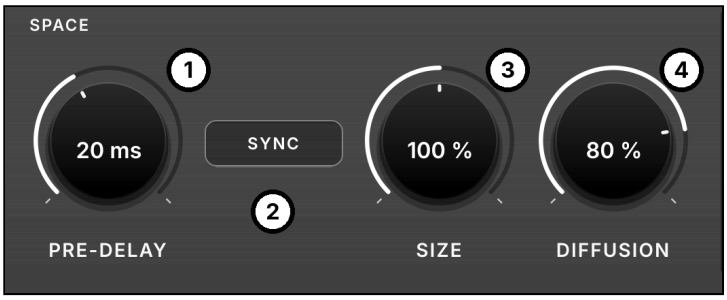


FIGURE 18 1 PRE-DELAY (NOTE while SYNC is on), 2 SYNC, 3 SIZE and 4 DIFFUSION.

Control	Range	Default	What it does
PRE-DELAY	0 to 300 ms	20 ms	The gap before the reverb (with SYNC off).
NOTE	1/64 to 1/4, with triplets (T) and dotted (D) values	1/16	The gap as a note value at the song's tempo (with SYNC on).
SYNC	on / off	off	Swaps PRE-DELAY for NOTE.
SIZE	50 to 150 %	100 %	Every delay of the program, scaled.
DIFFUSION	0 to 100 %	80 %	How fast the echoes blur into the tail.

PRE-DELAY, NOTE and SYNC

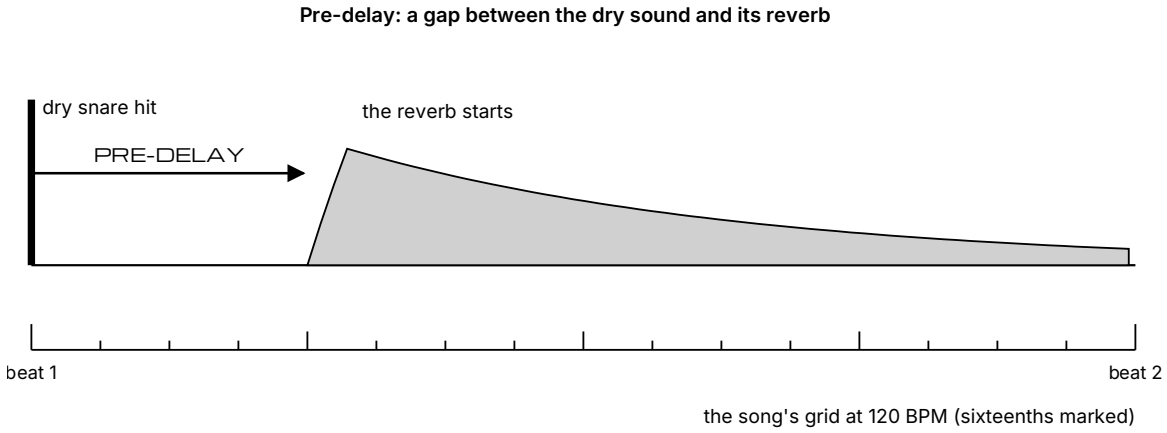


FIGURE 19 Pre-delay keeps the start of each sound clear of the reverb. With SYNC, the gap is a note value at your DAW's tempo.

- **0–10 ms:** drums and rooms; the reverb sticks to the sound.
- **20–40 ms:** vocals and lead instruments.
- **50–80 ms:** ballads, big leads and long tails (*Eighties Ballad Hall* 60 ms).

With SYNC on, the PRE-DELAY knob gives way to NOTE: a note value at your DAW's tempo, from a sixty-fourth to a quarter note, with triplets and dotted values, up to 1 s (*Synced Vocal Hall* an eighth, *Synced Snare Plate* a sixteenth).

SIZE

SIZE scales every delay of the program, from half to one and a half times: a bigger ring builds more slowly and sounds larger, a smaller one is denser and closer. It doesn't change DECAY. Like PROGRAM, a new SIZE starts a new tank and lets the old one ring out (stretching a running ring's delays would bend its pitch), so turn it between phrases rather than as an automation sweep.

DIFFUSION

DIFFUSION sets the strength of the input diffusers: **high** smears the echoes into a smooth wash at once (vocals, pads); **low** keeps the first echoes distinct, a grainier, more "digital" sound (*Grainy Echo Room* uses 10 %).

MOTION: MOD DEPTH and MOD RATE

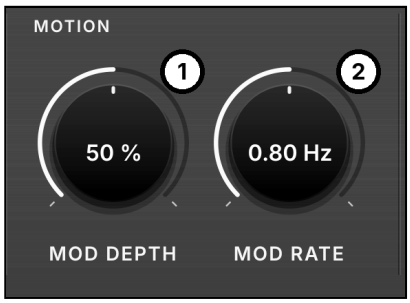


FIGURE 20 1 MOD DEPTH and 2 MOD RATE.

Control	Range	Default	What it does
MOD DEPTH	0 to 100 %	50 %	How far the ring's delays wander.
MOD RATE	0.10 to 5.00 Hz	0.80 Hz	How often they turn, at random intervals around it.

The ring's delays don't follow a regular wave (an LFO), which you'd hear as a warble. Each stage moves to a new random target at a random time around 1 / MOD RATE, joined by smooth glides: the movement never repeats. It moves the first allpass of each stage, the second a little less, and on CONCERT, CHAMBER and ROOM the stage's delay too.



FIGURE 21 A plain LFO repeats exactly; Reverb Blue's wander never does. The [MOTION] display draws it for every stage.

- **0 %:** a still tail; the ring is perfectly linear.
- **30–50 %:** the classic movement: smooth, with a gentle shimmer on held notes. Measured on a held 1 kHz tone at 50 %, the energy that the movement spreads away from the tone is 21–41 dB under it on [HALL], [PLATE], [CHAMBER] and [CONCERT].
- **60–80 %:** lush and chorused: electric pianos, pads, clean guitars (*Electric Piano Chorus*, *Shimmering Chamber*).
- **100 % at a fast rate:** an obvious, seasick chorus effect (*Creative* ▸ *Seasick Chorus*, 3.50 Hz).

[MOD RATE] from 0.4 to 1 Hz is the classic range; faster turns movement into vibrato.

OUTPUT: WIDTH, MIX, LOCK and OUTPUT

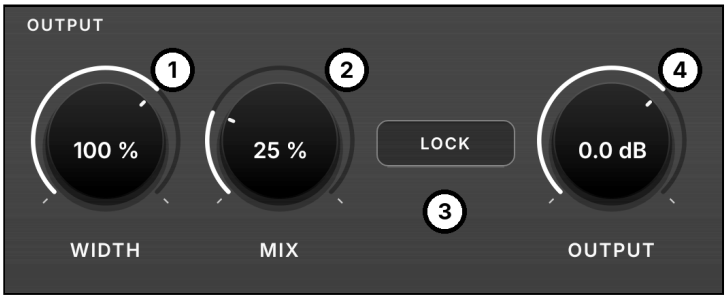


FIGURE 22 ❶ [WIDTH], ❷ [MIX], ❸ [LOCK] and ❹ [OUTPUT].

Control	Range	Default	What it does
[WIDTH]	0 to 150 %	100 %	The reverb's stereo width: 0 % mono, 150 % wider.
[MIX]	0 to 100 %	25 %	The dry sound against the reverb, equal power.
[LOCK]	on / off	off	Presets leave [MIX] where it is.
[OUTPUT]	−24 to +12 dB	0.0 dB	The final level, after [MIX].

WIDTH sets the reverb's stereo width at constant power: the left and right output taps are read from different points of the ring, so the tail is wide; 0 % folds it to mono, up to 150 % spreads it further.

MIX is an equal-power blend: at **0 %** the output is the input, bit for bit; at **100 %** it is the reverb only, for an aux. On an insert, 15–35 % is the usual range.

LOCK keeps MIX where it is when you load a preset: switch it on on an aux at 100 %. See *Inserts and aux sends*.

OUTPUT sets the final level; the insert presets come out within 1 LU of the dry track.

Displays

MOTION and CONVERTERS

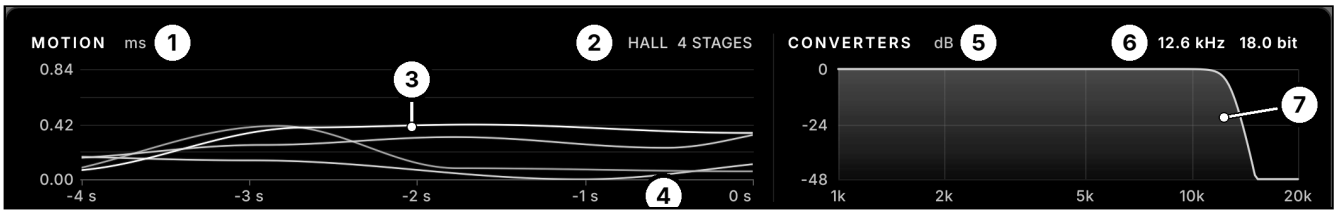


FIGURE 23 MOTION: 1 title, 2 the program and its number of stages, 3 one line per stage, 4 the last 4 seconds. CONVERTERS: 5 title, 6 bandwidth and word length, 7 the converters' response.

- 3 **MOTION** draws how far each stage of the ring has wandered (in ms) over the last 4 seconds, one line per stage: the chorusing you hear. MOD DEPTH sets how far the lines move, MOD RATE how often they turn. 2 The title row names the program and its number of stages.
- 7 **CONVERTERS** draws the response of the A/D and D/A filters that ERA sets (1 kHz to 20 kHz across, dB down), and 6 gives their bandwidth and word length (12.6 kHz and 18.0 bit at the default 50 %).

RT60 and TAIL

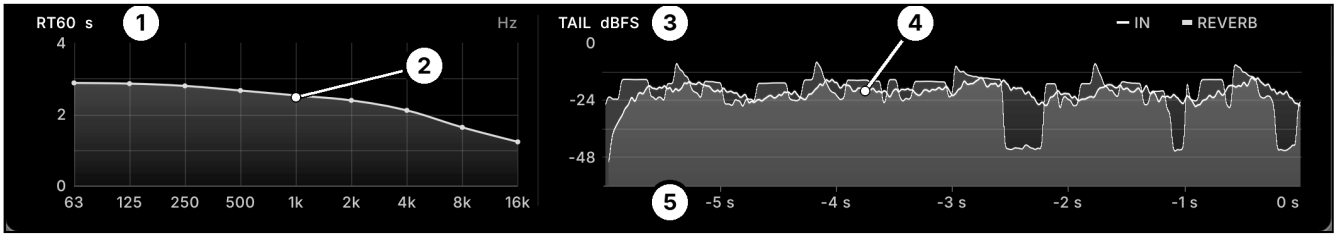


FIGURE 24 1 RT60, with 2 the reverb time per octave band; 3 TAIL, with 4 the input (grey) and the reverb (blue), and 5 its time scale.

- 2 **RT60** shows the reverb time per octave band, 63 Hz to 16 kHz, as DECAY, LOW X, CROSSOVER and HIGH CUT design it.
- 4 **TAIL** scrolls the last 6 seconds of the input (grey on screen; in print the lighter outline) and of the reverb (blue on screen; the filled shape), in dBFS: in the gaps you see how far the reverb rings on.



FIGURE 25 The PLATE at DECAY 2.00 s with LOW X ×0.80, HIGH CUT 9.00 kHz, ERA 100 %, MOD DEPTH 75 %, the pre-delay synced to an eighth note, WIDTH 130 % and MIX 32 %. MOTION shows two stages wandering, CONVERTERS the 10 kHz, 12-bit converters.

Meter bridge (IN | OUT)

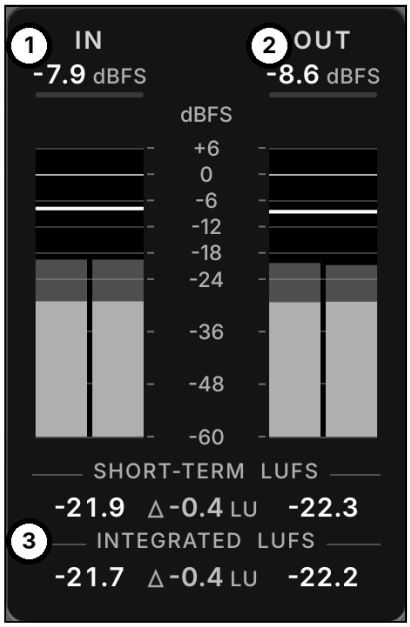


FIGURE 26 The meter bridge: 1 input and 2 output, 3 short-term and integrated loudness with the OUT − IN difference.

VEIRA Reverb Blue uses the standard VEIRA meter bridge.

Reading the IN and OUT meters

The meter bridge measures what goes into VEIRA Reverb Blue and what comes out, in level and in loudness. The drawing shows the input and output columns; any extra column on your plugin's bridge is described above.

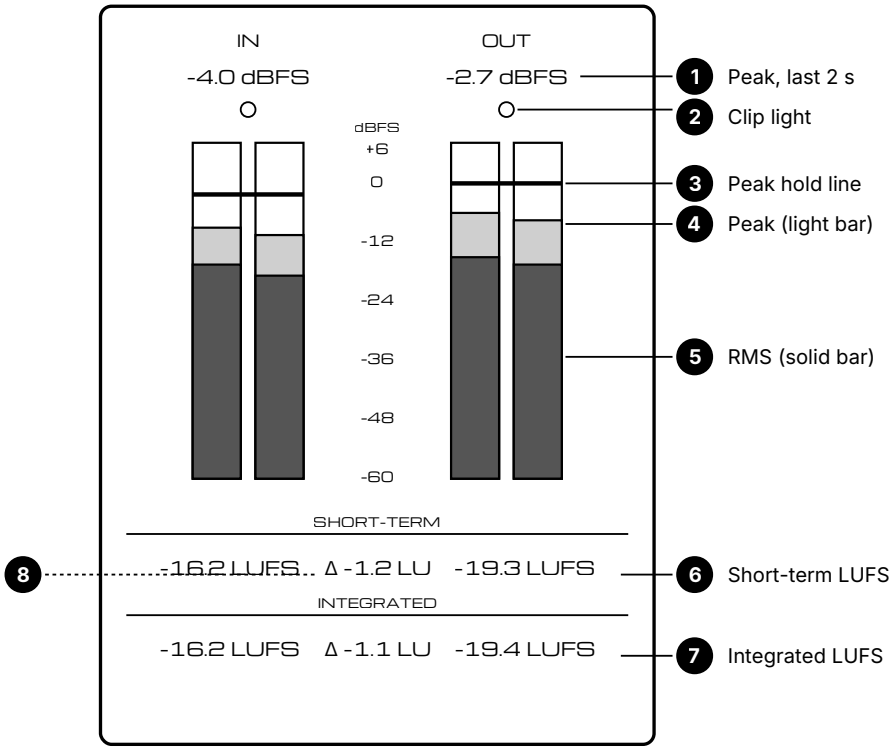


FIGURE 27 The meter bridge, left and right channel bars for input and output, with loudness below.

- 1 **Peak readout:** the highest sample peak of the last two seconds, in dBFS. It turns to a warning above 0 dBFS.
- 2 **Clip light:** lights on any sample at or over full scale. It stays lit until you click the meter.
- 3 **Hold line:** marks the recent peak on the bar.
- 4 **Peak bar** (the lighter part): the instantaneous sample peak of each channel.
- 5 **RMS bar** (the solid part): the average level over 300 ms, closer to how loud it sounds.
- 6 **SHORT-TERM:** loudness over the last 3 seconds, in LUFS, for the input (left) and the output (right).
- 7 **INTEGRATED:** loudness of everything since the measurement started, gated as the ITU-R BS.1770-4 and EBU R 128 standards require.
- 8 **Δ (delta):** OUT minus IN, in LU. It tells you how much louder (+) or quieter (−) VEIRA Reverb Blue made the signal, so you can match levels fairly when you compare with bypass. It reads -- while either side is too quiet to measure (below −70 LUFS).

The scale: on screen the bars are coloured like a studio console: green below −12 dBFS, yellow from −12 to −3, orange from −3 to 0 and red above 0 dBFS.

Clicks: click a level meter to reset its hold and clip light. Click the loudness readouts to restart the integrated measurement, for example at the start of a song.

Inserts and aux sends

A reverb can sit on a track in two ways, and VEIRA Reverb Blue is ready for both.

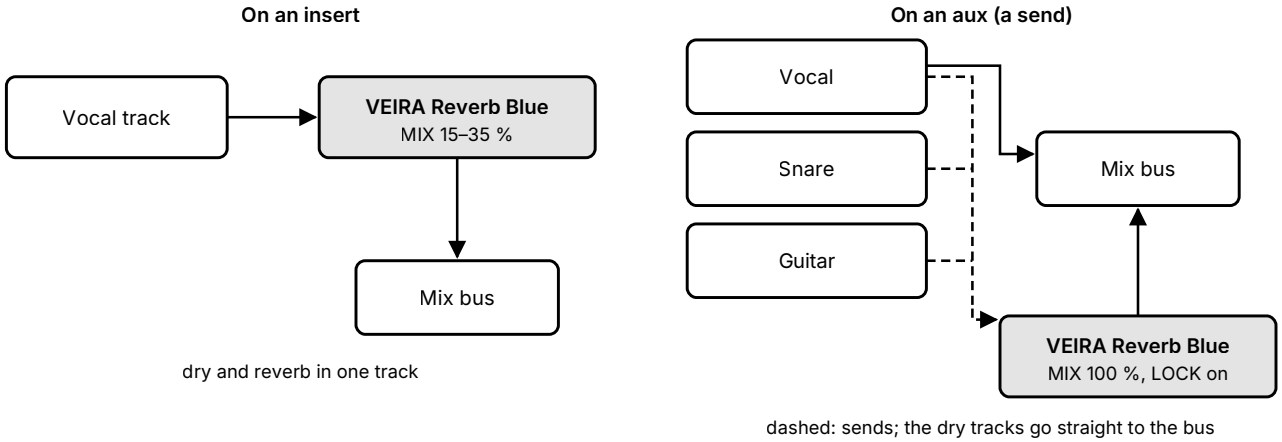


FIGURE 28 Left: on an insert, MIX blends the reverb into the track itself. Right: on an aux, several tracks send to one reverb at MIX 100 %; your DAW's send levels decide how much of each track goes in.

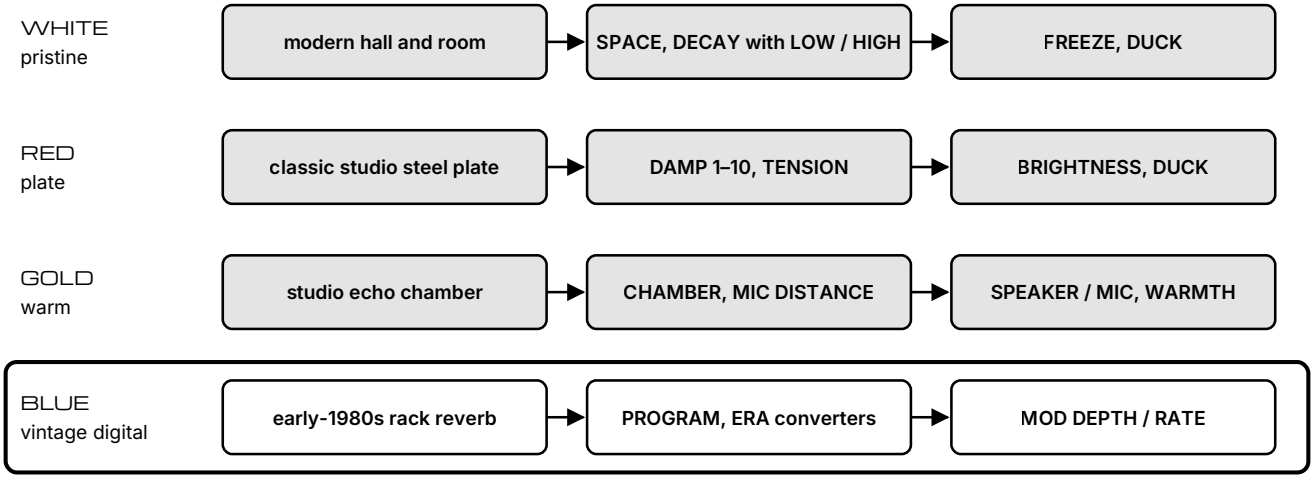
On an insert (the reverb straight on the track), MIX sets the balance. The vocal, drum, guitar and keys presets are made for this, at MIX 15–35 %. MIX is an equal-power blend: at 50 % the dry and the reverb are each 3 dB down, so the level stays steady as you turn it.

On an aux (a return track or FX channel that several tracks send to), set MIX to **100 %**, so the return carries only the reverb, and switch on LOCK. With LOCK on, loading a preset leaves MIX where it is, so you can step through presets on the aux without the dry signal coming back. The *Mix Bus* folder has ready-made aux returns at 100 %. One reverb on an aux puts several instruments in the same space, saves processing, and lets you EQ or compress the return on its own.

> **Tip:** On an aux, set your DAW's sends to *post-fader*, so the reverb follows the track's fader. A pre-fader send keeps the reverb at the same level when you pull the track down, which is useful only as an effect.

Which colour reverb to choose

VEIRA Reverb Blue is one of four VEIRA colour reverbs, each painted like the colour compressor, limiter, EQ and gate of the same name. All four have tempo-synced pre-delay, WIDTH, an equal-power MIX with LOCK for aux returns, the same meter bridge with loudness, and a tail that ends in true digital silence. What differs is the space they make: a modern hall, a steel plate, an echo chamber or a vintage digital rack.



The framed row, in white boxes, is the reverb in your hands.

FIGURE 29 The four colour reverbs, side by side.

	Character	Choose it when
White	Pristine. A modern algorithmic hall and room: four SPACE types from ROOM to CATHEDRAL, DECAY from 0.2 to 20 s shaped per band (LOW and HIGH with their crossovers), EARLY/LATE, DIFFUSION, FREEZE and DUCK. Clean and colourless.	You want a natural, lush space that never rings or colours the sound: vocals, piano, strings, film, long ambient tails.
Red	Plate. The classic studio steel plate: dense from the first millisecond, bright and shimmering, with the damper's 1-to-10 DAMP scale, TENSION and BRIGHTNESS.	Vocals and snare above all: the bright, immediate sheen of the records made with a plate.
Gold	Warm. A studio echo chamber in the tradition of the great 1950s-60s studio echo chambers: four hard rooms (TILE, PLASTER, BRICK, VAULT), a speaker and a pair of microphones, MIC DISTANCE and the chain's analog WARMTH.	A real room's early reflections and low-mid warmth: vintage vocals, drums, guitars, anything that should sound recorded in a space.
Blue	Vintage digital. The sound of the classic early-1980s digital rack reverbs: five PROGRAMs, a random wander that makes the tail chorus (MOD DEPTH and MOD RATE), and ERA, the converters from clean late-80s to grainy 12-bit.	The lush, chorused halls and plates of 1980s records: ballads, snare, synths, electric piano, big lead guitars.

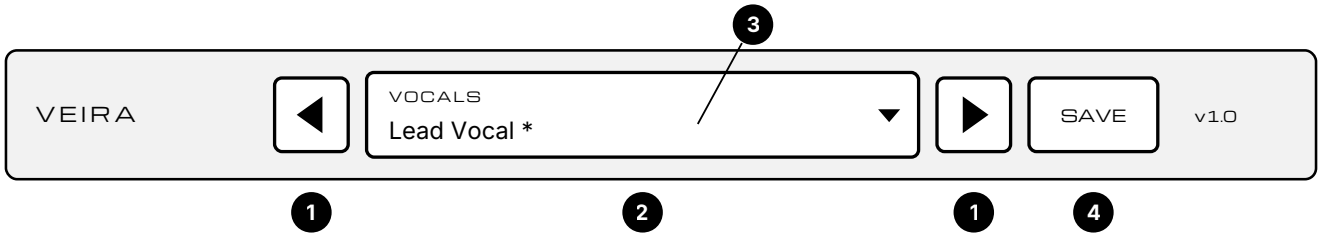
Blue is the vintage digital one. Reach for it when you want the lush, chorused, slightly dark reverb of 1980s records: on ballads, snares, electric pianos, synth pads and big lead guitars. For a clean, natural hall, try White; for the sheen of a real plate, Red; for a real room's reflections and warmth, Gold.

Presets

VEIRA Reverb Blue comes with **44 factory presets** in 9 folders. Each one is a starting point made for a real job. Load one close to what you need, then adjust the first control its note mentions.

The preset browser

The preset browser sits in the header, at the top of the window.



The header: logo and plugin name, then the preset browser, then the version.

FIGURE 30 The preset browser.

- 1 ◀ ▶ step to the previous or next preset, through every folder in order.
- 2 **The display** shows the folder (small, above) and the preset's name. Click it to open the preset menu. Hover over it to read the preset's note: what it's for and what to adjust first.
- 3 **An asterisk (*)** after the name means you've changed something since the preset loaded.
- 4 SAVE stores your current settings as a user preset.

The preset menu

Clicking the display opens a menu with:

- one submenu per **factory folder**, in the order shown below;
- **User Presets**, with your own presets in their folders;
- **Save...**, **Delete** (only for user presets: factory presets can't be deleted), **Rescan** (re-reads the user folder, if you copied presets in by hand) and **Show User Preset Folder** (opens it in Finder or Explorer).

Saving your own presets

1. Set VEIRA Reverb Blue the way you like it.
2. Press SAVE. A dialog opens inside the plugin window.
3. Type a name, choose a folder or type a new folder name, and confirm.

Each user preset is one small .veirapreset file:

	Folder
macOS	~/Library/Audio/Presets/VEIRA/VEIRA Reverb Blue/<Folder>/
Windows	%APPDATA%\VEIRA\VEIRA Reverb Blue\Presets\<Folder>\

Copy these files to move your presets to another computer, or to back them up. Presets keep loading in future versions: any control added later simply starts at its default.

Presets in your DAW

The factory presets also appear in your DAW's own preset or program menu, named *Folder: Name* (for example *Vocals: Lead Vocal*). Whatever preset is selected is saved with your session and comes back when you reopen it, including the asterisk if you'd changed it.

The **Default ▸ Init** preset equals a fresh instance of the plugin: every control at its default.

The factory folders

Folder	Presets
Default	Init
Vocals	Vintage Vocal Plate, Eighties Ballad Hall, Rich Vocal Plate, Tight Vocal Room, Backing Vocal Wash, Synced Vocal Hall, Clean Modern Plate
Drums	Snare Plate, Big Eighties Snare, Tom Chamber, Kit Room, Gritty Snare Room, Synced Snare Plate
Guitars	Clean Guitar Hall, Acoustic Plate, Lead Guitar Concert, Funk Guitar Room, Shimmering Chamber
Keys & Synths	Electric Piano Chorus, Grand Piano Hall, Synth Pad Concert, Synth Lead Plate, Organ Chamber
Strings & Orchestral	String Hall, Concert Stage, Solo Violin Plate, Brass Chamber, Choir Cathedral
Post & Film	Small Office, Concrete Garage, Arena Announcer, Radio Studio, Tunnel
Creative	Infinite Concert, Twelve-Bit Grit, Seasick Chorus, Dark Bass Bloom, Grainy Echo Room
Mix Bus	Mix Room Glue, Vintage Mix Hall, Aux Return Plate, Aux Return Hall, Aux Return Concert

Levels and MIX. The reverb itself doesn't depend on your track's level, and ERA's gain ranging follows the music, so the presets behave the same on quiet and loud tracks. What matters is MIX. The presets are set for an **insert** (MIX 12–40 %), except the *Mix Bus* folder (8–10 %, and three aux returns at 100 %). Measured through the plugin on matching material (vocals and dialogue peaking at −8 dBFS, drums at −6, a mix at −4), every insert preset comes out within 1 LU of the dry track and no output peaks above −4 dBFS. On an aux, switch on LOCK and set MIX to 100 %.

Recipes

Step-by-step starting points. In each, set MIX last, in the mix, not soloed.

The 80s vocal plate

1. Load **Vocals ▸ Vintage Vocal Plate** (PLATE, 2.20 s, LOW X ×0.90, HIGH CUT 8.00 kHz, 40 ms, ERA 55 %, MIX 20 %).
2. For more shimmer, raise MOD DEPTH (or load **Rich Vocal Plate**, 75 %); for a modern, clean plate, **Clean Modern Plate** (ERA 0 %).
3. For a slow song, **Eighties Ballad Hall** (HALL, 3.20 s, 60 ms of pre-delay).

The big 80s snare

1. On a snare send, load **Drums ▸ Big Eighties Snare** (HALL, 2.60 s, LOW X ×0.80, ERA 70 %, WIDTH 130 %, MIX 28 %).
2. For a tighter plate, **Snare Plate**; for grit, **Gritty Snare Room** (ERA 100 %).

Electric piano and pads

1. Load **Keys & Synths ▸ Electric Piano Chorus** (HALL, MOD DEPTH 80 % at 1.00 Hz, WIDTH 140 %).
2. For pads, **Synth Pad Concert** (CONCERT, 6.50 s, SIZE 130 %, WIDTH 150 %). For an endless wash, **Creative ▸ Infinite Concert** (20 s).

A big lead guitar

1. Load **Guitars ▸ Lead Guitar Concert** (CONCERT, 3.50 s, 50 ms of pre-delay, MOD DEPTH 60 %).
2. Raise PRE-DELAY so the notes speak before the reverb; for funk and rhythm parts, **Funk Guitar Room**.

One reverb for the whole band

1. On an aux, load **Mix Bus ▸ Aux Return Plate**, **Aux Return Hall** or **Aux Return Concert** (MIX 100 %) and switch on LOCK.
2. Send each track to it with your DAW's sends.

Lo-fi and effects

Creative ▸ Twelve-Bit Grit (PLATE, HIGH CUT 3.50 kHz, ERA 100 %) is the dark, grainy sound of the first units; **Seasick Chorus** (MOD DEPTH 100 % at 3.50 Hz) wobbles on purpose; **Dark Bass Bloom** (LOW X ×3.00, HIGH CUT 1.50 kHz) lets only the lows ring.

Specifications

Type	Vintage digital reverb: a ring of randomly modulated allpass stages with early taps and modelled converters
Channels	Mono and stereo (the input is summed to mono before the reverb)
Latency	None
Transparency	MIX 0 % with OUTPUT 0 dB returns the input bit for bit
Accuracy	Reverb time at 1 kHz within 4.3 % of DECAY (every program, 1.2 and 3.0 s); 63 Hz–8 kHz on average within 3.4 % of the design
Silence	The tail ends in true digital zeros once the ring has stayed under −180 dBFS for 2 s
PROGRAM	HALL, PLATE, CHAMBER, ROOM, CONCERT (default HALL)
DECAY	0.20 to 20.0 s in the mids (default 2.40 s)
LOW X / CROSSOVER	×0.25 to ×4.00 (default ×1.20) / 100 Hz to 2 kHz (default 500 Hz)
HIGH CUT	1.5 to 19.5 kHz, OPEN (default 7.00 kHz)
ERA	0 to 100 %: 16 kHz and 24 bits to 10 kHz and 12 bits, gain-ranged (default 50 %)
PRE-DELAY	0 to 300 ms (default 20 ms)
NOTE / SYNC	1/64 to 1/4 with triplets and dotted values, up to 1 s (default 1/16); SYNC off
SIZE	50 to 150 % (default 100 %)
DIFFUSION	0 to 100 % (default 80 %)
MOD DEPTH / MOD RATE	0 to 100 % (default 50 %) / 0.10 to 5.00 Hz (default 0.80 Hz)
WIDTH	0 to 150 % (default 100 %)
MIX / LOCK	0 to 100 %, equal power (default 25 %) / on, off (default off)
OUTPUT	−24 to +12 dB (default 0.0 dB)
Metering	MOTION (each stage's wander, 4 s); CONVERTERS (response, bandwidth and word length); RT60 per octave band; TAIL (6 s, input and reverb); IN and OUT meters (peak, RMS); short-term and integrated loudness per ITU-R BS.1770-4 / EBU R 128
Presets	44 factory presets in 9 folders, plus your own
Window	1360 × 900 points; resizable from 75 % to 200 %, saved with the session
Formats	VST3, Audio Units, standalone; AAX once signed
Plugin ID	Manufacturer Veir, plugin Vrbl

Troubleshooting and questions

The sound drops out for a moment every 30 seconds. The plugin isn't activated on this computer. Open VEIRA Manager and sign in; the strip at the bottom of the plugin's window says exactly what's wrong. See *Getting started ▸ Activation and the licence*.

I don't see VEIRA Reverb Blue in my DAW. Make sure VEIRA Manager shows SHOW (installed) for it, then rescan plugins in your DAW. In Logic Pro, open the Plug-in Manager and choose *Reset & Rescan Selection* if needed. Look under the manufacturer **VEIRA**.

I can't hear the reverb. Check MIX: at 0 % the output is the dry signal only. On an aux, check that the tracks' sends are up.

The tail warbles or sounds out of tune. Lower MOD DEPTH (30–50 %) or MOD RATE (0.5–0.8 Hz). CONCERT moves its delays too, so it chorusses most.

The reverb sounds dull. Raise HIGH CUT (or set it to OPEN) and lower ERA: at 100 % the converters stop at 10 kHz.

I hear grit or noise on the tail. That's ERA's 12-bit converters. Lower ERA; at 0 % there is no grain.

Moving SIZE makes the reverb restart. That's by design: a new size starts a new tank and lets the old one ring out, because stretching a running ring would bend its pitch. Change SIZE between phrases.

The reverb came back with the dry signal on my aux after I changed preset. The preset set MIX to its own value. Set MIX to 100 % and switch on LOCK.

Does VEIRA Reverb Blue add latency? No. It adds no delay, and your DAW's bypass needs no compensation.

The window is too small (or too big) on my screen. Drag its bottom-right corner. It scales from 75 % to 200 % and keeps its proportions; the size is saved with your session.

How do I type an exact value? Right-click the knob (Control-click on a Mac), type the number and press Return.

Do my sessions keep my settings? Yes. Every control, the selected preset and the window size are saved with your session.

Contact: support@veiraaudio.com. Mention your computer (Mac or Windows and its version), your DAW and version, and what you see.



VEIRA Reverb Blue · User Manual · Version 0.1.0

Support: **support@veiraaudio.com** · Web: **veiraaudio.com**

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