VEIRA

ACOUSTIC GUITAR ENHANCER

VEIRA Guitar DI Enhancer

User Manual

A finished acoustic guitar on one knob. Turn ENHANCE and a guitar recorded straight from its pickup gets the tone engineers give a piezo, playing that sits at one level, and a room around it, all in proportion, at the level it came in.



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Welcome

Thank you for choosing **VEIRA Guitar DI Enhancer**. An acoustic guitar recorded **direct from its pickup** (an under-saddle piezo, a soundhole pickup, the DI output of an acoustic preamp) is practical and free of bleed, but it rarely sounds like the guitar: the body is thin, there is a honk in the upper mids that players call the "quack", the strings zing, loud strums jump out of quiet picking, and the whole thing is bone dry. Engineers fix that with a small chain: an EQ that gives the body back and takes the quack out, a gentle compressor that evens the playing, and a reverb that puts the guitar in a room.

VEIRA Guitar DI Enhancer is that whole chain on **one knob**. Turn ENHANCE and all three move together, in proportion. **AUTO GAIN** keeps the loudness about where it was while you turn, so you judge the tone, not the volume. The STYLE switch picks the path the knob takes: NATURAL (the guitar as it sounds in the room), WARM (rounder and fuller, in a warm chamber) or BRIGHT (sparkle and air, on a bright plate). MIX blends the result with the dry pickup and OUTPUT sets the level.

It is made for an acoustic guitar's pickup, and works on anything close to it: a nylon-string with a piezo, a mandolin or a ukulele recorded direct, an acoustic preamp's DI.

What makes it different

- **One knob, three processors, in proportion.** The pickup EQ, the levelling and the reverb rise together along a path made for an acoustic guitar, so you never have to balance three plugins against each other.
- **The level stays put.** AUTO GAIN takes back what the EQ and the reverb add or take away in loudness. Measured on strummed, fingerpicked and flatpicked lines from 25 to 100 % on all three styles, the output stays within 1.2 dB of the input's loudness.
- **The same on a quiet pickup and a hot one.** The compressor measures the guitar against **its own level**, so a quiet pickup and one 26 dB hotter come out the same, just 26 dB apart. You never set a threshold.
- **A real room, not an effect.** The reverb is VEIRA Space's engine: a small room, an echo chamber or a plate, chosen by the style, blended in at equal power, short at light settings and longer as ENHANCE rises. A mono guitar stays mono; on a stereo track the reverb is stereo.
- **No latency, and untouched when you don't use it.** The plugin adds no delay, so you can play through it while recording. At ENHANCE 0 % or MIX 0 %, the output is the input bit for bit.
- **41 measured presets** in 9 folders, sorted by how the guitar is played (strumming, fingerstyle), by what the track is for (singer-songwriter, pop and rock, folk and country, the stage) and by the usual problems (*Mix Fix*).
- **A clean, legible face.** Large knobs with the value in their middle, text you can read at a glance, and a window you can scale from 75 % to 200 %.

How this manual is organised. *Getting started* covers installing and activating. *The panel at a glance* names every part of the window. *How a pickup becomes a guitar* explains, without maths, what each of the three processors does to a pickup and what happens inside the plugin. *Controls* explains ENHANCE, STYLE, MIX and OUTPUT with drawings of what they do, *Displays* teaches you to read the TONE display, the COMP reduction meter and the SPACE meter, and *Presets*, *Recipes*, *Specifications* and *Troubleshooting* follow.

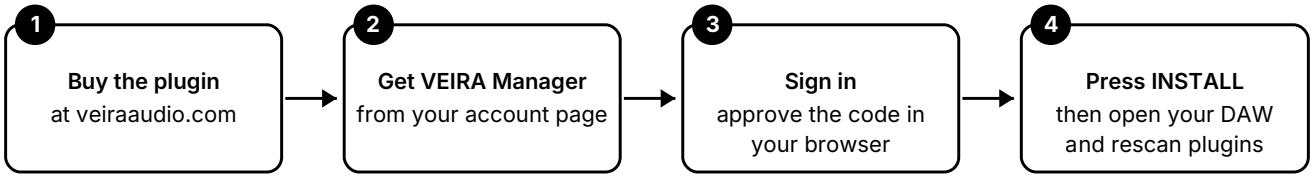
Getting started

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 Guitar DI Enhancer 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 Guitar DI Enhancer 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 Guitar DI Enhancer appears in your DAW under the manufacturer **VEIRA** (in Logic Pro: Audio Units ▸ VEIRA ▸ VEIRA Guitar DI Enhancer).

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 Guitar DI Enhancer 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.

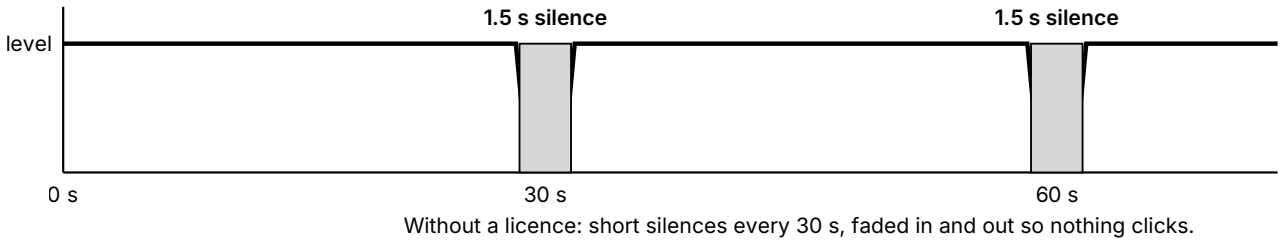


FIGURE 2 What an unlicensed copy does. With a valid licence the audio is never touched.

- **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 Guitar DI Enhancer. 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 Guitar DI Enhancer 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 Guitar DI Enhancer with the factory preset *Default: Init* loaded (NATURAL, ENHANCE 50 %) while a strummed acoustic guitar plays through an under-saddle pickup.

	Part	What it does
1	Preset browser	Steps through and saves presets. See *Presets*.
2	TONE display	The EQ that ENHANCE and STYLE set, over the spectrum of the guitar.
3	The five moves	BODY, MUD, QUACK, HARSH and AIR: where the EQ works, and by how much right now.
4	The EQ curve	The EQ's shape, read on the dB scale at the right.
5	The spectrum	The output (amber on screen, filled) and the input (a thin grey line).
6	Legend	Names the three lines: ENHANCE EQ, OUT, IN.
7	COMP	The REDUCTION meter: a bar and a number showing how much the compressor takes off now.
8	STYLE	NATURAL, WARM or BRIGHT: the path ENHANCE takes.
9	ENHANCE	The one knob: how much of everything.

	Part	What it does
10	SPACE	How much reverb is in the sound.
11	MIX	The enhanced guitar against the dry pickup.
12	OUTPUT	The final level.
13	Meter bridge	Input and output level and loudness.

The window has three areas: the **TONE display** across the top, the controls underneath in three groups captioned COMP, ENHANCER and OUTPUT, and the **meter bridge** down the right.

Quick start: a finished pickup in four moves

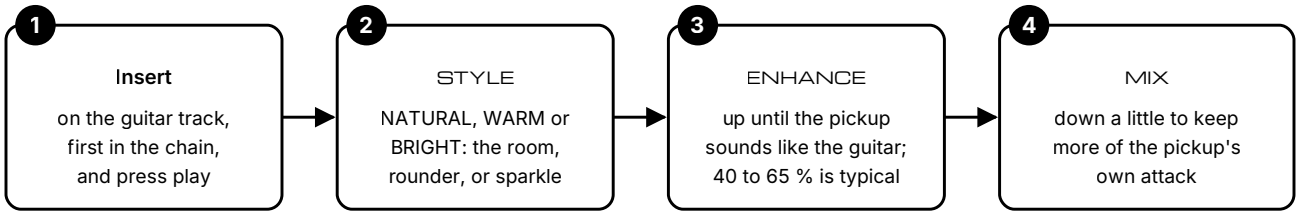


FIGURE 4 The quickest way to a good result. Or load a preset for how the guitar is played (Strumming, Fingerstyle) or for what the track is for (Singer-Songwriter, Pop & Rock, Folk & Country, Live & Stage).

Using the controls

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

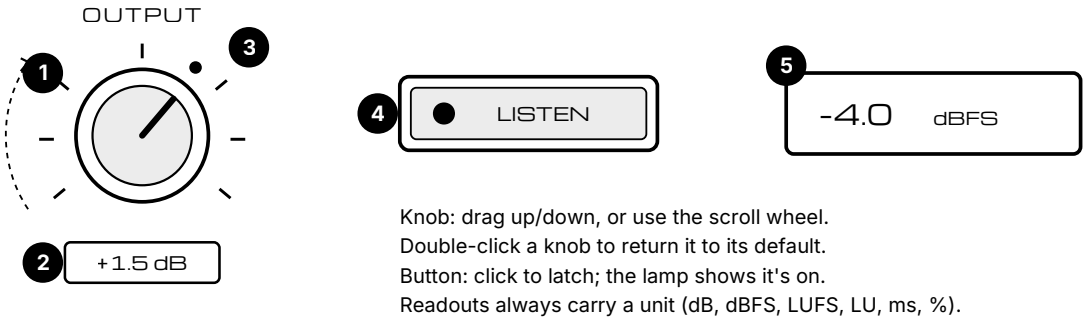


FIGURE 5 The parts you'll find on every VEIRA panel (the labels are examples).

- 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 Guitar DI Enhancer's panel the parts look a little different from the drawing above:

- **Knobs** show their value **in their middle**, and a lit ring (blue on screen; in print, the lighter arc) shows how far each is turned. Drag, use the wheel, or double-click (or Alt/Option-click) for the default, as on every VEIRA knob.
- **Type a value:** right-click a knob (Control-click on a Mac). A field opens over the knob with the current value; type the new one and press Return. The number is enough: **40** for ENHANCE or MIX, **-1.5** for OUTPUT. Press Escape or click elsewhere to leave it unchanged.
- **The STYLE buttons** have no lamps and work like radio buttons: click one and it fills (orange on screen; in print, the lighter, solid button against the two dark ones), and the other two go dark.
- **Resize the window:** drag its bottom-right corner (the small diagonal lines). It scales from 75 % to 200 % of its normal size and keeps its proportions, so everything stays sharp. Your DAW saves the size with the session.

How a pickup becomes a guitar

If you already record acoustic guitars every day, skim this chapter; it explains what the three processors do and why VEIRA Guitar DI Enhancer moves them together.

What a pickup hears, and what's missing

A microphone in front of an acoustic guitar hears the whole instrument: the strings, the top vibrating, the air moving in and out of the soundhole, and the room. A **pickup** hears much less. An under-saddle **piezo** feels the pressure of the strings on the saddle; a **soundhole pickup** hears the strings' magnetic field. Neither hears the body or the room. Recorded direct, a pickup is clean and free of bleed, which is why it's used on stage and in home studios, but it tends to have four problems:

- **A thin body.** The warmth of an acoustic lives in the top's resonance, around 100 to 200 Hz. A pickup hears little of it, so the guitar sounds small, while the low mids around 300 Hz can still build up into a boxy "mud".
- **The quack.** A piezo under the saddle has a honk around 2 to 3 kHz that every player knows: the plasticky, nasal tone of a plugged-in acoustic. A soundhole pickup is duller instead, with less air on top.
- **A spiky attack.** The pickup feels every pick stroke directly, so the strings' zing around 4 to 6 kHz is sharp, and loud strums jump far out of quiet picking.
- **Bone dry.** With no room around it, a direct guitar sits flat and close, in front of everything else in the mix.

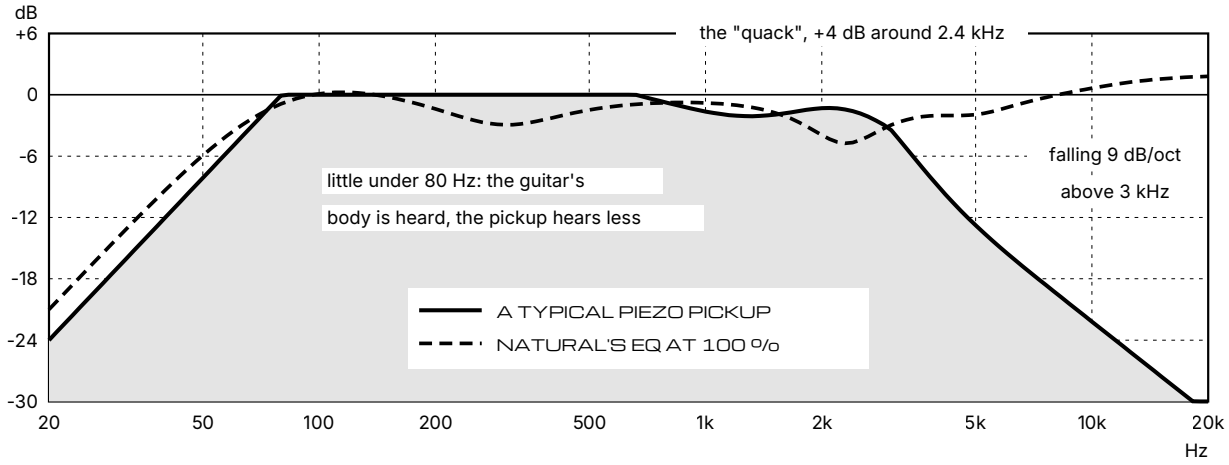
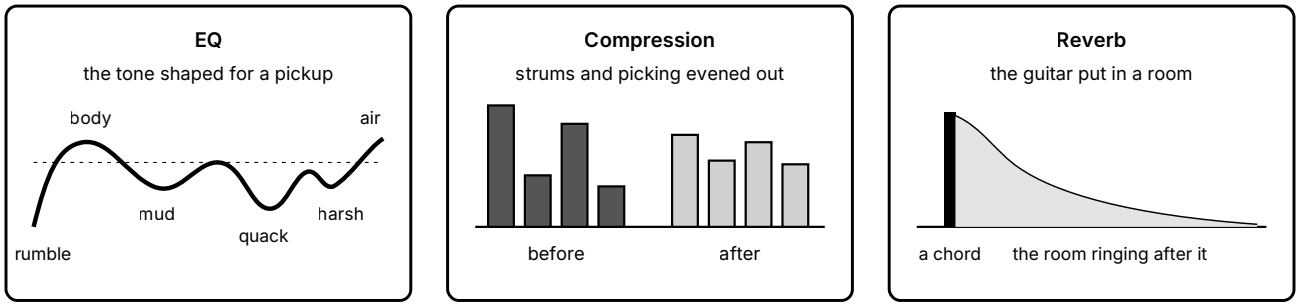


FIGURE 6 The pickup spectrum the plugin assumes (the one AUTO GAIN measures loudness over), and NATURAL's EQ at 100 % answering it: the body given back, the mud and the quack taken out, the string zing softened, air on top.

The three tools



VEIRA Guitar DI Enhancer runs all three, in this order, and turns them up together with ENHANCE.

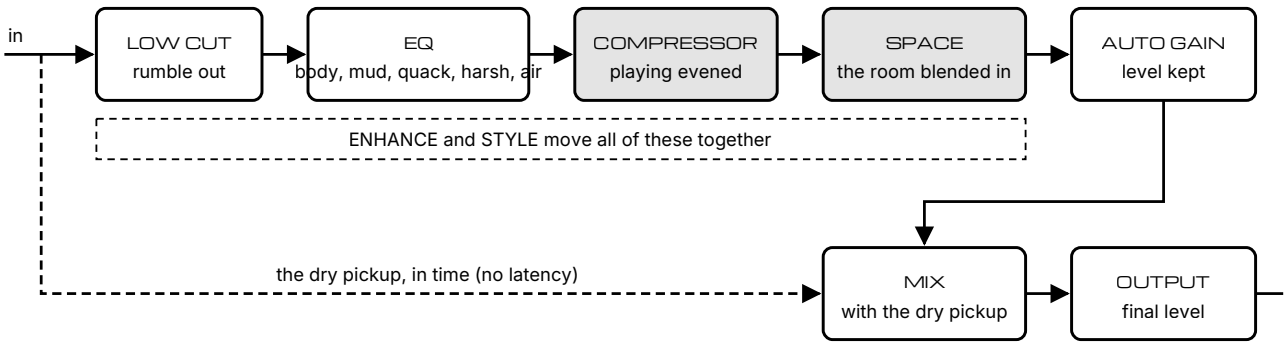
FIGURE 7 What the three processors do to a pickup. Each is a separate plugin in a usual chain; here they share one knob.

EQ shapes the tone. For a pickup, engineers usually take out the rumble and the handling thumps under the lowest notes, give the **body** back with a gentle lift around 130 to 160 Hz, cut the **mud** around 300 Hz, cut the **quack** around 2 to 2.5 kHz, soften the **harsh** zing of the strings around 5 kHz, and open the top with a little **air** above 9 kHz.

Compression turns loud strums down and, with makeup gain, quiet picking up, so the guitar sits at one steady level in the mix. On an acoustic it should be gentle and slow enough to leave the strum's own attack alone: a leveller rather than a squasher.

Reverb puts the guitar in a room. The early reflections give it a body and a place; the tail connects the notes. A short room at a low level is enough to make a pickup stop sounding plugged in; a longer chamber or plate makes it bigger and further away.

What happens inside VEIRA Guitar DI Enhancer



The shaded boxes measure the guitar against its own level, so a quiet and a hot pickup are treated alike.

FIGURE 8 The signal flow. Everything between the input and MIX is the enhanced path; MIX blends it with the dry pickup. Nothing is delayed, so the two stay in time by themselves.

Step by step:

1. **LOW CUT** takes out the rumble, the handling thumps and the stage noise under the lowest notes (a 12 dB per octave high-pass). It stays out of the way, at 10 Hz, until [ENHANCE] reaches 20 %, then rises to 70 to 85 Hz at 100 % depending on the style. (Even a high-pass that cuts nothing audible turns the phase of a plucked string and changes its peaks, which is why it stays out of light settings.)
2. **The EQ** shapes the tone: body, mud, quack, harsh and air, and on [WARM] a gentle top cut. It comes **before** the compressor, so the quack never drives it.
3. **The compressor** is a gentle, full-band leveller. It compares the guitar with its own long-term level and turns loud strums down and quiet picking up. See *What the compressor does*.
4. **SPACE** is the reverb: a copy of the guitar runs through VEIRA Space's room, chamber or plate, and is blended in at equal power. How much, and how long it rings, rises with [ENHANCE].
5. **AUTO GAIN** takes back the loudness the EQ and the reverb add or take away, so turning [ENHANCE] changes the tone, not the level. It's always on.
6. [MIX] blends this with the dry pickup, and [OUTPUT] sets the final level.

How the parts move together

[ENHANCE] moves each part along its own path, so they stay in proportion but don't all rise at the same rate. The EQ moves a little quicker at first, so even a light setting changes the tone; the compressor comes in steadily, and the reverb most gently of all, so that at low settings it is only a short ambience and the room only becomes clearly audible in the upper half of the knob.

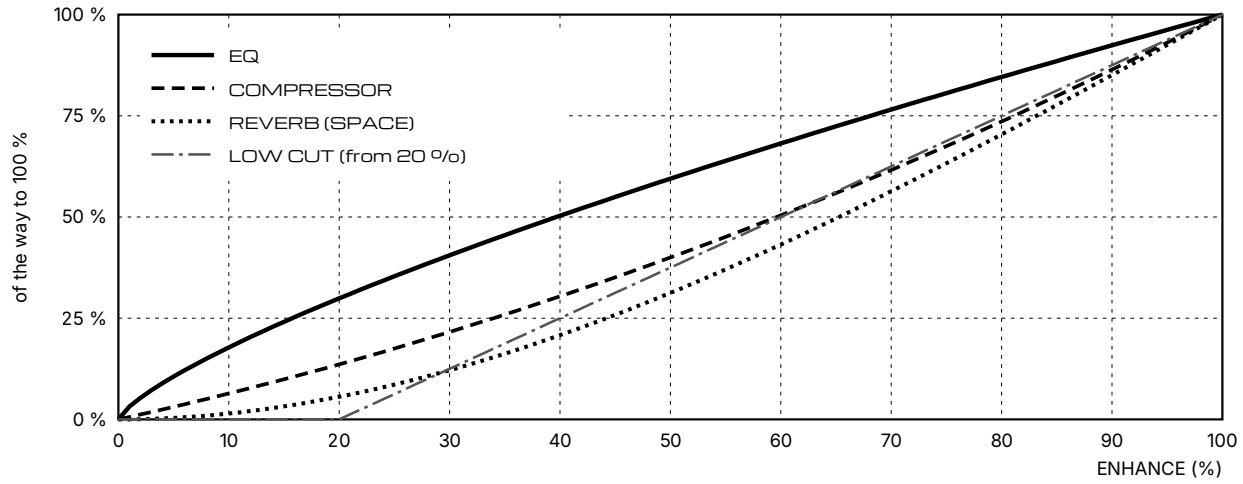


FIGURE 9 How far each part has gone towards its 100 % setting as ENHANCE turns. At 50 % the EQ is about 60 % of the way, the compressor 40 % and the reverb about 30 %. Over the first 3 % of the knob the whole chain fades in from nothing.

At **0 %** the plugin does nothing at all: the output is the input, bit for bit. Over the first 3 % the whole chain fades in, so there's never a jump. Around **40 to 65 %** is a typical "make the pickup sound like the guitar" setting; **100 %** is a lot of everything.

Controls

ENHANCER: STYLE, ENHANCE and SPACE

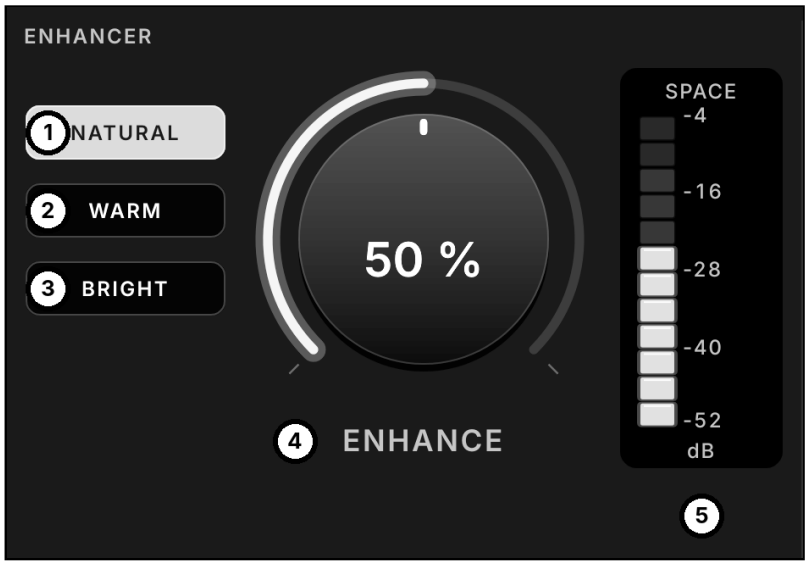


FIGURE 10 The ENHANCER group: the STYLE buttons 1 NATURAL (chosen), 2 WARM and 3 BRIGHT, 4 the ENHANCE knob (here at 50 %) and 5 the SPACE meter (see *Displays*).

Control	Range	Default	What it does
ENHANCE	0 to 100 % in 1 % steps	50 %	How much of everything: EQ, compression and reverb.
STYLE	NATURAL, WARM, BRIGHT	NATURAL	The path ENHANCE takes: the EQ's shape, how much levelling, and which room.

ENHANCE

ENHANCE is the one knob. Turn it up and the body comes back, the quack goes, the playing evens out and the guitar moves into a room, all at once. The lit ring around the knob shows how far it's turned, and the setting is written in its middle. To set an exact amount, right-click it and type the number.

Changes glide over about 60 ms, so you can move the knob while the guitar plays, and automate it, without clicks.

A good way to set it: start at 0 %, play the busiest part of the song **in the mix**, and turn up until the pickup stops sounding plugged in and the strums and the picking sit at one level. Then go back a little. Because AUTO GAIN keeps the level, you won't be fooled into thinking "louder is better".

STYLE

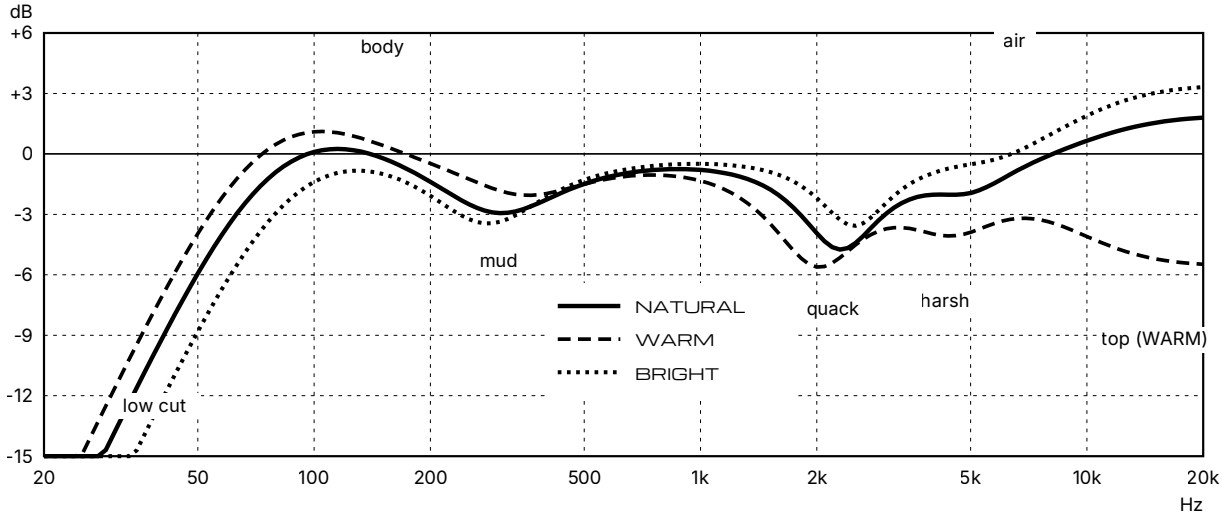


FIGURE 11 The EQ of each style at ENHANCE 100 %, drawn from the plugin's own filters (before AUTO GAIN). The names show where each move works; the bells overlap, so the curve's peaks are a little different from the table's figures.

NATURAL is the guitar as it sounds in the room: the body back with a low shelf at 150 Hz, the boxiness out at 300 Hz, a firm quack cut at 2.3 kHz, the string zing softened at 5 kHz and a little air at 10 kHz; medium levelling; and a **small room** that rings for 1.5 seconds at 100 %. It's the default and the all-round choice: a singer-songwriter's guitar, folk, a stage tone, a fingerstyle piece.

WARM is a rounder, fuller acoustic: the most body (a low shelf at 130 Hz), the quack and the zing taken further down, the top shelved down from 9 kHz and only a touch of air; the most levelling; and an **echo chamber**, warm and dense, that rings for 1.7 seconds at 100 %. Choose it for a guitar that should feel close and old, for ballads, for a thin pickup that needs its body back, and whenever a bright pickup gets tiring.

BRIGHT is a sparkling, modern acoustic: the boxiness out at 280 Hz, less of the quack cut, plenty of air from 9 kHz; the lightest levelling; and a **plate**, bright and smooth, that rings for 1.5 seconds. Choose it for pop strumming that has to cut through a dense mix, for a flatpicked lead line, for a dull soundhole pickup. On a thin or harsh pickup, keep ENHANCE moderate.

What ENHANCE does at 100 %, per style (it moves there in proportion, as drawn in *How the parts move together*):

	NATURAL	WARM	BRIGHT
Low cut (12 dB/oct, from 20 % ENHANCE)	75 Hz	70 Hz	85 Hz
Compression	60 %	70 %	50 %
Body (low shelf)	+2.0 dB at 150 Hz	+3.0 dB at 130 Hz	+1.0 dB at 160 Hz
Mud (bell)	−3.0 dB at 300 Hz	−2.0 dB at 350 Hz	−3.5 dB at 280 Hz
Quack (bell)	−4.5 dB at 2.3 kHz	−5.0 dB at 2.0 kHz	−3.5 dB at 2.5 kHz
Harsh (bell)	−1.5 dB at 5 kHz	−3.0 dB at 4.5 kHz	−0.5 dB at 6 kHz
Air (high shelf)	+2.0 dB at 10 kHz	+0.5 dB at 12 kHz	+3.5 dB at 9 kHz

	NATURAL	WARM	BRIGHT
Top (high shelf cut)	none	−6 dB from 9 kHz	none
Reverb	room, 1.5 s, blend 30 %	chamber, 1.7 s, blend 30 %	plate, 1.5 s, blend 24 %

Switching styles is smooth. A STYLE change crossfades the EQ and the compression over 40 ms, and the reverb hands over from one room to the next without a click (see *Changing style while the guitar plays*). You can switch while the guitar plays, or automate the switch.

The EQ as ENHANCE turns

Each EQ move grows with ENHANCE. The TONE display draws the curve for the current setting and names each move with its amount, so you always see what's happening.

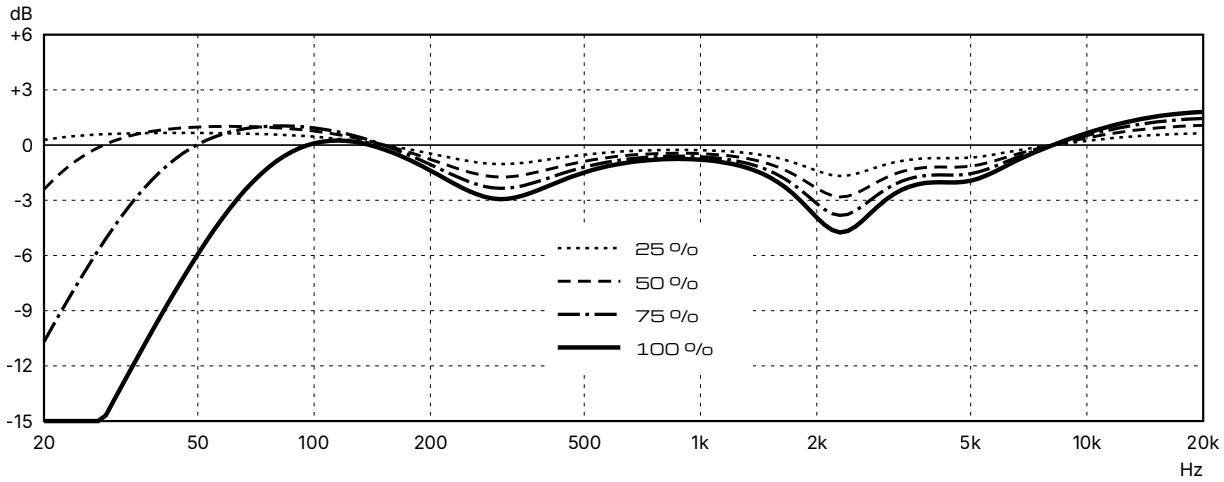


FIGURE 12 NATURAL's EQ at ENHANCE 25, 50, 75 and 100 %. The low cut only appears from 20 %, and here only shows at the left edge from 75 %.

At the default (NATURAL, 50 %) the moves read BODY +1.2 dB, MUD −1.8 dB, QUACK −2.7 dB, HARSH −0.9 dB and AIR +1.2 dB, as in the screenshot in *The panel at a glance*.

The EQ is made of analog-matched filters (VEIRA EQ's designs), so the shelves and bells keep their shape up to the top of the band at any sample rate. At 0 % it is exactly flat and out of the way.

What the compressor does

The compressor is the gain computer from VEIRA Sub Control, set up as a gentle, full-band leveller for an acoustic guitar. Three things make it different from an ordinary compressor:

- **It measures against the guitar's own level.** It keeps a long-term average of how loud the guitar usually is while it plays (over about 2.5 seconds), and compares each moment with that. So the same setting does the same thing on a quiet pickup and a hot one: you never set a threshold.
- **Loud strums come down, quiet picking comes up.** Makeup gives back what a strum a little over the usual level loses, so the loudness stays where it was: it is a leveller, not a volume drop.
- **It is slow enough to leave the attack alone.** The gain moves down in 8 ms and up in 150 ms, on a 15 ms average of the signal, with both channels linked. The pick's own transient passes; what gets evened is the strum behind it.

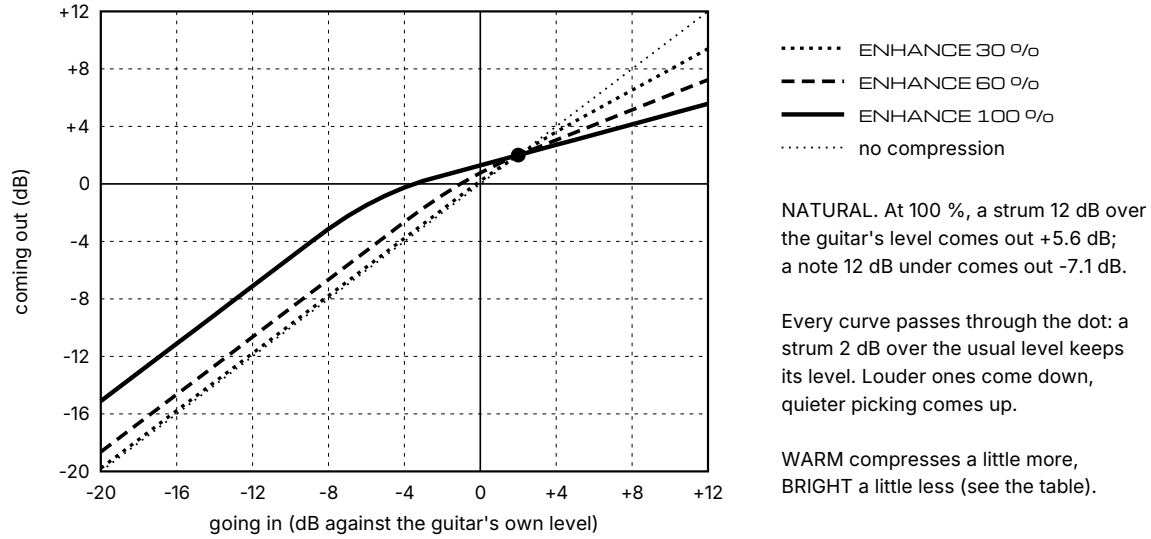


FIGURE 13 The compressor's curve on NATURAL, from the plugin's formulas: how loud the guitar comes out against how loud it goes in, both measured against the guitar's own level (the gain moves down in 8 ms and up in 150 ms, so real notes follow it with a short delay).

As [ENHANCE] rises, the threshold falls from 4 dB above the guitar's level towards 12 dB under it, and the ratio rises towards 4:1, with a soft 6 dB knee. At 100 % the threshold and ratio are 5.6 dB under and 2.8:1 on [NATURAL], 7.2 dB under and 3.1:1 on [WARM], and 4.0 dB under and 2.5:1 on [BRIGHT]. **Makeup** gives back what a strum 2 dB over the usual level loses (that is where an acoustic's energy sits), so loud strums come down and quiet picking comes up, and the average level stays where it was.

How much evener does it get? We measure it as the spread of the guitar's level from one 50 ms moment to the next: on a strummed line it goes from 4.1 dB to about 3.3 dB at 100 %, on a fingerpicked pattern from 2.2 to about 1.6 dB. The factory presets bring strumming to between 3.3 and 3.9 dB and fingerpicking to between 1.7 and 2.1 dB, more as [ENHANCE] rises.

> **Note:** The compressor has **no lookahead**, so it adds no latency. The price is that a strum's first few milliseconds pass at the gain the guitar had just before it: after a quiet passage, the first strum's attack comes through a little louder, as with any compressor without lookahead. The COMP meter shows the reduction as it happens.

What the reverb does

The reverb is VEIRA Space's engine, run fully wet on a copy of the guitar and blended in at **equal power**: as the reverb comes in, the direct guitar is turned down a little, so the sum stays at one level. Each style has its own room, and [ENHANCE] sets how much of it there is and how long it rings:

	[NATURAL]	[WARM]	[BRIGHT]
Room	a small live room: close, natural reflections	an echo chamber: dense and warm	a plate: dense from the start, bright and smooth
Pre-delay	12 ms	18 ms	10 ms
The reverb's band	180 Hz to 9 kHz	150 Hz to 6.5 kHz	220 Hz to 12 kHz

	NATURAL	WARM	BRIGHT
Decay at 100 %	1.5 s	1.7 s	1.5 s
Blend at 100 %	30 %	30 %	24 %

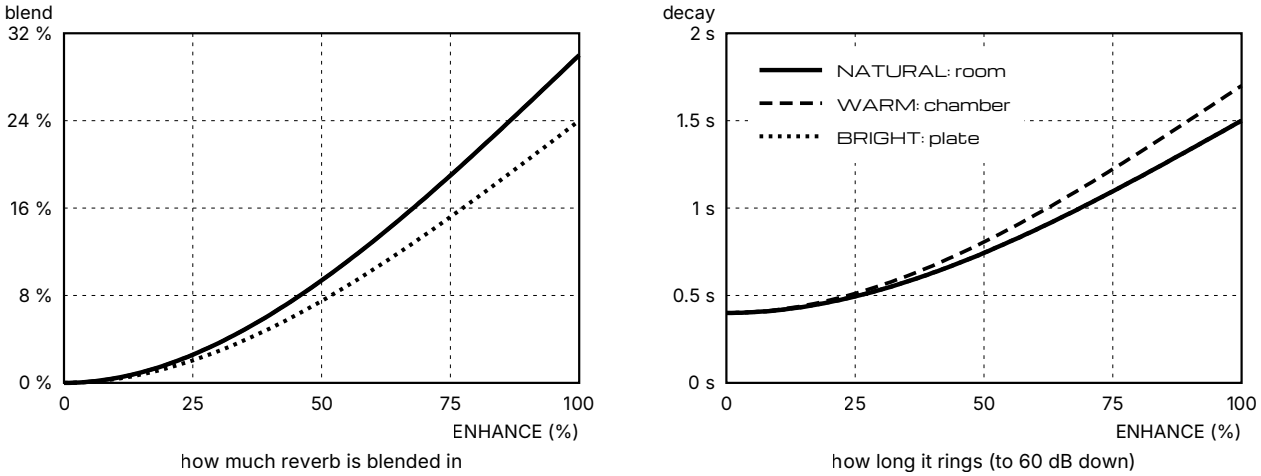


FIGURE 14 How much reverb is blended in and how long it rings, against ENHANCE, from the plugin's settings. NATURAL and WARM share the same blend, so their lines coincide on the left. The reverb starts gently: at 50 % it is a short ambience of about 0.7 seconds at a third of the full blend.

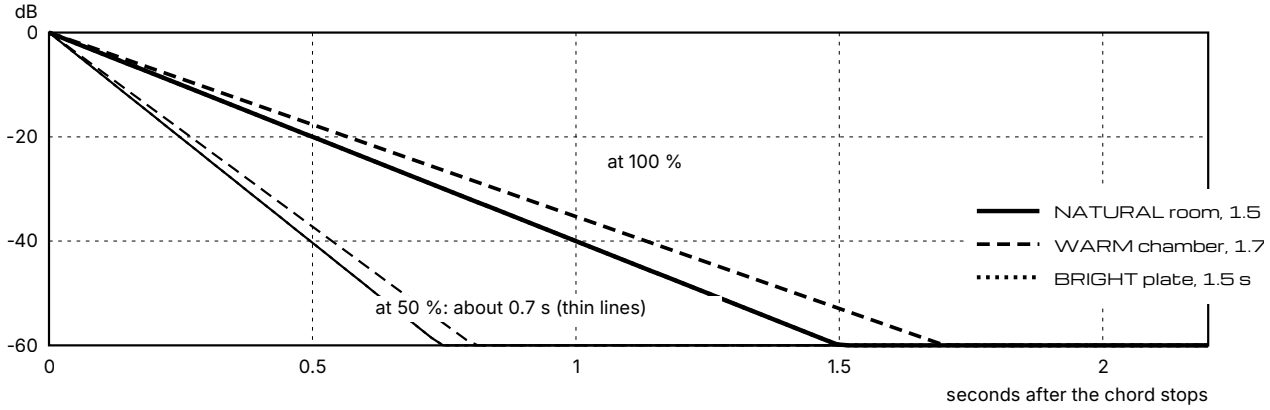


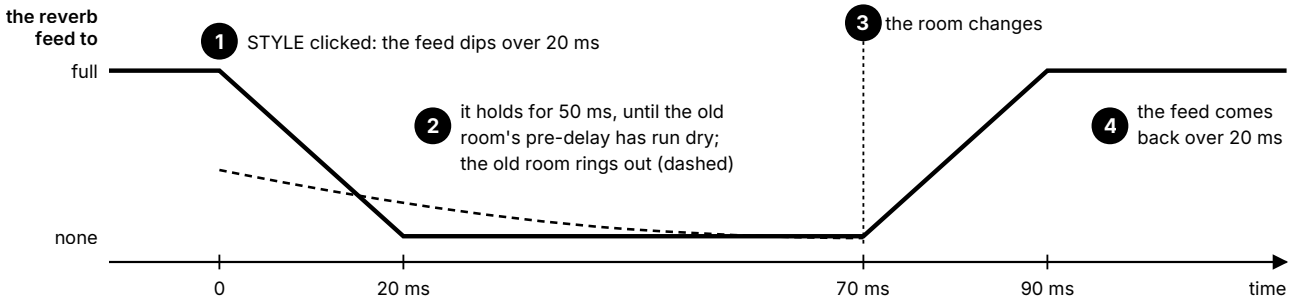
FIGURE 15 The three rooms' tails after a chord stops, at ENHANCE 50 % (thin lines) and 100 %: the level of the reverb falling 60 dB over its decay time. NATURAL's room and BRIGHT's plate ring equally long, so their lines coincide; the plate is brighter, the room has the more open reflections.

The reverb's band is cut below 150 to 220 Hz, so the room never adds boom under the guitar, and above 6.5 to 12 kHz, so it never fizzes; WARM's chamber is the darkest and BRIGHT's plate the most open. At a light setting the room stays tucked under the playing; from about 70 % it becomes a clear space, and at 100 % a lot. The SPACE meter shows where you are.

Mono and stereo. On a mono track the reverb's two sides are summed and the guitar stays mono. On a stereo track (a stereo pickup system, or a mono guitar on a stereo track) the reverb is stereo and gives the guitar width while the direct sound stays where it was.

Changing style while the guitar plays

The three styles use three different rooms, and a reverb can't be swapped in the middle of a chord without a click at every reflection. So when a STYLE change brings a new room, the plugin hands over:



The EQ and the compression crossfade over the first 40 ms; only the reverb waits for silence at its input.

FIGURE 16 The reverb's handover on a STYLE change. The old room's tail is never cut off, and the new one starts from nothing, so the switch is free of clicks even on a ringing chord.

1. The copy fed to the reverb dips to nothing over 20 ms.
2. It stays there for 50 ms, long enough for the old room's pre-delay to run dry. The old room keeps ringing out inside the engine.
3. The room changes: the new type with its own size, pre-delay, band and damping.
4. The feed comes back over 20 ms.

The whole handover takes about 90 ms. The direct guitar is never interrupted; what you hear is one room fading into the next. Nothing else waits: the EQ and the compression crossfade over the first 40 ms of it.

OUTPUT: MIX and OUTPUT

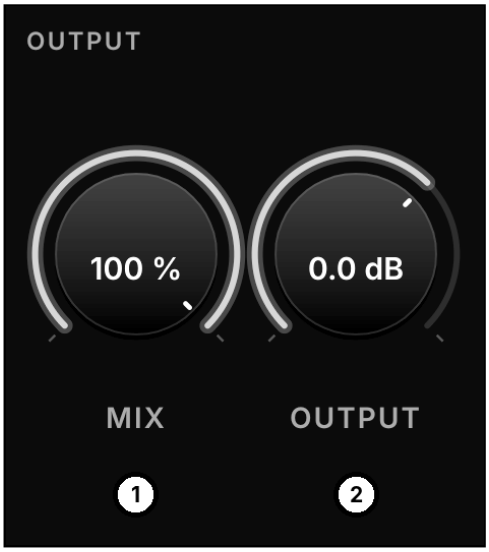


FIGURE 17 1 MIX (here 100 %) and 2 OUTPUT (here 0.0 dB).

Control	Range	Default	What it does
MIX	0 to 100 % in 1 % steps	100 %	The enhanced guitar against the dry pickup, in time with it.
OUTPUT	−24 to +12 dB in 0.1 dB steps	0.0 dB	The final level.

MIX blends the enhanced guitar with the dry pickup. The plugin has no latency, so the two are in time by themselves and add up cleanly, without the hollow sound of a delayed copy. At 0 % the output is the input, bit for bit. MIX and OUTPUT glide over 20 ms.

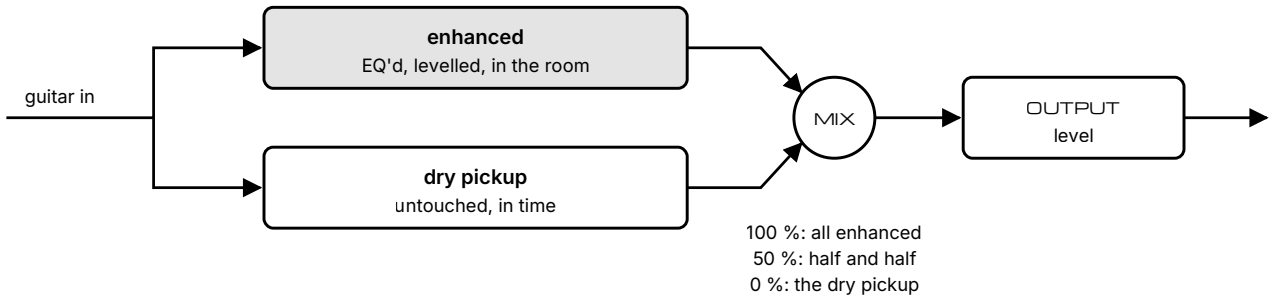


FIGURE 18 MIX as parallel processing. Heavy settings blended under the dry pickup are a classic way to get control and a room while keeping the player's own attack.

Parallel processing. Setting ENHANCE high and MIX between 35 and 70 % gives you the tone, the evenness and the room of a heavy setting, while the dry pickup keeps the player's original attack and dynamics. Several factory presets work this way (*Strum Parallel Control*, *Even Out Dynamics*, *Room Only*, *Distant Warm Blend*). With MIX at 35 % and ENHANCE at 100 % (*Room Only*), what you mostly add is the room.

OUTPUT sets the level leaving the plugin, after MIX. AUTO GAIN already keeps the loudness close to the input's, so you'll mostly use OUTPUT for small trims (the factory presets use −0.5 to +0.8 dB), or to set the level for the next plugin.

Displays

The TONE display

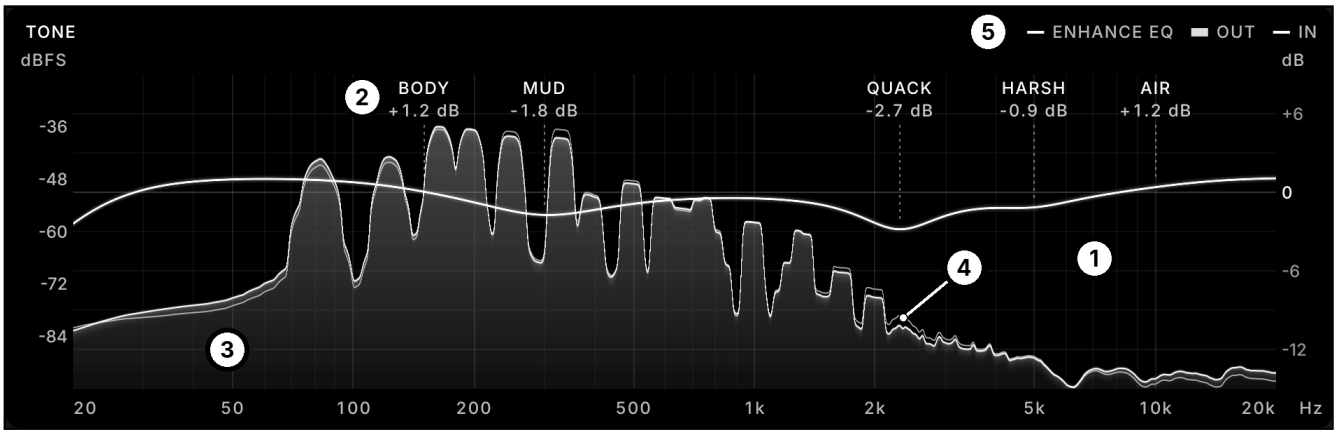


FIGURE 19 1 The EQ curve, 2 the five moves with their amounts, 3 the output's spectrum (amber on screen, filled), 4 the input's spectrum (a thin grey line) and 5 the legend.

The TONE display shows the guitar from 20 Hz to 20 kHz, the low notes on the left and the highs on the right, on a musical scale (each octave the same width).

- **The EQ curve** 1 (the light line, ENHANCE EQ in the legend) is the shape the EQ has at the current ENHANCE and STYLE. Read it on the **dB scale at the right**: 0 is no change, +6 a 6 dB boost. It changes as you turn ENHANCE or switch STYLE. It's the EQ before AUTO GAIN, and doesn't include the compressor or the reverb.
- **The five moves** 2 name where the EQ works (BODY, MUD, QUACK, HARSH, AIR), each with a dotted line down to the curve and its amount right now, for example QUACK -2.7 dB.
- **The spectrum** shows the guitar as it plays, read on the **dBFS scale at the left**: the output 3 as a filled shape (amber on screen) and the input 4 as a thin grey line. Without colour, tell them apart by their shape: the output is the **filled** area with a bright edge, the input only an outline. Where the outline shows above the fill, the plugin took level away there (around the quack, for instance); where the fill rises above it, the plugin added (the body, the air, the room's tail between the notes).
- **The legend** 5 names the three lines.

Hover over the display for a read-out of the EQ at any frequency, for example *At 2.30 kHz ENHANCE's EQ changes the level by −2.7 dB (before AUTO GAIN)*.

What to look for:

- **The quack.** Between 2 and 3 kHz, a piezo's spectrum has a hump. As you raise ENHANCE, the output's fill drops under the input's outline there: that's the honk going.
- **The body.** Around 100 to 200 Hz the fill rises a little above the outline: the warmth given back.
- **The strums.** With a busy strum the humps of the spectrum jump up and down; as you raise ENHANCE, the output's humps settle into a steadier row.

- **The top.** On WARM, the curve bends down on the right: the pick's fizz and the string noise get softer. On BRIGHT it rises: air.

The COMP reduction meter



FIGURE 20 The COMP meter, captioned REDUCTION: 1 the number, 2 the bar and 3 its scale, from 0 dB (right) to 18 dB (left). Here *Init* takes 1.7 dB off a strum.

The meter shows how much the compressor takes off right now, in dB.

- 2 **The bar** (red on screen; in print, the lighter block) grows from the right-hand end, 0 (resting), towards the left as the compressor turns the guitar down. A small white marker sits at its tip.
- 3 **The scale** runs from 0 at the right to -18 at the left, evenly spaced in dB, with marks at -3, -6 and -12.
- 1 **The number** shows the most reduction of the last quarter-second, for example -1.7 dB; it turns red on screen while there is reduction, and reads 0.0 at rest. Because it holds the peak, it usually reads a little more than the bar.

The bar moves exactly like the needle of an analog VU meter (it reaches 99 % of a change in 300 ms, with a slight overshoot), so it's easy to follow by eye.

- On steady strumming at a moderate setting, the bar **swings a few dB** with the loudest strums and shrinks back between them. That's the playing being evened out.
- Because makeup gives back what a typical strum loses, **an empty bar doesn't mean the plugin is idle**: quiet picking is being lifted.
- If the bar stays long most of the time, reaching far to the left, the playing is very uneven or ENHANCE is high; check by ear that the strums still breathe.
- After you start playback, the compressor takes about a second and a half to learn the guitar's level before it settles.

The SPACE meter

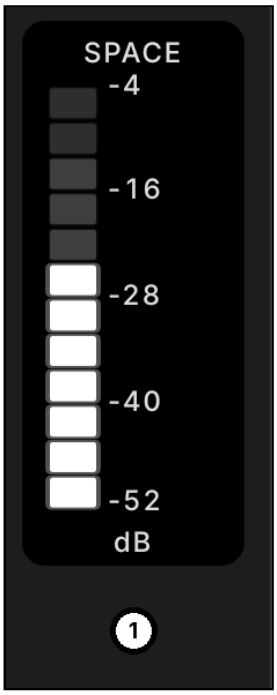


FIGURE 21 1 The SPACE meter with *Init* at 50 %: seven lamps lit, about −24 dB, a light room. Its scale reads -4, -16, -28, -40 and -52 dB.

The SPACE meter is a column of twelve lamps showing **how much reverb is in the sound**: how loud what the reverb adds is compared with the guitar, from −52 dB at the bottom to −4 dB at the top. The lamps are green on screen for the lower seven, amber for the next three and red for the top two; without colour, read the height of the column.

As a guide, from the factory presets' measurements: around **−30 dB and below** is a hint of room you feel more than hear (*Light Touch* reads −37 dB), **−20 dB** a clear space (*Quack Tamer*, *Travis Picking Even*), **−12 dB** a lot (*Full Warm Chamber*, *Distant Warm Blend*). The meter falls back over about 0.3 seconds, and the guitar's level it compares against holds for a second after the guitar stops, so the tail after a final chord still reads against the playing.

Meter bridge (IN | OUT)

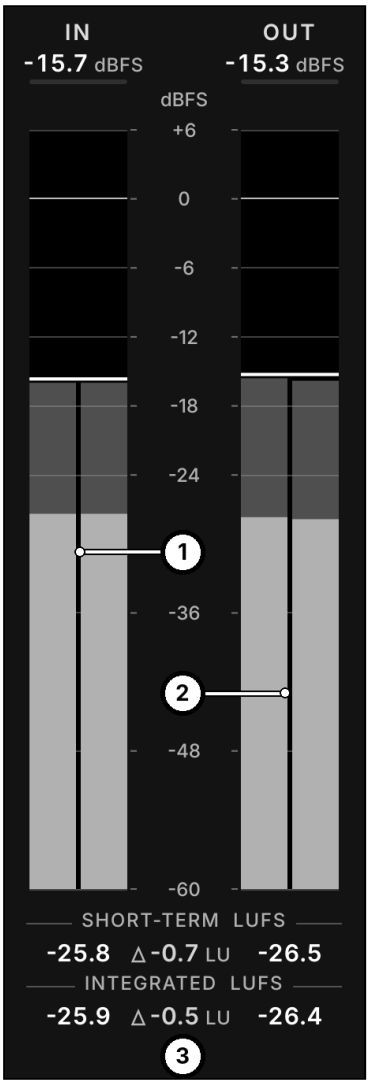


FIGURE 22 The meter bridge: 1 input and 2 output level, 3 short-term and integrated loudness with the OUT − IN difference.

VEIRA Guitar DI Enhancer's meter bridge is the standard one, measured on the plugin's input and output. Thanks to AUTO GAIN the Δ readings stay close to 0 LU as you turn ENHANCE: a useful check that you're comparing tone, not level. On a mono track, both bars of each meter show the same mono signal.

Reading the IN and OUT meters

The meter bridge measures what goes into VEIRA Guitar DI Enhancer 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.

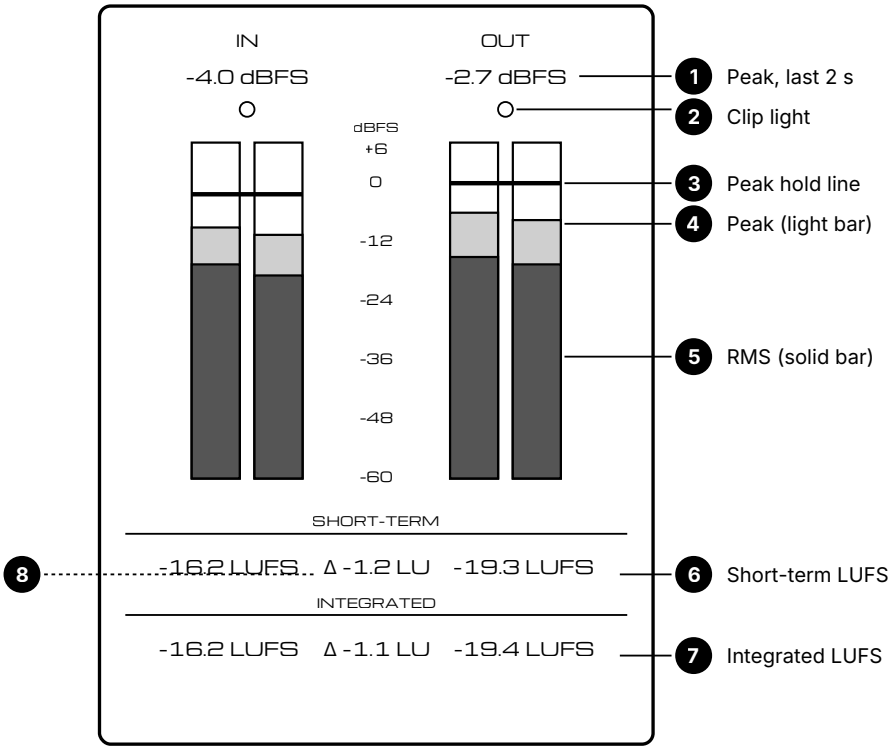


FIGURE 23 The meter bridge, left and right channel bars for input and output, with loudness below.

- 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 Guitar DI Enhancer 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.

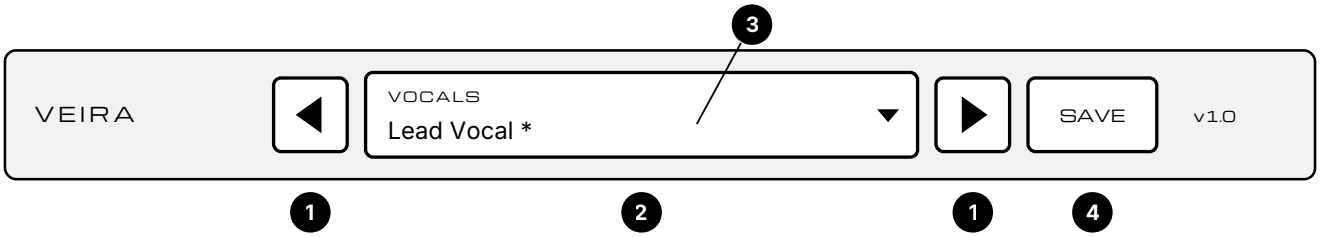
Clicks: click a level meter to reset its hold and clip light. Click the loudness readouts to restart the integrated measurement, for example at the start of a song.

Presets

VEIRA Guitar DI Enhancer comes with **41 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 24 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 Guitar DI Enhancer 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 Guitar DI Enhancer/<Folder>/
Windows	%APPDATA%\VEIRA\VEIRA Guitar DI Enhancer\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
Singer-Songwriter	Songwriter Natural, Songwriter Warm, Songwriter Bright, Intimate Fingerstyle, Late Night Ballad
Strumming	Strum Natural, Strum Even Rhythm, Strum Big Warm, Strum Bright Pop, Strum Parallel Control
Fingerstyle	Fingerstyle Natural, Fingerstyle Warm Wood, Fingerstyle Sparkle, Fingerstyle Even Thumb, Fingerstyle Light Touch
Pop & Rock	Pop Acoustic Bright, Rock Acoustic Layer, Indie Warm Strum, Radio Acoustic, Lead Line Clear
Folk & Country	Folk Natural, Country Flatpick, Campfire Warm, Travis Picking Even, Old Time Dark
Live & Stage	Stage Natural, Stage Even Level, Stage Warm Full, Stage Bright Cut, Stage Dry Control
Mix Fix	Quack Tamer, Thin Pickup Body, Dull Pickup Air, Light Touch, Even Out Dynamics, Room Only
Creative FX	Full Warm Chamber, Full Bright Plate, Everything Natural, Distant Warm Blend

The folders are sorted by how the guitar is played (*Strumming* leans on the levelling, *Fingerstyle* keeps it gentler and looks after the thumb's bass notes) and by what the track is for (*Singer-Songwriter*: a guitar under a voice; *Pop & Rock*: an acoustic in a full band, a flatpicked lead; *Folk & Country*; *Live & Stage*: a piezo through a PA, with and without the room). **Mix Fix** is for a pickup that honks, is thin or dull, only needs a light touch, plays unevenly, or only wants the room; **Creative FX** goes all the way. Each preset's note (in the preset menu) says which control to move first.

> **Levels.** The compressor measures the guitar against its own level, so the presets behave the same on a quiet pickup and a hot one; you don't need to gain-stage into the plugin. Every preset was measured on strummed, fingerpicked and flatpicked lines through an under-saddle pickup, and on the material it's made for it stays within about half a dB of the input's loudness (−0.3 to +0.5 dB). Real guitars and pickups differ, so trim OUTPUT by ear if a preset jumps out of the mix.

Recipes

Step-by-step starting points. In each, listen in the mix as well as solo, and compare with the plugin bypassed: the meter bridge's Δ reading tells you the levels match.

A singer-songwriter's guitar under the voice

1. Insert VEIRA Guitar DI Enhancer first on the guitar track and load **Singer-Songwriter ▸ Songwriter Natural**. The quack goes, the body comes back and a small room appears; the guitar stops sounding plugged in.
2. Play the song with the vocal. If the guitar fights the voice in the upper mids, you're hearing the rest of the quack: raise ENHANCE to 60 %.
3. For a closer, rounder guitar try **Songwriter Warm**; for one that sits under the voice with more clarity, **Songwriter Bright**.

Tame a honky piezo

1. Load **Mix Fix ▸ Quack Tamer** (NATURAL, 68 %).
2. Watch the TONE display between 2 and 3 kHz: the output's fill should drop clearly under the input's outline there. Raise ENHANCE until the honk is gone, then go back a little.
3. If the pickup is also thin, switch to WARM (**Mix Fix ▸ Thin Pickup Body**): more body and the zing taken further down.

Even out strumming

1. Load **Strumming ▸ Strum Even Rhythm** (NATURAL, 75 %) and play the busiest part of the song.
2. Watch the COMP meter: its bar should swing a few dB with the loudest strums, not stay far out to the left. Lower ENHANCE if the dynamics feel flat.
3. If the strums still jump but the tone is already right, load **Strumming ▸ Strum Parallel Control** instead: heavy control (NATURAL, 85 %) blended with the dry pickup at MIX 55 %, so the attack comes through on top. Set MIX for how even.

Fingerstyle with a heavy thumb

1. Load **Fingerstyle ▸ Fingerstyle Even Thumb** (NATURAL, 70 %): more levelling, otherwise natural. The thumb's bass notes stop booming over the melody.
2. If the bass notes still jump, raise ENHANCE; if the piece loses detail, try **Fingerstyle Natural** at 45 %.
3. For a woody, warm fingerstyle tone, **Fingerstyle Warm Wood**; for every note clear on a bright plate, **Fingerstyle Sparkle**.

A bright pop acoustic that cuts through

1. Load **Pop & Rock ▸ Pop Acoustic Bright** (BRIGHT, 65 %) or **Strumming ▸ Strum Bright Pop**.
2. Listen in the full mix: the air from 9 kHz up and the mud cut at 280 Hz are what let a strummed acoustic be heard under electric guitars and keyboards without turning it up.

3. On a thin or harsh pickup, lower ENHANCE to 45 to 55 %. For an acoustic layer behind the electrics, **Rock Acoustic Layer**.

On stage, or in a mix that has its own reverb

1. Load **Live & Stage ▸ Stage Natural** for a piezo through a PA: the quack out, body back, a little room. There is no latency, so you can play through it live.
2. If the venue, or your mix, already has its reverb, load **Live & Stage ▸ Stage Dry Control** instead: the tone and the levelling with less of the room, blended with the dry pickup at MIX 70 %.
3. The other way round, if you only want the room and a touch of tone on a guitar that is already right, **Mix Fix ▸ Room Only** (NATURAL at 100 %, MIX 35 %): MIX is the room's amount.

Specifications

Type	Acoustic guitar enhancer: pickup EQ, levelling and reverb on one knob, with automatic gain
Channels	Mono and stereo (stereo channels are processed with a linked compressor; a mono guitar stays mono, the reverb's two sides summed)
Latency	None, at every sample rate
Transparency	ENHANCE 0 %, MIX 0 %, and bypass: the output is the input, bit for bit
Level	AUTO GAIN, always on. Measured from 25 to 100 % on all three styles on strummed, fingerpicked and flatpicked lines: within 1.2 dB of the input's loudness; factory presets −0.3 to +0.5 dB
Level independence	The compressor measures the guitar against its own level: a pickup 26 dB quieter comes out the same, 26 dB quieter
ENHANCE	0 to 100 % in 1 % steps (default 50 %); glides over about 60 ms; the chain fades in over the first 3 %
STYLE	NATURAL, WARM, BRIGHT (default NATURAL); a change crossfades the EQ and the compression over 40 ms and hands the reverb over in about 90 ms
MIX	0 to 100 % in 1 % steps (default 100 %); glides over 20 ms
OUTPUT	−24 to +12 dB in 0.1 dB steps (default 0.0 dB); glides over 20 ms
Low cut	12 dB/oct high-pass, out (10 Hz) up to 20 % ENHANCE, then up to 75 Hz (NATURAL), 70 Hz (WARM) or 85 Hz (BRIGHT) at 100 %
EQ	Body (low shelf), mud, quack and harsh (bells), air (high shelf), top (high shelf cut, WARM); analog-matched; flat and bypassed at 0 %
Compressor	Full band, 15 ms RMS detector, both channels linked; threshold from 4 dB above to 12 dB under the guitar's long-term level, ratio up to 4:1 (6 dB knee) as the amount rises; 8 ms down, 150 ms up; makeup for a strum 2 dB over the usual level; no lookahead
Reverb	VEIRA Space's engine, fully wet on a copy, blended at equal power: room (NATURAL), chamber (WARM) or plate (BRIGHT); blend up to 30 / 30 / 24 %, decay from 0.4 s up to 1.5 / 1.7 / 1.5 s; pre-delay 12 / 18 / 10 ms; band 180 Hz–9 kHz / 150 Hz–6.5 kHz / 220 Hz–12 kHz; tail reported to the host (2.5 s)
Displays	TONE (20 Hz–20 kHz: the EQ, ±dB at the right; the input and output spectrum, dBFS at the left; hover read-out); COMP REDUCTION bar (0 to 18 dB, VU movement); SPACE (−52 to −4 dB, 12 lamps)
Metering	IN and OUT meters (sample peak, RMS); short-term and integrated loudness per ITU-R BS.1770-4 / EBU R 128
Presets	41 factory presets in 9 folders, plus your own
Window	1240 × 780 points; resizable from 75 % to 200 %, saved with the session
Formats	VST3, Audio Units, standalone; AAX once signed
Plugin ID	Manufacturer Veir, plugin Vgdi

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 Guitar DI Enhancer 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 turn ENHANCE and hardly hear a difference. That's AUTO GAIN doing its job: the level doesn't rise, so the change is in the tone. Listen to the quack between 2 and 3 kHz, to the strums' evenness and to the space around the guitar, and compare with bypass at matched level. Below about 40 % the room is only a short ambience; it becomes clearly audible from about 70 %.

The first strum after a pause comes through a little loud. The compressor has no lookahead, so a strum's first milliseconds pass at the gain the guitar had just before it. After a quiet passage that gain is higher (quiet picking is being lifted), so the first attack can be a little louder. Lower ENHANCE, or blend with MIX.

The reverb is too much, or not enough. ENHANCE sets the room together with everything else. For less room with the same tone, lower MIX a little (*Stage Dry Control* works this way), or switch to BRIGHT, whose plate is blended in least. For more room than tone, raise ENHANCE and lower MIX (*Room Only*). The SPACE meter tells you where you are: around −20 dB is a clear space.

It sounds woolly or too dark. WARM shelves the top down from 9 kHz, more as ENHANCE rises, and its chamber is the darkest room. Lower ENHANCE, or switch to NATURAL or BRIGHT, which don't cut the top.

The pickup is thin and BRIGHT makes it worse. BRIGHT adds the most air and the least body, so a thin or harsh pickup gets thinner. Use WARM (**Mix Fix ▸ Thin Pickup Body**) for the body back and a softer top, or NATURAL at a moderate setting.

Can I use it while recording, or on stage? Yes. The plugin has no latency at all, so you can play through it while recording and in a live rig.

Where should it go in my chain? First, straight after the recorded pickup: that's the signal it was designed for. Add your own EQ, compressor or a longer reverb after it.

Does it work on a microphone recording of an acoustic guitar? It's voiced for a pickup: the body shelf, the quack cut and the softened zing answer what a pickup gets wrong, which a microphone recording doesn't have. The levelling and the room still work: start at a lower ENHANCE and use MIX.

I bounced the song and the reverb's tail is cut off at the end. The plugin reports a 2.5-second tail to the host, so most DAWs render it. If yours stops at the last region's end, extend the bounce range by a few seconds.

Do my sessions keep my settings? Yes. Every control, the selected preset and the window size are saved with your session (drag the window's bottom-right corner to resize it, from 75 % to 200 %), and every control can be automated.

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



VEIRA Guitar DI Enhancer · User Manual · Version 0.2.1

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

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