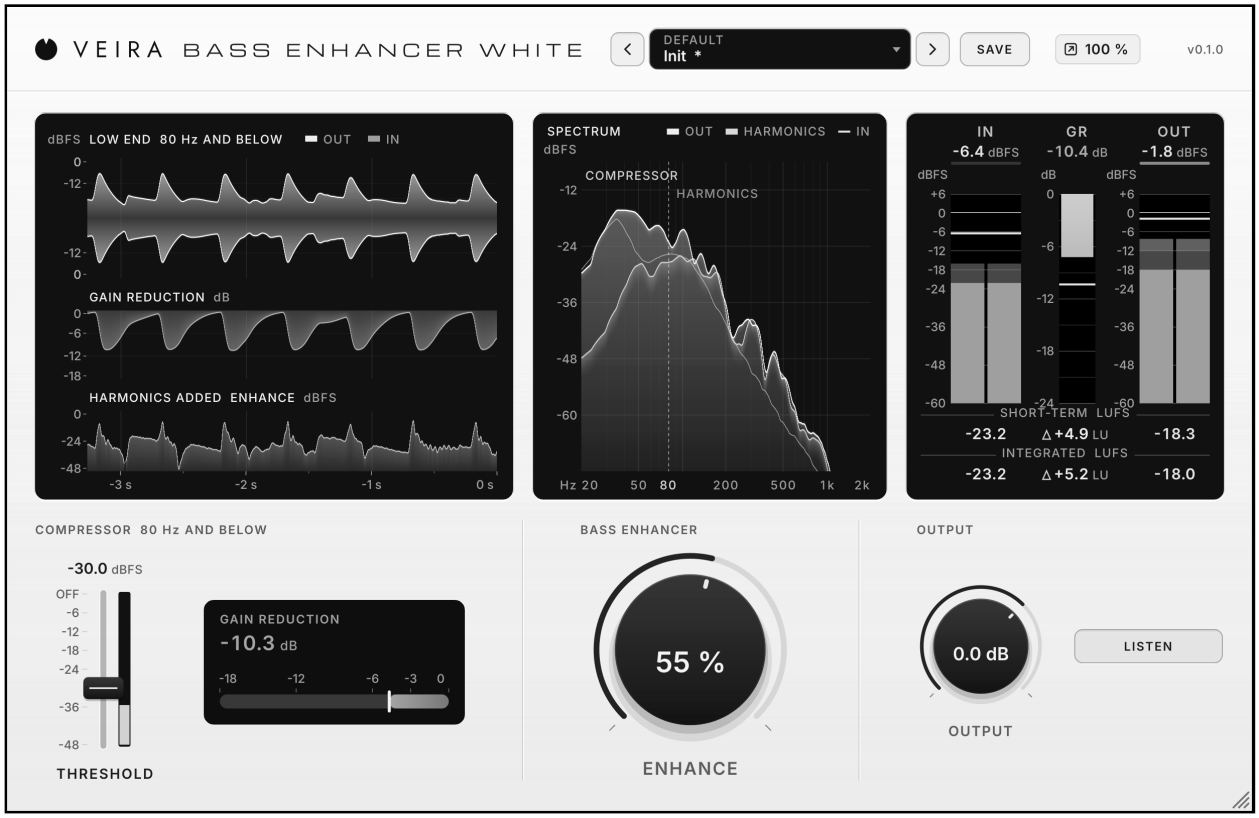
VEIRA

BASS ENHANCER

VEIRA Bass Enhancer White

User Manual

The clean one of the VEIRA colour bass enhancers: a compressor that works on 80 Hz and below only, set with one THRESHOLD fader, and one big ENHANCE knob that adds exact harmonics of the bass, so it is heard on phones, laptops and earbuds.



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Welcome

Thank you for choosing **VEIRA Bass Enhancer White**. It does two jobs for the low end of a bass, a kick, an 808, a drum bus, a mix or a master. A **compressor that works on 80 Hz and below only** evens the deepest notes out, so the sub stops jumping out on one note and dropping away on the next. And one big ENHANCE knob adds **exact harmonics** of those lows, so the bass line is still heard on speakers that can't play it: phones, laptops and earbuds.

It is the White member of the VEIRA colour family: clean, precise and modern, with a light face, dark screens and black knobs. There are only four controls: THRESHOLD, ENHANCE, OUTPUT and LISTEN.

What makes it different

- **Exact harmonics, and only harmonics.** ENHANCE adds the 2nd, 3rd, 4th and 5th harmonics of each low note, built exactly from the note at its own level. The note itself is never added again, so it can't be thinned or doubled: notes from 28 to 95 Hz keep their level within 0.07 dB.
- **Even, not quieter.** The compressor turns loud low notes down at 4:1 and gives back what a note at the lows' usual level loses, so THRESHOLD evens the low end out (loud notes down, quiet ones up) without making it quieter.
- **Only the lows move.** The gain is applied by a low shelf on the whole signal, not by splitting off a band and adding it back: with 12 dB of reduction, 160 Hz moves 0.19 dB and nothing moves from 320 Hz up.
- **Set it against what is there.** The lows' own level runs in a bar beside the THRESHOLD fader, lit red where it is over the threshold.
- **See it over time.** The LOW END display draws the last 4 seconds of the lows going in and out, the gain reduction and the harmonics added; the SPECTRUM shows the harmonics on their own.
- **Untouched when idle, and no latency.** With THRESHOLD at OFF and ENHANCE at 0 %, the output is the input, bit for bit.

How this manual is organised. *Getting started* installs and activates the plugin. *The panel at a glance* names its parts. *How bass enhancement works* explains why the lows disappear on small speakers and what happens inside. *Controls* and *Displays* explain every control and graph. *Presets*, *Recipes*, *Specifications* and *Troubleshooting* close the manual.

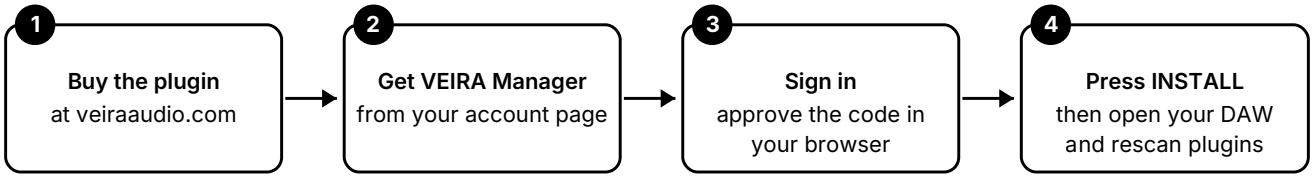
Getting started

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

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 Bass Enhancer White 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.

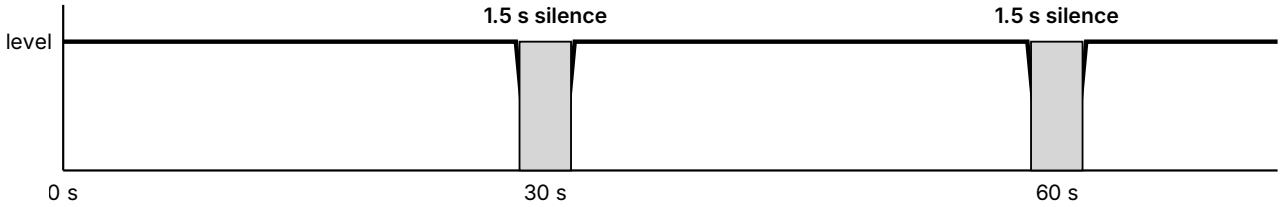


FIGURE 2 What an unlicensed copy does. With a valid licence the audio is never touched.

- **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 Bass Enhancer White. 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 Bass Enhancer White 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

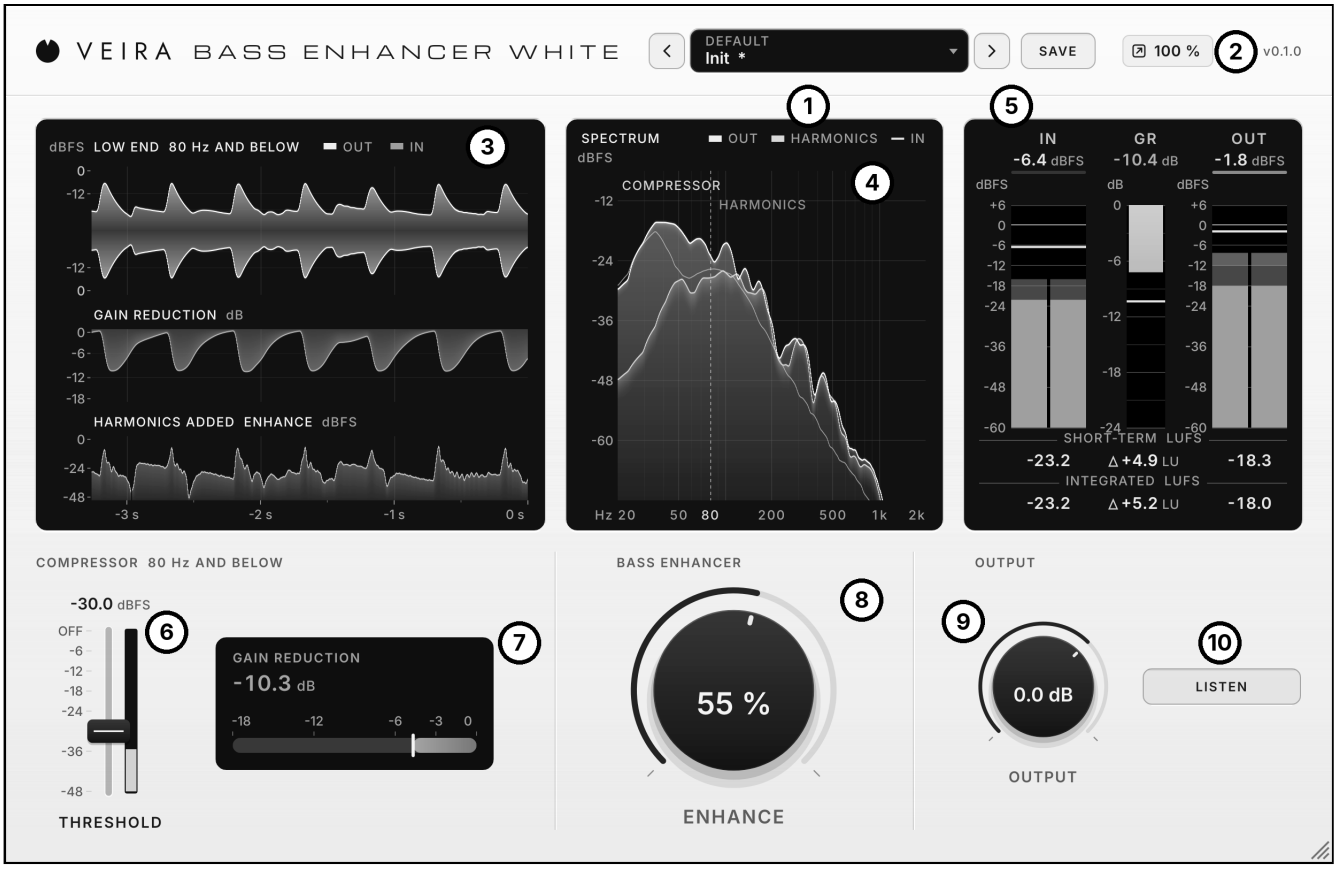
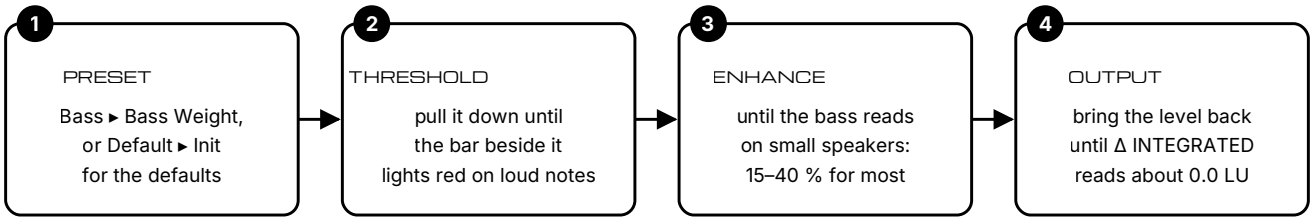


FIGURE 3 VEIRA Bass Enhancer White on a bass line: THRESHOLD at −30.0 dBFS with 10.3 dB of gain reduction on the lows, and ENHANCE at 55 %.

	Part	What it does
1	Preset browser	Steps through and saves presets. See *Presets*.
2	Size button	The window's size: 75 to 200 %, or *Fit to screen*.
3	LOW END	The last 4 seconds of the lows (80 Hz and below), the gain reduction and the harmonics added.
4	SPECTRUM	20 Hz to 2 kHz: the input, the output and the harmonics alone.
5	Meter bridge	IN, GR and OUT meters with short-term and integrated loudness.
6	THRESHOLD	Where the compressor on the lows starts. The lows' level runs in the bar beside it.
7	GAIN REDUCTION	How much the lows are being turned down right now.
8	ENHANCE	How much of the exact harmonics is added.
9	OUTPUT	The level after everything.
10	LISTEN	Hear only what the plugin works on: the lows and the harmonics.

The displays fill the top of the window: LOW END at the left, the SPECTRUM in the middle and the meter bridge at the right. The controls sit in three groups along the bottom, under the captions COMPRESSOR 80 Hz AND BELOW, BASS ENHANCER and OUTPUT.

Quick start: a bass that carries in four moves

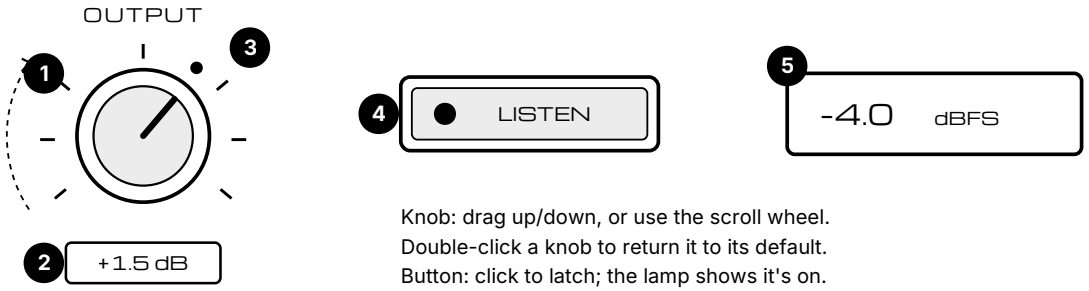


Check on earbuds or a phone. LISTEN plays only the lows and the harmonics, so you hear exactly what you add.

FIGURE 4 The quickest way to a bass that carries. *Default* ▸ *Init* starts with THRESHOLD at −18.0 dBFS and ENHANCE at 35 %.

Using the controls

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



Knob: drag up/down, or use the scroll wheel.
Double-click a knob to return it to its default.
Button: click to latch; the lamp shows it's on.
Readouts always carry a unit (dB, dBFS, LUFS, LU, ms, %).

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 Bass Enhancer White's panel the parts look a little different from the drawing above:

- **Knobs show their value in the middle** ([55 %], [0.0 dB]): the knobs are black, with a dark ring around each one on the light face showing how far it is turned. The control's name is printed under the knob. [ENHANCE], the one you touch most, is the large one.
- **THRESHOLD is a vertical fader**, not a knob: drag its black cap up and down. The top of its travel is [OFF], and the scale beside it reads −6 to −48 dBFS. Its value is printed above the fader ([-30.0 dBFS]). Double-click it for its default, −18.0 dBFS.
- **Type a value:** right-click a knob or the fader (Control-click on a Mac). A field opens with the current value; type the new one and press Return. The number is enough: **−24** for a threshold of −24 dBFS, **40** for 40 % of [ENHANCE]; **off** sets [THRESHOLD] to [OFF].
- **The button has no lamp:** [LISTEN] fills dark with light lettering when it is on (in print, a dark button), and is a light key when it is off.
- **The window size.** VEIRA Bass Enhancer White opens at 100 %, 1240 × 800 points. To change it, click the size button (2) in the header and choose 75, 90, 100, 125, 150 or 200 % or *Fit to screen* (sizes that don't fit your display are left out); or drag the grip in the bottom-right corner (double-click it for 100 %); or press Cmd + [=] and Cmd + [-] (Ctrl on Windows) to step up and down and Cmd + [0] for 100 %. Your DAW saves the size with the session, and new instances open at the size you chose last.
- **The face:** a light, clean face with dark screens for the displays, the [GAIN REDUCTION] box and the preset window, so the meters keep their usual colours. Every label stands at least 4.5:1 against what is behind it (the WCAG AA contrast for text), and no text is smaller than 12 points.

Where to put VEIRA Bass Enhancer White

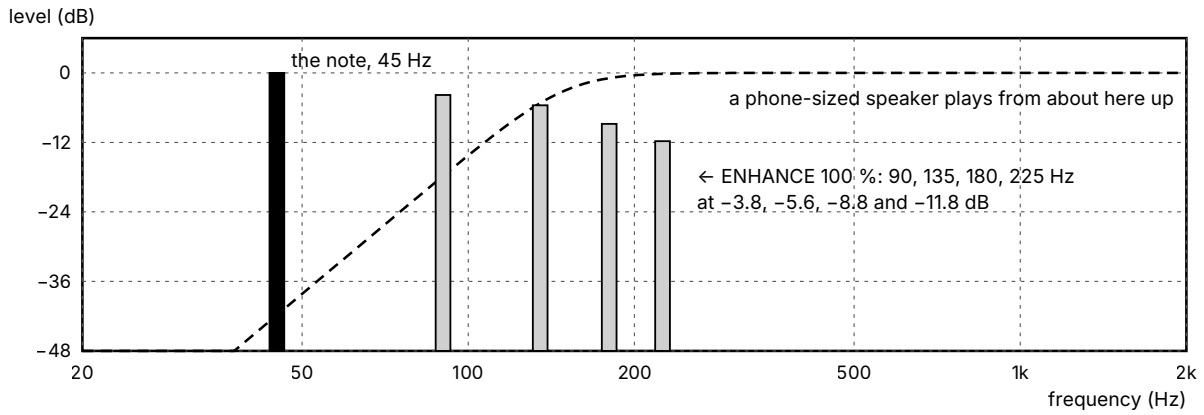
Use it as an insert on whatever carries the low end: a bass (DI or amp), a synth bass or 808, a kick, a floor tom, a drum bus, the mix bus or the master. It adds no latency, so it is fine while you record and play. If you also EQ the bass, an EQ before it shapes what the compressor measures and what the harmonics are made from; an EQ after it shapes the result, harmonics included.

How bass enhancement works

Why the bass disappears on small speakers

A bass note's fundamental, the frequency you'd name it by, sits low: about 41 Hz for the low E of a bass guitar, 55 Hz for the A above it, and lower still for an 808. Small speakers can't move enough air to play those frequencies: a phone, a laptop or an earbud plays little or nothing below about 150 Hz. On those speakers the bass line simply goes missing.

Every real note also has **harmonics**: quieter tones at 2, 3, 4 … times its frequency. Those do fall where a small speaker plays, and the ear has a useful habit: from a row of harmonics at 90, 135, 180 Hz … it hears the pitch of the missing 45 Hz. A bass enhancer uses that habit. It adds harmonics, so the bass line is heard, at its own pitch, on speakers that can't play its fundamental.

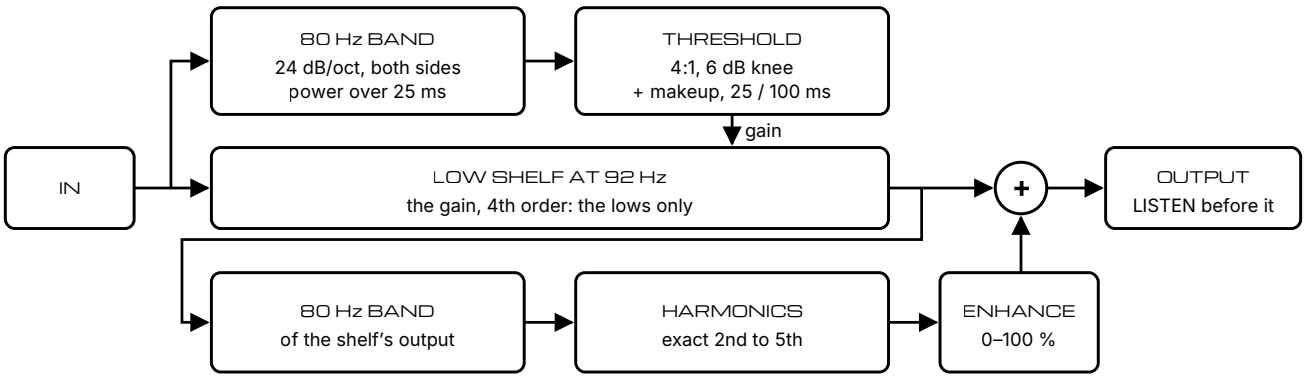


The speaker can't play 45 Hz, but it plays the harmonics, and the ear hears the note's pitch from them. ENHANCE adds only the 2nd to 5th harmonics (grey); the note itself (black) is left exactly as it was.

FIGURE 6 A 45 Hz note and the harmonics ENHANCE adds at 100 %, as measured (dashed: about how much of each frequency a phone-sized speaker plays).

The second job is **level**. The lowest notes of a bass line rarely come out even: one note rings on in the room or the amp and jumps out, the next is weak. On big speakers that makes the low end bounce; on small ones, the harmonics would bounce with it. Evening the lows out first, and then adding their harmonics, gives a steady low end that carries everywhere.

What happens inside VEIRA Bass Enhancer White



The lows are measured on their own, but turned down by a shelf on the whole signal: nothing is split off and added back. The harmonics are made from the lows after the shelf. With THRESHOLD at OFF and ENHANCE at 0 % the output is the input, bit for bit. No latency.

FIGURE 7 The signal flow. The upper path measures the lows and sets their gain; the lower path makes the harmonics.

1. **The lows are measured.** A 24 dB per octave low-pass at 80 Hz picks out the lows of both channels, linked, and their power is averaged over 25 ms, so a steady low note reads its peak level in dBFS.
2. **The compressor works out the gain** against [THRESHOLD]: 4:1 with a 6 dB soft knee, plus the makeup that gives a usual note back what it loses. The gain comes down in 25 ms and goes back up in 100 ms.
3. **A low shelf applies it.** Instead of splitting the signal into bands and adding them back, the plugin turns the lows down (or up) with a 4th-order low shelf cornered at 92 Hz, on the whole signal. A shelf has no crossing point where two bands could add up wrong, and at 0 dB it is exactly no change.
4. **The harmonics are made from the lows after the shelf**: the 2nd to the 5th, built exactly from each note at its own level, each set at a fixed phase against the note.
5. [ENHANCE] **adds them** to the full signal, then [OUTPUT] sets the level.

There is no latency, and with [THRESHOLD] at [OFF] and [ENHANCE] at 0 % the output is the input, bit for bit.

Controls

COMPRESSOR 80 Hz AND BELOW: THRESHOLD and GAIN REDUCTION

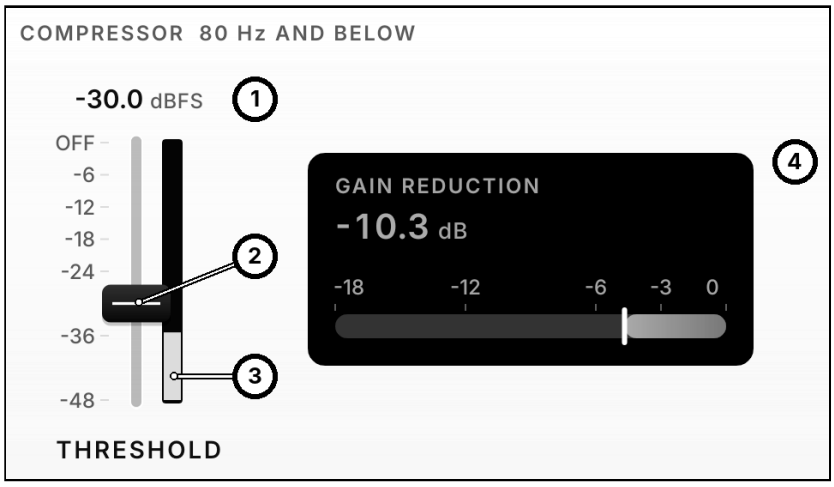


FIGURE 8 The COMPRESSOR 80 Hz AND BELOW group: 1 the THRESHOLD value, 2 the fader's cap, 3 the lows' own level in the bar beside it (red where it is over the threshold), and 4 GAIN REDUCTION, here 10.3 dB.

Control	Range	Default	What it does
THRESHOLD	−48 dBFS to OFF	−18.0 dBFS	Where the compressor on the lows starts, against their own level. The top of the fader is OFF.
GAIN REDUCTION	0 to 18 dB (display)	–	How much the lows are being turned down right now.

THRESHOLD. The compressor reads the level of the lows alone (80 Hz and below) and compares it with THRESHOLD. Over the threshold, the lows are turned down at a fixed **4:1**: for every 4 dB they rise, they come out only 1 dB louder. A **6 dB soft knee** rounds the corner, so the compression fades in rather than switching on. The ratio and the timing are fixed and set for the low end, so THRESHOLD is the only thing to set.

You don't need to guess: **the lows' live level runs in the bar beside the fader**, light below the threshold and red over it. Pull the cap down until the loudest low notes light the top of the bar red, and watch GAIN REDUCTION:

- **A few dB on the loudest notes:** a steadier sub that still moves with the playing.
- **6 to 10 dB:** the low notes held at one level; the usual setting on bass, 808 and kick.
- **More than that:** a flat, held low end. The quieter notes come up as far as the loud ones come down.

Even, not quieter. A plain compressor makes the lows quieter. VEIRA Bass Enhancer White also gives back, as makeup, what a note at the lows' **usual level** loses (their level over about the last 2.5 seconds), at most 12 dB. Notes louder than usual come out lower, notes quieter than usual come out higher, and the low end as a

whole keeps its level: a bass line's average stayed within 0.3 dB at THRESHOLD −30 dBFS. The makeup fades out 40 to 50 dB under the usual level, so silence, noise and tails are not lifted, and it waits until the lows' level is known: the first note after loading isn't lifted.

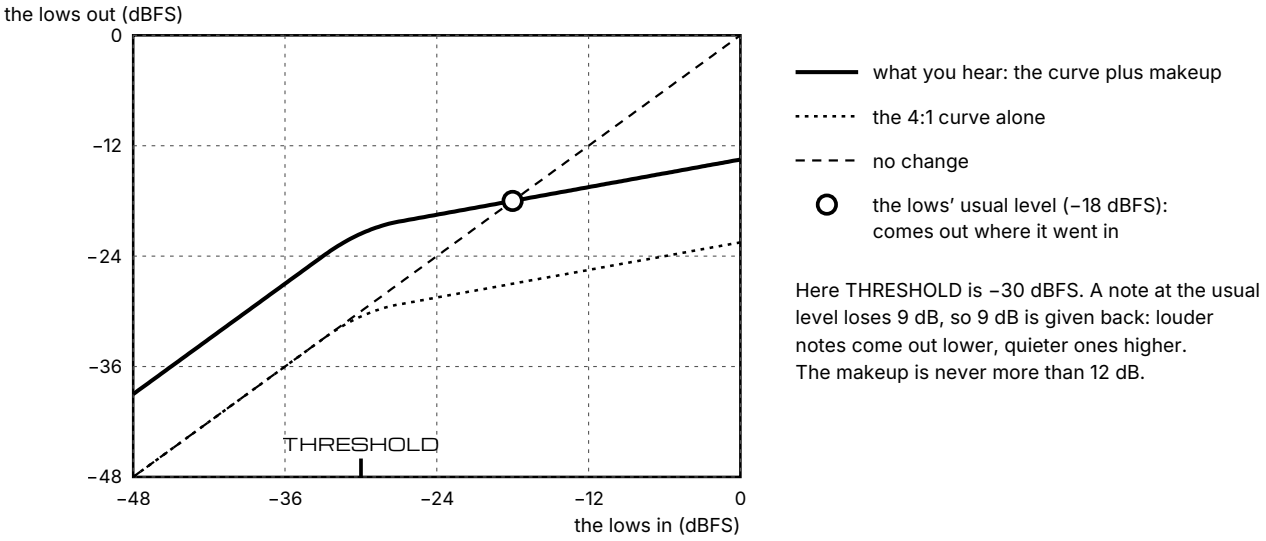
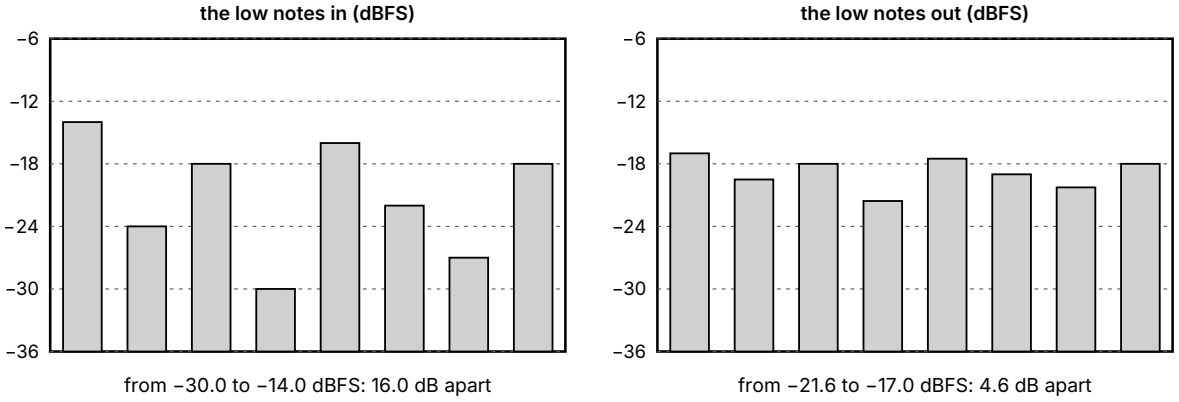


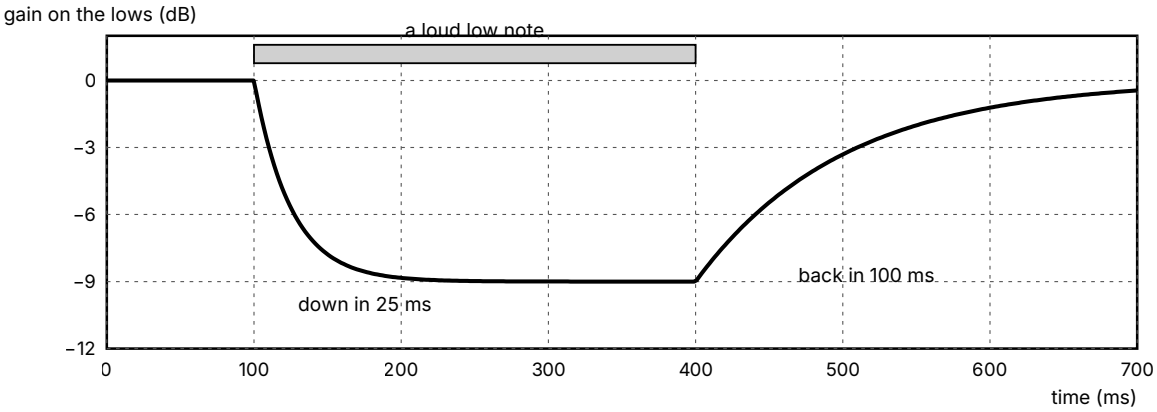
FIGURE 9 The curve for steady low notes, with THRESHOLD at −30 dBFS on lows that usually sit at −18 dBFS (computed: 4:1, 6 dB knee, 9 dB of makeup).



Steady notes on the curve (THRESHOLD −30 dBFS, the lows usually at −18 dBFS). In real playing the gain takes 25 ms to come down and 100 ms to come back, so the effect is gentler: a bass line whose low notes varied by 12.9 dB came out with 6.3 dB at THRESHOLD −24 dBFS (notes of 0.6 s).

FIGURE 10 What evening out means: eight steady low notes before and after, on the same curve.

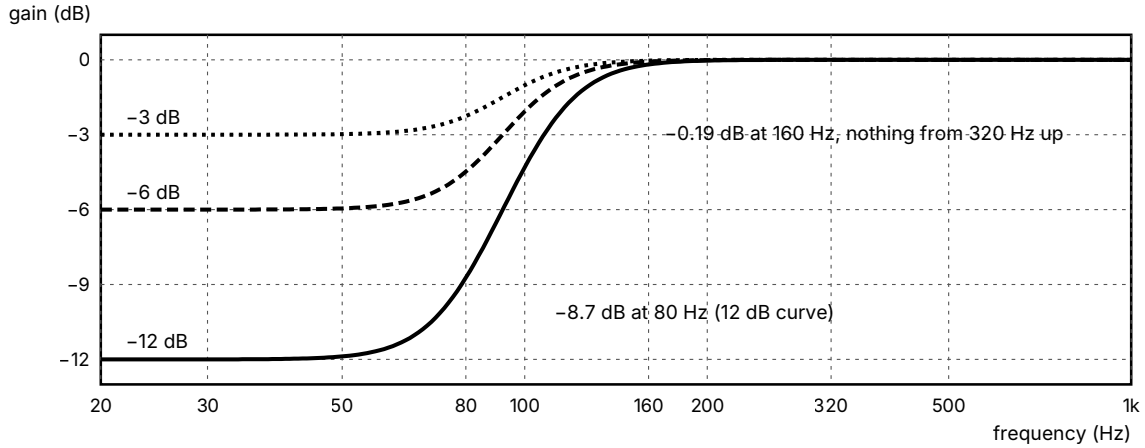
Timing. The gain comes down with a **25 ms** attack and goes back with a **100 ms** release. Both are set for the lows: a 30 Hz cycle lasts 33 ms, so the gain moves over whole waves rather than riding each one, which keeps the compressor clean (a swelling 35 Hz tone ridden by the gain kept every harmonic under −59 dB).



The gain follows the lows with a 25 ms attack and a 100 ms release (time constants), set for the lowest notes: a 30 Hz cycle lasts 33 ms, so the gain doesn't ride the waves and add distortion of its own.

FIGURE 11 How the gain on the lows follows a loud note, roughly.

Only the lows move. The gain is applied by a 4th-order low shelf at 92 Hz on the whole signal: all of it below about 50 Hz, most of it at 80 Hz, a trace at 160 Hz, and nothing from about 320 Hz up. A bass's growl, a kick's click and a voice stay where they were.



How a change in the lows' gain spreads over frequency: 3, 6 and 12 dB down (computed from the plugin's shelf). The shelf moves the lows exactly as far as the gain does (up as well as down), and at 0 dB it is no change at all.

FIGURE 12 How the change in gain spreads across frequency, for 3, 6 and 12 dB (computed from the plugin's shelf).

GAIN REDUCTION shows how much the lows are turned down right now: the number in dB, and a bar on a 0 to −18 dB scale that grows from the right (red). The meter bridge's GR column shows the same reduction.

> **Tip:** Set THRESHOLD first, then ENHANCE: the harmonics are made from the lows after the compressor, so steadier lows give steadier harmonics.

BASS ENHANCER: ENHANCE

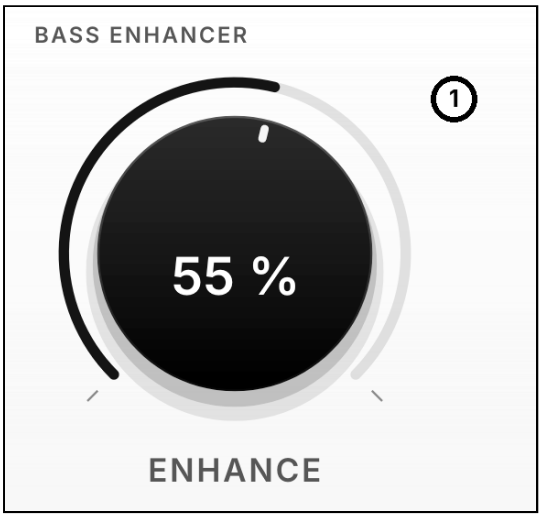


FIGURE 13 1 ENHANCE, here at 55 %.

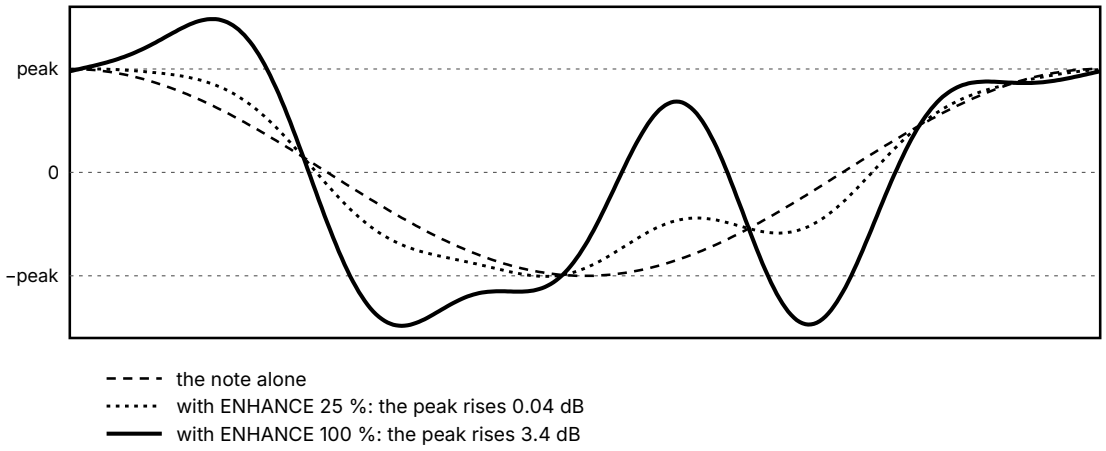
Control	Range	Default	What it does
ENHANCE	0 to 100 %	35 %	How much of the exact 2nd to 5th harmonics of the lows is added.

ENHANCE adds the **2nd, 3rd, 4th and 5th harmonics** of the lows, in the proportions 1, 0.75, 0.5 and 0.35. At 100 % they are together as loud as the lows; at 50 % exactly 6 dB quieter; at 0 % none are added. Measured on a 45 Hz note at 100 %: the 2nd harmonic at −3.8 dB against the note, the 3rd at −5.6 dB, the 4th at −8.8 dB and the 5th at −11.8 dB, together −0.5 dB, the same at every sample rate.

- **10–25 %:** a little more definition; on big speakers you hardly hear it, on small ones the bass line appears. The mix bus and mastering presets sit here.
- **25–45 %:** a clear bass on any speaker, still clean. The usual range for bass, kick and toms.
- **45–100 %:** the bass is carried mostly by its harmonics; for phones and tiny speakers (see *Small Speakers*). Lower it if it starts to sound grainy on big speakers.

Exact, not distorted. Many bass enhancers distort the low end and mix it in. VEIRA Bass Enhancer White builds each harmonic directly from the note: it follows each note's level and pitch and adds clean tones at exactly 2, 3, 4 and 5 times its frequency. So the amount doesn't depend on how loud the track is (it was the same over 40 dB of level), it never adds a copy of the note itself, and it can't alias: the harmonics of a band under 80 Hz end far below the top of the audio range. With a 78 Hz tone at −3 dBFS and ENHANCE at 100 %, every other component stayed under −112 dB.

No pile-up on the peaks. Each harmonic is set at a fixed phase against the note, worked out for the note's pitch, so the harmonics don't all peak where the note peaks. A note's peak rises at most 0.2 dB at 25 % and 3.4 dB at 100 % (28 to 80 Hz notes).



Each harmonic sits at a fixed phase against the note (worked out for the note's pitch), so they don't pile onto its peaks.

FIGURE 14 One cycle of a low note, alone and with the harmonics added at 25 % and 100 % (computed from the plugin's weights and phases).

No new sub. The harmonics pass a 60 Hz high-pass on their way out, so ENHANCE never adds sub of its own (it takes 0.9 dB off the 2nd harmonic of a 45 Hz note, at 90 Hz). Moving ENHANCE while playing glides over 20 ms, so it never clicks.

OUTPUT: OUTPUT and LISTEN

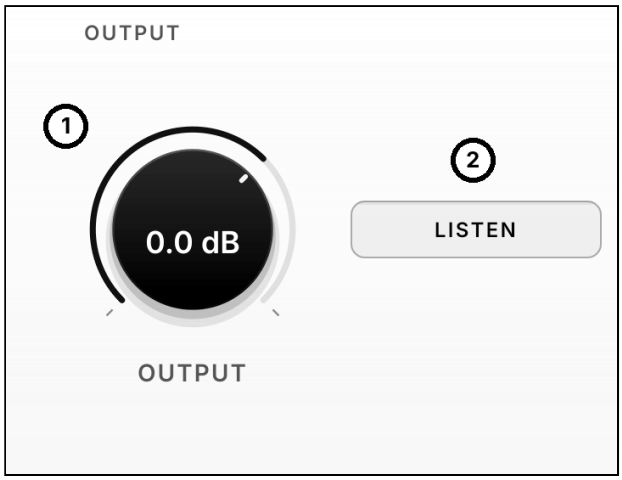


FIGURE 15 The OUTPUT group: 1 OUTPUT and 2 LISTEN (here off).

Control	Range	Default	What it does
OUTPUT	−24 to +12 dB	0.0 dB	The level after everything.
LISTEN	on, off	off	Plays only what the plugin works on: the lows (80 Hz and below) and the harmonics.

OUTPUT sets the final level. The harmonics add level, so after raising ENHANCE, set OUTPUT until the meter bridge's Δ INTEGRATED reads about 0.0 LU, then compare with your DAW's bypass. The factory presets already do this: each one's OUTPUT was set so that it comes out at the level it went in.

LISTEN is a listening aid. It plays only the lows below 80 Hz, after the compressor, plus the harmonics ENHANCE adds: exactly what the plugin works on. Use it to hear what the compressor holds and what the harmonics sound like, then switch it off. It crossfades in and out, so it never clicks. **Offline bounces always leave it out**, so a bounce never comes out as lows only by mistake.

Displays

LOW END

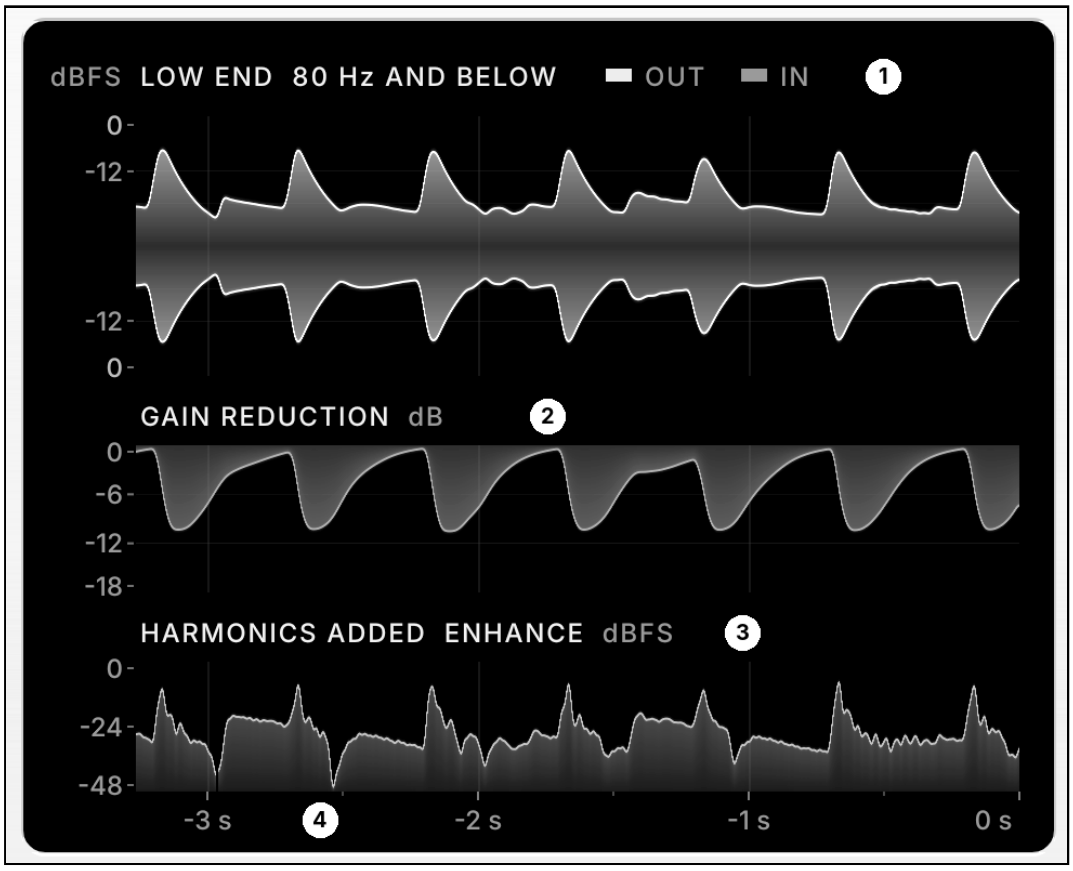


FIGURE 16 LOW END 80 Hz AND BELOW: 1 the lows going out (light) over coming in (grey), 2 GAIN REDUCTION, 3 HARMONICS ADDED, and 4 the time scale, the last 4 seconds.

LOW END draws the last **4 seconds** of the lows (80 Hz and below), newest at the right, in three lanes:

- **The lows** 1 (dBFS): what goes out, silver (in print, the light shape in front), over what came in, grey (behind it). Where the grey reaches beyond the silver, the compressor took the lows down; where the silver reaches beyond the grey, it lifted a quiet note.
- GAIN REDUCTION 2 (dB): how much the compressor turns the lows down, from 0 at the top, drawn in red (in print, the dark shape hanging from the top line).
- HARMONICS ADDED 3 (dBFS): how loud the harmonics ENHANCE adds are, drawn in teal. At ENHANCE 0 % this lane stays empty.

Hover over the display to read any moment: TIME, LOWS IN, LOWS OUT, REDUCTION and HARMONICS, each with its unit.

What to look for. On a bass line, the reduction lane should show bumps on the loud notes and little in between. If it hangs down all the time, THRESHOLD is low; with the makeup, that still evens the line out, but raise it if the low end starts to sound flat.

SPECTRUM

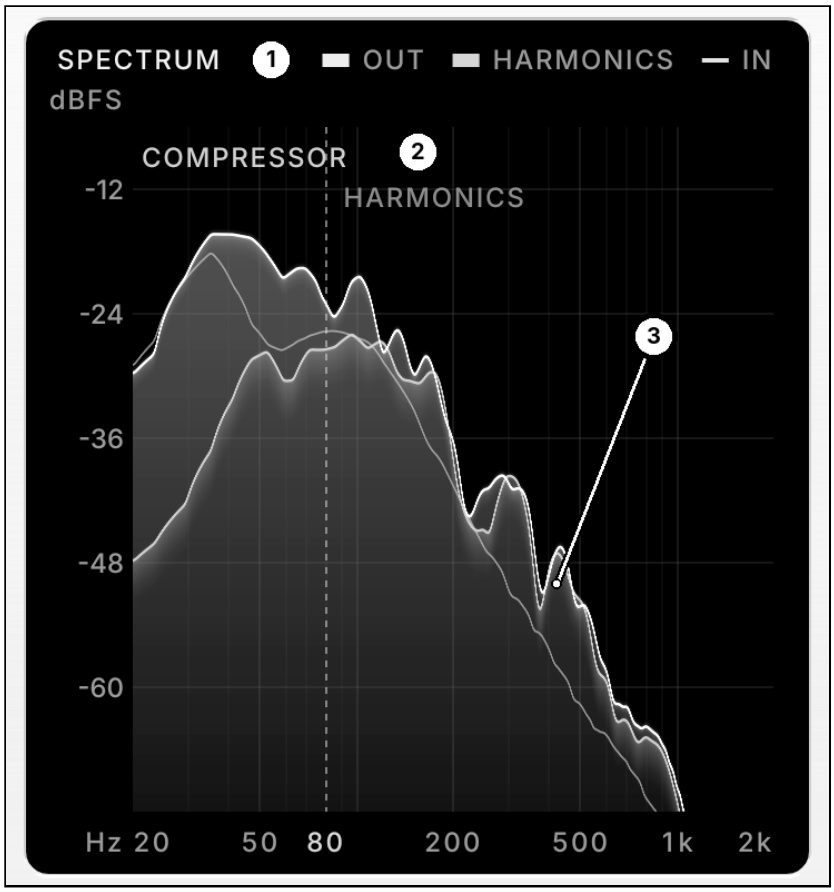


FIGURE 17 The SPECTRUM: 1 its title and key (OUT, HARMONICS, IN), 2 the 80 Hz line, with COMPRESSOR to its left and HARMONICS to its right, and 3 the harmonics alone.

The SPECTRUM shows the lows and low mids, **20 Hz to 2 kHz**, in sixth-octave steps on a dBFS scale. It rises quickly and falls slowly, so it is easy to read on music.

- **The output** is the filled silver curve (in print, the light filled area).
- **The input** is a thin line.
- **The harmonics** ENHANCE adds are the teal curve (in print, the separate curve that starts low at the left and joins the output in the low mids). Turn ENHANCE up and it rises; set it to 0 % and it disappears.
- **The dashed line at 80 Hz** marks where the compressor's lows end.

Hover over the display: below 80 Hz it reminds you that this is where the compressor works; above it, that this is where the harmonics carry the bass on speakers that can't play the lows.

What to look for. A teal curve that reaches into the 100 to 300 Hz range is what a phone or a laptop will play of your bass.

Meter bridge (IN | GR | OUT)

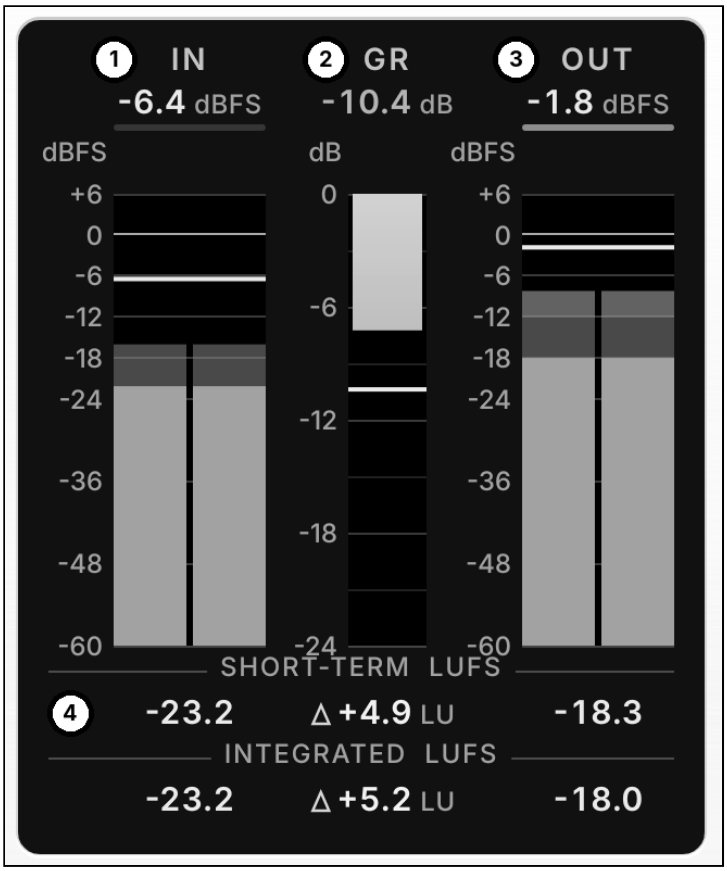


FIGURE 18 The meter bridge: 1 IN, 2 GR (the lows' gain reduction) and 3 OUT, with 4 short-term and integrated loudness.

The middle column, **GR**, is the compressor's reduction on the lows: an orange bar growing down from 0 on a 0 to 24 dB scale, with a hold line, and above it the reduction in dB.

Reading the IN and OUT meters

The meter bridge measures what goes into VEIRA Bass Enhancer White 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.

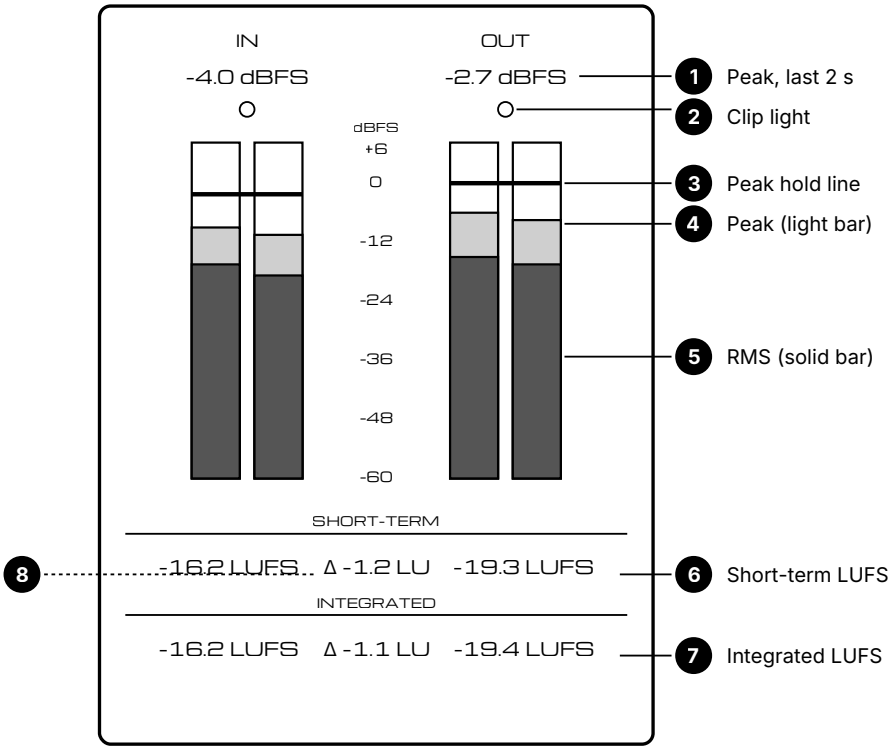


FIGURE 19 The meter bridge, left and right channel bars for input and output, with loudness below.

- 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 Bass Enhancer White 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.

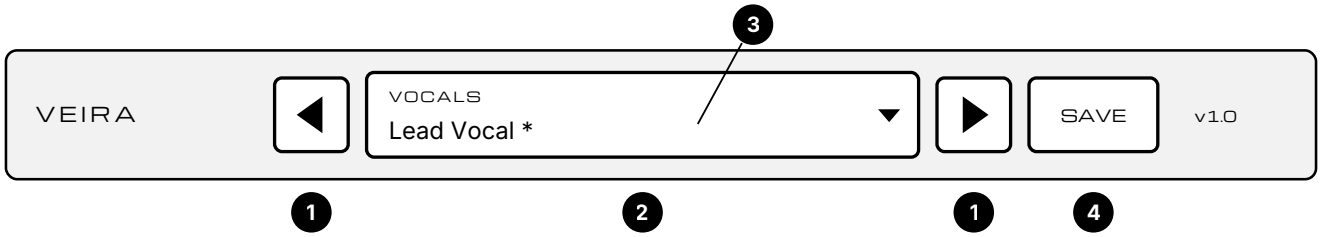
Clicks: click a level meter to reset its hold and clip light. Click the loudness readouts to restart the integrated measurement, for example at the start of a song.

Presets

VEIRA Bass Enhancer White comes with **22 factory presets** in 6 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 20 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 Bass Enhancer White 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 Bass Enhancer White/<Folder>/
Windows	%APPDATA%\VEIRA\VEIRA Bass Enhancer White\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
Drums	Kick Sub Control, Kick Weight, Tom Thunder, Kit Low End Tidy
Bass	Bass Even Notes, Bass Weight, Synth Bass Solid, Upright Bass Lift, Bass Clarity Light
Mix Bus	Mix Low End Glue, Mix Bass Presence, Mix Sub Tamer, Mix Warmth Light
Mastering	Master Low End Even, Master Translation, Master Sub Focus, Master Bass Lift
Small Speakers	Phone Bass, Laptop Bass, Earbud Punch, Sub Drop Translator

Levels. The presets were made on tracks peaking at −8 dBFS, drums and sub lines at −6 dBFS, the mix bus at −4 dBFS and masters at −3 dBFS. THRESHOLD is set in dBFS against the lows' own level, so on a quieter or louder track **set** THRESHOLD **first**: watch the bar beside the fader and move the threshold by the difference. ENHANCE doesn't depend on level. Every preset but *Init* was measured through the plugin and comes out within 0.15 dB of bypass loudness (K-weighted), with its peaks at or under −0.7 dBFS; *Init* is the plain defaults. The presets with THRESHOLD at OFF (*Bass Clarity Light*, *Mix Warmth Light*, *Master Bass Lift*) only add harmonics; those with ENHANCE at 0 % only even the lows out. The *Small Speakers* presets played the sub line 9 to 12 dB louder on a phone-sized speaker.

Recipes

Each recipe starts from a factory preset; the numbers are a starting point for your track.

A bass line that carries on phones

1. Load *Small Speakers* ▸ *Phone Bass* (THRESHOLD −16.0 dBFS, ENHANCE 80 %), or *Small Speakers* ▸ *Laptop Bass* (60 %) for a gentler start.
2. Press LISTEN and play the loudest part: you hear the lows and the harmonics alone. Switch it off again.
3. Lower ENHANCE until the bass just stops sounding grainy on big speakers, and check the line is still heard on earbuds or a phone.
4. Compare with bypass at equal loudness (Δ INTEGRATED about 0.0 LU).

Even low notes on a bass

1. Load *Bass* ▸ *Bass Even Notes* (THRESHOLD −34.0 dBFS, ENHANCE 0 %).
2. Play the passage with the boomiest note. Move THRESHOLD until the bar beside the fader lights red on the loud notes.
3. Watch LOW END: the reduction should bump on the loud notes, and quiet notes come up a little.
4. For weight on small speakers too, raise ENHANCE, or start from *Bass* ▸ *Bass Weight* (35 %).

A kick with a steady sub

1. Load *Drums* ▸ *Kick Sub Control* (THRESHOLD −34.0 dBFS): the kick's sub at one level from hit to hit, the click untouched.
2. If the boom loses its punch, raise THRESHOLD.
3. For a kick that also reads in a busy mix, try *Drums* ▸ *Kick Weight* (ENHANCE 30 %).

Clarity without touching the dynamics

1. Load *Bass* ▸ *Bass Clarity Light* (THRESHOLD OFF, ENHANCE 30 %), or *Mix Bus* ▸ *Mix Warmth Light* on a whole mix.
2. Raise ENHANCE until the bass reads on a laptop. With the compressor off, nothing changes in the dynamics: only harmonics are added.

A steady low end on the mix bus

1. Load *Mix Bus* ▸ *Mix Low End Glue* (THRESHOLD −20.0 dBFS, ENHANCE 0 %), or *Mix Bus* ▸ *Mix Sub Tamer* for a mix whose sub swings.
2. Keep THRESHOLD near the lows' peaks: a few dB of reduction on the kick and the bass is enough. Everything above 80 Hz is untouched.
3. For a touch of presence on small speakers, try *Mix Bus* ▸ *Mix Bass Presence* (ENHANCE 20 %).

A master that translates

1. Load *Mastering* ▸ *Master Translation* (THRESHOLD −13.0 dBFS, ENHANCE 15 %).
2. Set THRESHOLD by the bar beside the fader, so only what jumps out below 80 Hz comes down.
3. Put your limiter after it. *Mastering* ▸ *Master Sub Focus* steadies a loud master's sub, so the limiter works less.

Sub drops that are heard everywhere

1. Load *Small Speakers* ▸ *Sub Drop Translator* (THRESHOLD −18.0 dBFS, ENHANCE 100 %).
2. Play the longest drop: every note gets its full set of harmonics.
3. Watch the output peaks: at 100 % a note's peak can rise up to 3.4 dB, which the preset's OUTPUT (−4.5 dB) already allows for.

Specifications

Type	Bass enhancer: a compressor on the lows (80 Hz and below) and exact harmonics of the lows
Channels	Mono and stereo (stereo linked: one gain for both sides)
Latency	None
Clean when idle	With THRESHOLD at OFF and ENHANCE at 0 %, the output is the input, bit for bit
Compressor	Level: 24 dB/oct low-pass at 80 Hz, both channels linked, power over 25 ms (a sine reads its peak); 4:1 with a 6 dB soft knee; attack 25 ms, release 100 ms; makeup: what a note at the lows' usual level loses (their level over about 2.5 s), at most 12 dB, fading out 40 to 50 dB under it; gain applied by a minimum-phase 4th-order low shelf at 92 Hz (with 12 dB of change: −12.0 dB at 30 Hz, −8.7 dB at 80 Hz, −0.19 dB at 160 Hz, nothing from 320 Hz)
Harmonics	Exact 2nd to 5th (weights 1, 0.75, 0.5, 0.35), at fixed phases against the note; at 100 % together as loud as the lows; 60 Hz high-pass (no new sub); no aliasing (other components under −112 dB)
THRESHOLD	−48 dBFS to OFF (default −18.0 dBFS)
ENHANCE	0 to 100 % (default 35 %)
OUTPUT	−24 to +12 dB (default 0.0 dB)
LISTEN	On or off (default off); left out of offline bounces
Metering	LOW END (last 4 s: lows in and out, gain reduction, harmonics added; hover read-out); SPECTRUM (20 Hz to 2 kHz, sixth-octave: input, output and harmonics); GAIN REDUCTION with a bar; the lows' level beside the THRESHOLD fader; IN, GR and OUT meters (peak, RMS); short-term and integrated loudness per ITU-R BS.1770-4 / EBU R 128
Sample rates	44.1 to 192 kHz
Presets	22 factory presets in 6 folders, plus your own
Window	1240 × 800 points at 100 %; 75 to 200 % or Fit to screen, from the size button, the corner grip or Cmd/Ctrl + = - 0; saved with the session and remembered for new instances
Formats	VST3, Audio Units, standalone; AAX once signed
Plugin ID	Manufacturer Veir, plugin Vbew

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 Bass Enhancer White 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**.

GAIN REDUCTION **stays at 0.0 dB.** THRESHOLD is at OFF (the top of the fader), or above the level of your lows. Pull it down until the bar beside the fader lights red. A track with little below 80 Hz (a guitar, a voice) gives the compressor nothing to do.

The first note after loading isn't evened out. The makeup waits until it knows the lows' usual level, so the first note isn't lifted. From then on it follows the music.

Does it make the bass thinner? No. Only harmonics are added, each at its exact frequency and phase, and the note itself is never added again, so it can't cancel: notes from 28 to 95 Hz keep their level within 0.07 dB.

Does it touch the mids or the vocal? The compressor doesn't: its shelf moves 160 Hz by 0.19 dB with 12 dB of change and nothing from 320 Hz up. ENHANCE adds the 2nd to 5th harmonics of notes under 80 Hz, so they land in the low mids; lower it if that range gets crowded.

The output peaks went up. The harmonics add level: a note's peak rises up to 3.4 dB at ENHANCE 100 % (0.2 dB at 25 %). Lower OUTPUT, or put a limiter after it on the mix bus or master.

My bounce sounds different from playback. LISTEN is left out of offline bounces on purpose. If it was on while you listened, you heard only the lows and the harmonics.

Does VEIRA Bass Enhancer White add latency? No. It works without latency, so it is fine while recording and playing live.

Does it work on a mono track? Yes, mono and stereo. On stereo, both sides are measured together and get the same gain, so the stereo image doesn't move.

The window is too small (or too big) on my screen. Click the size button in the header and pick a size or *Fit to screen*, or drag the bottom-right corner. The size is saved with your session.

How do I type an exact value? Right-click the knob or the fader (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 Bass Enhancer White · User Manual · Version 0.1.0

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

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