VEIRA

PARAMETRIC EQUALIZER

VEIRA EQ White

User Manual

The clean one of the four VEIRA colour EQs: a surgical, transparent eight-band parametric EQ with a zero-latency minimum-phase mode, a linear-phase mode, SOLO for every band and AUTO GAIN, on a large curve display over the live spectrum.



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Welcome

Thank you for choosing **VEIRA EQ White**. It is a parametric equalizer: eight bands, each a bell, a shelf, a cut or a notch, drawn as numbered points on a large curve over the spectrum of your music. It is the clean one of the four VEIRA colour EQs (White, Red, Gold and Blue): the one that adds nothing of its own, for precise corrections, for tone shaping you don't want to hear as an "effect", and for mastering.

Drag a point on the graph and the band follows; the knobs under the graph show the selected band's exact values. Choose MINIMUM phase for zero latency, or LINEAR phase when you want no phase shift at all. SOLO lets you hear the region a band works on, so you can find a ring or a harsh spot quickly, and AUTO GAIN keeps the loudness where it was, so you judge the tone and not the level.

What makes it different

- **Eight bands, six shapes.** Bell, low shelf, high shelf, low cut, high cut (6 to 96 dB/oct) and notch, on any band.
- **Analog shape to the top.** In minimum phase, bells and shelves keep their analog shape right up to 20 kHz: a boost at 15 kHz is as broad as the knob says, not squeezed narrower near the top of the range.
- **Minimum or linear phase.** Zero latency for tracking and mixing; linear phase (181 ms at 48 kHz) for mastering, where it leaves the phase of the music untouched.
- **SOLO** plays only what a band works on: a bell's region, what a cut takes away, the side a shelf shelves.
- **AUTO GAIN** keeps the loudness the same whatever the curve does, worked out from the curve itself, so it never pumps.
- **Flat is exact.** With every band flat or off, the output is the input bit for bit (in linear phase, an exact delay).

How this manual is organised. *Getting started* covers installing and activating. *The panel at a glance* names every part of the window. *How an equalizer works* is a short primer. *Working on the graph* and *Controls* explain the bands, the knobs and the buttons with drawings, and *Minimum and linear phase* explains the choice the PHASE buttons make. *Which colour EQ to choose* compares the four colour EQs. *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:

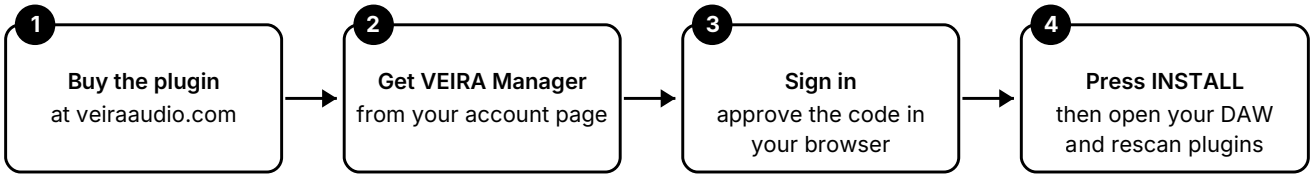


FIGURE 1 From purchase to first sound in four steps.

1. **Buy** VEIRA EQ 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 EQ 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 EQ White appears in your DAW under the manufacturer **VEIRA** (in Logic Pro: Audio Units ▸ VEIRA ▸ VEIRA EQ 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 EQ 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.

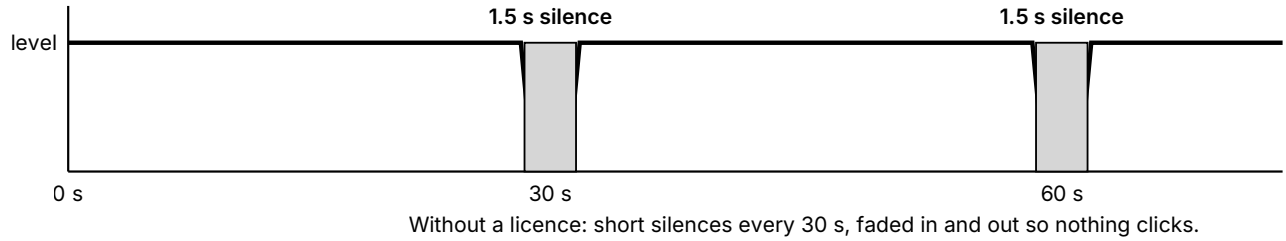


FIGURE 2 What an unlicensed copy does. With a valid licence the audio is never touched.

- **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 EQ 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 EQ 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

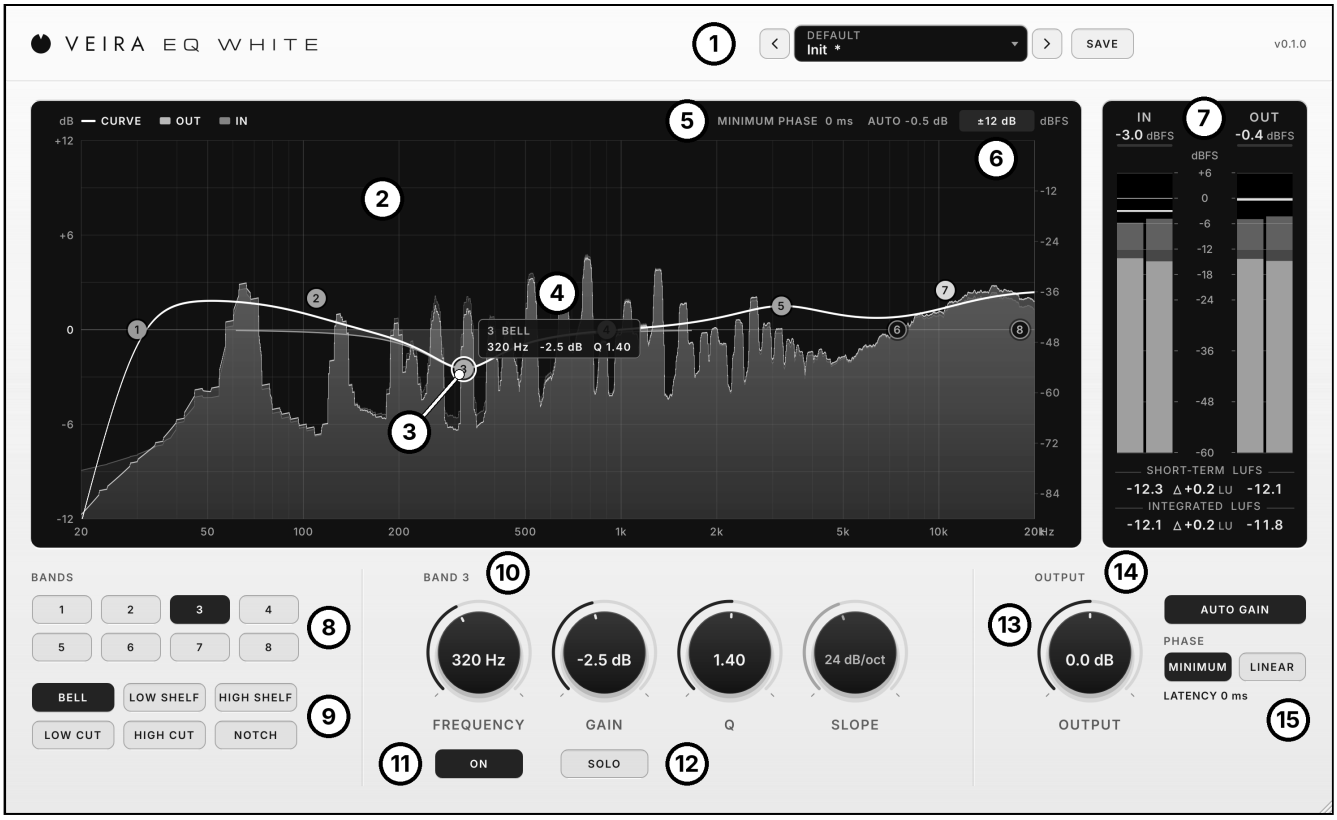


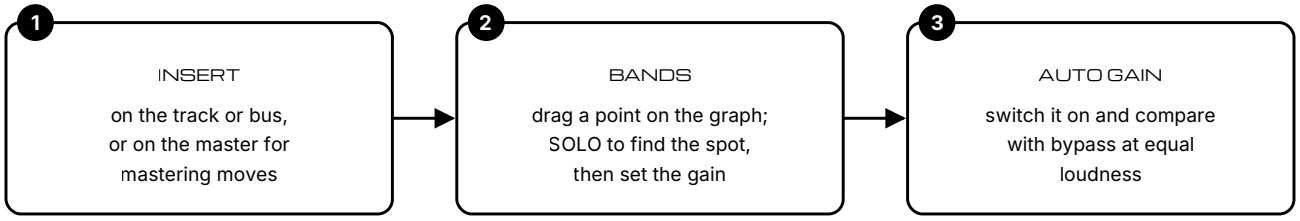
FIGURE 3 VEIRA EQ White, the pearl-white unit, with six bands at work on a pop mix: a 30 Hz low cut, a low shelf, a cut at 320 Hz (band 3, selected and hovered), a lift at 3.2 kHz and a high shelf at 10.5 kHz. AUTO GAIN is on and reads −0.5 dB.

	Part	What it does
1	Preset browser	Steps through and saves presets. See *Presets*.
2	The graph	Your EQ curve over the live spectrum of the output and the input.
3	Band points	One numbered point per band. Drag it to set the band's frequency and gain.
4	Read-out	The band under the mouse, or the curve at the mouse.
5	Status line	The phase mode and its latency, and what AUTO GAIN is doing.
6	Range button	The graph's scale: ±6, ±12 or ±24 dB.
7	Meter bridge	Input and output level and loudness.
8	BANDS	Picks the band the knobs show.
9	Type buttons	BELL, LOW SHELF, HIGH SHELF, LOW CUT, HIGH CUT, NOTCH.
10	BAND n knobs	FREQUENCY, GAIN, Q and SLOPE of the selected band.
11	ON	Puts the selected band in or out.

	Part	What it does
12	SOLO	Plays only the region the selected band works on.
13	OUTPUT	The final level.
14	AUTO GAIN	Keeps the loudness the same whatever the curve does.
15	PHASE and LATENCY	MINIMUM or LINEAR phase, with the latency it adds.

The graph fills the top of the window, with the meter bridge beside it. The strip along the bottom reads left to right: which band (BANDS and its type), what the band does (BAND 3 and its knobs), and the end of the chain (OUTPUT).

Quick start: a cleaner sound in three moves

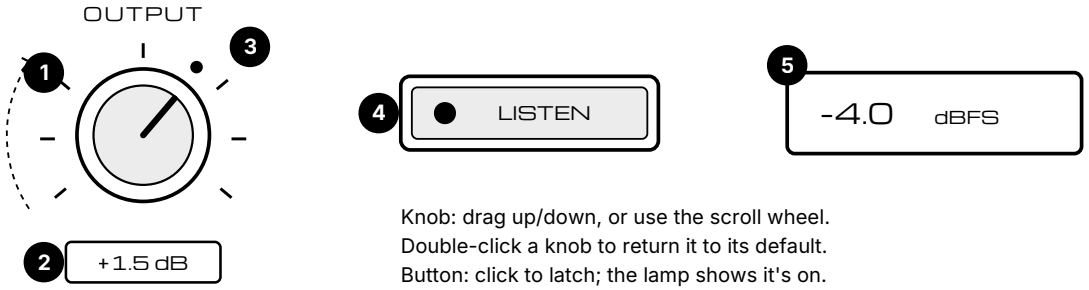


Or start from a factory preset: every one but Init has AUTO GAIN on. Mastering ▸ Master Polish is a gentle start.

FIGURE 4 The quickest way in. *Default* ▸ *Init* is a clean start: every band flat or off, minimum phase, AUTO GAIN off.

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

- **Knobs show their value in the middle** (320 Hz, -2.5 dB, 1.40, 24 dB/oct): the knobs are black, and a ring printed in charcoal on the paint around each one (in print, the dark arc) shows how far it is turned. The control's name is printed under the knob. Drag, use the wheel, or double-click for the default, as on every VEIRA knob. A knob that does nothing for the band's type (GAIN on a cut or a notch, SLOPE on anything but a cut) is dimmed, still readable.
- **Type a value:** right-click a knob (Control-click on a Mac). A field opens over it with the current value; type the new one and press Return. Frequencies can be typed as **120**, **2.5k** or **2500**; gains as **-3** or **4.5**. Press Escape or click elsewhere to leave it unchanged.
- **Buttons have no lamps:** the selected band, type and PHASE button, and ON, SOLO and AUTO GAIN when they are on, fill with charcoal with pale lettering (in print, a dark button); when they are off they are shallow wells in the paint with dark lettering.
- **Resize the window:** drag its bottom-right corner (the small diagonal lines). It scales from 75 % to 200 % of its normal size (1480 × 900 points) and keeps its proportions. Your DAW saves the size with the session.
- **The face:** White is painted like VEIRA Limiter White: pearl white, with charcoal print and black knobs. The graph, the meter bridge and the preset window are dark screens set into the paint, so the curve, the spectrum and the meters keep their colours. Every label on the paint stands at least 4.5:1 against it (the WCAG AA contrast for text).

How an equalizer works

If you already know EQ, skip to *What happens inside VEIRA EQ White*. If not, these pages make every control obvious.

Every sound is a mix of frequencies: low ones you feel (the thump of a kick, the weight of a bass), middle ones that carry most of the tone and the words, and high ones that bring detail, breath and air. An equalizer turns chosen frequency regions up or down, like a set of very precise tone controls. On the graph the horizontal axis is **frequency**, from 20 Hz (the lowest note you can hear) to 20 kHz (the highest), and the vertical axis is **gain**: above the 0 dB line is louder, below is quieter.

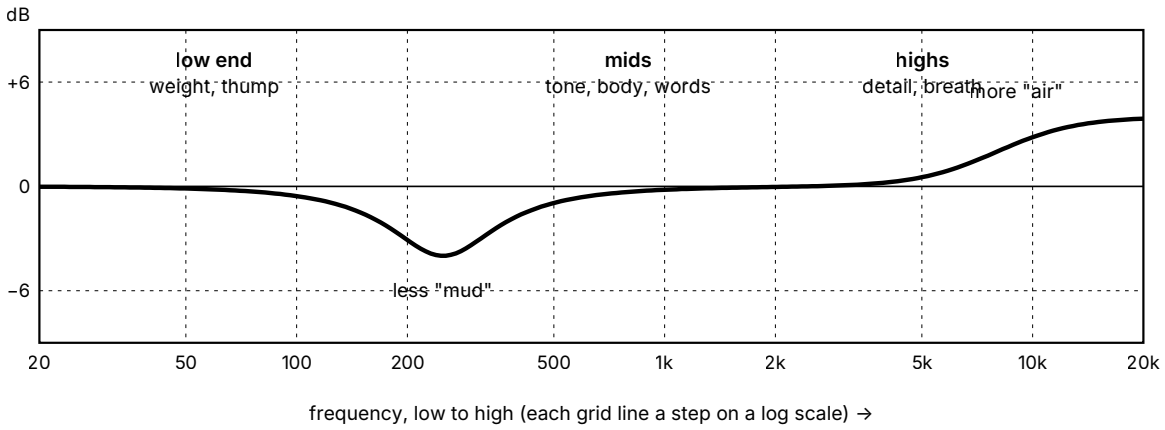


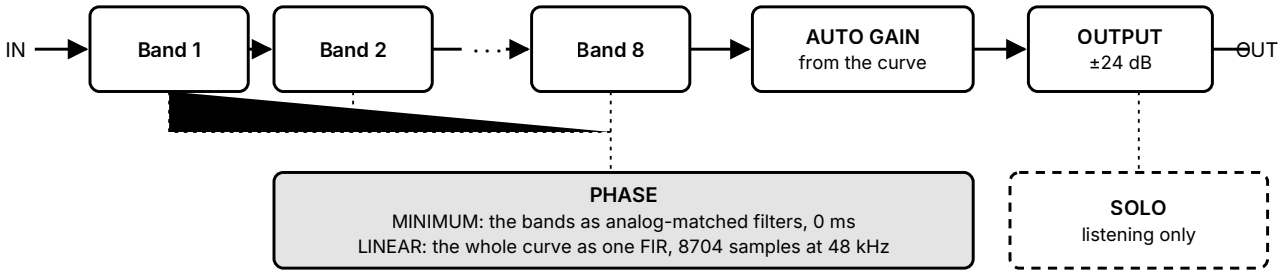
FIGURE 6 An EQ curve reads like a map of the spectrum. This one is a typical vocal move: a cut in the low mids and a gentle lift in the highs (drawn from EQ White's own filters).

Three ideas cover almost everything:

- **Frequency:** *where* you act. Each band has a centre (a bell or notch) or a corner (a shelf or cut), in Hz.
- **Gain:** *how much* you turn that region up (boost) or down (cut), in dB. 6 dB is a clear change; 1–2 dB is a subtle one.
- **Q:** *how wide* the region is. A low Q is broad and gentle and sounds musical; a high Q is narrow and surgical, for single resonances and rings.

A good habit: **cut narrow, boost wide.** Narrow cuts remove one problem without touching the rest; broad boosts sound natural, while narrow boosts tend to sound honky or whistly. And **judge at equal loudness**: a boost makes things louder, and louder always sounds "better" for a moment. That is what AUTO GAIN is for.

What happens inside VEIRA EQ White



The bands run in order on both channels alike; PHASE sets how the curve they make is applied.

FIGURE 7 Signal flow. The eight bands make one curve; PHASE decides how it is applied. AUTO GAIN and OUTPUT set the final level, and SOLO only changes what you hear.

- **Both channels get the same curve,** so the stereo image never moves. Mono tracks work too.
- **Minimum phase** (the default) runs each band as one to eight analog-matched filter sections, sample by sample: **no latency**. A flat band passes its samples through untouched.
- **Linear phase** turns the whole curve into one long filter (a 16384-point FIR at 44.1 and 48 kHz) that delays every frequency by the same amount. It adds latency, which White reports to your DAW. See *Minimum and linear phase*.
- **Smooth and click-free.** Frequency, gain and Q glide over about 20 ms. Switching a band on or off, or changing its type or slope, fades it out, switches it and fades it back in; switching PHASE or SOLO fades the output out over 8 ms and back in.
- **What you see is what you hear.** The curve on the graph is calculated from the same filters that process your audio.

Working on the graph

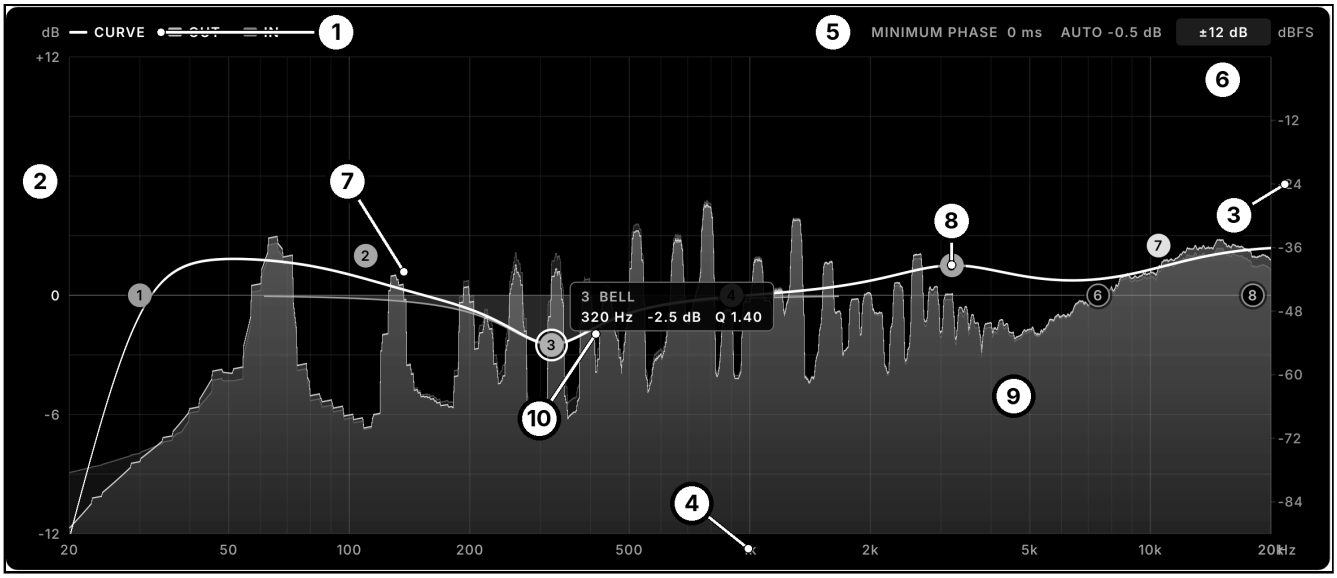


FIGURE 8 The graph: 1 legend, 2 the EQ's dB scale, 3 the analyser's dBFS scale, 4 frequency scale, 5 status line, 6 range button, 7 the curve, 8 a band point, 9 the spectrum, 10 the selected band's own curve under the read-out.

The graph shows three things at once:

- 7 **The curve** (white): what all eight bands do together. Above the centre line is a boost, below it a cut.
- 9 **The spectrum** of your music, live: the **output** (light) in front and the **input** (grey) behind it, so you can see what the EQ changed. 1 The legend at the top left names them: CURVE, OUT, IN. In print the output is the lighter area and the input the darker one behind it.
- 8 **The band points**, numbered 1 to 8, each in its own colour. 10 The selected band's own curve is shaded in its colour, so you can see what that band alone does inside the total.

Two scales. 2 On the left, the EQ's scale in dB, for the curve. 3 On the right, the analyser's scale in dBFS, for the spectrum. The analyser is tilted 4.5 dB per octave, so a typical, balanced mix reads roughly level across the graph instead of falling to the right; a region that sticks up stands out from the balance. 4 Frequencies run from 20 Hz to 20 kHz.

6 **The range button** sets the EQ's scale: click it for ±6, ±12 or ±24 dB. Use ±6 dB for mastering moves of a dB or two, ±24 dB for big corrections. It changes only the drawing.

5 **The status line** shows the phase mode and its latency (MINIMUM PHASE 0 ms or LINEAR PHASE 181 ms at 48 kHz) and, when AUTO GAIN is on, the gain it applies (AUTO -0.5 dB).

Moving bands with the mouse

Drag a point	left and right: FREQUENCY; up and down: GAIN. Dragging a band that is off switches it on.
Shift + drag	the same, finely, for small moves
Mouse wheel on a point	Q: wider or narrower
Double-click a point	switches the band on or off
Alt / Option-click a point	returns its gain to 0 dB
Hover	a point: its type, frequency, gain, slope and Q; elsewhere: the curve at the mouse

FIGURE 9 Everything you can do with the mouse on the graph. Clicking or dragging a point also selects its band, so the knobs show it.

A band that is off is drawn dimmer and leaves the curve alone. A cut or notch has no gain, so dragging it up and down does nothing; its point sits on the 0 dB line.

> **Tip:** the read-out is the fastest way to set an exact move: hover a point while you drag, and read its frequency and gain as you go. For a typed value, right-click the knob instead.

Controls

BANDS: choosing a band and its type

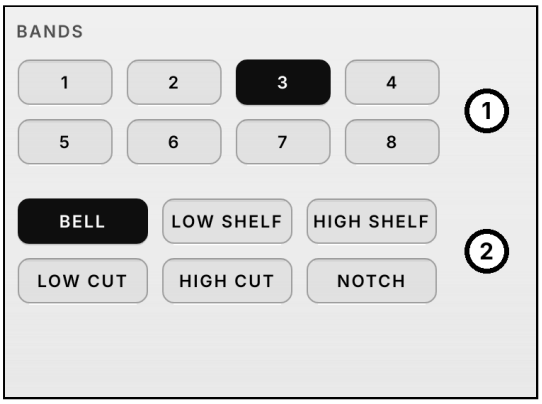


FIGURE 10 1 The eight band buttons, band 3 selected; 2 the six type buttons, BELL selected.

1 The **band buttons** 1 to 8 choose which band the knobs show. Clicking a point on the graph does the same. 2 The **type buttons** choose the selected band's filter. The top row boosts or cuts: BELL, LOW SHELF, HIGH SHELF. The bottom row only removes: LOW CUT, HIGH CUT, NOTCH.

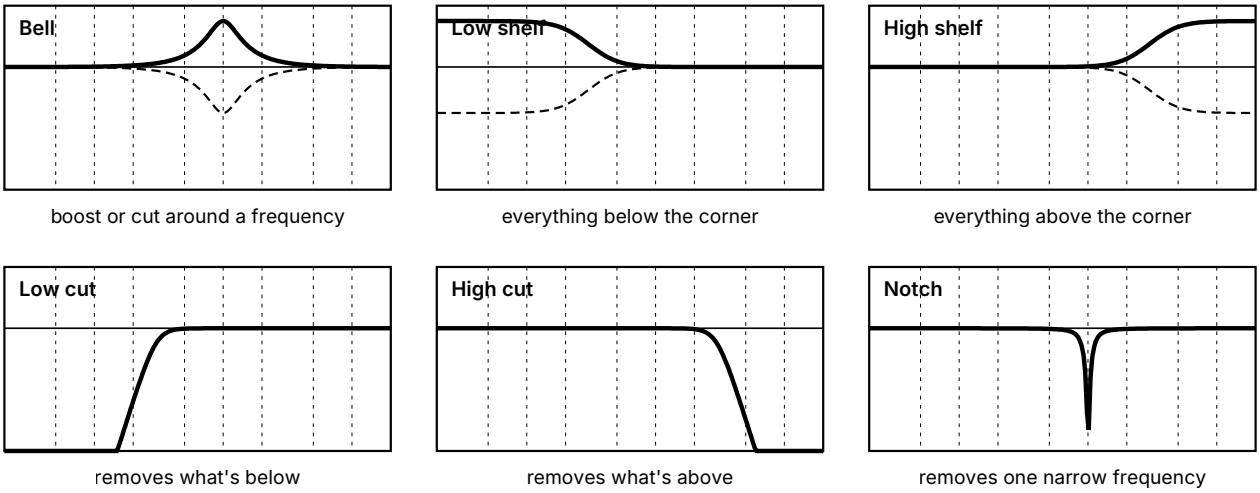


FIGURE 11 The six filter types, drawn from White's own filters. Solid lines show a boost, dashed lines the same band set to cut. Cuts and the notch have no gain: they only remove.

- **Bell:** boosts or cuts a region around its frequency. The workhorse for shaping tone and fixing problems.
- **Low shelf / high shelf:** raise or lower everything below (low shelf) or above (high shelf) the corner, like the bass and treble controls on a hi-fi, but with the corner where you want it.
- **Low cut / high cut:** remove everything below (low cut, also called high-pass) or above (high cut, low-pass) the corner. A low cut clears rumble, handling noise and the low end of sources that have nothing useful down there.

- **Notch:** a very deep, narrow cut that removes a single frequency: a hum, a whistle, a ring. In minimum phase it removes that frequency completely; Q sets how narrow it is.

The eight starting bands. A new instance (and *Default* ▸ *Init*) opens with every band flat or off, so it is perfectly transparent:

Band	Type	FREQUENCY	Q	State
1	Low cut	30 Hz	0.71	off
2	Low shelf	100 Hz	0.71	on, 0 dB
3	Bell	250 Hz	1.00	on, 0 dB
4	Bell	800 Hz	1.00	on, 0 dB
5	Bell	2.5 kHz	1.00	on, 0 dB
6	Bell	6 kHz	1.00	on, 0 dB
7	High shelf	10 kHz	0.71	on, 0 dB
8	High cut	18 kHz	0.71	off

Every band can be any type, so these are only starting points: move them wherever you need them.

BAND n: FREQUENCY, GAIN, Q, SLOPE, ON and SOLO

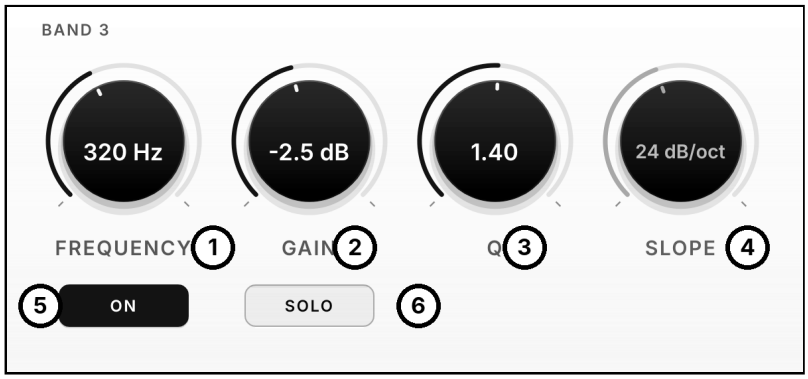


FIGURE 12 The selected band: 1 FREQUENCY, 2 GAIN, 3 Q, 4 SLOPE (dimmed: band 3 is a bell), 5 ON and 6 SOLO. The title above them names the band (BAND 3).

Control	Range	Default	What it does
FREQUENCY	20 Hz to 20 kHz	per band (see above)	The centre of a bell or notch, or the corner of a shelf or cut.
GAIN	−24 to +24 dB	0.0 dB	How much a bell or shelf boosts (+) or cuts (−). Dimmed for cuts and notches.
Q	0.10 to 18	1.00 (bells), 0.71 (shelves and cuts)	The width of a bell or notch; the shape of a shelf or cut.

Control	Range	Default	What it does
SLOPE	6, 12, 18, 24, 36, 48, 72, 96 dB/oct	24 dB/oct	How steep a cut is. Dimmed for other types.
ON	on / off	see the table above	Puts the band in or out.
SOLO	on / off	off	Plays only what the band works on. Not saved in presets, not automatable.

FREQUENCY is shown in Hz below 1 kHz (320 Hz) and in kHz above (3.20 kHz). The knob is logarithmic, like the graph, so every octave takes the same amount of turn.

GAIN sounds most natural in moves of a few dB. The ±24 dB range is there for big corrections and effects.

Q sets the width of a bell: higher Q, narrower band. As a guide, Q 0.7 is very broad (about two octaves), Q 1.4 covers about one octave, and Q 4 and up is narrow enough to pick out a single resonance. On shelves and cuts, Q sets the shape of the corner: 0.71 is the plain one (a smooth step on a shelf, a flat cut right up to the corner); higher values add a small bump at the corner, which can sound more focused.

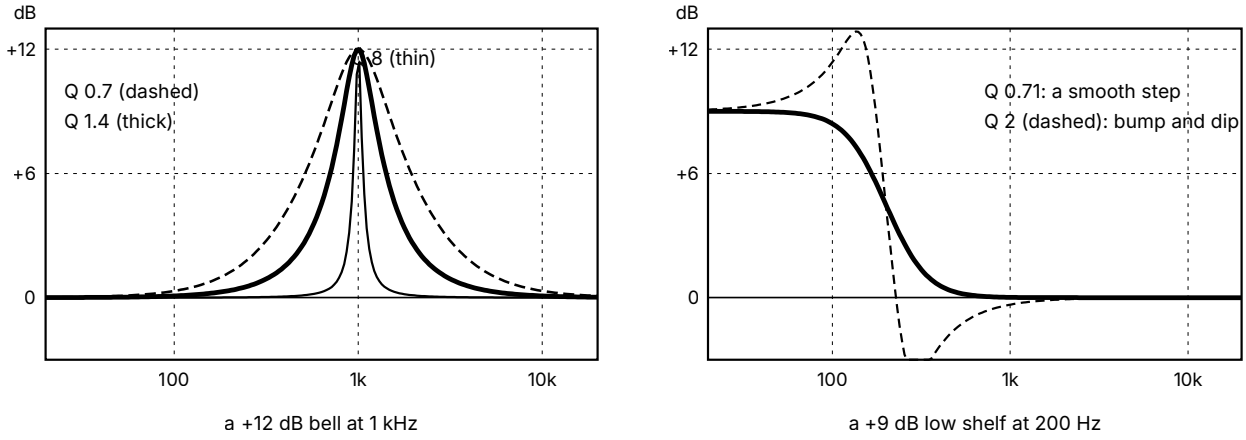


FIGURE 13 Left: the same +12 dB bell at three Q settings. Right: Q on a shelf. At 0.71 the shelf is a smooth step; at 2 it gains a small bump and dip either side of the corner.

SLOPE is how quickly a cut removes sound beyond its corner, in dB per octave. 6 and 12 dB/oct are gentle and natural; 24 dB/oct is a firm, everyday cut; 48 dB/oct and steeper act like a wall, removing everything past the corner while leaving the rest alone.

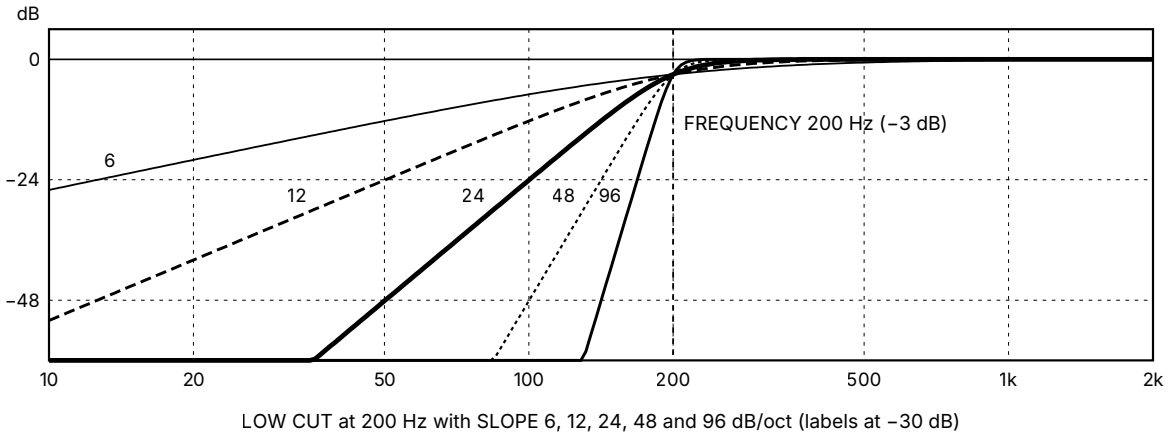


FIGURE 14 Low cuts at the same FREQUENCY with different slopes. Steeper slopes keep more of what's above the corner and remove more of what's below.

ON

ON puts the selected band in or bypasses it. Double-clicking its point on the graph does the same, and dragging a band that is off switches it on. Bands 1 and 8 start off: switch them on when you need a low or high cut.

SOLO: hear what a band works on

With SOLO on, you hear only the part of the music the selected band works on, so you can find and judge it by ear:

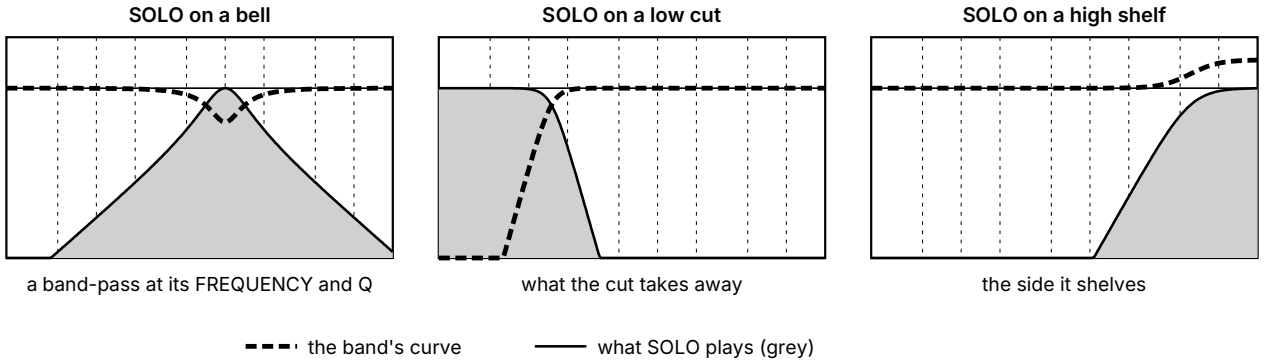


FIGURE 15 What SOLO plays (grey) for three kinds of band. For a bell or notch: a band-pass at its frequency and Q. For a cut: what the cut takes away. For a shelf: the side it shelves.

- **Finding a problem:** set a bell narrow (Q 4–8) with a few dB of boost or cut, switch SOLO on, and sweep FREQUENCY until the ring, the boxiness or the harshness jumps out. Turn SOLO off and set the gain.
- **Checking a cut:** solo a low cut to hear what it removes. If you hear notes of the instrument, not just rumble, lower its frequency.
- SOLO **follows the band you select**: click another band and it is soloed instead. Click SOLO again to turn it off.
- It is for listening only: **offline bounces always leave it out**, it isn't saved in presets and it can't be automated. In a real-time bounce it would be printed, so turn it off first.

> **Tip:** *Surgical Fixes* ▸ *Harshness Finder* and *Boxiness Finder* are narrow dips ready to sweep with SOLO.

OUTPUT, AUTO GAIN and PHASE

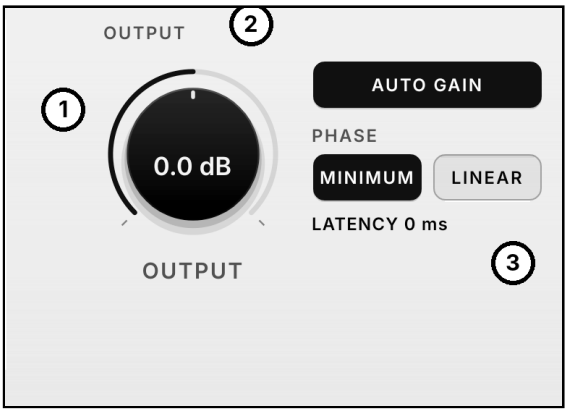


FIGURE 16 1 OUTPUT, 2 AUTO GAIN (on), 3 PHASE with MINIMUM selected and LATENCY 0 ms under it.

Control	Range	Default	What it does
OUTPUT	−24 to +24 dB	0.0 dB	The final level, after the EQ and AUTO GAIN.
AUTO GAIN	on / off	off (on in every factory preset but Init)	Keeps the loudness the same whatever the curve does.
PHASE	MINIMUM, LINEAR	MINIMUM	How the curve is applied. Not automatable (it changes the latency).

AUTO GAIN

A boost makes the music louder, and louder always sounds better for a moment. That makes it hard to tell whether a move really improved the tone. With AUTO GAIN on, White works out how much louder or quieter the curve makes typical music, and takes exactly that back off.

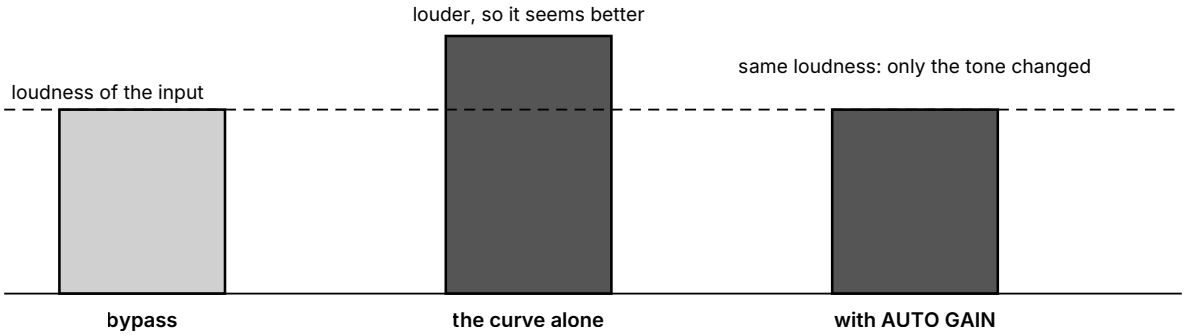


FIGURE 17 What [AUTO GAIN] does. It reads the curve, not the music: it never pumps or follows the song.

- It is calculated **from the curve itself**: the curve's effect averaged from 20 Hz to 20 kHz, weighted by the spectrum of a typical mix and by the K-weighting loudness meters use. So it doesn't move with the music, never pumps, and is exactly 0 dB for a flat curve.
- It glides (20 ms) as you move a band. The status line shows what it applies ([AUTO -0.5 dB]).
- Every factory preset but Init has it on: measured on matching material, every one keeps the loudness within 0.5 LU.
- On material far from a typical mix (a single bass note, a hi-hat alone) it is a good guide rather than exact; check the meter bridge's Δ if level matters.

OUTPUT

[OUTPUT] sets the final level. Use it to match levels by hand when [AUTO GAIN] is off, or to trim the output after it.

PHASE

[MINIMUM] and [LINEAR] apply the same curve in two different ways. The [LATENCY] read-out under the buttons shows the delay: [0 ms] in minimum phase, [181 ms] in linear phase at 48 kHz. The next chapter explains the difference and when to use each.

Minimum and linear phase

Every equalizer delays some frequencies a little more than others around the frequencies it changes. That is **phase shift**, and it is part of how analog EQs sound: in **minimum phase** (the default, like an analog EQ) the delay is as small as it can be, it happens only around the bands you move, and there is no latency.

Linear phase delays every frequency by exactly the same amount, so the phase of the music doesn't change at all: only the levels do. The price is a fixed latency, and a small "pre-ring": a faint echo of the filter's ringing that arrives *before* each sharp transient instead of after it.

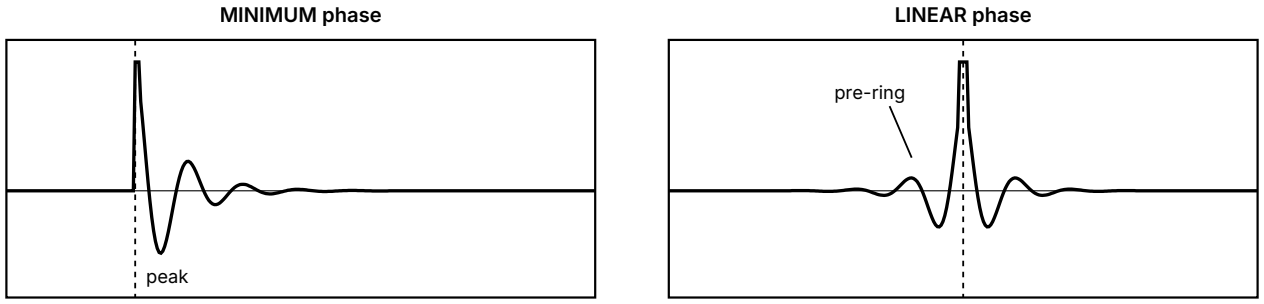


FIGURE 18 One click through the same boost in each mode. Minimum phase rings only after the click; linear phase rings symmetrically around it, so a little of the ringing comes before.

	MINIMUM	LINEAR
Latency	none	8704 samples at 44.1 and 48 kHz (181 ms at 48 kHz); 17408 at 88.2 / 96 kHz; 34816 at 176.4 / 192 kHz
Phase	shifts around each band, like an analog EQ	unchanged
Transients	ring only after the hit	a faint pre-ring before the hit, longest for steep, low cuts
Notches	infinitely deep	about −12 dB at 60 Hz (Q 10), −37 dB at 1 kHz
Use it for	tracking, mixing, drums, anything live; hum notches	mastering, buses, parallel and stem work where phase between copies matters

When linear phase is worth it. On a master, the phase shift of a few gentle moves is rarely audible, but linear phase keeps the low end exactly as tight as it was and keeps a processed copy in phase with an unprocessed one (for example on parallel buses or stems that are summed again). The factory *Mastering* presets use it.

When it isn't. Linear phase pre-rings, and pre-ringing is most audible on sharp transients with steep, low cuts: a 96 dB/oct low cut at 30 Hz pre-rings for a few milliseconds. On drums with such cuts, and for hum notches (which linear phase can't make infinitely deep), use minimum phase. The *Hum* presets use it.

The latency is always the same whatever the bands do, and White reports it to your DAW, which compensates for it automatically; your DAW's bypass is delayed by the same amount, so a bypassed track stays in time. Don't monitor a live input through linear phase: 181 ms is far too late to play to. Switching PHASE fades the output out over 8 ms, changes mode, and fades back in once the new mode has filled its delay, so nothing starts mid-waveform. Because it changes the latency, PHASE can't be automated.

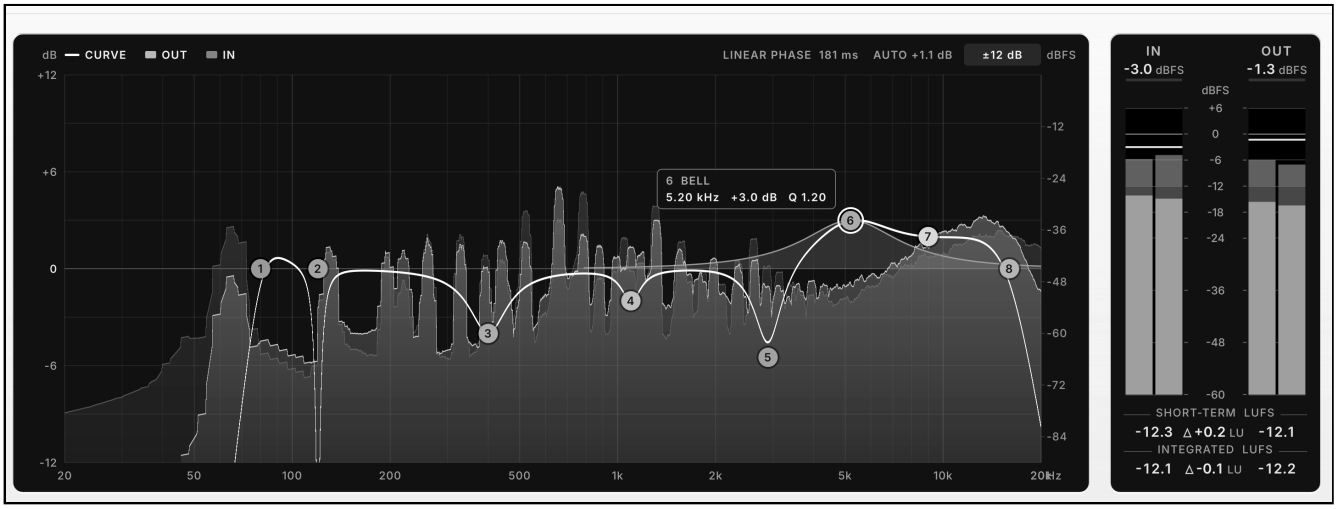


FIGURE 19 A fix-it curve in LINEAR phase: the status line reads LINEAR PHASE 181 ms and AUTO +1.1 dB. A 48 dB/oct low cut at 80 Hz, a notch at 120 Hz, narrow cuts at 400 Hz, 1.1 kHz and 2.9 kHz, a lift at 5.2 kHz (band 6, selected; its own curve shaded), a high shelf at 9 kHz and a 36 dB/oct high cut at 16 kHz.

Analog shape to the top of the range

A common shortcut in digital EQs makes bells and shelves near the top of the range narrower and lower than the knob says ("cramping"), because the digital filter has to fit under half the sample rate. White's minimum-phase filters are matched to their analog shape, so a boost at 15 kHz sounds as broad and smooth as it looks. In linear phase the curve is drawn from the analog shapes directly.

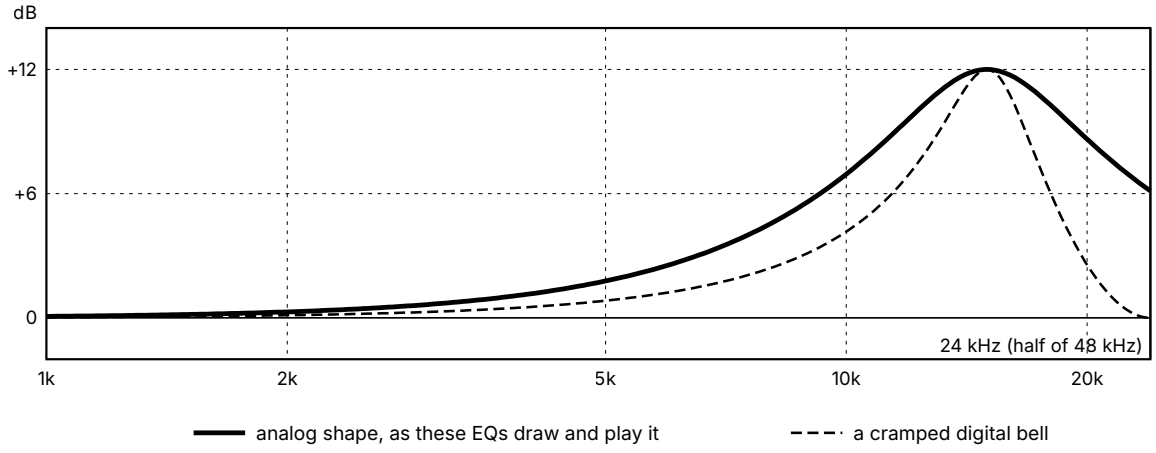


FIGURE 20 A +12 dB bell at 15 kHz, Q 1, at a 48 kHz sample rate. White's bell (solid) stays within 0.84 dB of the analog shape up to 20 kHz; a cramped digital bell (dashed) falls far short of it near the top.

Displays

The graph

The graph is described in *Working on the graph*. In short: the curve, the band points, the output spectrum (light) in front of the input spectrum (grey), the EQ's scale in dB on the left, the analyser's in dBFS on the right, and the read-out under the mouse.

What to look for: a region of the spectrum that sticks up above its neighbours (the analyser is tilted so a balanced mix reads level) is often a resonance or a build-up worth a narrow look with SOLO. Comparing the output with the input behind it shows exactly what your curve changed in the music.

Meter bridge (IN | OUT)

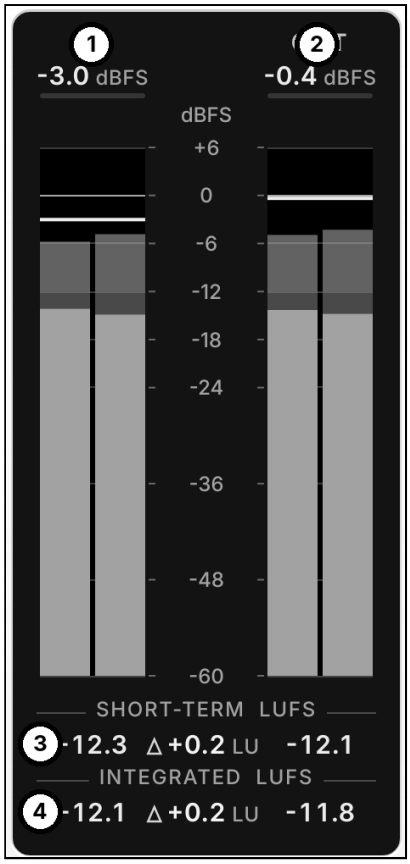


FIGURE 21 The meter bridge: 1 input and 2 output, 3 short-term and 4 integrated loudness, with the OUT − IN difference between them.

VEIRA EQ White uses the standard VEIRA meter bridge, with an input and an output column. Δ shows how much louder or quieter the EQ made the music, in LU: with AUTO GAIN on it stays close to 0.0. Everything else works as described below.

Reading the IN and OUT meters

The meter bridge measures what goes into VEIRA EQ 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.

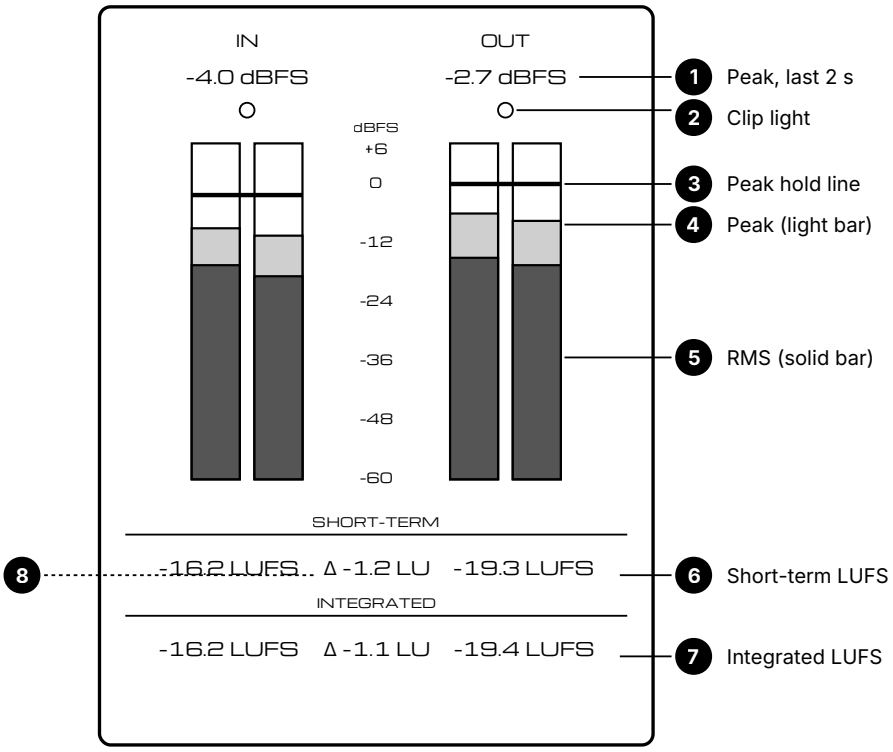


FIGURE 22 The meter bridge, left and right channel bars for input and output, with loudness below.

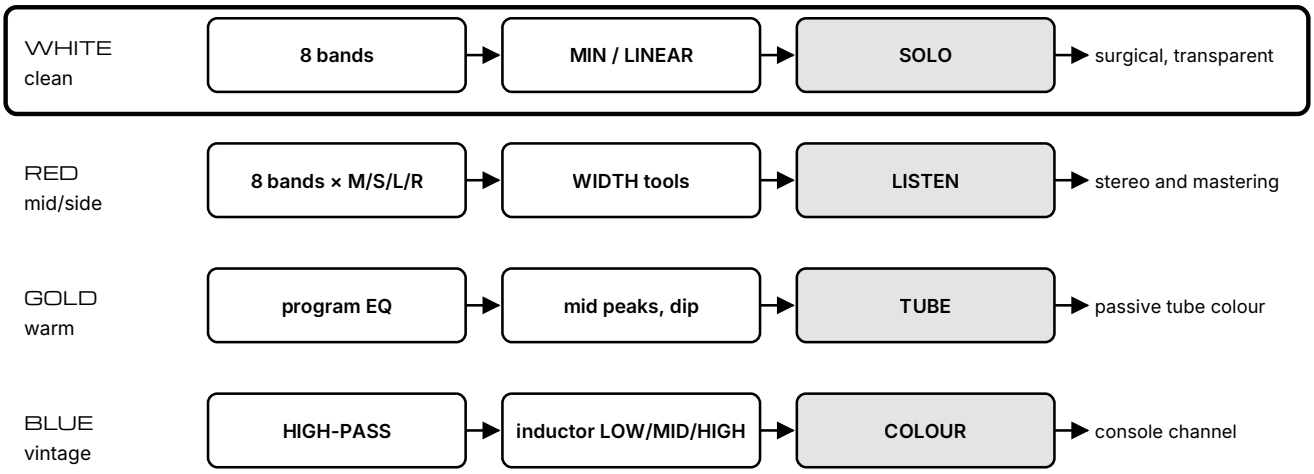
- 1 **Peak readout:** the highest sample peak of the last two seconds, in dBFS. It turns to a warning above 0 dBFS.
- 2 **Clip light:** lights on any sample at or over full scale. It stays lit until you click the meter.
- 3 **Hold line:** marks the recent peak on the bar.
- 4 **Peak bar** (the lighter 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 EQ 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.

Which colour EQ to choose

VEIRA EQ White is one of four VEIRA colour EQs, each painted like the colour limiter of the same name. All four draw their curve over the live spectrum, show the same meter bridge and keep their curves' analog shape up to 20 kHz. What differs is the kind of EQ, and how much of its own sound it adds.



Grey: what gives each colour its character. The framed row is the one in your hands.

FIGURE 23 The four colour EQs, side by side.

	Character	Choose it when
White	Clean, surgical. Eight bands of any type, minimum or linear phase, SOLO, AUTO GAIN.	You need precision and no colour: fixing resonances, hum, rumble; tone shaping you don't want to hear; transparent mastering.
Red	Mid/side. Eight bands, each on the stereo signal, its mid, its side, or one channel; BASS MONO, AIR, WIDTH and LISTEN.	The stereo picture is the job: a vocal in the centre, cymbals on the sides, mono low end, width on a master.
Gold	Warm. A passive tube program EQ with a mid-range section, in the tradition of the classic tube program EQs, and TUBE drive.	You want broad, flattering moves: weight in the lows without mud, a silky top, a little tube warmth.
Blue	Vintage. A 1970s British inductor console EQ: high-pass, resonant low shelf, mid bell, gradual high shelf, stepped frequencies, COLOUR.	You want the console sound: punchy lows, a forward mid, character you can hear on drums, bass, guitars and vocals.

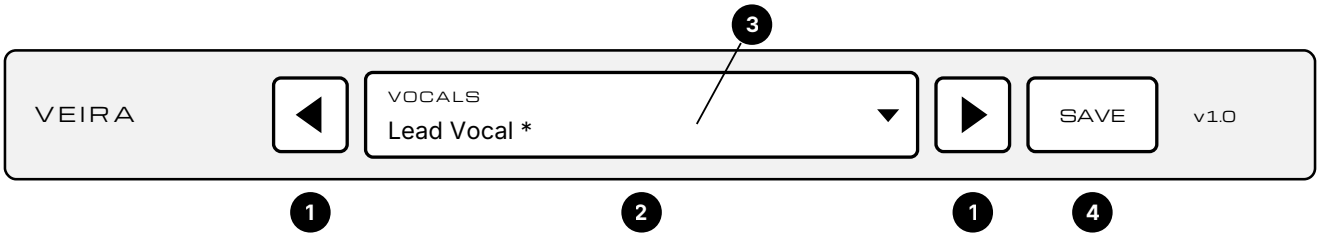
White is the clean one. It changes only what you ask it to, so it is the right tool when a problem has a precise frequency, or when the music should sound exactly the same, only balanced. When a move should *sound* like an EQ, reach for Gold or Blue; when the stereo field is the problem, Red.

Presets

VEIRA EQ White comes with **40 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 EQ 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 EQ White/<Folder>/
Windows	%APPDATA%\VEIRA\VEIRA EQ 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 Punch, Kick Tight Low End, Snare Body And Crack, Overheads Clean Up, Drum Bus Shape
Bass	Bass Definition, Sub Focus, Bass Tame Boom, DI Bass Growl
Guitar	Acoustic Sparkle, Electric Mud Cut, Guitar Bite, Acoustic Boom Control
Keys	Piano Clarity, Piano Warmth, Synth Pad Thin Out, Electric Piano Sweet
Vocals	Vocal Clarity, Warm Vocal, De-Mud Vocal, Air And Presence, Podcast Voice, Backing Vocal Tuck
Mix Bus	Gentle Smile, Bus Clean Low End, Bus Air, Bus Mid Scoop
Mastering	Master Polish, Master Low End Tighten, Master Air Lift, Master De-Harsh, Master Tilt Warm, Master Tilt Bright
Surgical Fixes	Hum 50 Hz, Hum 60 Hz, Rumble Cut, Harshness Finder, Boxiness Finder, Ring Notch

Levels and tone. An EQ doesn't react to level, so these presets work at any level; they were measured with close drum mics peaking at −4 dBFS, other tracks at −8, buses at −4 and premasters at −3. Every preset but Init has AUTO GAIN on and keeps the loudness within 0.5 LU of the input, so switching presets changes the tone, not the level. The *Mastering* presets run in linear phase; the *Hum* notches in minimum phase. Each preset sets all the bands it uses and leaves the others flat. The frequencies are starting points: most notes say which band to tune to your material.

Recipes

Step-by-step starting points. In each, leave AUTO GAIN on while you judge, and compare with your DAW's bypass.

Find and remove a ring

1. Load **Surgical Fixes ▸ Ring Notch** (band 4, a notch at 900 Hz) or select an unused bell and set Q to about 6 and GAIN to +6 dB.
2. Switch SOLO on and sweep FREQUENCY until the ring sings out.
3. Switch SOLO off. For a bell, turn GAIN down until the ring is gone (usually −3 to −8 dB); for a notch, narrow Q until only the ring goes.

Clean up a vocal

1. Load **Vocals ▸ Vocal Clarity**: a low cut at 85 Hz, −2 dB at 260 Hz, +1.5 dB at 3.2 kHz and a high shelf at 11 kHz.
2. Sweep band 3 between 200 and 500 Hz to where your singer sounds boxiest; for a muddier voice try **De-Mud Vocal**.
3. Raise the low cut (band 1) until the voice just starts to thin, then back it off a little.
4. If the S sounds get louder with the high shelf, lower band 7 or use a de-esser after White.

Remove mains hum

1. Load **Surgical Fixes ▸ Hum 50 Hz** or **Hum 60 Hz** (whichever your country's mains is): notches on the hum and its first three harmonics, in minimum phase.
2. If some hum remains, solo each notch in turn and fine-tune its FREQUENCY while watching the spectrum.

Tighten a kick

1. Load **Drums ▸ Kick Punch**.
2. Tune band 2 to your kick's fundamental: solo it and sweep between 45 and 80 Hz until the thump is fullest.
3. Sweep band 3 (the box at 350 Hz) and band 5 (the beater at 3.5 kHz) to taste.

A transparent mastering polish

1. Load **Mastering ▸ Master Polish**: linear phase, a 22 Hz low cut, +0.8 dB at 80 Hz, −0.8 dB at 350 Hz and +1.2 dB of high shelf at 12 kHz.
2. Set the range button to ±6 dB so small moves are easy to see.
3. Compare with bypass; for a bright master try **Master Tilt Warm**, for a harsh one **Master De-Harsh**.
4. Leave PHASE on LINEAR for the bounce: the latency is compensated, and offline bounces are the same every time.

Clear rumble under everything

1. Load **Surgical Fixes ▸ Rumble Cut**: a 72 dB/oct low cut at 40 Hz.
2. Raise FREQUENCY until the low end just starts to change, then back it off a little. Solo the band to hear exactly what it removes.

Specifications

Type	Eight-band parametric equalizer, minimum or linear phase
Channels	Mono and stereo (both channels get the same curve)
Band types	Bell, low shelf, high shelf, low cut, high cut, notch, on every band
FREQUENCY	20 Hz to 20 kHz
GAIN	−24 to +24 dB (default 0.0 dB); bells and shelves
Q	0.10 to 18 (default 1.00 for bells, 0.71 for shelves and cuts)
SLOPE	6, 12, 18, 24, 36, 48, 72 or 96 dB/oct (default 24); cuts
ON, SOLO	Per band; SOLO plays the band's region, is left out of offline bounces and isn't automatable
OUTPUT	−24 to +24 dB (default 0.0 dB)
AUTO GAIN	On / off (default off); from the curve, K-weighted on the spectrum of typical music
PHASE	MINIMUM (default) or LINEAR; not automatable
Latency	None in minimum phase. Linear phase: 8704 samples at 44.1 and 48 kHz (181 ms at 48 kHz), 17408 at 88.2 / 96 kHz, 34816 at 176.4 / 192 kHz; constant and reported to the host; the DAW's bypass is delayed by the same amount
Accuracy (minimum phase)	Bells within 1.2 dB of their analog shape up to 20 kHz at 48 kHz (0.11 dB at 96 kHz); shelves within 0.45 dB
Flat	Bit for bit the input in minimum phase; an exact delay in linear phase
Display	Curve over the output and input spectrum; EQ scale ±6, ±12 or ±24 dB; analyser in dBFS, tilted 4.5 dB/oct; hover read-outs
Metering	IN and OUT meters: peak, RMS, short-term and integrated LUFS, OUT − IN in LU
Presets	40 factory presets in 9 folders, plus your own
Window	1480 × 900 points; resizable from 75 % to 200 %, saved with the session
Formats	VST3, Audio Units, standalone; AAX once signed
Plugin ID	Manufacturer Veir, plugin Vewh

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 EQ 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**.

I hear only a thin slice of the music. SOLO is on. Click it again, or select the band and switch it off. Offline bounces always leave it out.

Everything is late when I play through it. PHASE is on LINEAR, which adds 181 ms at 48 kHz. Your DAW compensates on playback, but a live input monitored through White will be late. Use MINIMUM while recording.

My notch doesn't remove the hum completely. In linear phase a notch can't go infinitely deep (about −12 dB at 60 Hz with Q 10). Switch PHASE to MINIMUM, as the *Hum* presets do.

I hear a soft swish before drum hits. That is linear phase's pre-ringing, most audible with steep, low cuts. Use a gentler slope or MINIMUM phase on drums.

My boost sounds better, but is it? Turn AUTO GAIN on and compare again: it takes the loudness the curve adds back off, so you hear only the tone. The Δ on the meter bridge shows any difference left.

I can't drag the gain of a band. Cuts and notches have no gain: they only remove. Change the band's type to a bell or shelf if you want to boost.

The graph is too small (or too big) for my moves. Click the range button at the top right of the graph for ±6, ±12 or ±24 dB. To make the whole window bigger, drag its bottom-right corner (75 % to 200 %).

How do I type an exact value? Right-click the knob (Control-click on a Mac), type the number (frequencies as **2.5k** or **2500**) and press Return.

Do my sessions keep my settings? Yes. Every band, the phase mode, the selected preset, the graph's range and the window size are saved with your session. SOLO is for listening and is not kept in presets.

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



VEIRA EQ White · User Manual · Version 0.1.0

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