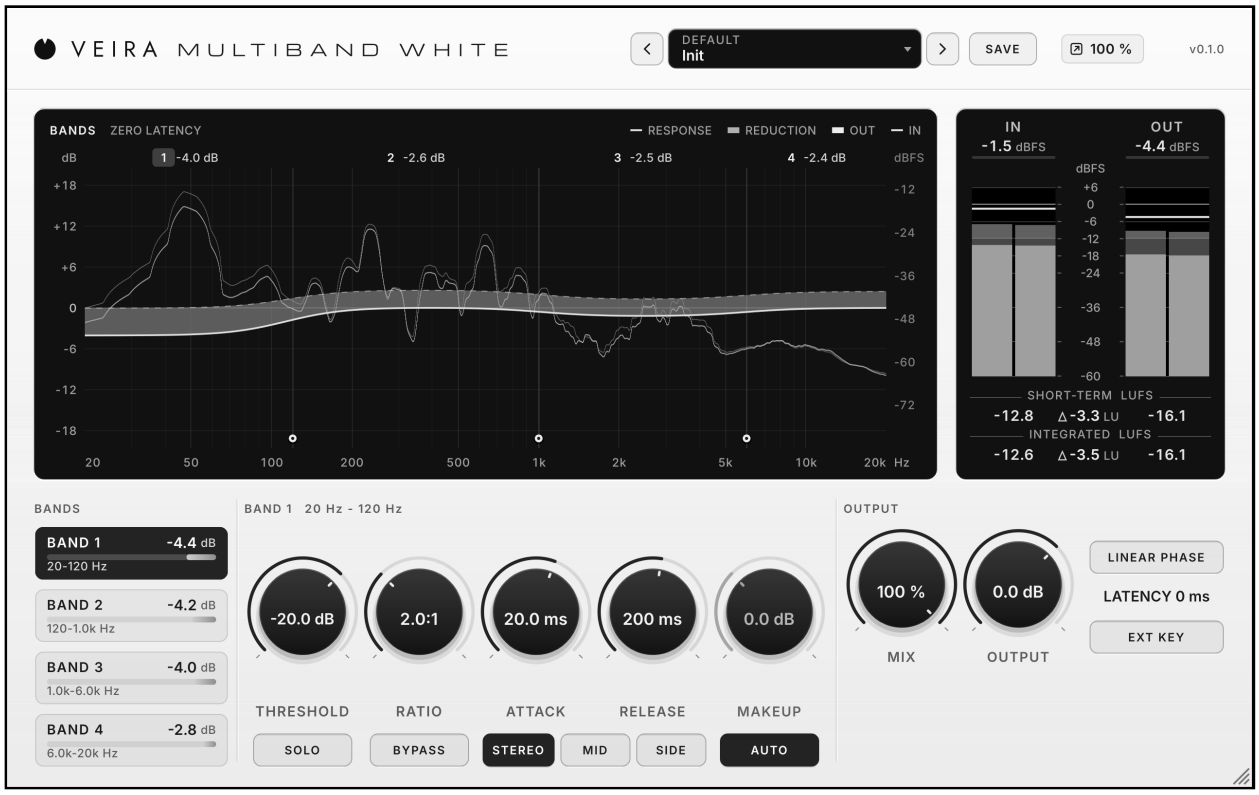
VEIRA

MULTIBAND COMPRESSOR

VEIRA Multiband White

User Manual

The clean one of the VEIRA colour multiband compressors: four bands, three draggable crossovers, zero latency or LINEAR PHASE, and in each band an exact, transparent compressor with AUTO makeup.



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Welcome

Thank you for choosing **VEIRA Multiband White**. It splits your sound into **four bands** and gives each one its own compressor, so you can hold the boom of a bass, the harsh moments of a vocal or the cymbals of a drum bus without touching the rest. It works on single tracks, buses, the mix and the master.

It is the White member of the VEIRA colour family: transparent and precise, with a light face, dark screens and black knobs. Each band's compressor does exactly what its controls say: the curve is exact, [ATTACK] and [RELEASE] measure what they read, and [AUTO] makeup gives back what the compression really took.

What makes it different

- **Zero latency, or none of the phase turns.** By default the crossovers add no latency and the bands add up flat. Switch on [LINEAR PHASE] for crossovers that keep every frequency in time, at a fixed 24 ms of latency (at 48 kHz) that your DAW makes up for.
- **An exact compressor in each band.** [THRESHOLD], [RATIO] (1:1 to 20:1) with a 6 dB soft knee, [ATTACK], [RELEASE] and [MAKEUP]. Steady tones settle on the curve within 0.0023 dB.
- **Clean low bands.** A short hold in each band's detector keeps the gain still between a bass wave's peaks: a 30 Hz tone turned down 15 to 18 dB stayed free of distortion (−153 dB and better).
- **AUTO makeup that keeps each band's level.** It gives back what the compression took from the band's energy, but not what it took from a loud passage the band is there to hold.
- **Per band: SOLO, BYPASS and STEREO / MID / SIDE**, plus parallel [MIX], [OUTPUT] and an external key ([EXT KEY]) for frequency-aware ducking.
- **See every band at work.** The [BANDS] display draws the spectrum, the response of the whole compressor right now and what each band takes off, with handles to drag the crossovers.

How this manual is organised. *Getting started* installs and activates the plugin. *The panel at a glance* names its parts. *How a multiband compressor works* is a short primer. *Controls* and *Displays* explain every knob, button and graph. *Linear phase and latency* and *Sidechain* cover the two bigger choices, and *Presets*, *Recipes*, *Specifications* and *Troubleshooting* close the manual.

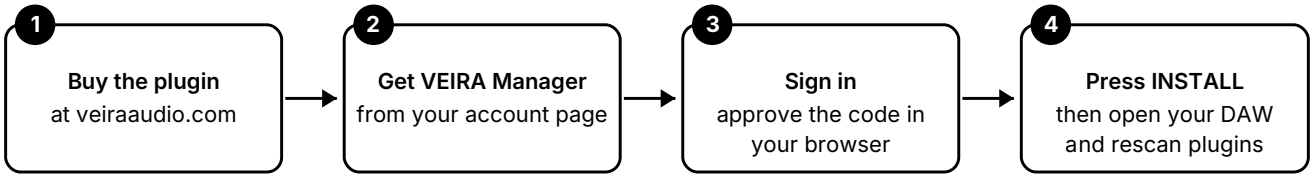
Getting started

What you need

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

Install with VEIRA Manager

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



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

FIGURE 1 From purchase to first sound in four steps.

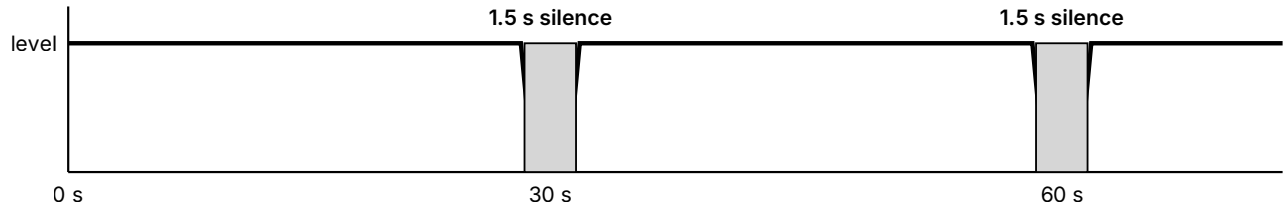
1. **Buy** VEIRA Multiband White at **veiraaudio.com**. It's a one-time purchase: you own it for good, with free updates.
2. **Download VEIRA Manager** from your account page (or veiraaudio.com/manager) and install it.
3. **Sign in.** VEIRA Manager shows a short code and opens your browser; confirm the code there. Your password is never typed into the app.
4. Find VEIRA Multiband 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 Multiband White appears in your DAW under the manufacturer **VEIRA** (in Logic Pro: Audio Units ▸ VEIRA ▸ VEIRA Multiband 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 Multiband 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.



Without a licence: short silences every 30 s, faded in and out so nothing clicks.

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 Multiband 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 Multiband 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

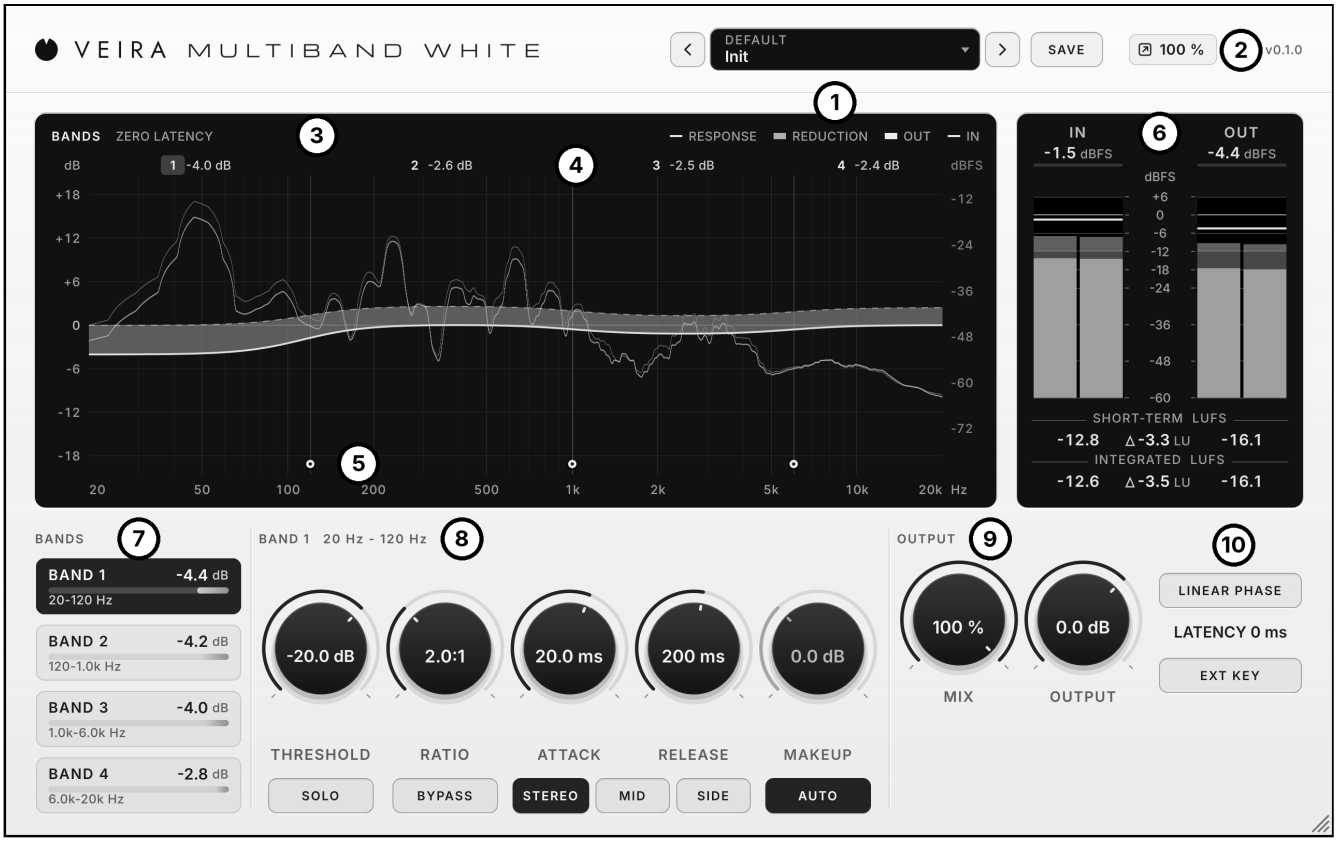


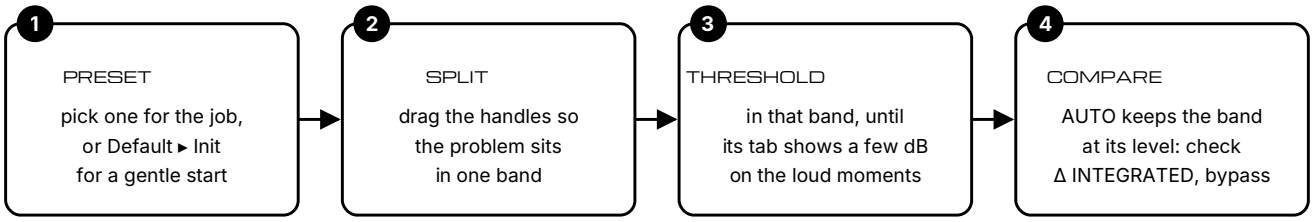
FIGURE 3 VEIRA Multiband White with the *Init* preset: every band at −20 dBFS, 2:1 with AUTO makeup, and band 1 selected.

	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	BANDS	The spectrum, the response of the whole compressor now and what each band takes off.
4	Band labels	Over each band: its number and its gain reduction right now.
5	Crossover handles	Drag them to move where the bands meet.
6	Meter bridge	IN and OUT meters with short-term and integrated loudness.
7	BANDS tabs	One tab per band, with its range and its gain reduction. Click one to show its controls.
8	BAND n	The controls of the band shown: THRESHOLD, RATIO, ATTACK, RELEASE, MAKEUP, and its buttons.
9	OUTPUT	MIX and OUTPUT for the whole plugin.

	Part	What it does
10	LINEAR PHASE, EXT KEY	The crossover mode, with its latency, and the external key.

The BANDS display fills the top left, with the meter bridge at the right. Underneath, from left to right: the four band tabs, the controls of the selected band, and the OUTPUT section.

Quick start: a steadier track in four moves

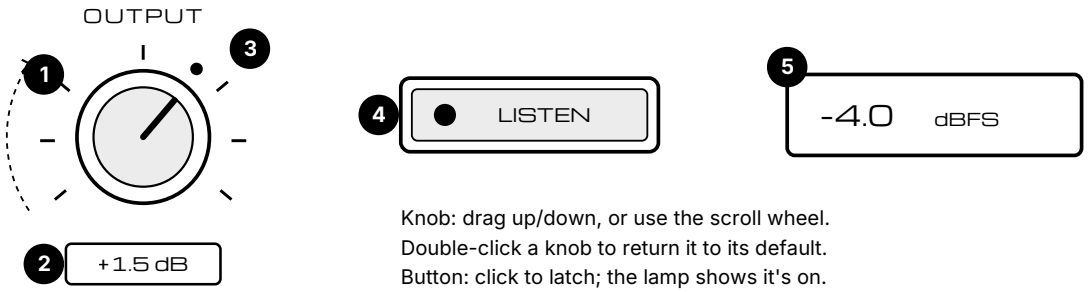


SOLO a band to hear only it while you set its crossovers. SOLO is a listening aid and is left out of offline bounces.

FIGURE 4 The quickest way in. *Default ▸ Init* sets every band at −20 dBFS, 2:1, with AUTO makeup.

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

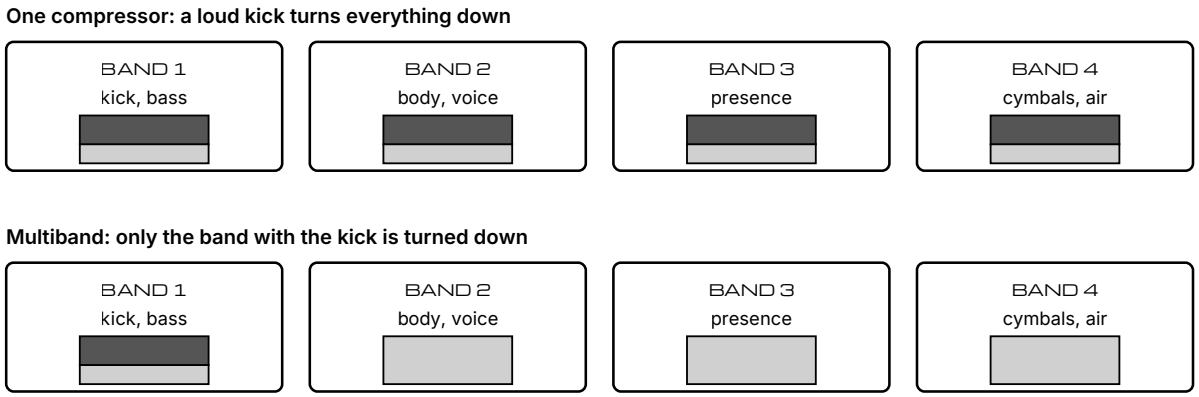
- **Knobs show their value in the middle** ([-20.0 dB], [2.0:1], [20.0 ms]): the knobs are black, with a dark ring around each one on the light face showing how far it is turned. The control's name is printed under the knob.
- **One band at a time.** The five knobs and the buttons under them belong to the band named above them ([BAND 1 20 Hz - 120 Hz]). Click a band's tab, or click its part of the [BANDS] display, to show its controls. Your DAW saves which band was shown.
- **Type a value:** right-click a knob (Control-click on a Mac). A field opens with the current value; type the new one and press Return. **−24** for a threshold of −24 dBFS, **4** for 4:1, **1.5 s** or **1500** for a release of 1.5 seconds.
- **Buttons have no lamp:** a button that is on fills dark with light lettering ([STEREO] and [AUTO] in the picture; in print, dark buttons); one that is off is a light key. [STEREO], [MID] and [SIDE] work as a group: one of them is always on.
- **A dimmed control** is one that doesn't act right now: [MAKEUP] while [AUTO] is on, and [EXT KEY] while no sidechain is connected.
- **The window size.** VEIRA Multiband White opens at 100 %, 1280 × 800 points. To change it, click the size button 2 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) 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 selected band's tab and the preset window. 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.

How a multiband compressor works

One compressor, or four

A compressor turns the level down when it goes over a threshold. On a full mix or a full instrument that has a catch: whatever is loudest moves everything. A kick turns the cymbals down with it, a boomy note dulls the whole bass, a loud “s” pulls the voice back.

A **multiband compressor** first splits the sound into frequency bands with **crossovers**, then gives each band its own compressor, and adds the bands back together. Each band is held only by what happens in it.



Dark: the gain taken off. Splitting the sound into four bands lets each part be held on its own, so a kick no longer pulls the cymbals and the voice down with it.

FIGURE 6 The same kick, one compressor against four.

Use it to **control** one part of the spectrum (a boomy low end, a harsh upper mid, sibilance, splashy cymbals) or to **even out** a whole mix or master band by band. With gentle settings in every band it holds a mix together; with one band set and the others at 1:1 it works like a dynamic EQ on that band alone.

What happens inside VEIRA Multiband White

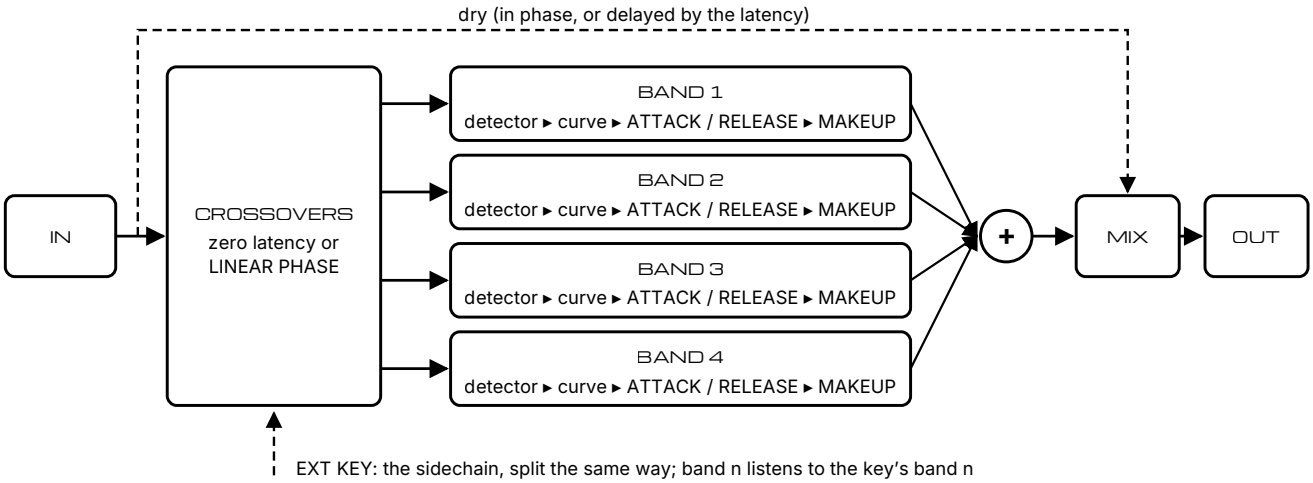


FIGURE 7 The signal flow. Each band has its own compressor; [MIX] blends the result with the dry signal, in phase.

1. **The crossovers split the sound into four bands.** Three crossovers, at 120 Hz, 1 kHz and 6 kHz by default, set where they meet. The bands add back up flat.
2. **Each band's detector reads its peak level**: of both sides together ([STEREO]), of its middle or its sides only ([MID], [SIDE]), or of the same band of the key ([EXT KEY]). It holds each peak for a quarter of [RELEASE] (at most 25 ms).
3. **The static curve** works out the reduction from [THRESHOLD] and [RATIO], with a 6 dB soft knee.
4. [ATTACK] **and** [RELEASE] set how fast the reduction comes and goes.
5. [MAKEUP] (or [AUTO]) sets the band's gain after compression; [SOLO] and [BYPASS] act per band.
6. **The bands are added back up**, [MIX] blends them with the dry signal and [OUTPUT] sets the level.

With no reduction, [MAKEUP] at 0 dB and [BYPASS] off, a band's gain is exactly 1: nothing in that band is changed.

Controls

The BANDS tabs



FIGURE 8 The band tabs: 1 band 1, selected (dark), with its gain reduction (−4.4 dB) and range (20-120 Hz), and 2 the reduction bar of band 2.

Each tab shows a band's **name**, its **range** in Hz and its **gain reduction right now**, as a number in dB and as an orange bar (0 to 24 dB). The tab of the band whose controls are shown is dark. When a band is soloed or bypassed, the tab says SOLO or BYPASS beside its name.

Click a tab to show that band's controls. You can also click a band on the BANDS display, or the number over it.

BAND n: THRESHOLD, RATIO, ATTACK, RELEASE, MAKEUP

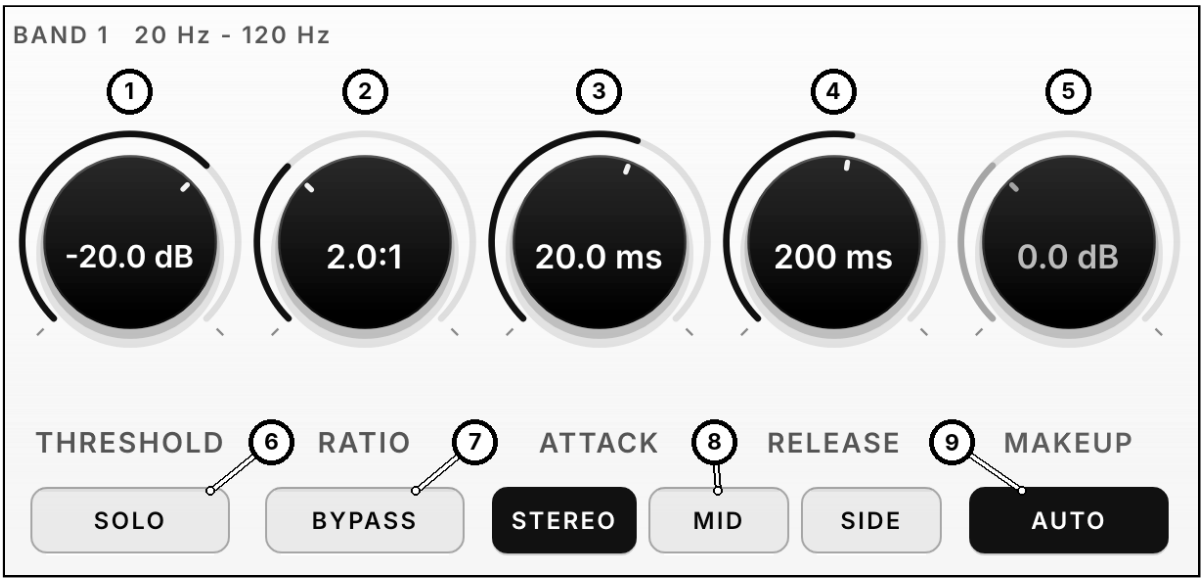


FIGURE 9 The controls of band 1 (BAND 1 20 Hz - 120 Hz): 1 THRESHOLD, 2 RATIO, 3 ATTACK, 4 RELEASE, 5 MAKEUP (dimmed: AUTO is on), 6 SOLO, 7 BYPASS, 8 STEREO / MID / SIDE and 9 AUTO.

Control	Range	Default	What it does
THRESHOLD	−60 to 0 dBFS	−20.0 dB	Where the band's compressor starts, against the band's peak level.
RATIO	1.0:1 to 20.0:1	2.0:1	How strongly the level over the threshold is turned down. 6 dB soft knee.
ATTACK	0.1 to 300 ms	20 / 10 / 5 / 2 ms	How quickly the reduction comes in (bands 1 to 4).
RELEASE	5 ms to 3 s	200 / 150 / 100 / 80 ms	How quickly it lets go (bands 1 to 4).
MAKEUP	−12 to +24 dB	0.0 dB	The band's gain after compression (dimmed while AUTO is on).
AUTO	on, off	on	Gives back what the compression took from the band.
SOLO	on, off	off	Hear only this band (and any other soloed).
BYPASS	on, off	off	This band passes without compression or makeup.
STEREO / MID / SIDE	one of three	STEREO	Compress the band as a whole, its middle only or its sides only.

THRESHOLD is in dBFS against the band's **peak level**. A band holds only part of the track's energy, so it reads lower than the track's own meter: on the *Init* settings, start a few dB under where you would set a full-band compressor and watch the band's tab. A few dB of reduction on the loud moments is the usual aim.

RATIO sets how hard the band is held over the threshold: at 2:1 a band that rises 4 dB over it comes out only 2 dB louder; at 20:1 it barely rises at all. The **6 dB soft knee** fades the compression in from 3 dB under the threshold to 3 dB over it. 1:1 means no compression: the presets use it to leave bands alone.

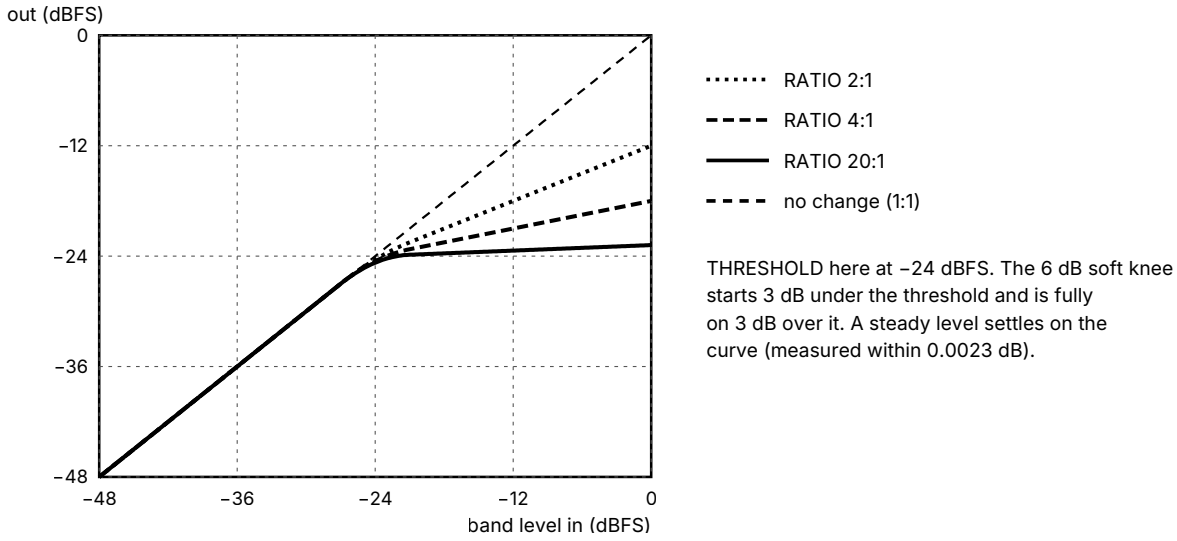
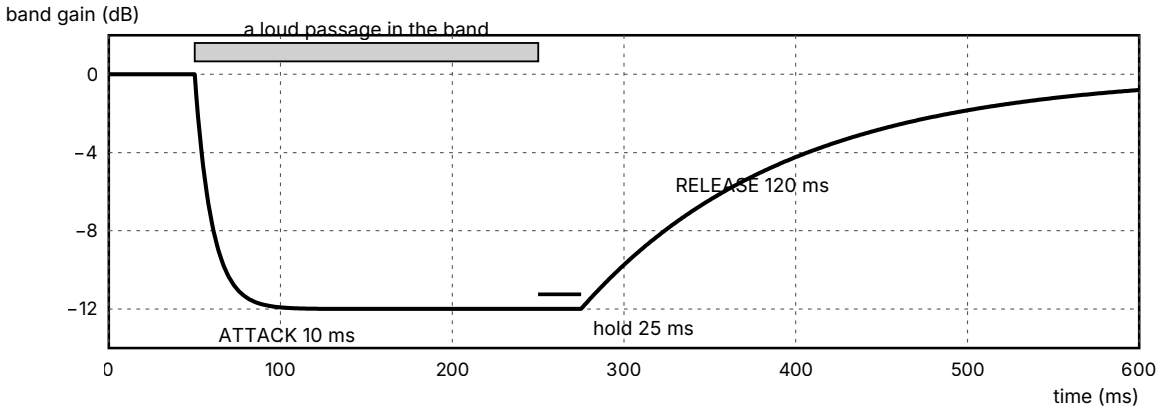


FIGURE 10 The static curve at THRESHOLD −24 dBFS for three ratios (computed from the plugin's formula).

ATTACK and RELEASE are time constants on the reduction: in the time set, the gain covers 63 % of a step. Measured on a tone stepping by 40 dB, ATTACK 10 and 50 ms came out at 10.6 and 50.4 ms, and RELEASE 50 and 400 ms at 52.4 and 402.2 ms (an attack of 1 ms measures about 2 ms, because a tone's first peak comes a quarter of a cycle in and the band filters delay it about 1 ms). There is no lookahead, so even the fastest attack lets the first moment of a hit through: that keeps transients alive and adds no latency.

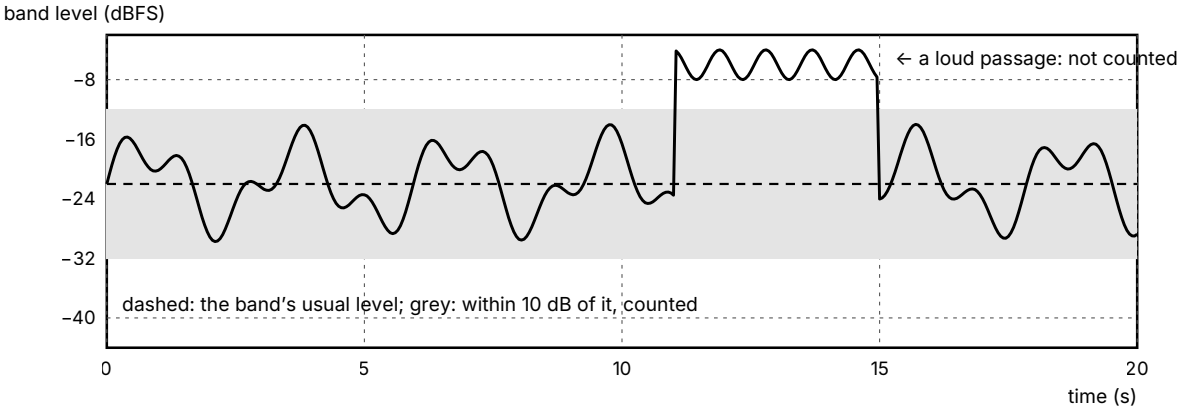
After the level drops, the reduction is **held for a quarter of** RELEASE (at most 25 ms) before it lets go. A bass wave's peaks are further apart than a hi-hat's, and the hold keeps a low band's gain still between them, so the compressor doesn't ride the waveform and add distortion. That is why the defaults are slower in the low bands (20 ms / 200 ms) than in the top one (2 ms / 80 ms).



ATTACK and RELEASE are time constants: the gain covers 63 % of a step in the time set. After the level drops, the reduction is held for a quarter of RELEASE (at most 25 ms), so a low band's waves don't move the gain between peaks.

FIGURE 11 A band's gain over a loud passage: ATTACK 10 ms, the 25 ms hold, RELEASE 120 ms.

MAKEUP and AUTO. Compression lowers a band; makeup brings it back. With AUTO on (the default), the plugin works out what the compression really took from the band's energy and gives exactly that back, from 0 to +24 dB, gliding. It averages over the whole time from the start, then over about the last 5 seconds, and counts only moments within 10 dB of the band's usual level, so a loud passage the band is there to hold doesn't buy its makeup back: the passage stays held. Measured: a band swinging by 12 dB at −24 dBFS, 4:1, lost 9.6 dB without makeup and came back within 0.43 dB; a passage 18 dB over the band's level was held 9.8 dB down and added only 0.07 dB of makeup. Switch AUTO off to set MAKEUP yourself.

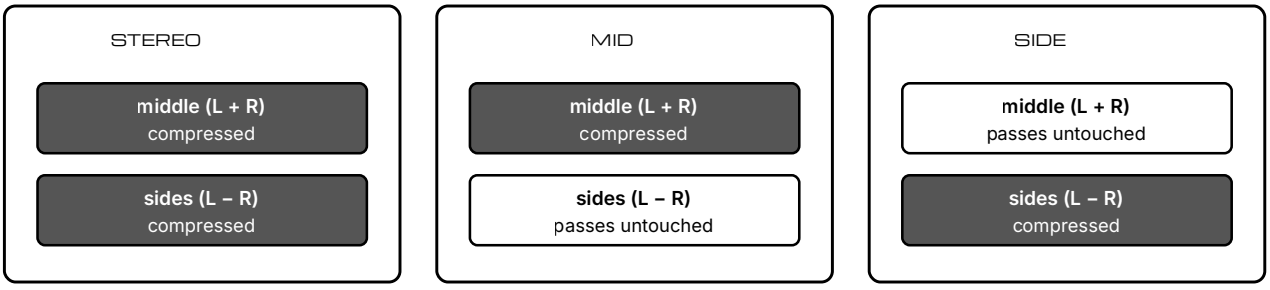


AUTO gives back what the compression took from the band's energy, averaged over about the last 5 s and counting only moments in the grey area, so a loud passage the band is there to hold doesn't buy its makeup back.

FIGURE 12 Which moments AUTO counts, roughly.

SOLO plays only the soloed bands (you can solo several). Use it to place the crossovers and to hear what a band holds. It is a listening aid: **offline bounces leave it out**, so a bounce always has every band. **BYPASS** lets a band through with no compression and no makeup; its tab and its label on the display say BYPASS. Both fade in and out, so they never click.

STEREO / MID / SIDE. STEREO compresses the band as a whole, both sides with one gain from the louder side, so the image doesn't move. MID detects and compresses only the band's middle (what both sides share); SIDE only its sides (what differs between them). The other part passes untouched. Use MID to hold a centred bass or voice without touching the width, and SIDE to calm wide, splashy highs or a wandering low end.



Dark: the part of the band that is detected and compressed. STEREO links both sides (the louder one counts). With MID or SIDE, the other part was measured untouched (0.0000 dB).

FIGURE 13 What each choice compresses.

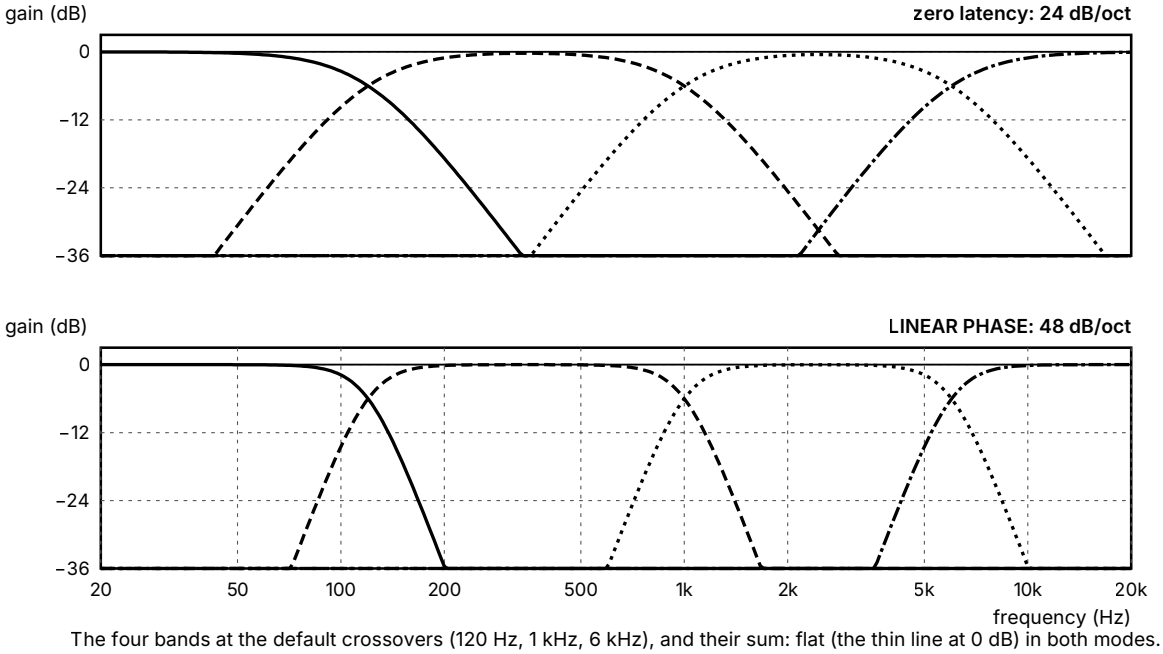
> **Tip:** On a mono track, MID and STEREO do the same and SIDE has nothing to work on.

The crossovers

Crossover	Range	Default
1 (band 1 to 2)	30 to 800 Hz	120 Hz
2 (band 2 to 3)	150 Hz to 6 kHz	1 kHz
3 (band 3 to 4)	800 Hz to 16 kHz	6 kHz

Drag a **crossover handle** at the bottom of the BANDS display left or right; while you hover or drag, its frequency shows above it. **Double-click** a handle for its default. Neighbouring crossovers are kept at least 1.25 times apart. The crossovers are host parameters too, so they can be automated (*Crossover 1* to *3*). Band 1 runs from 20 Hz and band 4 up to 20 kHz.

With zero latency a moving crossover glides over 20 ms; with LINEAR PHASE the filters are worked out again and crossfaded over four blocks. Either way, moving one never clicks.



The four bands at the default crossovers (120 Hz, 1 kHz, 6 kHz), and their sum: flat (the thin line at 0 dB) in both modes.

FIGURE 14 The four bands at the default crossovers, in each mode (computed from the plugin's band shapes).

OUTPUT: MIX, OUTPUT, LINEAR PHASE, EXT KEY

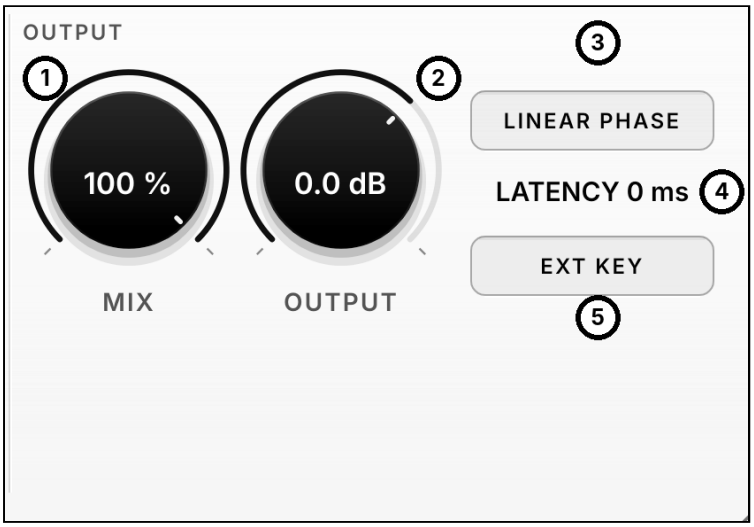


FIGURE 15 The OUTPUT section: 1 MIX, 2 OUTPUT, 3 LINEAR PHASE, 4 the latency read-out and 5 EXT KEY (here dimmed: no sidechain is connected).

Control	Range	Default	What it does
MIX	0 to 100 %	100 %	The compressed signal against the dry one, in phase (parallel compression).
OUTPUT	−24 to +12 dB	0.0 dB	The level going out, after MIX.
LINEAR PHASE	on, off	off	Linear-phase crossovers, with latency. See *Linear phase and latency*.
EXT KEY	on, off	off	Every band listens to the same band of the sidechain. See *Sidechain*.

MIX blends the compressed signal with the dry one for **parallel compression**: heavy settings blended under the original keep its transients and add density. The dry signal is taken in step with the bands (with zero latency, from the same crossovers; with LINEAR PHASE, delayed by the same latency), so the blend stays in phase. At 0 % the output is the dry signal.

OUTPUT sets the final level, after MIX. With AUTO on in the bands it is mostly for small adjustments: compare with bypass at equal loudness (Δ INTEGRATED about 0.0 LU).

The latency read-out under LINEAR PHASE says LATENCY 0 ms with zero latency and the real figure with LINEAR PHASE (24 ms at 48 kHz).

Displays

BANDS

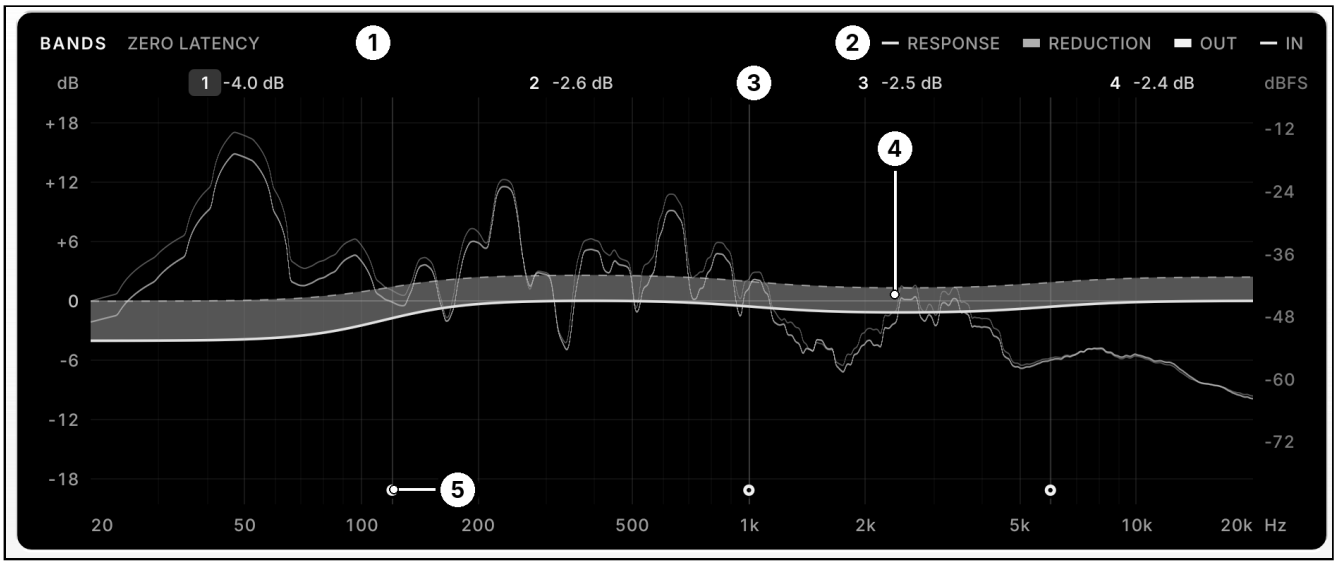


FIGURE 16 The BANDS display: 1 the crossover mode (ZERO LATENCY or LINEAR PHASE), 2 the key, 3 a band's number and its reduction now, 4 the response now (light line) with the reduction (orange) under the makeup (dashed), and 5 a crossover handle.

BANDS shows **20 Hz to 20 kHz** in three layers:

- **The spectrum** of the input (a thin grey line) and the output (silver), in sixth-octave steps, rising fast and falling slowly, on the dBFS scale at the right.
- **The response of the whole compressor right now**, a light amber line on the dB scale at the left: what each frequency is turned up or down by at this moment, eased so it moves smoothly. The **dashed line** is where each band's makeup alone puts it; the **orange area** between the dashed line and the response is what each band's compressor takes off right now (in print, the dark band between the two lines).
- **Over each band**, its number and its reduction now in dB (orange while it is compressing). The selected band's number sits in a lit box; a bypassed band reads BYPASS; while bands are soloed, the others are dimmed.

Hover over the display for a read-out of the frequency under the pointer, the response there NOW and the dashed line's value, AVERAGE. Hover over a crossover handle to see its frequency, and drag it to move it.

What to look for. On a bass line, the orange should bump on the boomy notes in band 1 and stay thin elsewhere. With AUTO, the dashed line sits above 0 dB by about what the band usually loses, so on average the response comes back to 0 dB.

Meter bridge (IN | OUT)

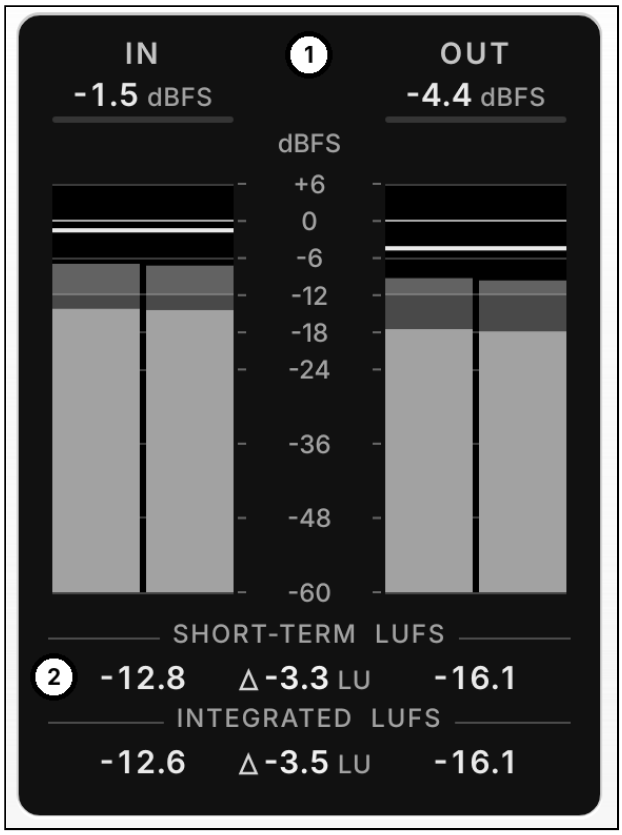


FIGURE 17 The meter bridge: 1 IN and OUT, with 2 short-term and integrated loudness. Each band's gain reduction is shown on its tab and over the BANDS display.

Reading the IN and OUT meters

The meter bridge measures what goes into VEIRA Multiband 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.

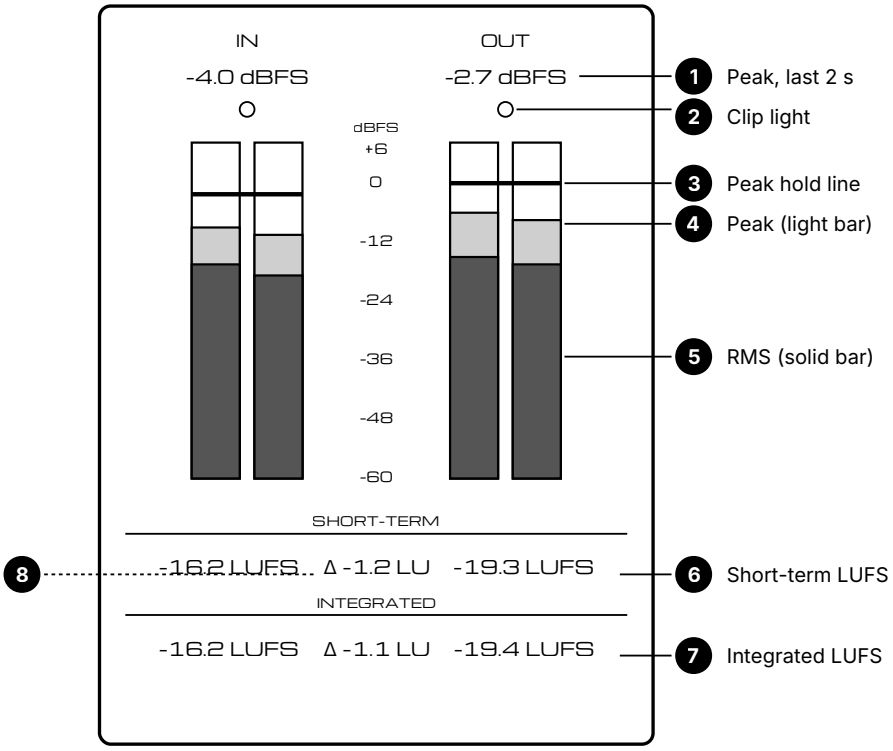


FIGURE 18 The meter bridge, left and right channel bars for input and output, with loudness below.

- 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 Multiband 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.

Linear phase and latency

Every crossover changes the phase of the sound near the frequency where two bands meet. With **zero latency** (the default), VEIRA Multiband White uses Linkwitz-Riley crossovers at 24 dB per octave, each band also passed through the all-pass of the crossovers above it, so the four bands add up perfectly flat in level (within 0.0001 dB from 25 Hz to 18 kHz) and nothing is delayed. What is left is a gentle turn of phase where bands meet, like most analogue crossovers.

With LINEAR PHASE, the bands are linear-phase filters at 48 dB per octave that add up to a **pure delay**: the output, with every band at 1:1, nulls against the input delayed. Nothing is turned in phase at all, which matters most on a master or a mix bus with strong compression in neighbouring bands.

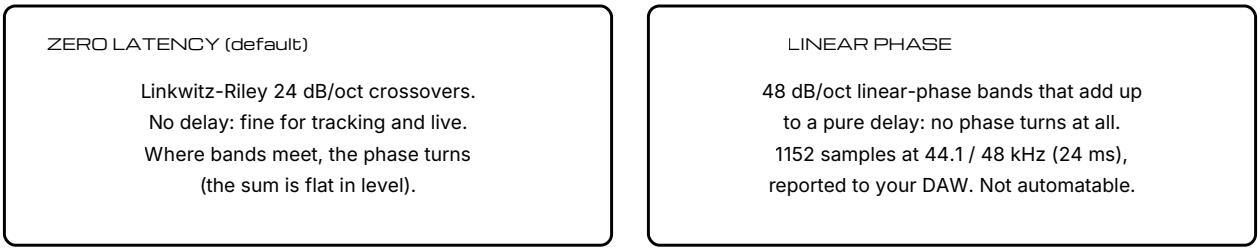


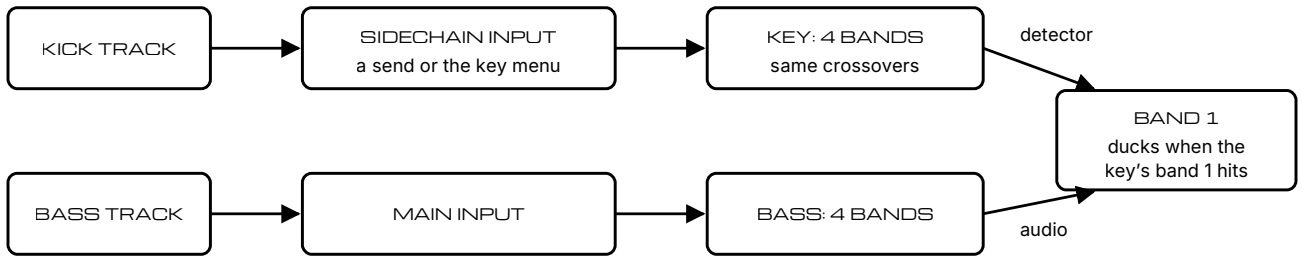
FIGURE 19 The two crossover modes.

The cost is **latency**: 1152 samples at 44.1 and 48 kHz (24 ms at 48 kHz), 2304 at 88.2 and 96 kHz, and 4608 at 176.4 and 192 kHz. It is reported to your DAW, which delays the other tracks to match, and your DAW's own bypass is delayed by the same amount, so comparing never jumps in time. Because it changes the latency, LINEAR PHASE **can't be automated**: set it once, while the transport is stopped. It also takes a little more processing.

> **Tip:** Use zero latency while tracking and on single tracks; use LINEAR PHASE on the mix bus and the master. Every *Mastering* preset uses it.

Sidechain

With EXT KEY on, every band listens to **the same band of a sidechain input** instead of to itself: the key is split by the same crossovers, and band 1 of your track is held by band 1 of the key, band 2 by band 2, and so on. That lets a kick duck only the low band of a bass, or a voice duck only the mids of a music bed.



With EXT KEY on and a sidechain connected, every band listens to the same band of the key. A keyed band gets no AUTO makeup, so it ducks. Without a sidechain the button is dimmed and each band listens to itself.

FIGURE 20 A kick on the key ducks only the bass's low band.

- **A keyed band gets no AUTO makeup**, so it really ducks rather than being given its level back. With AUTO off, your MAKEUP still applies. The *Sidechain* presets set AUTO off and MAKEUP to 0 dB in their keyed bands.
- A stereo key is summed to mono for detection. STEREO, MID or SIDE still decides which part of your band is turned down.
- Bands you don't want ducked: set their RATIO to 1:1, as the *Sidechain* presets do.
- **Routing.** Open your DAW's sidechain menu on the plugin's insert and choose the key track (in Logic Pro, the *Side Chain* menu at the top of the plugin window; in Ableton Live, *Sidechain* in the device; in Cubase and Nuendo, activate side-chain and route a send to it; in Studio One, the sidechain button in the plugin header). While no sidechain is connected, EXT KEY is dimmed and each band listens to itself.

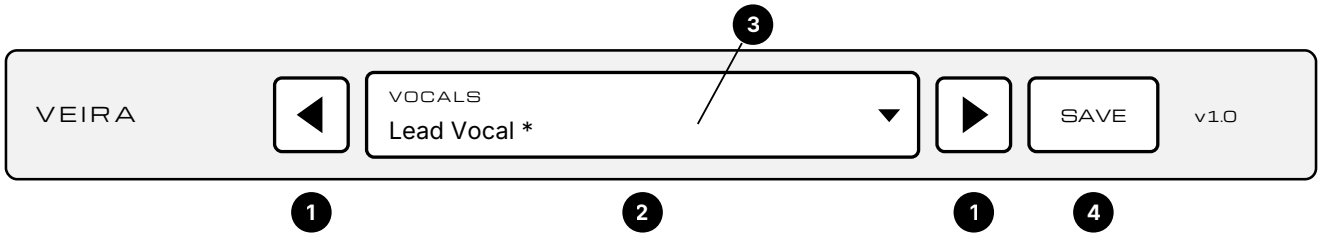
Measured: a kick on the key ducked band 1 by 18 dB, while band 3 stayed untouched.

Presets

VEIRA Multiband White comes with **41 factory presets** in 10 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 21 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 Multiband 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 Multiband White/<Folder>/
Windows	%APPDATA%\VEIRA\VEIRA Multiband 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 and Snare Control, Drum Bus Punch, Cymbal Tamer, Room Mic Squash, Snare Body
Bass	Bass Even Lows, Bass Finger Noise, Synth Bass Tight, Upright Bass Smooth
Guitar	Acoustic Boom Control, Electric Rhythm Glue, Lead Fizz Tamer, Clean Guitar Even
Keyboards	Piano Even, Electric Piano Bark, Pad Tamer, Organ Low End
Vocals	Vocal Even, Vocal De-Harsh, Vocal Sibilance, Vocal Mud Control, Spoken Voice Even
Mix Bus	Mix Bus Glue, Mix Low End Lock, Mix Bus Smooth Top, Mix Side Control, Mix Bus Parallel
Mastering	Master Transparent, Master Low End Control, Master De-Harsh, Master Mid Side Even, Master Loud Prep
Sidechain	Kick Ducks Bass, Voice Ducks Music, Kick Pumps Pad, Snare Ducks Guitars
Creative FX	Over The Top, Breathing Highs, Lo-Fi Mid Squeeze, Wide Side Pump

Levels. The presets were made on tracks peaking at −8 dBFS, drums at −6 dBFS, the mix bus at −4 dBFS and masters at −3 dBFS; the *Sidechain* presets with a kick at −4 dBFS or a voice at −8 dBFS on the key. THRESHOLD works against each band's own peak level, so on a quieter or louder track **move every band's THRESHOLD by the difference**. Every preset uses AUTO makeup except the *Sidechain* presets, whose keyed bands duck with no makeup. Every preset but *Init* comes out within 0.15 dB of bypass loudness (K-weighted), except *Over The Top*, held 2.4 dB lower so its peaks stay under −0.7 dBFS. Every *Mastering* preset uses LINEAR PHASE; every *Sidechain* preset uses EXT KEY.

Recipes

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

Hold a boomy bass

1. Load *Bass* ▸ *Bass Even Lows* (crossovers 100 Hz, 700 Hz, 5 kHz; band 1 at −27.0 dBFS, 4:1).
2. Select band 1 and play the boomiest passage. Lower its THRESHOLD until its tab shows several dB on the boomy notes only.
3. If the low notes pump, raise band 1's RELEASE.

Tame harsh vocals and sibilance

1. Load *Vocals* ▸ *Vocal De-Harsh*: only band 3 (2.5 to 6 kHz) compresses, at 3:1 with a 2 ms attack.
2. Solo band 3 and drag crossovers 2 and 3 until the harshness sits in it. Un-solo.
3. For "s" sounds, use *Vocals* ▸ *Vocal Sibilance* instead: band 4 from 5.5 kHz at 6:1. Lower its THRESHOLD for more.

Glue a drum bus

1. Load *Drums* ▸ *Drum Bus Punch*: slow attacks in bands 1 to 3 let each hit through, then hold the bus; band 4 is left at 1:1.
2. Set each band's THRESHOLD for a few dB on the hits.
3. For splashy cymbals only, *Drums* ▸ *Cymbal Tamer* moves band 4 alone.

A transparent master

1. Load *Mastering* ▸ *Master Transparent* (1.5:1 in every band, LINEAR PHASE on).
2. Set each band's THRESHOLD for 1 to 2 dB of reduction on the loudest passages.
3. Compare with bypass at equal loudness. For more level before a limiter, try *Mastering* ▸ *Master Loud Prep*.

A kick that clears the bass

1. On the bass, load *Sidechain* ▸ *Kick Ducks Bass*: only band 1 (up to 120 Hz) is keyed, 8:1, 1 ms attack, 100 ms release, no makeup.
2. Route the kick to the sidechain input (see *Sidechain*). EXT KEY is lit when the key is connected.
3. Lower band 1's THRESHOLD for deeper ducking; the bass's mids and top stay as played.

A voice-over over music

1. On the music bus, load *Sidechain* ▸ *Voice Ducks Music*: bands 2 and 3 (150 Hz to 4 kHz) duck under the voice.
2. Route the voice to the sidechain. The lows and the air of the music stay; only the range of the words makes room.

A wider, steadier mix

1. Load *Mix Bus* ▸ *Mix Side Control*: band 1 and band 4 set to SIDE, so only the sides of the lows and highs are held.
2. For a breathing, pumping width as an effect, try *Creative FX* ▸ *Wide Side Pump*.

Specifications

Type	Four-band compressor
Channels	Mono and stereo, with a mono or stereo sidechain input
Latency	None with zero-latency crossovers; with LINEAR PHASE, 1152 samples at 44.1 / 48 kHz, 2304 at 88.2 / 96 kHz, 4608 at 176.4 / 192 kHz, reported to the host (host bypass delayed to match)
Crossovers	Three, draggable, at least 1.25 times apart: 30 to 800 Hz (default 120 Hz), 150 Hz to 6 kHz (1 kHz), 800 Hz to 16 kHz (6 kHz). Zero latency: Linkwitz-Riley 24 dB/oct, bands sum flat (within 0.0001 dB, 25 Hz to 18 kHz). LINEAR PHASE: 48 dB/oct linear-phase bands summing to a pure delay
Per band	THRESHOLD −60 to 0 dBFS (default −20.0); RATIO 1:1 to 20:1 (2.0:1), 6 dB soft knee; ATTACK 0.1 to 300 ms (20 / 10 / 5 / 2 ms); RELEASE 5 ms to 3 s (200 / 150 / 100 / 80 ms), with a hold of a quarter of RELEASE (at most 25 ms); MAKEUP −12 to +24 dB (0.0 dB) or AUTO (on); SOLO, BYPASS; STEREO / MID / SIDE
Detection	The band's peak (STEREO: the louder side, linked; MID or SIDE: that part; EXT KEY: the key's same band)
MIX	0 to 100 % (default 100 %), in phase with the dry signal
OUTPUT	−24 to +12 dB (default 0.0 dB)
LINEAR PHASE, EXT KEY	On or off (default off); LINEAR PHASE isn't automatable
Measured	Static curve within 0.0023 dB; a 30 to 60 Hz tone reduced 15 to 18 dB: distortion −153 dB and better; MID / SIDE: the other part untouched (0.0000 dB); SOLO: the other bands under −160 dB
Metering	BANDS (20 Hz to 20 kHz: input and output spectra, the response now, each band's reduction, crossover handles, hover read-out); per-band gain reduction on the tabs; IN 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	41 factory presets in 10 folders, plus your own
Window	1280 × 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 Vmbw

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 Multiband 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**.

A band never compresses. Its THRESHOLD is above the band's level, its RATIO is 1:1, or it is bypassed. Remember that a band reads lower than the whole track: lower THRESHOLD and watch the band's tab.

I can only see one band's knobs. That's by design: the controls show one band at a time. Click another tab, or click the band on the display.

My bounce has every band, but I soloed one. SOLO is a listening aid and is left out of offline bounces on purpose.

The level drops when I compress, even with AUTO. AUTO gives back what the compression took from the band's usual level, but not what it takes from loud passages: those stay held, which is the point. It also needs a few seconds of music to settle. For a fixed amount, switch AUTO off and set MAKEUP.

EXT KEY is dimmed. No sidechain is connected. Route a key to the plugin's sidechain input in your DAW (see *Sidechain*).

My keyed band ducks too much (or not enough). Raise or lower that band's THRESHOLD, or its RATIO. A keyed band gets no AUTO makeup; set MAKEUP with AUTO off if you want some level back.

LINEAR PHASE won't automate, or my DAW jumped when I switched it. It changes the latency, so it isn't automatable. Switch it while the transport is stopped; your DAW then makes up for the 24 ms (at 48 kHz).

Can I hear the transients get through? There is no lookahead, so the first moment of a hit passes before the fastest attack acts. That keeps the punch and adds no latency. For tighter control of peaks, put a limiter after it.

Does it work on a mono track? Yes, mono and stereo, with a mono or stereo sidechain. On mono, STEREO and MID do the same and SIDE has nothing to work on.

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 (Control-click on a Mac), type the number and press Return.

Do my sessions keep my settings? Yes. Every control, the crossovers, the selected band and 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 Multiband White · User Manual · Version 0.1.0

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

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