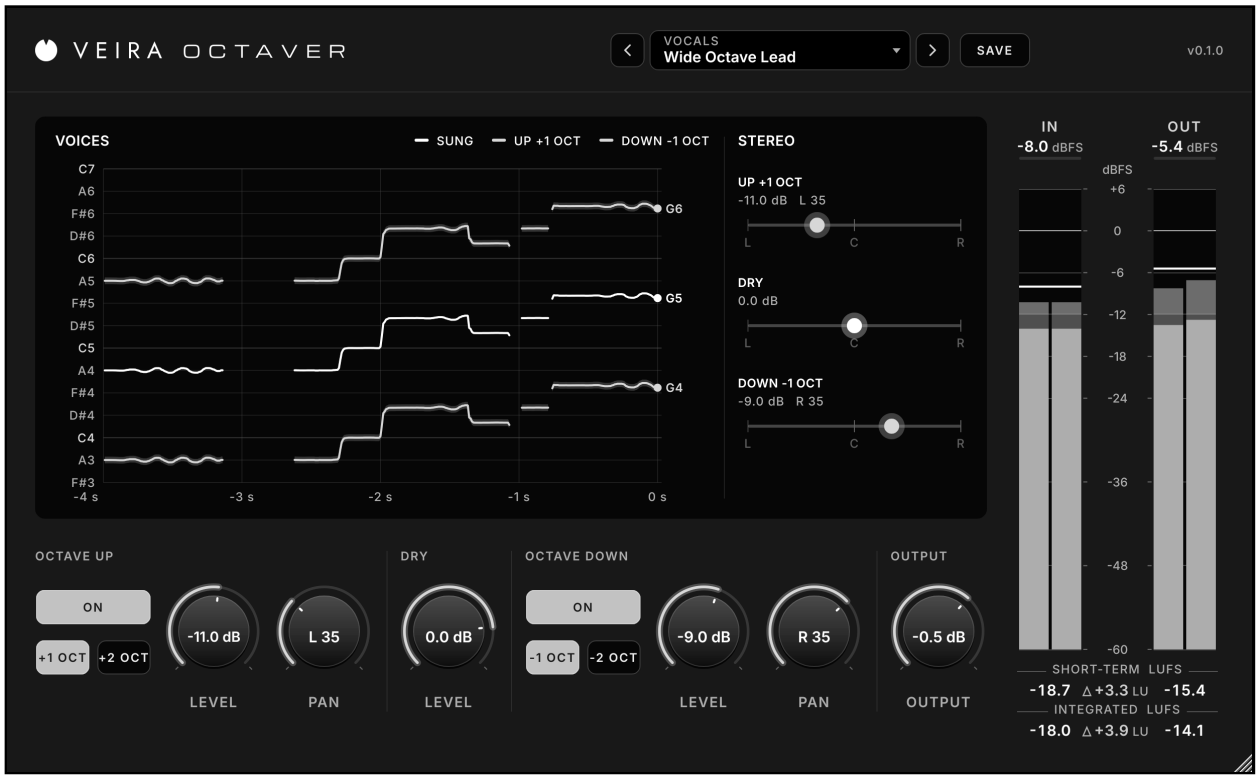
VEIRA

VOCAL OCTAVER

VEIRA Octaver

User Manual

Natural octave voices above and below a singer. The formants stay where they are, so the octave above is never a chipmunk and the octave below is never a monster: they sound like singers doubling the part an octave apart.



Contents

Welcome 3
Getting started 4
What you need 4
Install with VEIRA Manager 4
Activation and the licence 4
Formats and where the files go 5
The panel at a glance 6
Quick start: an octave under a voice in three moves 7
Using the controls 7
How an octaver works 9
Pitch and octaves 9
Formants: why most octavers sound fake 9
How it makes an octave without moving the formants 10
What happens inside VEIRA Octaver 12
What it needs from the sound 12
Controls 14
OCTAVE UP 14
OCTAVE DOWN 16
±1 or ±2 octaves 16
DRY 17
OUTPUT 18
Stereo 19
PAN and the stereo field 19
Mono and stereo tracks 19
Latency 20
Displays 21
The VOICES display 21
The STEREO panel 23
Meter bridge (IN | OUT) 24
Presets 26
The preset browser 26
The preset menu 26
Saving your own presets 26
Presets in your DAW 27
The factory folders 27
Recipes 28
A low double under a lead vocal 28
A wider lead from one take 28
Lift the last chorus 28
A backing-vocal pad from one voice 28
Weight on a rap vocal or a spoken voice 28
An octave guitar lead or a sub-octave synth 29
Creative voices 29
Specifications 30
Troubleshooting and questions 31

Welcome

Thank you for choosing **VEIRA Octaver**. Put it on a vocal track and it sings along with the voice, an octave (or two) above it, an octave (or two) below it, or both. Each octave voice has its own level and its own place between left and right, and the singer's own voice stays on its own knob.

What sets it apart is the tone of those voices. An ordinary pitch shifter moves everything up or down together, including the resonances of the singer's throat and mouth that make a voice sound like that person: shifted up, a singer turns into a chipmunk; shifted down, into a monster. VEIRA Octaver changes only the **pitch** and keeps those resonances, the **formants**, where they were. The octaves sound like the same singer, or a sibling, singing the part an octave apart.

What makes it different

- **Natural octaves.** The singer's tone is kept: the octave above sounds like a higher singer with the same mouth, the octave below like a lower one, not like a tape played faster or slower.
- **Two voices, each your way.** [OCTAVE UP] and [OCTAVE DOWN] each have [ON], a choice of one or two octaves, [LEVEL] and [PAN]. Use one, the other, or both.
- **Level-matched.** At 0 dB [LEVEL], an octave voice is as loud as the dry voice, on any vowel and any note. The levels you set mean the same thing on every voice.
- **Clean words.** Consonants, breaths and noise have no pitch, so the octave voices let them through quietly and unshifted: the octaves never double an *s*.
- **See it.** The [VOICES] display draws the pitch sung over the last four seconds, with the octave voices above and below it on a scale of note names. The [STEREO] panel shows where each voice sits.
- **Constant, reported latency.** 29.1 ms, always the same, reported to your DAW so the track stays in time. The dry voice and the host's bypass are delayed to match.

How this manual is organised. *Getting started* covers installing and activating. *The panel at a glance* names every part of the window. *How an octaver works* explains octaves, formants and how VEIRA Octaver makes its voices, with what it needs from the sound you give it. *Controls* explains every knob and button, with *Stereo* and *Latency* chapters of their own. *Displays* teaches you to read the [VOICES] display, the [STEREO] panel and the meters. *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:

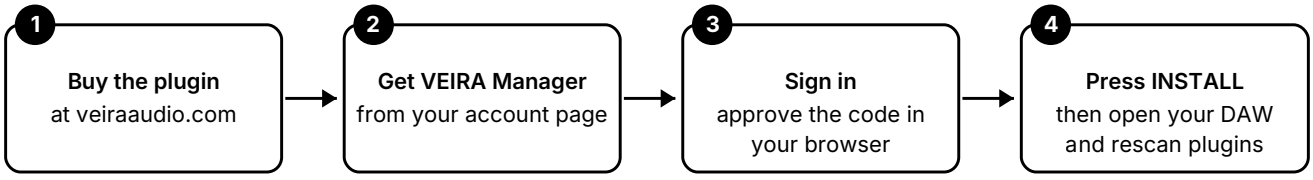


FIGURE 1 From purchase to first sound in four steps.

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

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 Octaver 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.

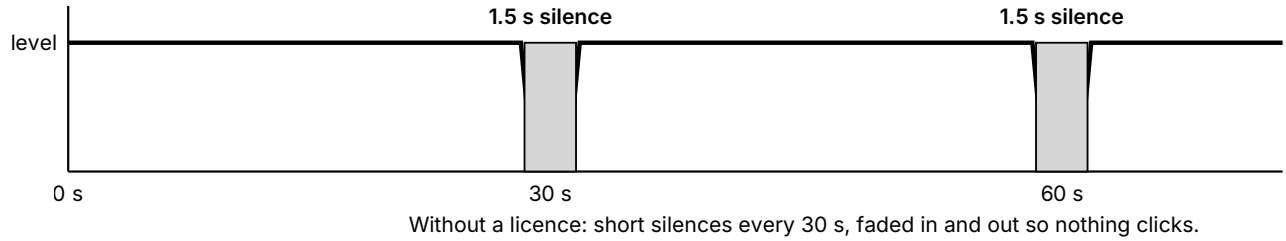


FIGURE 2 What an unlicensed copy does. With a valid licence the audio is never touched.

- **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 Octaver. 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 Octaver 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

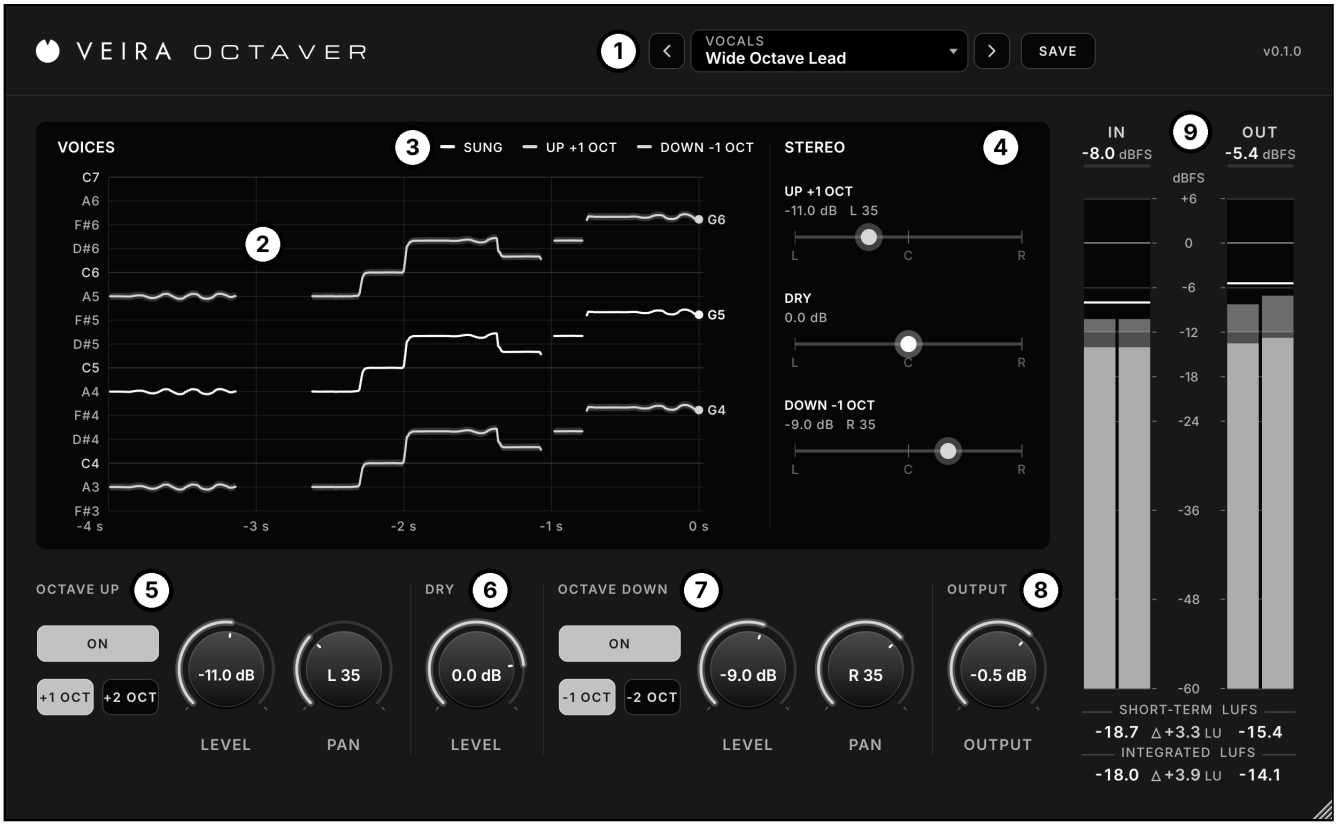


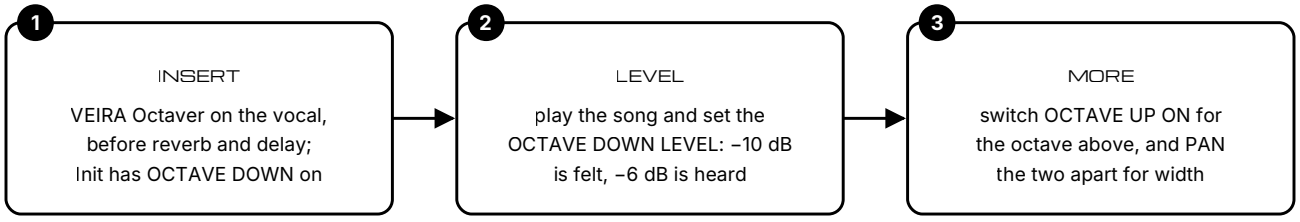
FIGURE 3 VEIRA Octaver with the factory preset *Vocals* ▸ *Wide Octave Lead* (OCTAVE UP +1 OCT at −11 dB, panned L 35; OCTAVE DOWN −1 OCT at −9 dB, panned R 35) while a woman sings, on a mono track with a stereo output.

The window has three parts. The VOICES **display** fills the top left, with the STEREO **panel** at its right. Under it sit the **controls**, in four sections: OCTAVE UP, DRY, OCTAVE DOWN and OUTPUT. The **meter bridge** runs down the right.

	Part	What it does
1	Preset browser	Steps through and saves presets. See *Presets*.
2	VOICES display	The pitch sung over the last four seconds (the middle line), with the octave above and the octave below drawn above and under it.
3	Legend	Names the lines: SUNG, UP +1 OCT and DOWN -1 OCT (or +2, -2); a voice that is off reads OFF.
4	STEREO	Where UP, DRY and DOWN sit between left and right, with their levels.
5	OCTAVE UP	ON, +1 OCT / +2 OCT, LEVEL and PAN of the voice above.
6	DRY	The level of the singer's own voice.
7	OCTAVE DOWN	ON, -1 OCT / -2 OCT, LEVEL and PAN of the voice below.

	Part	What it does
8	OUTPUT	The level of everything that comes out.
9	Meter bridge	Input and output level, and loudness.

Quick start: an octave under a voice in three moves



Or start from a factory preset: every one makes at least one octave.

FIGURE 4 The quickest way to an octave double. *Default* ▸ *Init* already has the octave below on, at −6 dB.

Using the controls

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

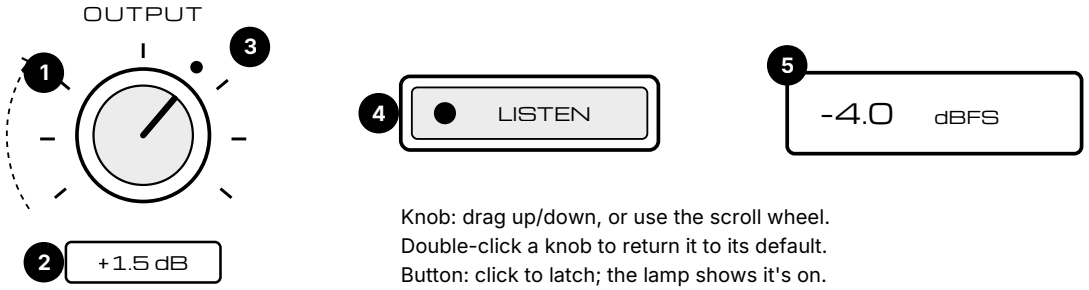


FIGURE 5 The parts you'll find on every VEIRA panel (the labels are examples).

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

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

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

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

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

- **Knobs show their value in the middle** (-6.0 dB, L 35), with a lit ring (blue on screen; in print, the lighter arc) showing how far they are 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.
- **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. LEVEL and DRY take dB (-3, or -inf for off), PAN takes L 30, R 100 or C, and OUTPUT takes dB. Press Escape or click elsewhere to leave it unchanged.
- **Buttons without lamps:** ON and the octave buttons fill with colour when they are on (orange on screen; in print, a solid button with dark lettering instead of a dark one with light lettering). +1 OCT and +2 OCT (and -1 OCT and -2 OCT) are a pair: one of them is always lit.
- **A section that is off dims:** with ON off, everything in that section but ON is veiled, so you see at a glance which voices are playing. You can still set the dimmed controls; they take effect when you switch ON on.
- **Resize the window:** drag its bottom-right corner (the small diagonal lines). It scales from 75 % to 200 % of its normal size (1240 × 760 points) and keeps its proportions. Your DAW saves the size with the session.

How an octaver works

If you already know what an octave and a formant are, skip to *What happens inside VEIRA Octaver*. If not, these pages make every control obvious.

Pitch and octaves

A sung note is a sound that repeats: the vocal cords open and close many times a second, and each time they send a pulse of air through the throat and mouth. The number of pulses per second is the note's **frequency**, in hertz (Hz), and the time between two pulses is its **period**. The A below middle C, A3, is 220 Hz: a pulse every 4.5 milliseconds.

An **octave** is a doubling of frequency. One octave above A3 is A4, 440 Hz, a pulse every 2.3 ms; one octave below is A2, 110 Hz, a pulse every 9.1 ms. Our ears hear notes an octave apart as *the same note*, higher or lower, which is why an octave double blends with a voice instead of fighting it: it adds weight below or brightness above without adding a new harmony.

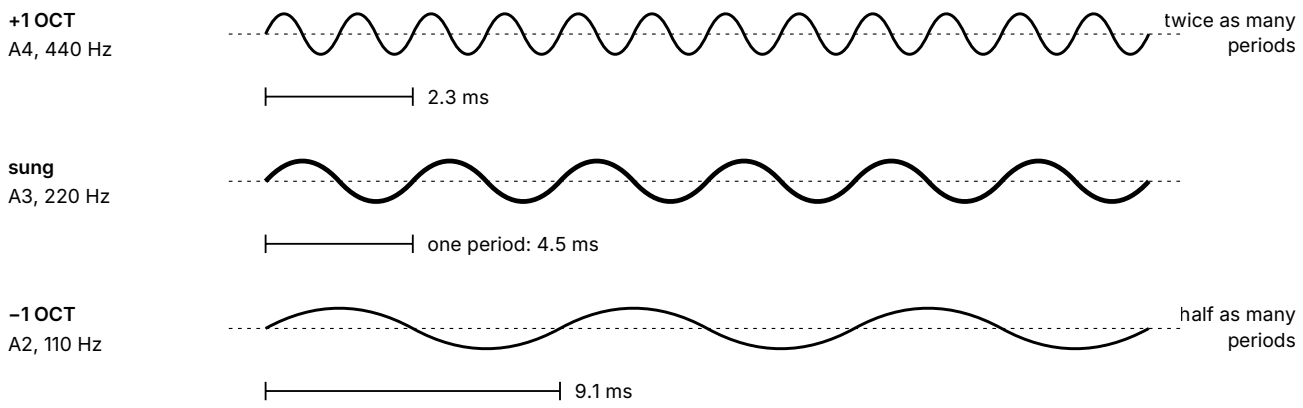


FIGURE 6 The same 7 milliseconds of a sung A3 and of its octaves. An octave up repeats twice as often; an octave down half as often.

Formants: why most octavers sound fake

Each pulse from the vocal cords rings through the throat, mouth and nose before it leaves the lips. Those spaces resonate at a few frequencies of their own, the **formants**. They depend on the shape of the mouth (an "ah" and an "ee" have different formants) and on the size of the person: they are a large part of what makes a voice sound like *that* singer, and what makes a vowel that vowel.

In a spectrum, a sung note is a row of **harmonics**, at the note's frequency and every whole multiple of it. The formants make some of them louder than others: the tops of the harmonics trace a curve, the **spectral envelope**, with a hump at each formant. Change the note and the harmonics move, but the envelope stays where it was, because the mouth hasn't changed.

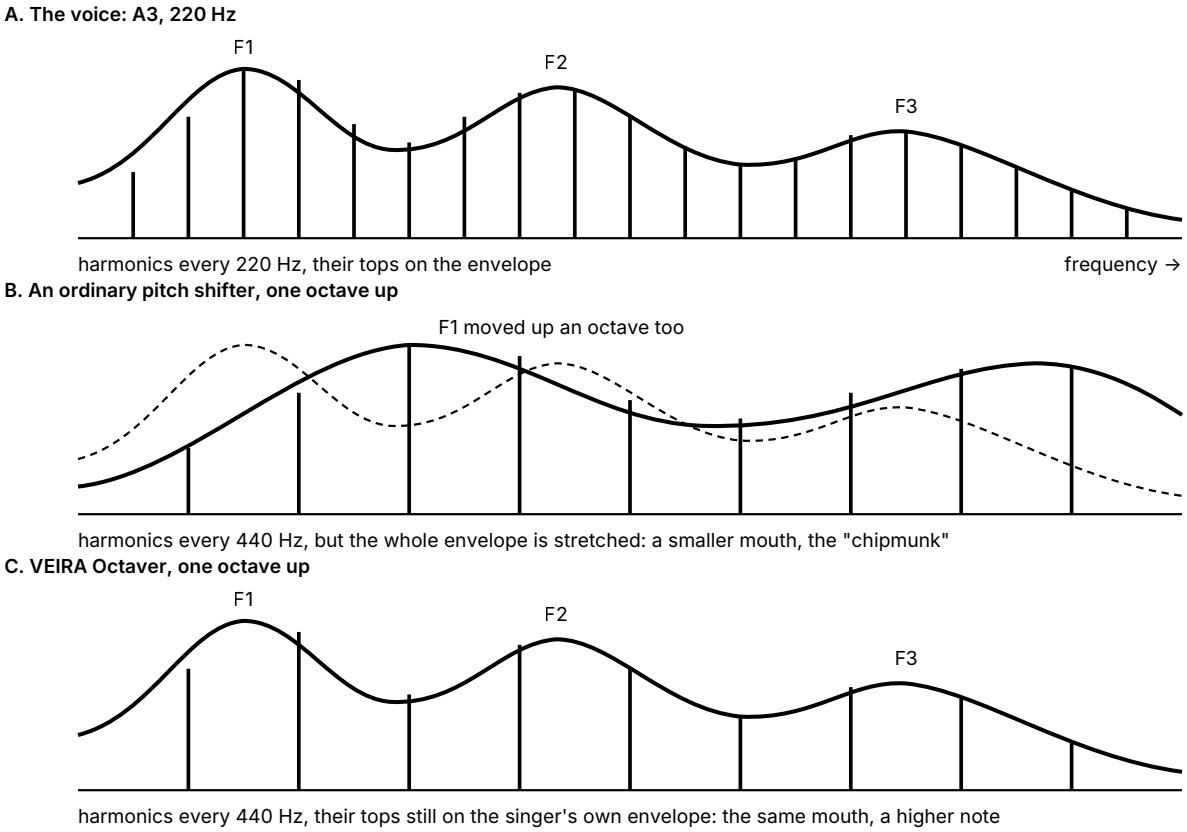


FIGURE 7 A: a voice's harmonics (vertical lines) under its spectral envelope (the curve), with three formants F1 to F3. B: an ordinary pitch shifter moves the envelope with the harmonics (the dashed curve is where it was). C: VEIRA Octaver moves only the harmonics; the envelope, and the singer's tone, stay.

An ordinary pitch shifter (or a tape played at double speed) stretches the whole spectrum, the envelope included: the formants move up an octave, as if the singer's head had shrunk to half its size. That is the chipmunk. Shifted down, the formants fall an octave: the monster. **VEIRA Octaver keeps the envelope where it is** and moves only the harmonics. The octave above has half as many harmonics, the octave below twice as many, and all of them sit on the singer's own envelope: the same mouth singing a different note.

Measured on sung vowels, the formants of the octaves stay within 10 % of the singer's own; an ordinary shifter moves them up by 100 % (one octave) or down by half.

How it makes an octave without moving the formants

VEIRA Octaver works on the voice's own pulses, one period at a time.

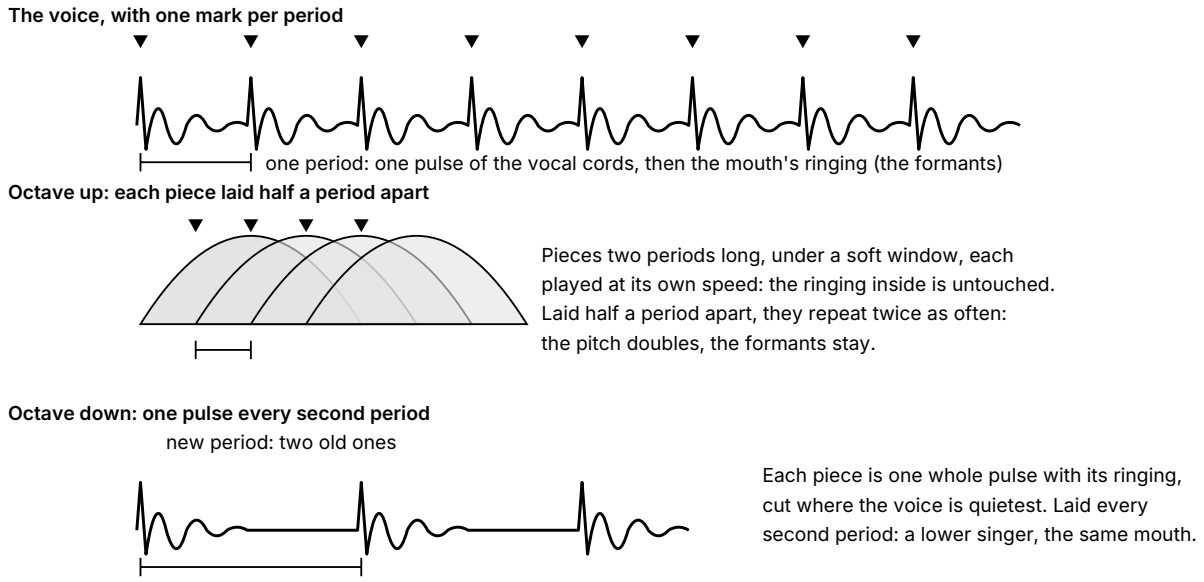


FIGURE 8 The idea in three rows. Top: the voice and its pitch marks (black triangles), one per period. Middle: for the octave up, short pieces of the voice are laid down twice as often. Bottom: for the octave down, one pulse is laid down every second period. The pieces keep their inside, so the formants stay; only their spacing, the pitch, changes.

1. **Finding the pitch.** A pitch detector listens to the voice and measures its period about 370 times a second, between 72 Hz and 1000 Hz (just under D2 to B5).
2. **Marking the periods.** It puts one mark in each period, where the waveform best repeats the period before. The same comparison tells it whether that stretch is really sung: when the waveform no longer repeats (a vowel running into a consonant), the stretch counts as unpitched.
3. **The octave up.** Pieces two periods long are cut around the marks under a soft window and laid down half a period apart (a quarter for +2 OCT). Each piece plays at its own speed, so the ringing of the formants inside it is unchanged.
4. **The octave down.** Each piece is one period: one pulse with its formant ringing, cut where the voice is quietest, with short crossfades. They are laid down every second period (every fourth for -2 OCT). That is how a lower singer with the same mouth sounds: the pulses come half as often, and each still rings the same way.
5. **Following the singer.** The new period is always exactly the singer's own, doubled or halved, so the octaves follow vibrato, slides and bends, and hold their pitch to under a cent on a held note.

What happens inside VEIRA Octaver

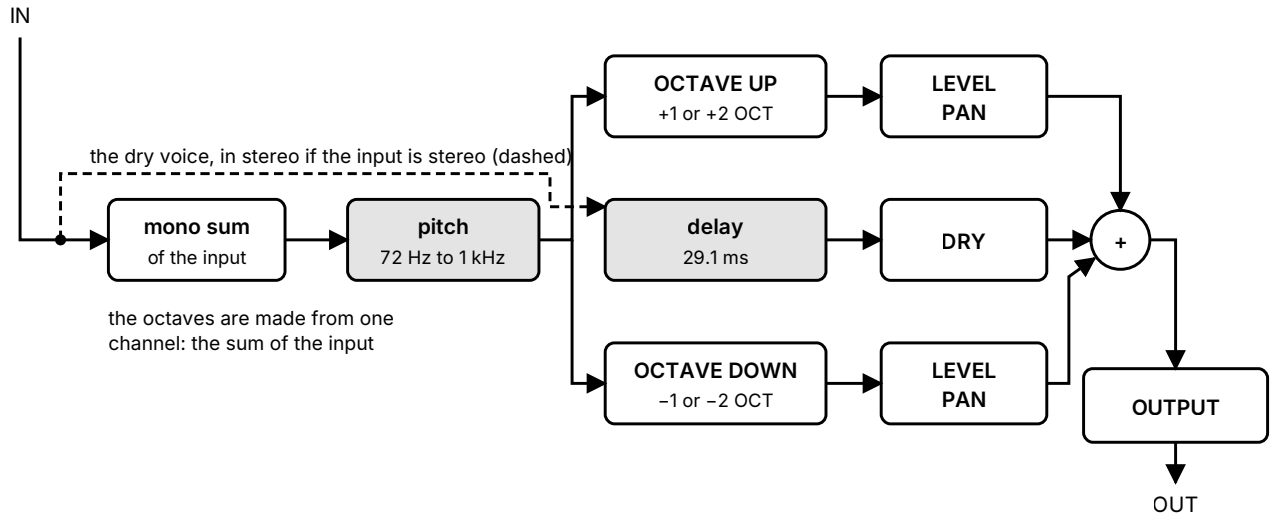


FIGURE 9 Signal flow. The input's channels are summed for the pitch detector and the two octave voices; each voice has its own [LEVEL] and [PAN]. The dry voice is delayed by the same 29.1 ms so it stays in time with the octaves, and goes through [DRY]. Everything is added and [OUTPUT] sets the level of the total.

A few facts that help when you're setting it:

- **Each voice is level-matched to the dry voice.** An octave up keeps the singer's formants, so its harmonics fall on other parts of the envelope, and a real octave can come out quieter or louder than the voice (an "ee" sung high can lose 16 dB). VEIRA Octaver measures the loudness of each voice against the dry voice over the sung parts and evens it out, within ±12 dB, gliding smoothly and holding through consonants and pauses. So at 0 dB [LEVEL] each octave sits at the dry voice's loudness, and −6 dB means 6 dB under it, on any vowel and any note.
- **Every switch and level glides over 20 ms**, so switching [ON], changing the octave, or automating a level never clicks, even in the middle of a note.
- **The latency is constant**: 29.1 ms at 48 kHz, reported to your DAW. See *Latency*.

What it needs from the sound

An octaver needs to hear **one note at a time**. VEIRA Octaver is made for a single voice, and works just as well on any monophonic instrument: a single-note guitar or bass line, a mono synth lead, a whistle.

- **Consonants, breaths, noise and chords** have no single pitch. The octave voices let them through **unshifted, about 12 dB quieter**, the way engineers cut the consonants out of doubled vocals. The dry voice carries every consonant, and an octave voice never doubles an *s*.
- **Chords** pass the same way: on a chord the detector mostly finds no pitch, so the voices fall back to that quiet, unshifted copy instead of garbling. Strummed chords and pianos get no octave.
- **The range** is 72 Hz to 1000 Hz, which covers every singing voice from a bass to a soprano. Below about D2 (73 Hz), the low notes of a bass guitar, a synth bass or a very deep voice, there is no octave: those notes pass quietly, unshifted.

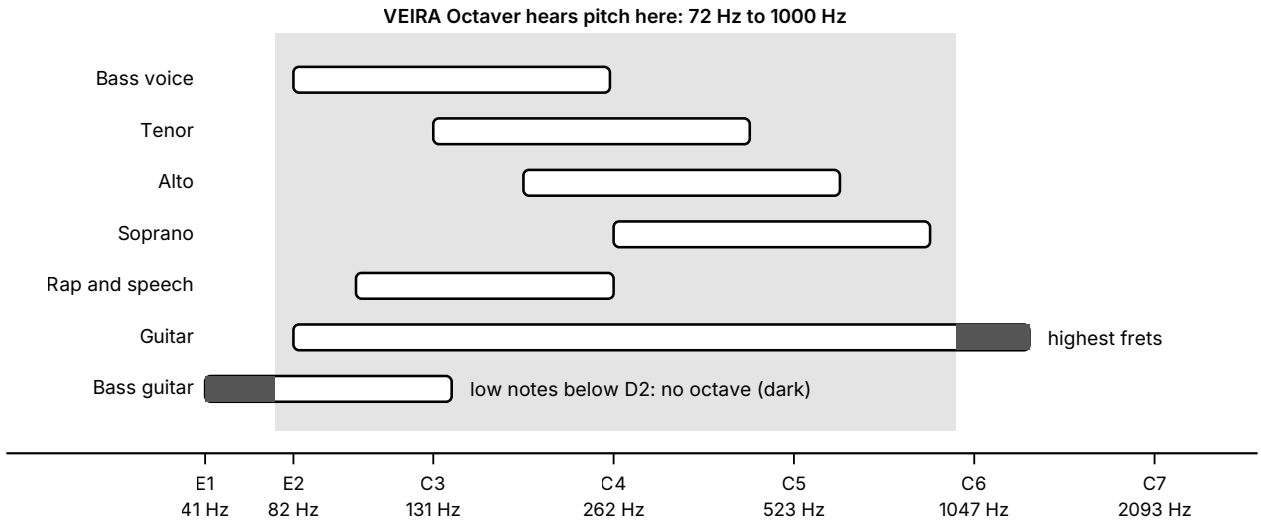


FIGURE 10 Typical ranges against the detector's range (shaded). Every singing voice fits. A bass guitar's lowest notes, below D2, and a guitar's highest frets, above B5, fall outside it (dark ends): they pass quietly and unshifted.

Controls

OCTAVE UP

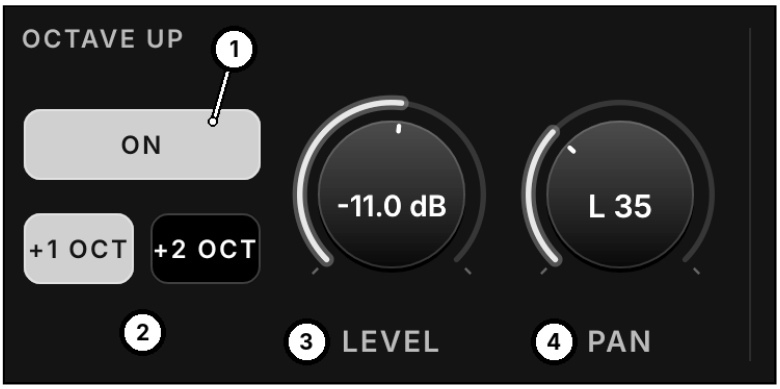


FIGURE 11 The OCTAVE UP section: 1 ON, 2 +1 OCT and +2 OCT, 3 LEVEL and 4 PAN.

Control	Range	Default	What it does
ON	On / Off	Off	Switches the voice above on.
+1 OCT / +2 OCT	One or two octaves up	+1 OCT	How far above the singer the voice sings.
LEVEL	−inf to +6 dB	−6.0 dB	The voice's level; at 0 dB it is as loud as the dry voice.
PAN	L 100 to R 100	C	Where the voice sits between left and right.

ON switches the octave above on. In *Init* it is off, with +1 OCT and −6 dB ready, so one click adds it. While it is off, the section dims and the VOICES legend and the STEREO panel read OFF for UP.

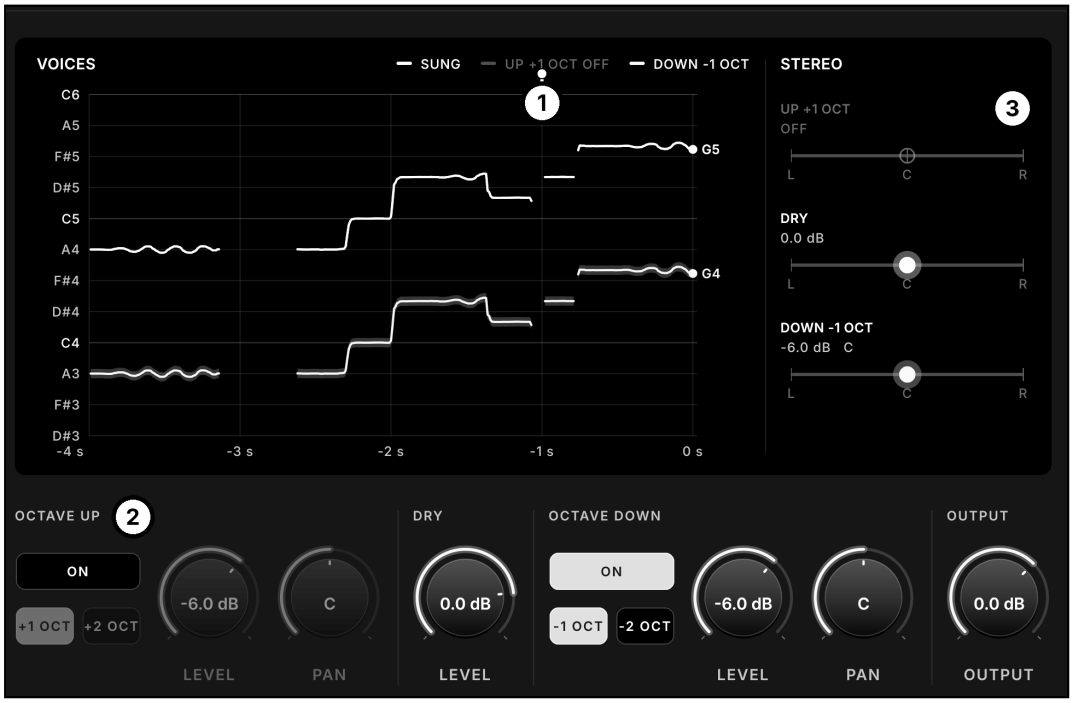


FIGURE 12 *Default ▸ Init*: OCTAVE DOWN on, OCTAVE UP off. 1 The legend reads UP +1 OCT OFF (dimmed), 2 the OCTAVE UP section is veiled except its ON button, and 3 the STEREO panel shows UP as OFF, with an outlined dot.

+1 OCT and +2 OCT. One octave up is the classic octave double: brightness and lift, like a higher singer joining the part. Two octaves up is thinner and airier, a glassy layer high above the voice; keep it lower in the mix (the factory presets put it between −12 and −16 dB, or at −6 dB for effects).

LEVEL sets how loud the octave above is, from off (-inf dB) to +6 dB. Because each voice is level-matched to the dry voice, **0 dB is as loud as the singer**. −12 to −10 dB adds shine you feel more than hear; −8 to −6 dB is a clear harmony-like octave; 0 dB is an equal second singer. The knob's travel is spread so −12 dB sits in the middle, where most settings live.

PAN places the voice from hard left (L 100) through the centre (C) to hard right (R 100). See *Stereo*.

> **Tip:** The octave above keeps the singer's formants. On very high notes (an "ee" or "oo" sung an octave up from about F4) it can come out up to about 3 dB quieter than LEVEL says, and it sounds slightly breathier than the voice. Raise LEVEL a little for a high chorus, or use +1 OCT instead of +2 OCT there.

OCTAVE DOWN

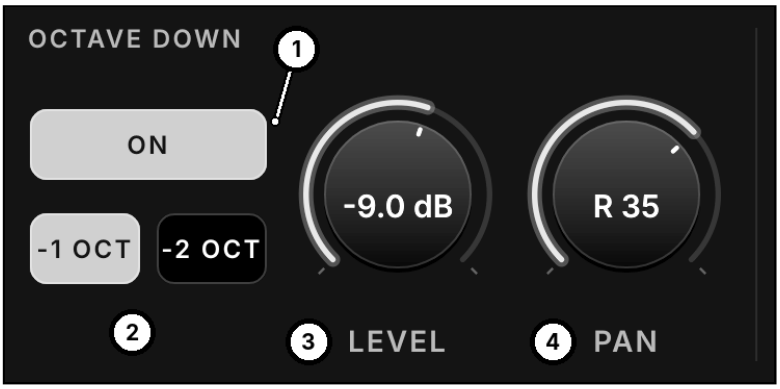


FIGURE 13 The OCTAVE DOWN section: 1 ON, 2 -1 OCT and -2 OCT, 3 LEVEL and 4 PAN.

Control	Range	Default	What it does
ON	On / Off	On	Switches the voice below on.
-1 OCT / -2 OCT	One or two octaves down	-1 OCT	How far below the singer the voice sings.
LEVEL	−inf to +6 dB	−6.0 dB	The voice's level; at 0 dB it is as loud as the dry voice.
PAN	L 100 to R 100	C	Where the voice sits between left and right.

The octave below works exactly like the octave above, mirrored. It is **on in *Init***, one octave down at −6 dB in the centre: the most-used octave sound, a low double under the voice.

-1 OCT and -2 OCT. One octave down adds weight and depth: a lower singer doubling the part, a baritone under a tenor. Two octaves down is a deep, dark shadow, almost a sub layer; it carries a long way, so keep it low (*Two Octaves Under* uses −14 dB) unless you want an effect (*Sub Rumble*, *Giant and Child*).

LEVEL. −12 to −10 dB is weight you feel more than hear, the classic thickener under a lead; −6 dB is a clear second voice; 0 dB with DRY down is a different, deeper singer (*Creative FX* ▸ *Giant*).

±1 or ±2 octaves

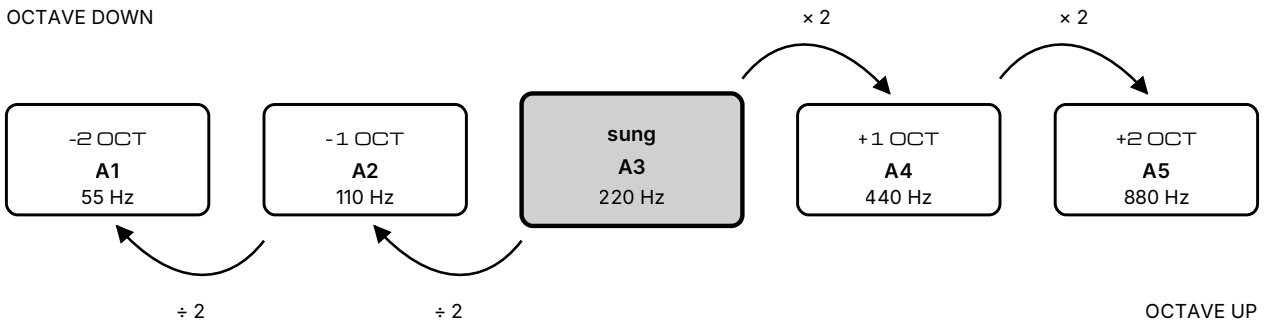


FIGURE 14 On a sung A3: each octave up doubles the frequency, each octave down halves it. The octaves always land on the same note name as the voice.

Whichever you choose, the octaves land on the **same note name** as the voice: an A becomes an A, higher or lower, so they never add a new harmony and stay in tune with any key and any chord the song plays.

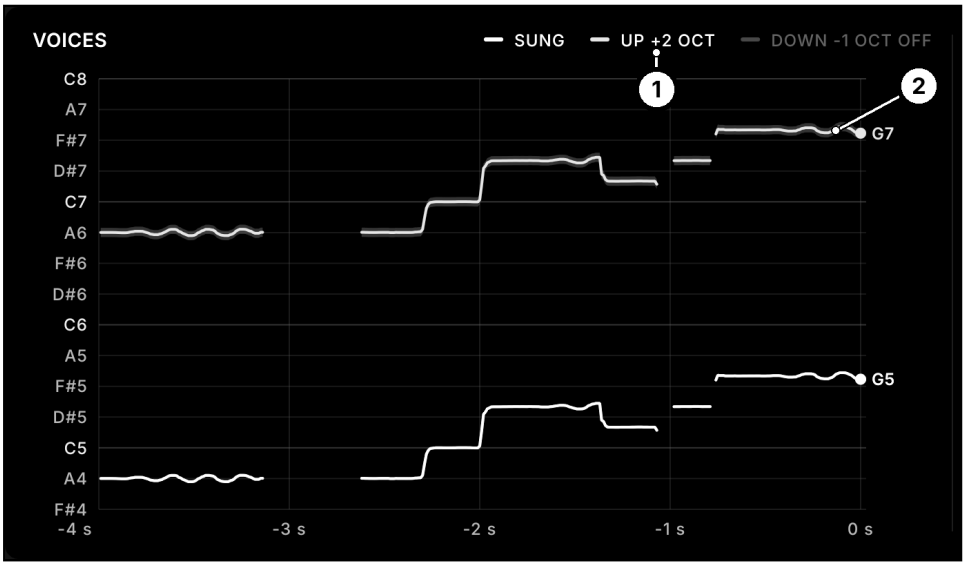


FIGURE 15 OCTAVE UP alone at +2 OCT, −10 dB, while the same phrase plays. 1 The legend reads UP +2 OCT, and 2 the upper line runs two octaves above the sung line: the scale stretches to fit it.

DRY



FIGURE 16 1 DRY: the level of the singer's own voice.

Control	Range	Default	What it does
DRY (LEVEL)	−inf to +6 dB	0.0 dB	The level of the voice itself.

DRY is the singer's own voice, delayed by the plugin's latency so it stays in time with the octaves. Leave it at 0 dB on a lead vocal. Pull it down a few dB when the octaves should share the space with it (*Backing Vocals* ▸ *Octave Pad* uses −3 dB), or all the way to -inf dB to hear only the octaves (*Creative FX* ▸ *Octaves Only*, *Giant*).

OUTPUT



FIGURE 17 1
OUTPUT: the level of everything that comes out.

Control	Range	Default	What it does
OUTPUT	−24 to +12 dB	0.0 dB	The level of the dry voice and both octaves together.

Adding octaves makes a track a little louder. **OUTPUT** brings it back: most factory presets trim it by 0.5 to 1.5 dB, so that, on a mono track, switching the plugin in and out changes the level by about a dB or less. Use it to match levels when you compare with bypass.

Stereo

PAN and the stereo field

PAN places each octave voice between left and right. On a **mono vocal track** whose output is stereo (the usual case in most DAWs: a mono track feeding a stereo mix), the dry voice sits in the centre and the octaves can spread around it.

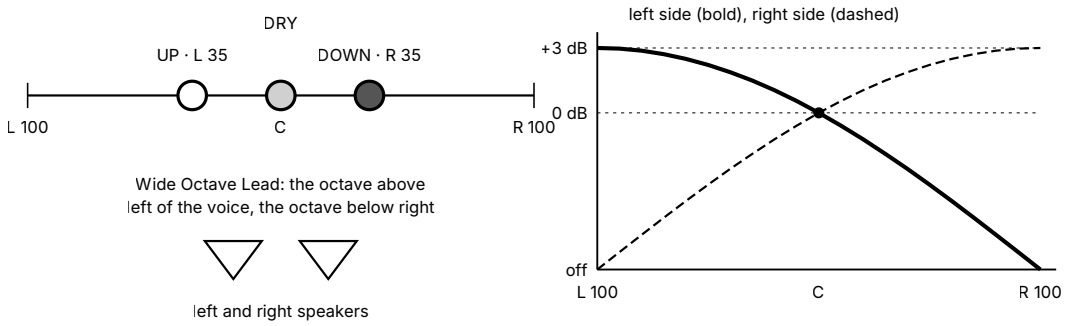


FIGURE 18 Left: *Wide Octave Lead* on a mono vocal. Right: the pan law. In the centre each side gets the voice at its LEVEL, the same as the dry voice; panned hard to one side it is 3 dB louder on that side and silent on the other. It sounds equally loud wherever it is.

The pan law is constant power, with **0 dB on each side in the centre**, the same place and level as a mono track's dry voice. So a centred octave at 0 dB is exactly as loud as the voice, and moving it never changes how loud it sounds: hard left, it is 3 dB louder on the left and silent on the right.

Typical settings:

- **Centred** (C): a thicker, bigger voice that stays one voice. Most lead-vocal presets with one octave.
- **A little apart** (L 20–L 35 and R 20–R 35, one octave each way): a wider lead that still sounds natural (*Wide Octave Lead*, *Chorus Lift*).
- **Wide** (L 60–L 100 and R 60–R 100): spreads a mono backing vocal across the stereo field (*Wide Octave Stack*, *Octave Pad*).

Mono and stereo tracks

Track	What happens
Mono in, stereo out (a mono vocal track in most DAWs)	The dry voice sits in the centre and PAN spreads the octaves around it. This is what the factory presets are made for.
Mono in, mono out	Everything is mono. PAN does nothing; the STEREO panel reads MONO OUT and shows every voice in the centre. To spread the octaves, give the track a stereo output (in Logic Pro, insert VEIRA Octaver as *Mono → Stereo*).
Stereo in, stereo out	The octaves are made from the sum of the two channels (a voice is one pitch); the dry signal keeps its stereo, and PAN places the octaves.

Latency

To lay down a piece of the voice in the right place, the octave voices need to hear a little ahead: up to one period of the lowest note they handle before the piece, and one period after it. So VEIRA Octaver **delays its output by 29.1 milliseconds** (1398 samples at 48 kHz, 1290 at 44.1 kHz; under 30 ms at every sample rate). The delay is always the same, whatever you sing and whatever you set.

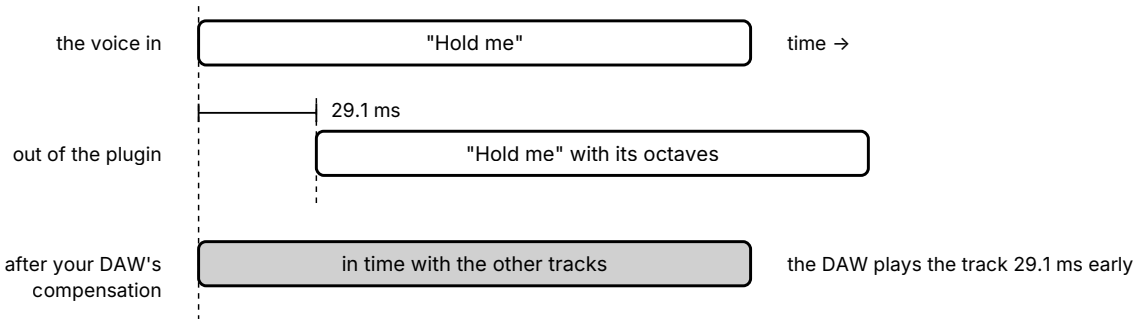


FIGURE 19 VEIRA Octaver tells your DAW its delay, and the DAW plays the track that much earlier, so the voice and its octaves land in time with the rest of the song.

- **Playback** is in time: VEIRA Octaver reports its latency, and every major DAW compensates for it automatically.
- **The dry voice is delayed to match**, so DRY and the octaves are always together. Even with both octaves off, the output is the input, delayed by the latency.
- **Bypass** is delayed to match too, so switching the plugin's bypass in your DAW never moves the track in time.
- **Recording through it** (monitoring a singer live through VEIRA Octaver) adds 29.1 ms to what the singer hears, which most singers notice. Record the voice dry and add the octaves afterwards, or monitor without the plugin.

Displays

The VOICES display

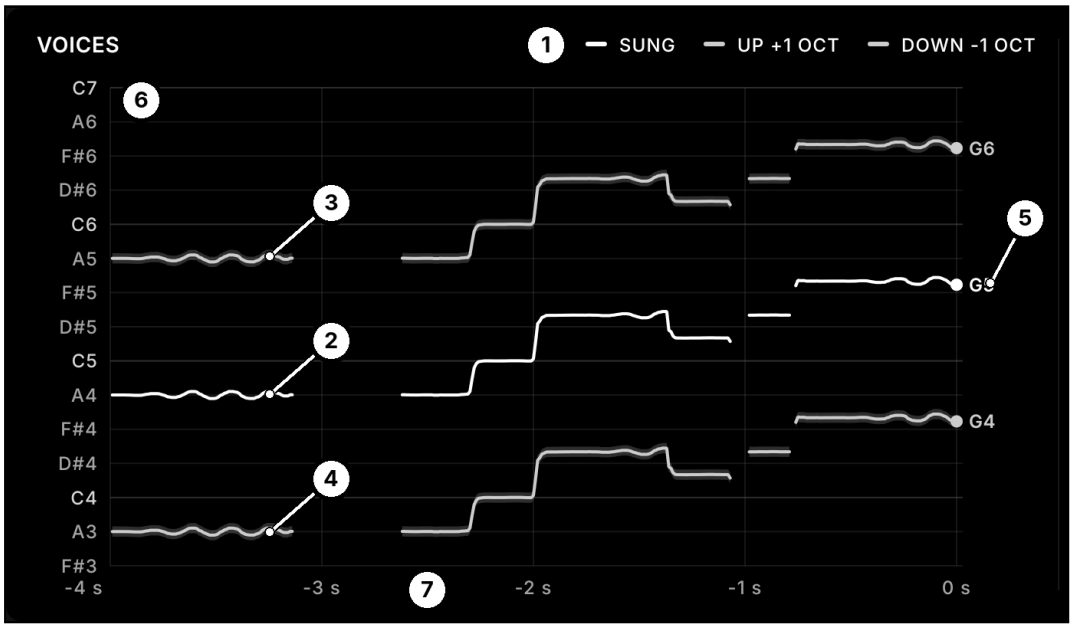


FIGURE 20 The [VOICES] display: 1 the legend, 2 the pitch sung ([SUNG]), 3 the octave above ([UP]), 4 the octave below ([DOWN]), 5 the notes the lines end on, now, 6 the note-name scale and 7 the time scale, the last four seconds.

The [VOICES] display draws the **pitch sung over the last four seconds**, moving from right to left: the newest moment is at the right edge ([0 s]), four seconds ago at the left ([-4 s]). Up the side is a scale of **note names**.

- 2 **The sung pitch** (white on screen; in print, the lightest line, with nothing shaded around it) is the note the singer is singing, moment by moment: you see the vibrato, the slides between notes and the scoops into them.
- 3 **The octave above** (blue on screen) is drawn one or two octaves **above** the sung line, and 4 **the octave below** (green on screen) one or two octaves **under** it. In print, tell them apart by their place: above or below the sung line. Both have a soft shaded band around them.
- 5 **While the voice sounds**, a dot at the right end of each line and the note's name beside it ([G5], [G6], [G4]) tell you the notes being sung and made right now.
- 1 **The legend** names the lines with their settings, for example [UP +1 OCT] and [DOWN -1 OCT]. A voice that is off, or whose [LEVEL] is at [-inf], isn't drawn, and the legend reads [OFF].
- **Gaps** in the lines are moments without a pitch: consonants, breaths and pauses. In those moments the octave voices pass the sound quietly and unshifted (see *What it needs from the sound*).

6 **The scale follows what is sung.** It grows at once to fit a higher or lower note, and shrinks back two seconds after the room is no longer needed. Note names are written every 1, 2, 3, 4, 6 or 12 semitones, whatever fits, with the lines at each C a little stronger.

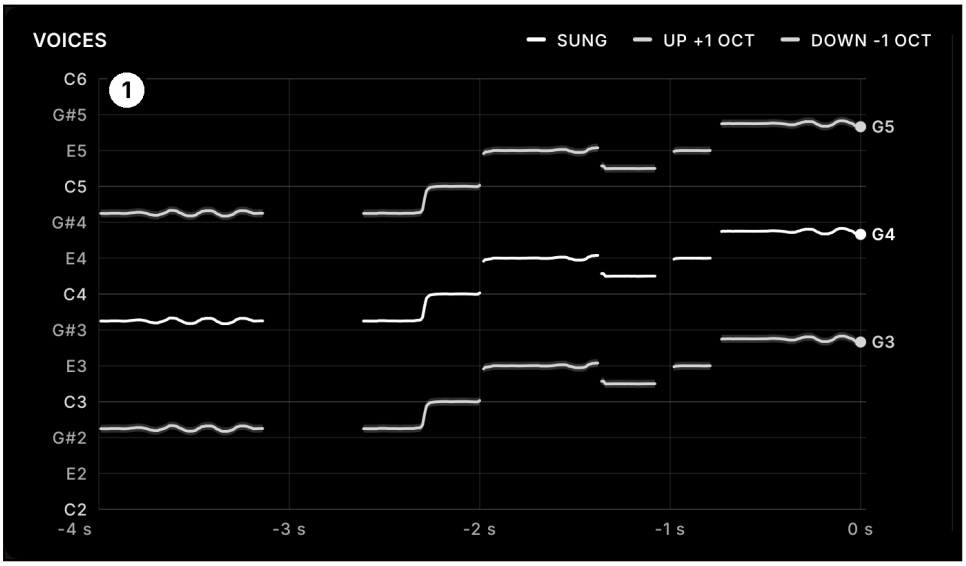


FIGURE 21 The same phrase sung by a man, an octave lower, with *Wide Octave Lead*. 1 The scale has moved down to fit: the octave below now runs around A2 (110 Hz) to G3, well inside the detector's range, and the sung line sits an octave lower than the woman's.

Hover over the display for a short explanation. **What to look for:**

- **A steady sung line with octave lines that follow it** means everything is working.
- **Many gaps on sung vowels** mean the plugin isn't hearing a clear single pitch: reverb, delay or chorus before it, several voices on one track, a lot of noise or bleed, or notes below its range. See *Troubleshooting*.
- **A line that jumps an octave for a moment** can happen on a very breathy or creaky note; the display smooths over single misreadings, and so does the octave voice.

The STEREO panel

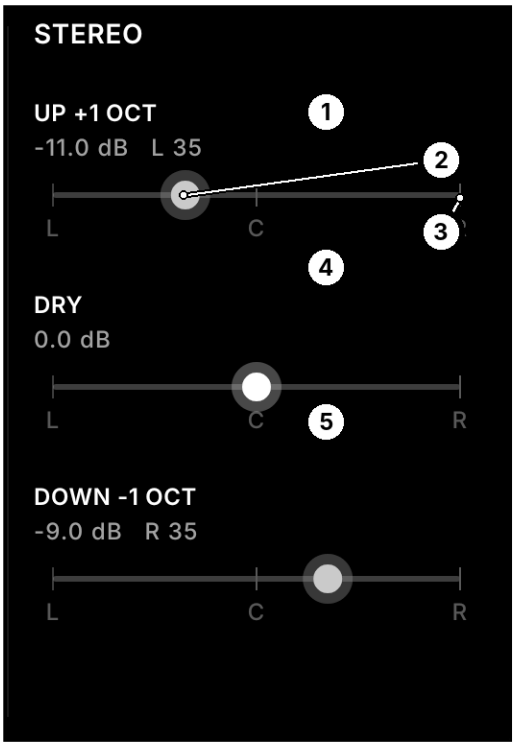


FIGURE 22 The STEREO panel: 1 the octave above, with its level and pan, 2 its position, 3 the left–centre–right scale, 4 the dry voice and 5 the octave below.

The STEREO panel shows the three voices as a top-down picture of the stereo field: UP at the top, DRY in the middle, DOWN at the bottom.

- **Each row** names the voice with its interval (UP +1 OCT), then its level and, for the octaves, its pan (-11.0 dB L 35).
- **The dot** sits where the voice is, on a scale from L through C to R. A voice you hear has a solid dot with a soft halo; a voice that is off, or at -inf, has an outlined ring and reads OFF (or -inf dB) in faint lettering.
- **On a mono output** the panel reads MONO OUT at the top right, the octaves' pan values are left out, and every dot sits in the centre, because there is nowhere else to go.

Meter bridge (IN | OUT)

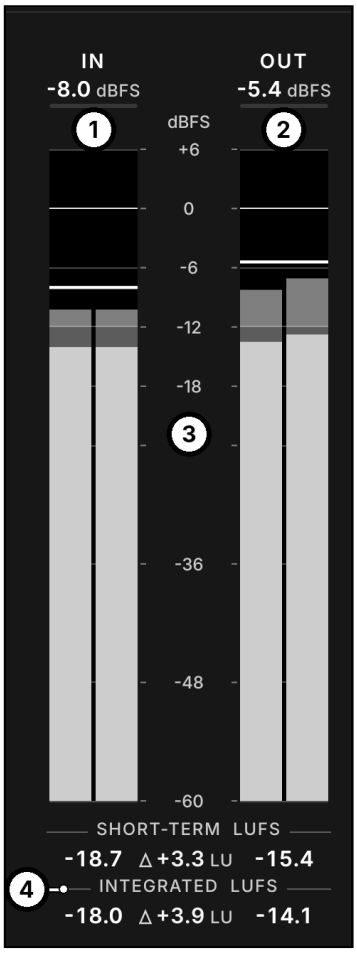


FIGURE 23 The meter bridge: 1 input, 2 output, 3 the shared dBFS scale, 4 short-term and integrated loudness with the OUT − IN difference.

VEIRA Octaver uses the standard VEIRA meter bridge, with an input and an output column and no gain-reduction column. On a mono track into stereo, IN shows the mono voice in both of its bars.

On a mono track the Δ reads about 3 LU high. Loudness is measured over all the channels: IN measures the voice once, as one channel, while OUT measures it on two speakers, left and right. So on a mono track with a stereo output, even with both octaves off, Δ reads about **+3 LU**. Take 3 off to see what the octaves add: in the figure, *Wide Octave Lead* reads +3.3 LU short-term, so the octaves add about 0.3 LU. On a stereo track, or a mono track with a mono output, Δ reads directly.

Reading the IN and OUT meters

The meter bridge measures what goes into VEIRA Octaver 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.

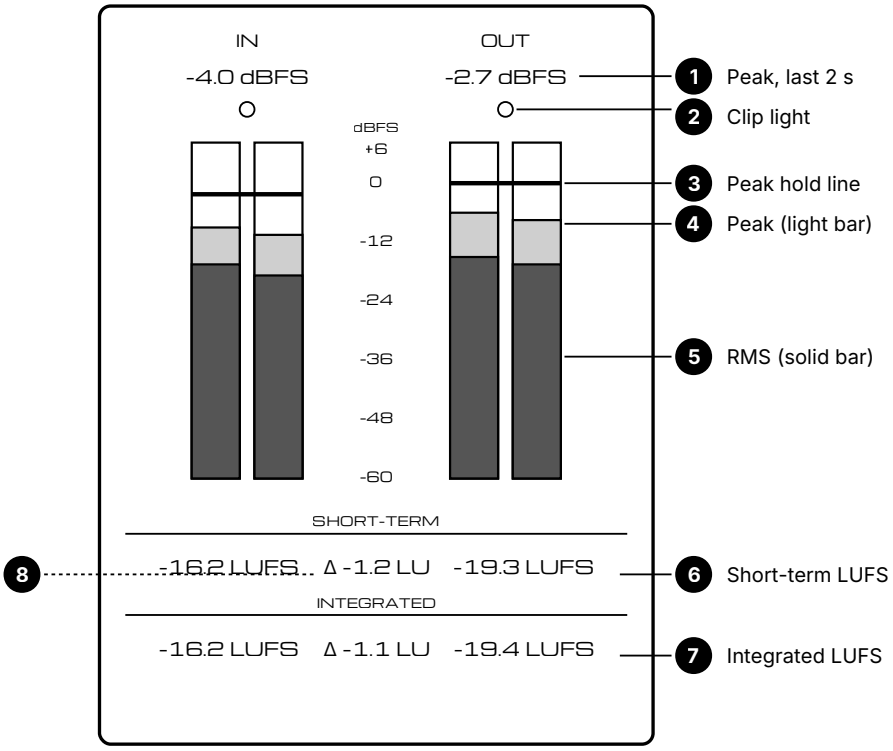


FIGURE 24 The meter bridge, left and right channel bars for input and output, with loudness below.

- 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 Octaver 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.

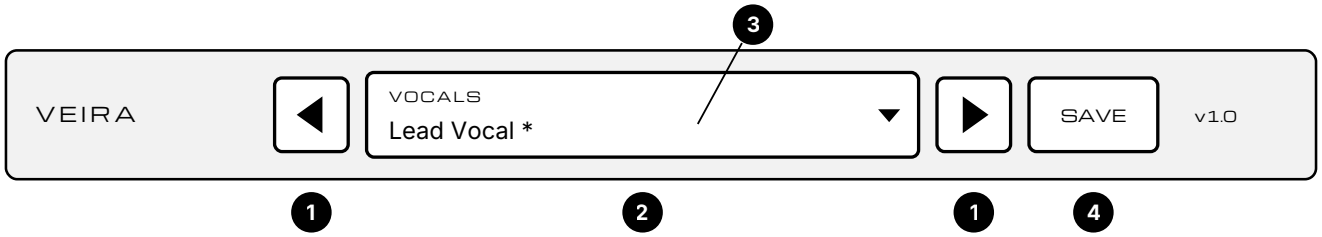
Clicks: click a level meter to reset its hold and clip light. Click the loudness readouts to restart the integrated measurement, for example at the start of a song.

Presets

VEIRA Octaver comes with **37 factory presets** in 8 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 25 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 Octaver 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 Octaver/<Folder>/
Windows	%APPDATA%\VEIRA\VEIRA Octaver\Presets\<Folder>\

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

Presets in your DAW

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

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

The factory folders

Folder	Presets
Default	Init
Vocals	Low Octave Double, Warm Under, Octave Shimmer, Wide Octave Lead, Chorus Lift, Two Octaves Under
Backing Vocals	Octave Pad, Low Choir, High Stack, Wide Octave Stack, Gang Octaves
Rap & Spoken	Rap Low Double, Dark Double, Ad-Lib Octaves, Hype Doubles, Radio Weight
Guitar	Octave Up Lead, Twelve-String Sparkle, Baritone Under, Wide Octave Lead, Two Above Glass
Bass	Octave Up Bass, Bright Top, Sub Under, Melodic Double
Synths & Keys	Lead Octave Up, Sub Octave, Big Mono Lead, Two Octave Sub, Bell Octaves
Creative FX	Octaves Only, Giant, Tiny Voice, Giant and Child, Ghost Choir, Sub Rumble

Every preset makes at least one octave, and every one was made for a **mono source on a mono track into stereo**: one singer, one rapper, one single-note guitar, bass or synth line.

> **Levels matter very little.** The octave voices follow the dry voice's loudness, so a preset sounds the same on a quiet take as on a loud one. On their folder's material, the presets change the loudness by about as much as their levels add up to (within 1 dB), most by under 1 dB, and keep peaks at −3 dBFS or under from a track peaking at −8 dBFS. The *Bass* presets need notes from D2 up: lower notes pass quietly, unshifted. The *Guitar* and *Synths & Keys* presets want one note at a time: chords pass quietly, without octaves.

Recipes

Step-by-step starting points. Put VEIRA Octaver on the vocal **before** reverb, delay, chorus or doubling effects, so it hears the dry voice. Compression and EQ before it are fine.

A low double under a lead vocal

1. On the lead vocal, load **Vocals ▸ Low Octave Double** (the octave below at −10 dB, centred).
2. Play the chorus. Raise the [OCTAVE DOWN] [LEVEL] until you hear the octave, then pull it back 2–3 dB: it should be felt more than heard.
3. For a fuller, more obvious double, try **Warm Under** (−6 dB). For a darker, cinematic lead, **Two Octaves Under**.
4. Bypass to compare, with [OUTPUT] set so the level barely changes.

A wider lead from one take

1. Load **Vocals ▸ Wide Octave Lead**: the octave above at −11 dB on the left, the octave below at −9 dB on the right.
2. Check the [STEREO] panel: the voice in the centre, the octaves either side. If it reads [MONO OUT], make the track's output stereo first.
3. Widen with both [PAN] knobs, or narrow them for a more natural sound. Keep them roughly mirrored so the lead stays centred.

Lift the last chorus

1. Load **Vocals ▸ Chorus Lift** (both octaves at −7 dB, close around the lead).
2. Automate the two [ON] buttons: off in the verses, on for the last chorus. They glide in over 20 ms, so they never click, even on a held note.
3. For a softer lift, use **Octave Shimmer** (the octave above only, at −12 dB).

A backing-vocal pad from one voice

1. On a single backing vocal, load **Backing Vocals ▸ Octave Pad** (an octave above at L 60, an octave below at R 60, [DRY] at −3 dB).
2. For an even wider spread, use **Wide Octave Stack** (L 80 and R 80). For a low section, **Low Choir**.
3. Add your reverb after VEIRA Octaver: the octaves are then in the same space as the voice.

Weight on a rap vocal or a spoken voice

1. Load **Rap & Spoken ▸ Rap Low Double** (the octave below at −9 dB). The consonants stay with the dry voice, so every word stays clear.
2. For a darker, menacing double, **Dark Double**. For hooks and ad-libs, **Ad-Lib Octaves** or **Hype Doubles**.
3. For a narrator or radio host, **Radio Weight**: the octave below 12 dB under the voice, richer without sounding processed.

An octave guitar lead or a sub-octave synth

1. On a single-note guitar solo, load **Guitar ▸ Octave Up Lead**; on a riff, **Baritone Under**. Play single notes: chords pass quietly, without octaves.
2. On a mono synth lead, **Synths & Keys ▸ Lead Octave Up**, or **Sub Octave** for a sub-oscillator underneath.
3. On a bass played from D2 up, **Bass ▸ Octave Up Bass** helps it cut through on small speakers. Notes below D2 get no octave.

Creative voices

1. **Creative FX ▸ Giant**: only the octave below, at the voice's level, with DRY off: the singer as a giant, with the same tone and words.
2. **Tiny Voice**: the octave above in front, the voice far behind. The formants stay, so it is never a chipmunk.
3. **Octaves Only**, **Ghost Choir** and **Giant and Child** take the voice itself back or out for eerie choirs. Bring DRY up to bring the singer back.

Specifications

Type	Vocal octaver: two octave voices that keep the singer’s formants
Source	One voice or monophonic instrument; consonants, breaths, noise and chords pass through the octave voices unshifted, about 12 dB down
Pitch range	72 Hz to 1000 Hz (just under D2 to B5)
Channels	Mono to mono, mono to stereo, stereo to stereo; the octaves are made from the sum of the input channels
Latency	29.1 ms (1398 samples at 48 kHz, 1290 at 44.1 kHz), constant, reported to the host; the dry voice and the bypass are delayed to match
Pitch accuracy	Within a cent on held notes; follows vibrato and slides
Formants	Kept: within 10 % of the singer’s own on sung vowels
ON (OCTAVE UP / OCTAVE DOWN)	On / Off (default Off / On)
Octaves	+1 OCT or +2 OCT; -1 OCT or -2 OCT (default ±1)
LEVEL (each voice)	−inf to +6 dB (default −6.0 dB); 0 dB is the dry voice’s loudness
PAN (each voice)	L 100 to R 100 (default C); constant power, 0 dB per side in the centre
DRY	−inf to +6 dB (default 0.0 dB)
OUTPUT	−24 to +12 dB (default 0.0 dB)
Smoothing	Every switch and level glides over 20 ms
Displays	VOICES: the pitch sung over the last 4 s with the octave voices, on a scale of note names; STEREO: each voice’s place, level and pan
Metering	IN and OUT meters (sample peak, RMS); short-term and integrated loudness per ITU-R BS.1770-4 / EBU R 128
Presets	37 factory presets in 8 folders, plus your own
Window	1240 × 760 points; resizable from 75 % to 200 %, saved with the session
Formats	VST3, Audio Units, standalone; AAX once signed
Plugin ID	Manufacturer Veir, plugin Voct

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 Octaver 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 no octave.

- Check that ON is lit in the section you want, and that its LEVEL isn't at -inf dB. The STEREO panel shows every voice that sounds as a solid dot.
- Watch the VOICES display while the voice plays. If there is no sung line, the plugin isn't hearing a clear pitch: see the next questions.

The octave comes and goes, or there are many gaps on the display.

- VEIRA Octaver needs **one voice, dry**. Put it before reverb, delay, chorus and doubling effects, and use it on a single vocal, not on a group of voices or a stem with music in it.
- Consonants, breaths and whispers have no pitch, and pass quietly without an octave: that's on purpose.
- Strong noise or bleed (a loud headphone mix in the vocal mic, a noisy room) can hide the pitch. Clean it up first (VEIRA Clean Up does that), then octave.

Chords get no octave. That is how an octaver works: it needs one note at a time. Chords pass through the octave voices quietly and unshifted, instead of being garbled. For a guitar, play single notes or split the part.

My bass's low notes get no octave. The pitch detector covers 72 Hz to 1000 Hz. Notes below about D2 (73 Hz), such as a bass guitar's open E and A strings and the frets just above them, are under its range and pass quietly, unshifted. The *Bass* presets are for lines played from D2 up.

The octave above sounds breathy on high notes. On very high sung notes, the octave above has few harmonics left to carry the singer's tone, and it sounds slightly breathier than the voice. It can also come out a little quieter there. Lower its LEVEL and let it blend, or switch from +2 OCT to +1 OCT for those notes.

PAN does nothing. The track's output is mono: the STEREO panel reads MONO OUT. Make the output stereo (in Logic Pro, insert the plugin as *Mono → Stereo*). See *Stereo ▸ Mono and stereo tracks*.

My track is late, or the singer hears an echo. VEIRA Octaver has 29.1 ms of latency, which your DAW compensates on playback. If a track is late, check that your DAW's plugin delay compensation is on. When recording, monitor the singer without the plugin, or with your DAW's low-latency monitoring mode, and add the octaves afterwards.

The output meter's loudness reads 3 LU higher than the input with no octaves on. That's the mono track into stereo: OUT is measured on two speakers and IN on one. See *Displays ▸ Meter bridge*.

Can I use it on an aux send? Yes, with DRY at -inf dB, so only the octaves come back, as long as you send it **one voice**. The octaves are made from everything that reaches the plugin, and several voices together have no single pitch.

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

Do my sessions keep my settings? Yes: every control, the selected preset and the window size.

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



VEIRA Octaver · User Manual · Version 0.1.0

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

© 2026 VEIRA. Proudly made in the Dominican Republic. VST is a trademark of Steinberg Media Technologies GmbH. Audio Units, Logic Pro and macOS are trademarks of Apple Inc. Pro Tools and AAX are trademarks of Avid Technology, Inc. All other trademarks belong to their owners and are used only to describe compatibility.