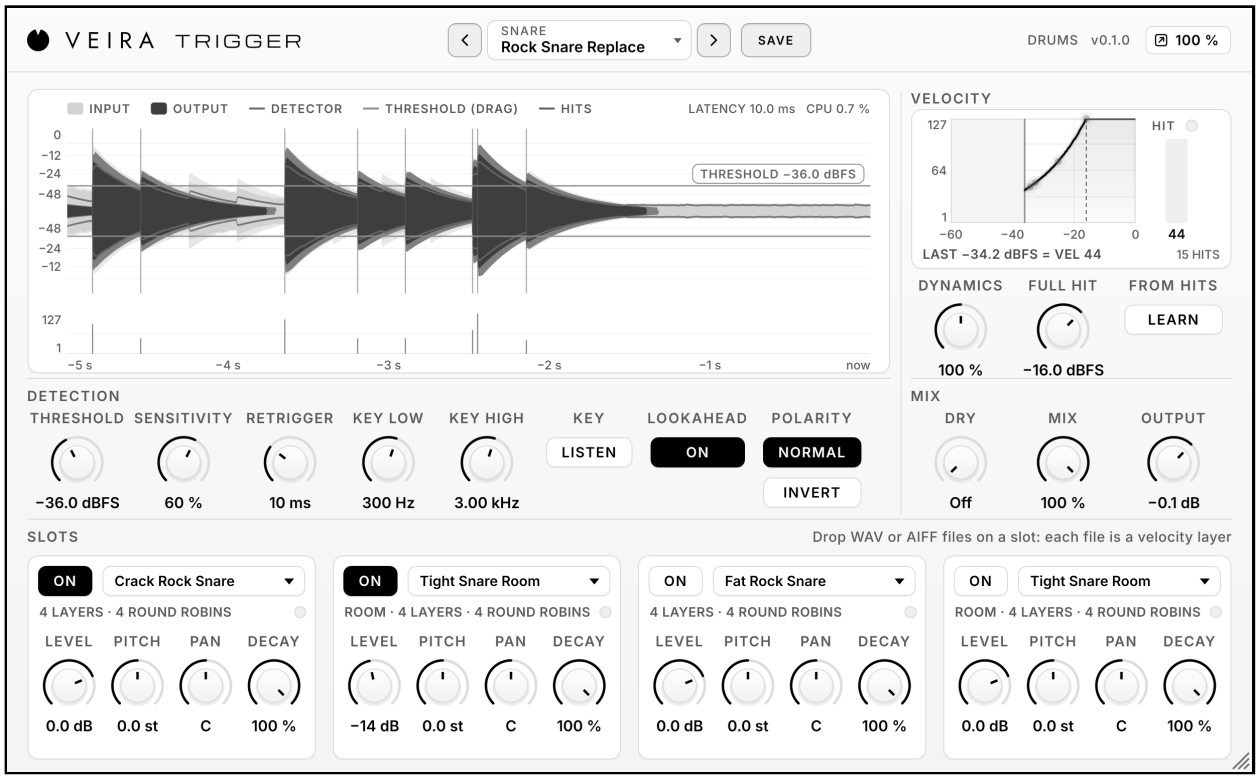
VEIRA

DRUM TRIGGER

VEIRA Trigger

User Manual

A drum trigger for recorded kicks, snares and toms: it finds every hit, measures how hard it was struck, and plays a clean sample on it in phase with the drum, blended under the track or replacing it.



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Welcome

Thank you for choosing **VEIRA Trigger**. Put it on a recorded kick, snare or tom track and it listens for the drum. Each time the drummer strikes, it measures the hit's strength and plays a sample at that strength, lined up with the drum to a fraction of a sample. You can lay the sample under the original to make the drum fuller and more even, or remove the original and keep only the sample.

The samples come from a built-in library of 33 sounds made for it (kicks, snares, rack and floor toms, claps and rooms, in rock, pop, metal, urban and Latin styles), or from your own WAV and AIFF files.

What makes it different

- **It hears the drum, not the bleed.** Key filters, a threshold and a rise test keep the rest of the kit in the microphone from triggering, while ghost notes and both strokes of a flam still play.
- **In phase.** Each sample starts on the hit's onset and is then slid, by half a millisecond at most, so that its low end lines up with the drum's. Blends sound fuller rather than hollow.
- **It follows the drummer.** A soft hit plays a soft sample from a softer velocity layer; an accent plays the hardest one. DYNAMICS sets how closely.
- **Four slots.** Up to four samples on every hit, each with its own level, pitch, pan and decay: a snare and its room, a kick and a sub.
- **A library made for the job.** Every sound has four velocity layers of four round robins, so repeated hits never sound copied.
- **Exact and repeatable.** The same track gives the same result, bit for bit, live or bounced, at any buffer size.
- **31 factory presets** in 5 folders, each measured on a recorded-drum track and levelled to that track's loudness.

What it doesn't do. It doesn't send the hits out as MIDI. And it finds hits by their level, so the quietest ghost notes in very fast playing, and very fast rolls on a long-ringing drum, can be missed. *What VEIRA Trigger does not do* explains both.

How this manual is organised. *Getting started* installs and activates the plugin. *The panel at a glance* names every part. *How drum triggering works* explains the idea and the path inside. *The display*, *Detection*, *Velocity*, *Mix* and *The slots* cover each control, and *Your own samples* how to use your files. *Latency and LOOKAHEAD* and *What VEIRA Trigger does not do* follow, then *Presets*, *Recipes*, *Specifications* and *Troubleshooting*.

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:

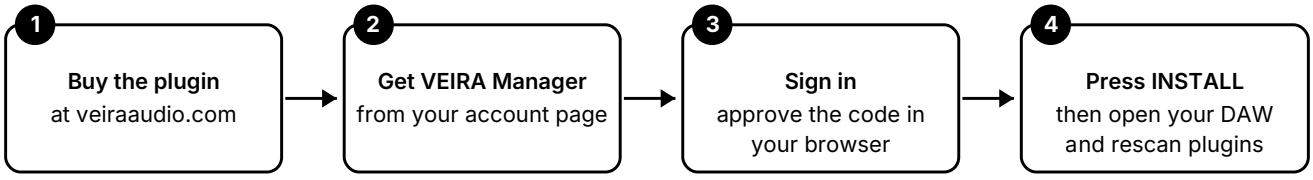


FIGURE 1 From purchase to first sound in four steps.

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

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 Trigger 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.

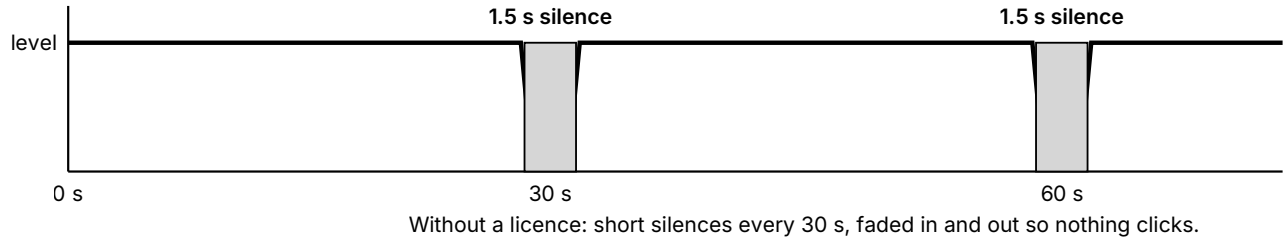


FIGURE 2 What an unlicensed copy does. With a valid licence the audio is never touched.

- **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 Trigger. 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 Trigger 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

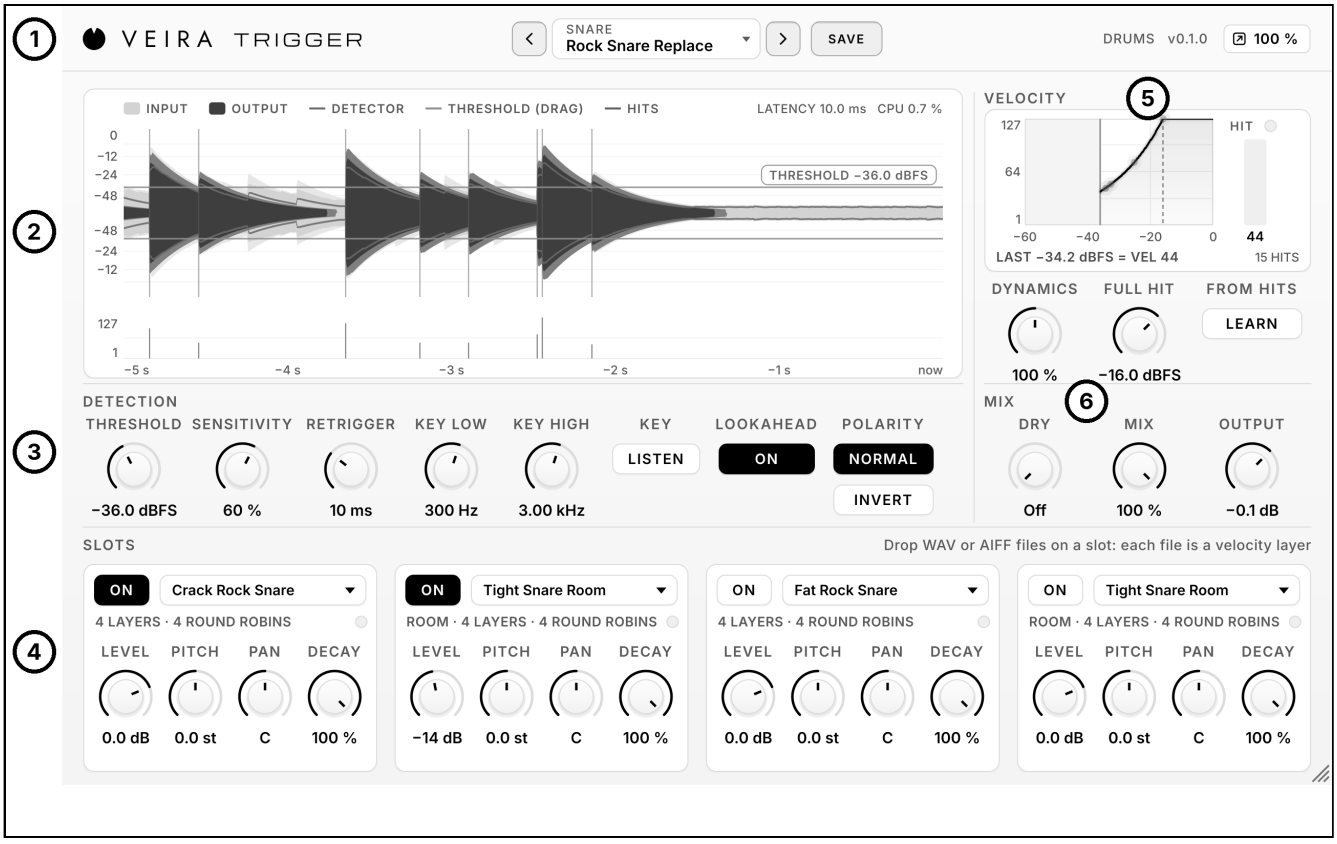


FIGURE 3 VEIRA Trigger with the preset *Rock Snare Replace* on a snare track: 1 the header, 2 the display, 3 DETECTION, 4 SLOTS, 5 VELOCITY and 6 MIX.

	Part	What it does
1	Header	The VEIRA logo and the name, the preset browser and SAVE, the word DRUMS with the version, and the size button.
2	The display	The last five seconds of the track and of the output, the detector, every hit found with its velocity, and the THRESHOLD line you can drag. The latency and CPU load at the top right.
3	DETECTION	What counts as a hit: THRESHOLD, SENSITIVITY, RETRIGGER, the key filters KEY LOW and KEY HIGH, LISTEN, LOOKAHEAD and POLARITY.
4	SLOTS	Four samples that play on every hit, each with ON, its sound, LEVEL, PITCH, PAN and DECAY. Drop your own files here.
5	VELOCITY	How hard each hit plays: the curve, the latest hits, the hit meter, DYNAMICS, FULL HIT and LEARN.
6	MIX	DRY (the track), MIX (the samples) and OUTPUT.

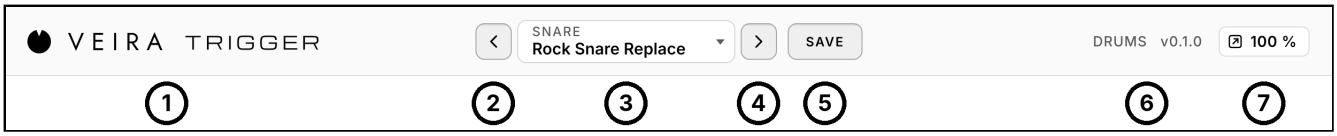


FIGURE 4 The header: 1 the VEIRA logo and the name, 2 and 4 the previous and next preset, 3 the preset's folder and name (an asterisk appears once you change something), 5 SAVE, 6 DRUMS and the version, and 7 the size button, here at 100 %.

Using the controls

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

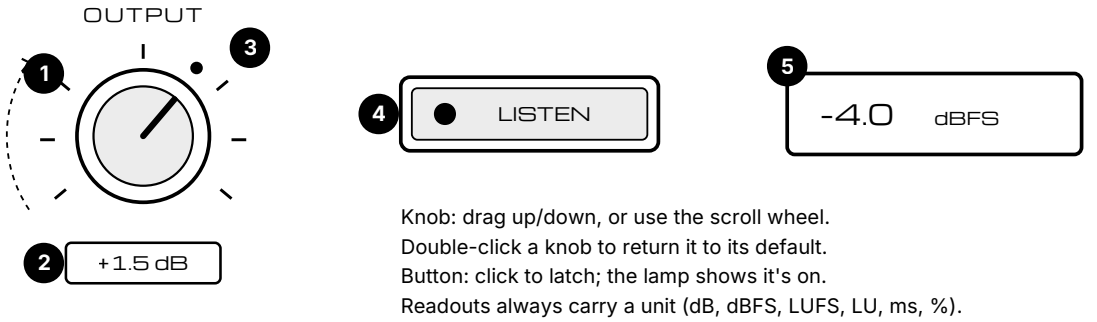


FIGURE 5 The parts you'll find on every VEIRA panel (the labels are examples).

- 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 Trigger's panel the parts look a little different from the drawing above. The face is clean and light: white panels on a pale grey page, dark type, no gradients or glass.

- **Knobs** are white with a dark arc, and the value is printed under each one (-36.0 dBFS, 60 %). Drag up or down or use the wheel; double-click for the default; right-click (Control-click on a Mac) to type a value.

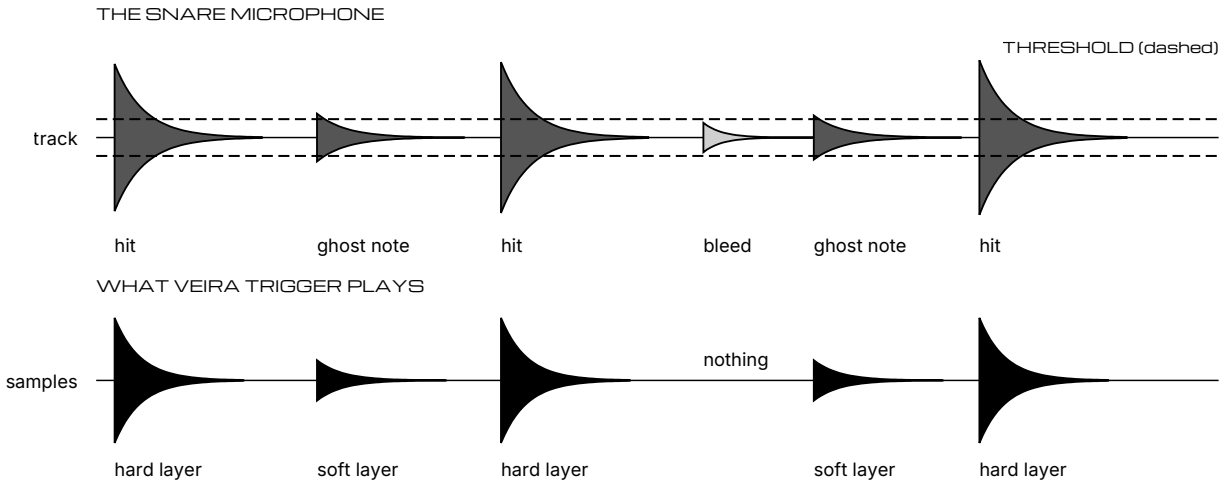
- **A key that is on is filled dark** with white type: ON for LOOKAHEAD, NORMAL or INVERT for POLARITY, a slot's ON. In print it is the darker key.
- **Colours on the display**: the input is light grey and the output charcoal, the detector teal, the threshold amber and the hits blue. In print, the input is the paler shape behind and the output the darker shape in front; the detector is the thin line that follows the drum's outline; the threshold is the pair of horizontal lines with the THRESHOLD label; the hits are the thin vertical lines, each with a tick in the lane below.
- **Tooltips** explain every control: hover over it.
- **The window size.** VEIRA Trigger opens at 100 %, 1240 × 760 points. The size button 7 offers 75, 90, 100, 125, 150 and 200 % and *Fit to screen* (sizes too large for your display are left out). You can also drag the grip in the bottom-right corner (double-click it for 100 %), or press Cmd + = and Cmd + - (Ctrl on Windows) to step through the sizes and Cmd + 0 for 100 %. The size is saved with the session, and new instances open at the size you chose last.

VEIRA Trigger is an audio effect: insert it on the drum's own track, mono or stereo.

How drum triggering works

The idea

A close microphone on a drum hears that drum loudest, but it also hears the rest of the kit: the kick in the snare microphone, the hi-hat over the snare, the cymbals in the toms. A drum trigger listens to that track, decides where each real hit is, and plays a sample there. Engineers use it to make a drum fuller or more even than it was recorded, to give a kit a consistent sound across a song, or to swap a drum that sounds wrong for one that sounds right while keeping the drummer's timing and dynamics.



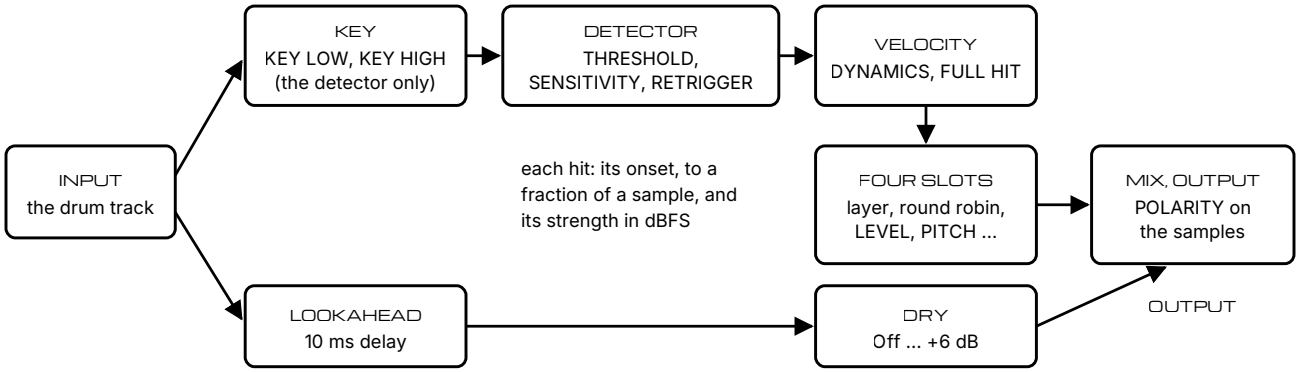
Every hit that crosses THRESHOLD and rises clearly over what was already sounding plays a sample, as hard as it was played: ghost notes softly. The kick, hi-hat or cymbals bleeding into the microphone stay under it and play nothing.

FIGURE 6 A trigger plays a sample on every real hit, at its strength, and nothing on the bleed.

Three things make a trigger good or bad:

- **Which hits it finds.** It must find every hit, including ghost notes and both strokes of a flam, and never mistake the bleed or the drum's own ring for a hit.
- **Where it puts the sample.** If the sample starts even a fraction of a millisecond away from the drum, the two partly cancel when they are blended, and the drum sounds thinner instead of fuller.
- **How hard it plays it.** A sample at the same level on every hit sounds programmed. Following the drummer's dynamics keeps the performance.

What happens inside VEIRA Trigger



The key filters shape only what the detector hears; the samples and the dry track never pass through them. With LOOKAHEAD on, the track is delayed 10 ms so each sample can start exactly in phase with the hit it belongs to.

FIGURE 7 From the drum track to the output.

1. **The key.** The detector listens to the track through KEY LOW and KEY HIGH, two filters that remove what you don't want it to hear. On a stereo track it listens to the louder channel. The filters touch only the detector, never the sound.
2. **The detector** follows the key's level: its highest point over the last 15 ms, which can't sag between the slow cycles of a low kick. A hit is found when that level is at or over THRESHOLD **and** has just risen by SENSITIVITY's amount within 5 ms, at least RETRIGGER after the last hit. The detector re-arms only once the rise has settled, so a drum's own ring or a second bump in its decay never triggers it twice.
3. **The onset** is the moment the hit begins, found to a fraction of a sample on the key and checked against the track itself. The key filters' own delay is measured and taken off, so they never make a sample late.
4. **The strength** is the key's peak over the 4 ms from the onset, in dBFS. The velocity curve (DYNAMICS, FULL HIT) turns it into a velocity from 1 to 127 and a level.
5. **The slots** each choose a velocity layer for that velocity, then the next round robin in it, and play it on the onset, slid by up to 0.5 ms so its low end lines up with the drum's.
6. **The mix**: the track at DRY, the samples at MIX, then OUTPUT.

When nothing is mixed in (MIX at 0 %, DRY and OUTPUT at 0 dB), the output is the input, delayed by the latency, bit for bit.

The display

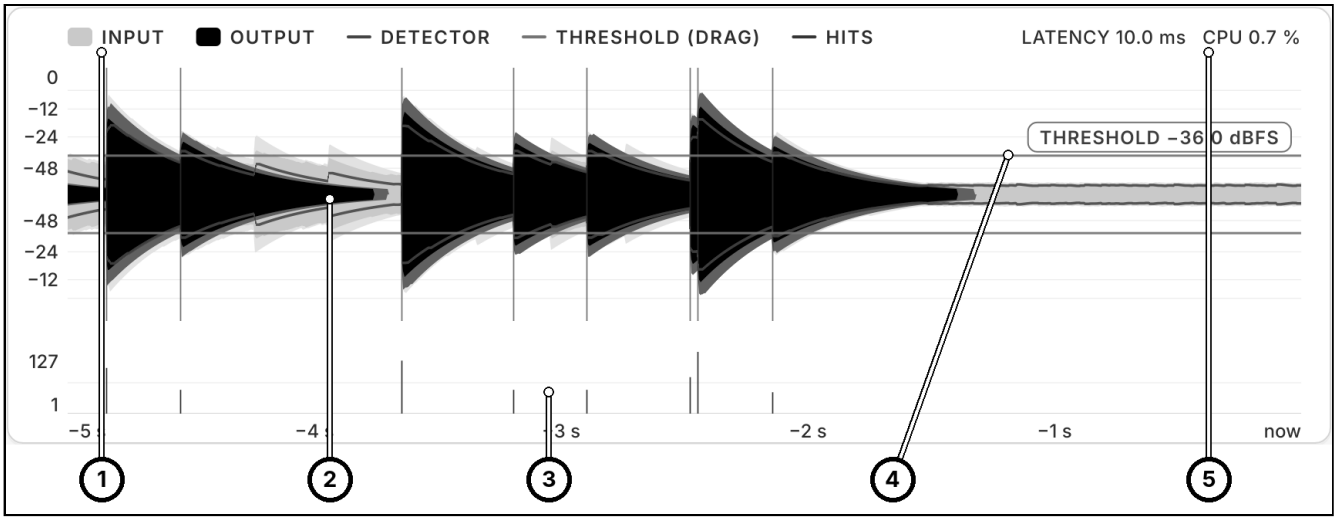


FIGURE 8 The display: 1 the legend; 2 the input (paler, behind) and the output (darker, in front) with the detector line and a vertical line at every hit; 3 the lane with each hit's velocity; 4 the THRESHOLD line and its value; 5 the latency and the CPU load.

The display scrolls through the last five seconds, newest at the right (now).

- **The waveforms** are drawn up and down from the middle on a dBFS scale, so quiet ghost notes and bleed are as easy to see as the loudest hits. The input is the track as you hear it; the output is what VEIRA Trigger sends on. With DRY off you see the samples alone in the output, and the bleed between hits gone.
- **The detector** is the line that follows the key's level. Watching it against the threshold is the quickest way to see why a hit did or didn't trigger.
- **The hits** are the vertical lines, one per hit found, and the lane underneath shows each one's velocity as a tick, from 1 at the bottom to 127 at the top.
- **The threshold** is the pair of horizontal lines (amber on screen) with its value. **Drag it** to set THRESHOLD, or click where it should be; double-click for −24 dBFS. Set it above the bleed and below your quietest wanted hit.
- LATENCY shows the plugin's delay (10.0 ms with LOOKAHEAD on, 0.0 ms with it off), and CPU the share of one processor core it uses.

> **Tip:** play the busiest part of the song with the display in view before you touch anything. The bleed between hits tells you where THRESHOLD must sit; the ghost notes tell you how low it may go.

Detection

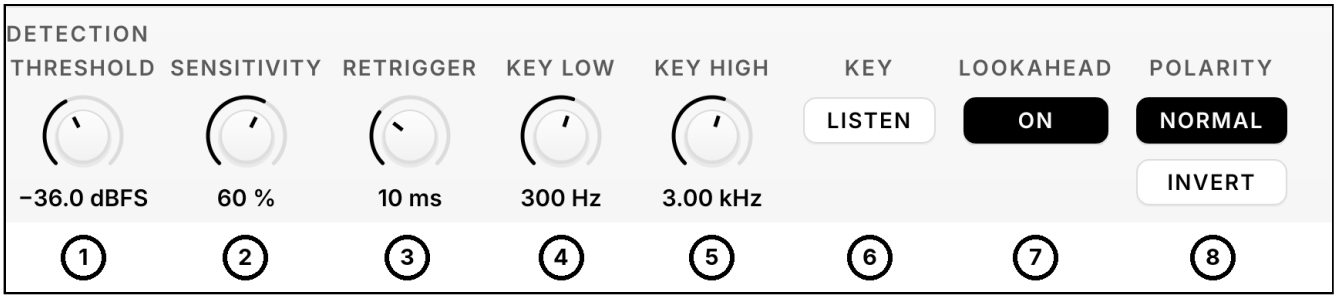


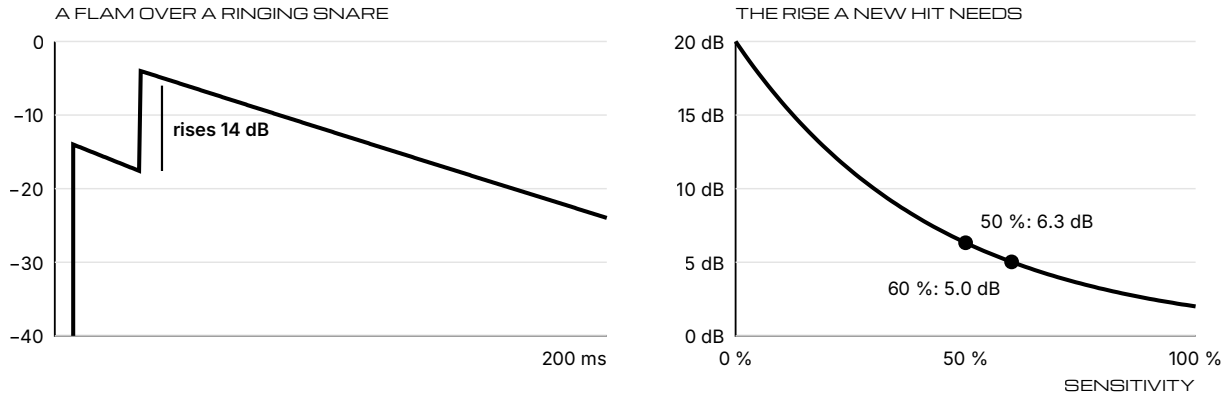
FIGURE 9 DETECTION: 1 THRESHOLD, 2 SENSITIVITY, 3 RETRIGGER, 4 KEY LOW, 5 KEY HIGH, 6 LISTEN, 7 LOOKAHEAD and 8 POLARITY.

Control	Range	Default	What it does
THRESHOLD	−60 to 0 dBFS	−24.0 dBFS	How loud a hit must be (in the key) to count.
SENSITIVITY	0 to 100 %	50 %	How far a new hit must rise over what is already sounding.
RETRIGGER	5 to 250 ms	10 ms	The shortest time between two hits.
KEY LOW	Off (20 Hz) to 2 kHz	Off	A 24 dB/oct high-pass on what the detector hears.
KEY HIGH	100 Hz to Open (20 kHz)	Open	A 24 dB/oct low-pass on what the detector hears.
LISTEN	off, on	off	Plays the key instead of the output.
LOOKAHEAD	ON, OFF	ON	10 ms of latency for exact placement, or none.
POLARITY	NORMAL, INVERT	NORMAL	Turns the samples upside down.

THRESHOLD

The level a hit has to reach, measured on the key (after the key filters). Set it between the loudest bleed and your quietest wanted hit: on the display, the bleed should stay under the line and every hit you want should cross it. The factory presets assume close microphones whose loudest hits peak around −6 dBFS: kick presets use −22 dBFS, snare presets −36 dBFS (−39 in *Ghost Note Snare*), tom presets −20 dBFS. If your track is hotter or quieter, move THRESHOLD and FULL HIT by the same number of dB.

SENSITIVITY



Left: a grace note and its main stroke 25 ms later. The main stroke rises well over the grace note's ring, so it is a new hit. Right: how far a rise must go within 5 ms to count, from 20 dB at 0 % to 2 dB at 100 %.

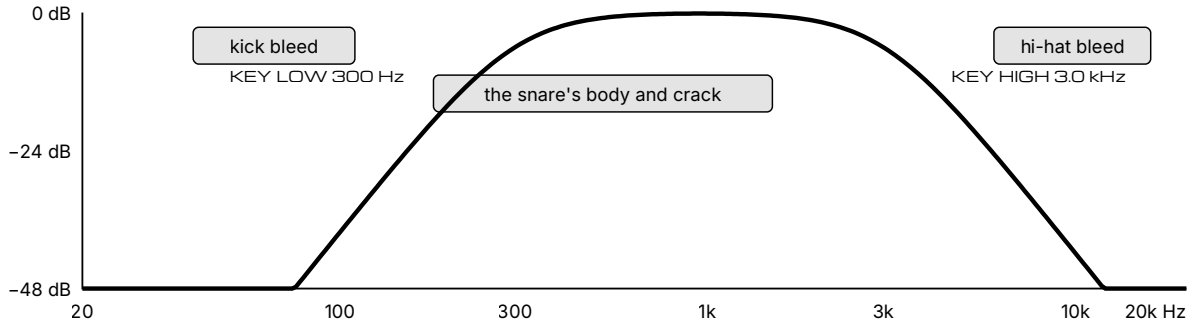
FIGURE 10 SENSITIVITY sets how far a hit must rise over what is already ringing.

A drum keeps ringing after it is struck, and a new hit lands on top of that ring. SENSITIVITY decides how big a jump counts as a new hit: 20 dB at 0 %, 6.3 dB at 50 % and 2 dB at 100 %, in between on a smooth curve. Higher settings catch flams and ghost notes over a ringing drum; lower settings ignore the ring and the bleed. The kick presets use 50 %, the snare and tom presets 60 %.

RETRIGGER

The shortest time between two hits: any rise within it of the last hit is ignored entirely. The default 10 ms lets fast flams through. Raise it if one hit plays two samples; lower it for very fast double strokes.

KEY LOW and KEY HIGH



The snare presets' key: 24 dB per octave either side, so the kick and the hi-hat in the snare microphone fall away from what the detector hears. The sound itself is not filtered, and the filters' delay is taken off the sample's timing.

FIGURE 11 The key filters remove the bleed from what the detector hears.

The key filters let the detector hear the drum you want and not the rest of the kit. KEY LOW is a high-pass (Off at 20 Hz, up to 2 kHz): it removes the kick from a snare or tom microphone. KEY HIGH is a low-pass (from 100 Hz to Open): it removes the hi-hat and cymbals. Typical settings, as in the presets:

- **Kick:** KEY HIGH at 150 Hz, so the snare and toms in the kick microphone don't trigger it. For fast double-kick playing, key on the beater instead with KEY LOW at 1.5 kHz.
- **Snare:** KEY LOW 300 Hz and KEY HIGH 3.0 kHz, leaving out the kick below and the hi-hat above.
- **Rack tom:** 80 to 350 Hz, the tom's body. **Floor tom:** 50 to 250 Hz.

The filters change only what the detector hears. Their delay is measured and taken off the sample's timing, so they never make samples late. A KEY HIGH under 250 Hz or a KEY LOW over 1 kHz is left out when the hit's strength is measured, because there it would squash or scatter the dynamics.

LISTEN

LISTEN plays the key itself, the track through KEY LOW and KEY HIGH, so you can hear what the detector hears while you set them. Turn it off again before you mix. It never applies in an offline bounce.

LOOKAHEAD and POLARITY

LOOKAHEAD is explained in its own chapter, *Latency and LOOKAHEAD*. Leave it ON unless you are playing or recording through the plugin live.

POLARITY INVERT turns the samples upside down. Use it if a blend gets thinner rather than fuller, which happens when a microphone was wired the other way round.

Velocity

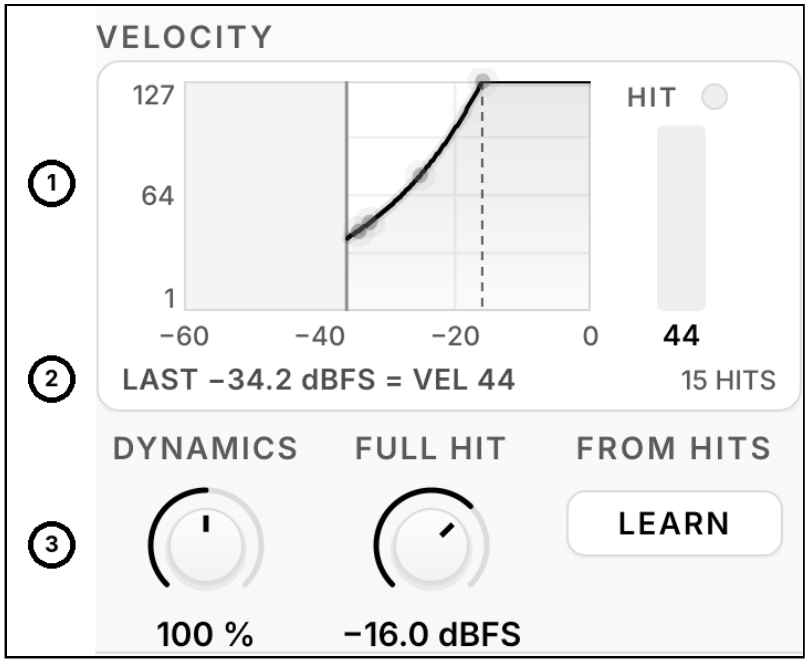
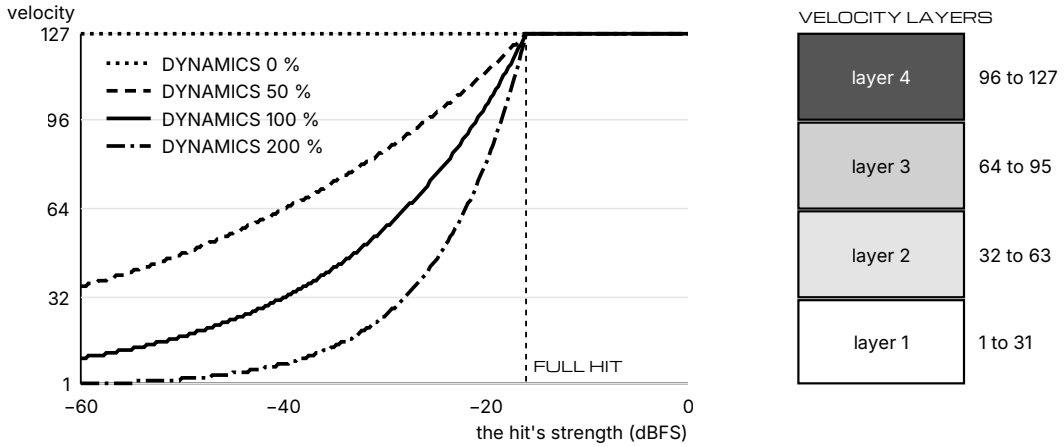


FIGURE 12 VELOCITY: 1 the curve, the threshold, the latest hits as dots, and the hit meter with the HIT lamp; 2 the last hit's strength and velocity, and the number of hits; 3 DYNAMICS, FULL HIT and LEARN.

Control	Range	Default	What it does
DYNAMICS	0 to 200 %	100 %	How closely the samples follow the drummer.
FULL HIT	−48 to 0 dBFS	−6.0 dBFS	A hit this strong or stronger plays at velocity 127.
LEARN			Sets FULL HIT from the loudest hit of the last 8 seconds.



With FULL HIT at −16 dBFS. At DYNAMICS 100 % the samples follow the hits dB for dB; at 0 % every hit plays at 127; at 200 % soft hits play softer still. The velocity also picks the layer: a library sound's four layers split 1 to 127 evenly.

FIGURE 13 The velocity curve, and how a velocity picks a layer.

The graph shows each hit's strength across (in dBFS) against the velocity it plays at, up from 1 to 127. The curve is set by DYNAMICS and FULL HIT; the threshold is the vertical line at the left of the curve; the dots are the latest hits. The **hit meter** beside it shows the last hit's velocity as a bar and a number, and the HIT lamp flashes on each hit. Under the graph: LAST -34.2 dBFS = VEL 44 and the count of hits so far.

FULL HIT is the strength that plays at full velocity. Hits at or over it play at 127, from the hardest layer; softer hits play softer and from softer layers. The quickest way to set it: play the loudest part of the song and press LEARN, which takes it from the loudest hit of the last 8 seconds.

DYNAMICS is how much the samples follow the drummer. At 100 % each hit plays exactly as much quieter as it was struck, dB for dB. Lower settings even the hits out, down to 0 %, where every hit plays at 127; settings above 100 % exaggerate the difference. Fast metal double-kick and snare presets use 60 to 70 % for even runs; *Urban Knock Replace* uses 40 % for a programmed feel.

Velocity layers and round robins. Each library sound has four velocity layers that split 1 to 127 evenly, and a harder layer is not just louder: it has more stick or beater and opens up. Inside a layer, four round robins take turns, so two hits in a row never play the same sample. Ghost notes, accents and flams therefore sound different, as they do on a real drum.

> **Note:** on a snare or tom keyed through its filters, the strength is measured several dB under the hit's own peak (some 9 dB on a snare keyed above 300 Hz). That is why the snare presets use FULL HIT −16 dBFS and the tom presets −10 dBFS on a track peaking around −6 dBFS. VEIRA Trigger corrects the level for it, so a strong hit still plays at its own peak.

Mix

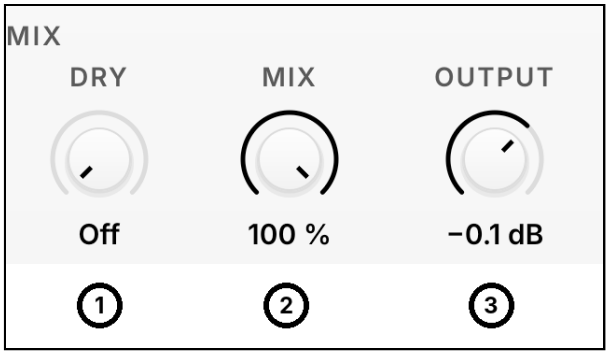


FIGURE 14 MIX: 1 DRY, 2 MIX and 3 OUTPUT, here as *Rock Snare Replace* sets them.

Control	Range	Default	What it does
DRY	Off, −60 to +6 dB	0.0 dB	The original track's level. Off replaces it.
MIX	0 to 100 %	50 %	The samples' level.
OUTPUT	−24 to +12 dB	0.0 dB	The total level.

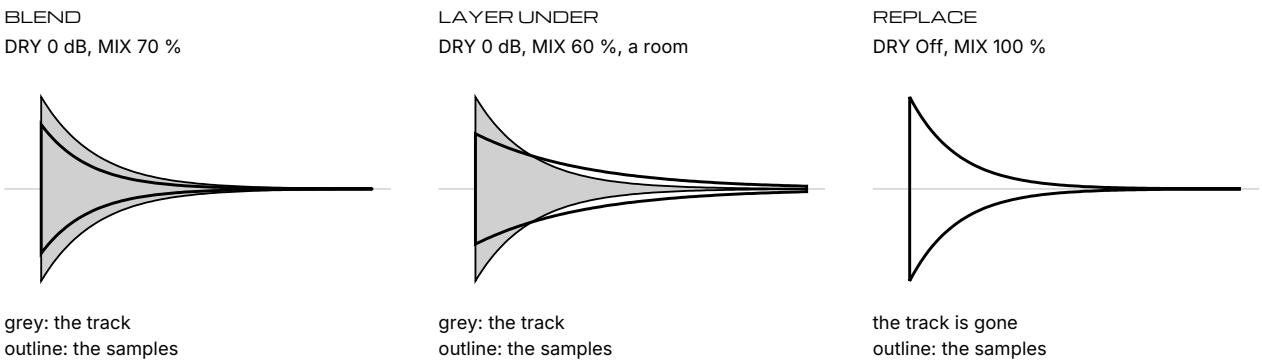


FIGURE 15 Blend, layer and replace.

- **Blend** keeps the track (DRY at 0 dB) and adds the sample under it (MIX 60 to 90 %): the drum you recorded, fuller and more even.
- **Replace** removes the track (DRY Off) and keeps only the samples (MIX 100 %). The bleed between hits goes with the track.
- **Layer** keeps the track whole and adds something it lacks: a room, a clap, a sub under a kick.

At MIX 100 %, with DYNAMICS at 100 % and FULL HIT on the loudest hit, each sample peaks like the hit it replaces, so switching between blend and replace keeps the level roughly where it was. DRY, MIX and OUTPUT glide over 20 ms, so you can ride them while the track plays.

The slots

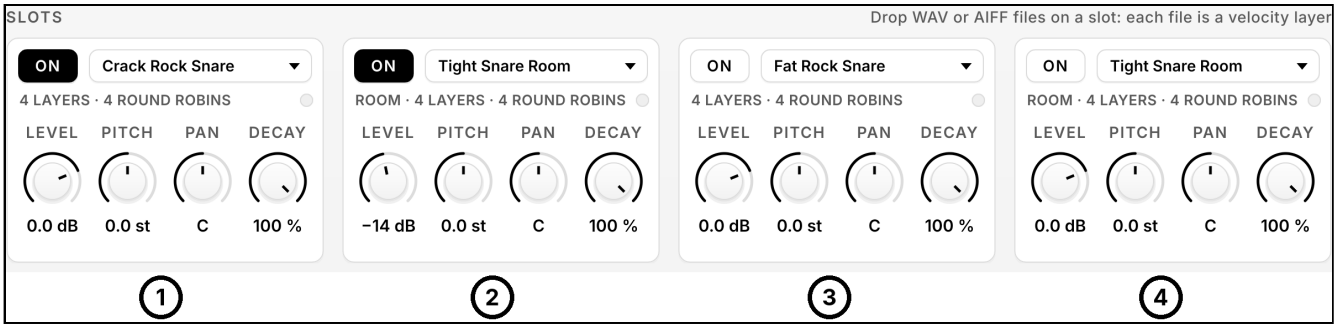


FIGURE 16 SLOTS 1 to 4. Each has ON, the sound menu, what it plays (4 LAYERS · 4 ROUND ROBINS), a lamp that flashes on its hits, and LEVEL, PITCH, PAN and DECAY. Here slots 1 and 2 are on: the Crack Rock Snare and a Tight Snare Room 14 dB under it.

Four slots play on every hit. Turn a slot on with ON; a slot that is off costs nothing.

Control	Range	Default	What it does
ON	off, on	slot 1 on	Whether this slot plays.
Sound	the library, or your files	Tight Rock Kick, Tight Kick Room, Fat Rock Snare, Tight Snare Room	What it plays.
LEVEL	−36 to +12 dB	0.0 dB	This slot's level.
PITCH	−12 to +12 st	0.0 st	Tunes the sample in semitones (it plays faster or slower).
PAN	L 100 to R 100	C	The slot's place between the speakers.
DECAY	5 to 100 %	100 %	Shortens the sample: 100 % plays it whole.

The sound menu lists the library by instrument (Kick, Snare, Rack Tom, Floor Tom, Clap, Room), then *Load Samples…* and *Clear Samples*. The line under it says what plays: the instrument and its layers and round robins, YOUR SAMPLES with the number of layers, PREPARING while a library sound is being made, or MISSING when one of your files can't be found.

PITCH over +6 semitones plays from a filtered copy of the sound, so nothing folds back as a harsh tone. DECAY fades the sample to −60 dB at its share of the length: use it to keep a long sub kick from piling up (*Urban Sub Layer* uses 70 %). LEVEL and PAN glide, so they can be moved while the track plays.

Each slot plays up to six hits at once; a new hit fades out the slot's earlier ones quickly (a 6 ms time constant), so a fast roll never builds up into a wash.

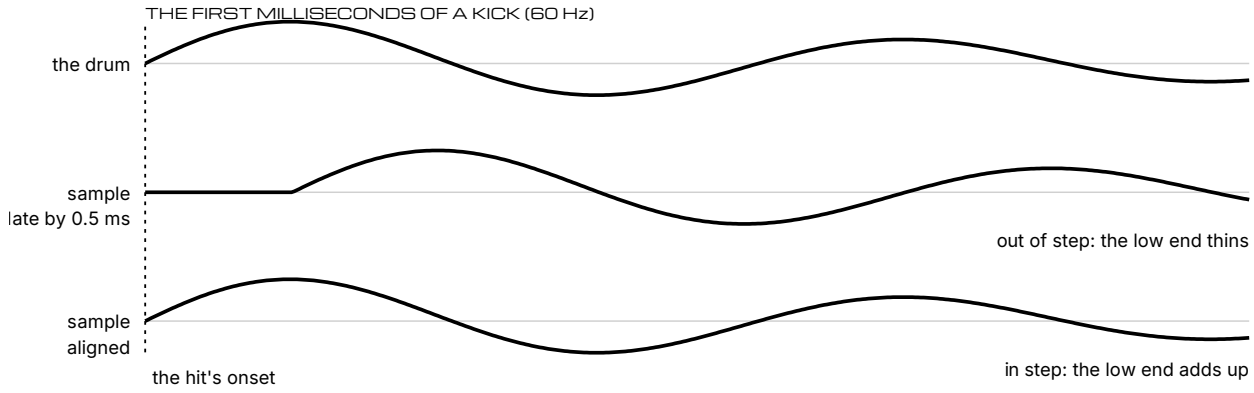
The library

Every sound is made by synthesis in the plugin, at your session's rate, when a slot that is on needs it. No recordings are inside. Each has four velocity layers of four round robins.

Instrument	Sounds
Kick	Tight Rock Kick, Deep Rock Kick, Punchy Pop Kick, Soft Pop Kick, Metal Click Kick, Metal Thump Kick, Urban Sub Kick, Urban Knock Kick, Latin Warm Kick
Snare	Fat Rock Snare, Crack Rock Snare, Bright Pop Snare, Tight Pop Snare, Metal Snap Snare, Metal Heavy Snare, Urban Crisp Snare, Latin Timbal Snare
Rack Tom	Rock Rack Tom, Pop Rack Tom, Metal Rack Tom, Latin High Tom
Floor Tom	Rock Floor Tom, Pop Floor Tom, Metal Floor Tom, Latin Low Tom
Clap	Pop Stack Clap, Urban Snap Clap, Latin Group Clap
Room	Tight Kick Room, Big Kick Room, Tight Snare Room, Big Snare Room, Tom Room

Rooms are the space around a drum without the drum: put one in a second slot, a little under the first, to give a dry or replaced drum a place to sit. A room keeps its own short delay after the drum, as a real room does.

In phase with the drum



A sample that starts even a fraction of a millisecond off cancels part of the drum's low end when the two are blended (drawn larger than life). VEIRA Trigger places each sample's onset on the hit's, then slides it up to 0.5 ms so its first low cycle lines up with the drum's.

FIGURE 17 Why the sample's placement matters.

Each sample's own onset is placed on the hit's onset, to a fraction of a sample. VEIRA Trigger then compares the sample's first 3 ms with the drum and slides it to where the two line up best: by at most 0.5 ms, or 2.5 ms when the track itself shows no clear onset. That is less than one cycle of any drum's body, so the timing doesn't move, but the low end of the sample and of the drum push the speaker the same way. The result: a blend gets fuller, not hollow.

Your own samples

Any slot can play your own sounds instead of the library's.

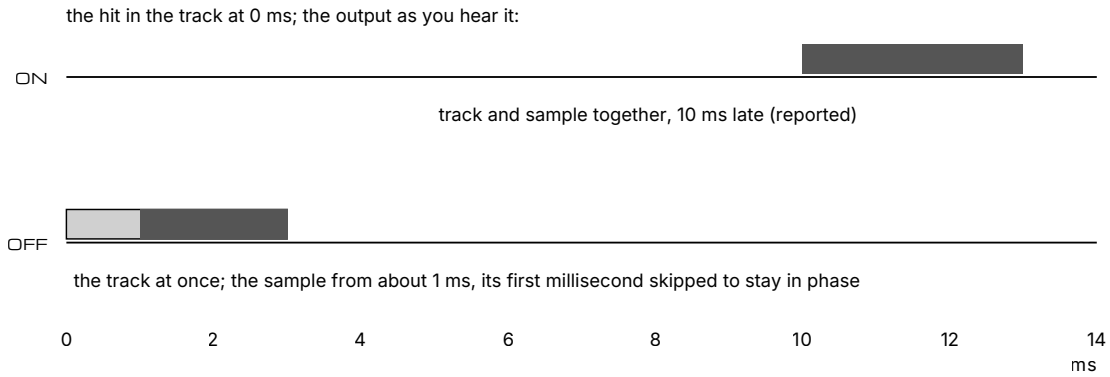
- **Drop** one or more files on a slot (WAV or AIFF, as the panel says; FLAC, Ogg and MP3 also load), or
- choose *Load Samples…* in the slot's sound menu.

Each file becomes a velocity layer. Up to 16 files per slot. They are sorted by their own peak, so the softest file plays the softest hits, and each is brought to the same peak, so the velocity sets the level. For the best result, give the slot several hits of the same drum played from soft to hard. One file plays on every hit at a level set by the velocity. Your files have no round robins.

Files	WAV, AIFF, FLAC, Ogg, MP3; up to 16 per slot
Length	The first 10 seconds of each, mono or stereo
Rate	Converted to the session's rate when loaded
Start	The silence before each file's hit is trimmed
Saved	**By reference**: the session and your presets store where the files are, not the audio
Missing	A file that can't be found is skipped and named on the slot (MISSING); the slot plays the others, or its library sound if none is found

Because files are saved by reference, keep them where they are, or copy them with the session if you move it to another computer. *Clear Samples* returns the slot to the library.

Latency and LOOKAHEAD



On (the default): 10 ms of latency at every rate, which your DAW compensates; every sample exactly placed. Off: no latency, for playing or tracking through it live, at the cost of a slightly less exact start and strength.

FIGURE 18 With LOOKAHEAD on and off.

To place a sample exactly on its hit and measure the hit's strength over its whole attack, VEIRA Trigger needs to hear a little of the hit before it plays the sample. LOOKAHEAD ON (the default) delays the output by **10 ms** at every sample rate and reports it to your DAW, which compensates for it on playback. Every sample is then placed exactly, and your host's bypass is delayed by the same amount, so a bypassed track stays in time.

LOOKAHEAD OFF has no latency at all. Use it when you play or record through the plugin and hear yourself in real time. A sample then starts about 1 ms after the hit and skips its own first millisecond, so it is still in phase; its strength is measured over that 1 ms, so it follows the dynamics a little less exactly. *Default ▸ Kick Live No Latency* is set up this way.

Switching LOOKAHEAD is the only thing that changes the latency, and the plugin tells your DAW when it does.

What VEIRA Trigger does not do

It doesn’t send the hits as MIDI. MIDI output from an audio effect doesn’t work the same way across the plugin formats, and in some it doesn’t work at all, so this version doesn’t offer it. The hits play the slots’ samples, which you can bounce or record as audio like any track.

It finds hits by level, and level has limits. On recorded tracks most hits are easy: the kick and snare presets find every hit on the tracks they were measured on, ghost notes and flams included. The cases that can be missed:

- **The quietest ghost notes in very fast playing.** When a ghost note lands while the previous stroke still rings, and is quieter than that ring, its rise can be too small to tell it apart. At slower tempos the snare presets find all but the very quietest ghost notes; *Ghost Note Snare*, with a lower threshold, found every one on its test track.
- **Very fast rolls on a long-ringing drum**, such as sixteenths on a floor tom: each new stroke barely rises over the ring of the last.
- **In fast double-kick runs** the previous kick’s ring sits under the next, so velocities scatter by a dB or so.

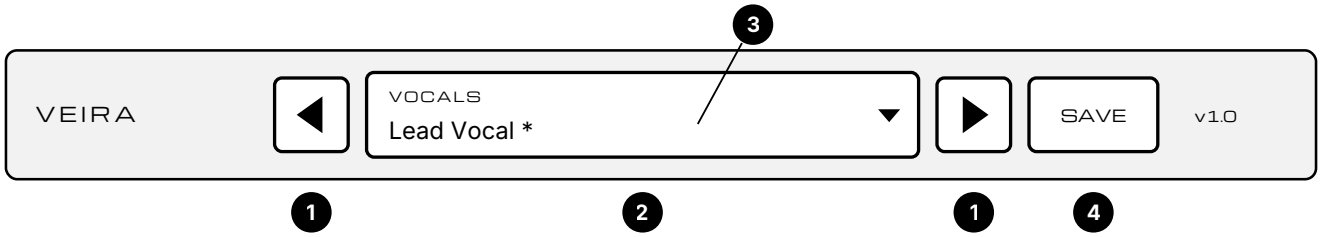
Raising SENSITIVITY catches more of these, but also lets more bleed through; check the display and listen. Where a ghost note matters and is missed, lower THRESHOLD a little, or leave DRY up so the original note still plays.

Presets

VEIRA Trigger comes with **31 factory presets** in 5 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 19 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 Trigger 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 Trigger/<Folder>/
Windows	%APPDATA%\VEIRA\VEIRA Trigger\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, Kick Blend, Snare Blend, Tom Blend, Kick Live No Latency
Kick	Rock Kick Blend, Rock Kick Replace, Pop Kick Punch, Metal Kick Click, Metal Double Kick, Urban Sub Layer, Urban Knock Replace, Latin Warm Kick
Snare	Rock Snare Blend, Rock Snare Replace, Pop Snare Crack, Ghost Note Snare, Metal Snare Snap, Metal Heavy Snare, Urban Crisp Snare, Latin Timbal Snare
Toms	Rock Rack Tom, Rock Floor Tom, Pop Toms Replace, Metal Toms Attack, Latin High Tom
Layers	Snare Clap Layer, Kick Room Layer, Snare Big Room, Tom Room Layer, Kick Sub and Room

A preset holds every control, including the slots' sounds. **Blend** presets keep the track and add the sample; **Replace** presets keep only the sample (DRY Off); **Layer** presets keep the track whole and add a room, a clap or a sub.

> **Levels:** every preset was measured on a 30-second recorded-drum track of its own instrument (close microphones with the rest of the kit bleeding in, the loudest hits at −6 dBFS), and its OUTPUT set so the result is as loud as the track, so you can compare presets fairly. *Init* keeps the defaults. The presets' THRESHOLD and FULL HIT assume that −6 dBFS peak: if your track peaks hotter or quieter, move both by the same number of dB, or play the loudest part and press LEARN, then set THRESHOLD by eye on the display. The key filters, SENSITIVITY, RETRIGGER and the slots don't depend on level. Hover over a preset's name to read its note.

Recipes

A fuller snare, same performance

1. Insert VEIRA Trigger on the snare track and load *Snare* ▸ *Rock Snare Blend*.
2. Play the loudest part of the song and press [LEARN].
3. On the display, set [THRESHOLD] just above the hi-hat bleed and below your quietest ghost note.
4. Set [MIX] to taste. If the blend gets thinner rather than fuller, try [POLARITY] [INVERT].

Replace a kick

1. Load *Kick* ▸ *Rock Kick Replace* (or *Urban Knock Replace* for a harder, more even kick).
2. Check on the display that every kick crosses the threshold and the snare bleed doesn't; adjust [THRESHOLD] if not.
3. Choose another kick in slot 1's sound menu until it suits the song, and balance with [OUTPUT].

Catch every ghost note

1. Load *Snare* ▸ *Ghost Note Snare*.
2. Lower [THRESHOLD] until the quietest ghost notes cross it, but the hi-hat bleed doesn't; use [LISTEN] to hear the key.
3. If a flam's second stroke is missed, raise [SENSITIVITY] a little; if the ring triggers twice, raise [RETRIGGER].

Toms without the bleed

1. On each tom track, load *Toms* ▸ *Rock Rack Tom* or *Rock Floor Tom*.
2. Adjust [KEY LOW] and [KEY HIGH] around the tom's body until the snare hits barely move the detector line.
3. For tidy fills with no ring between them, use *Toms* ▸ *Pop Toms Replace*.

A room for a dry drum

1. Load *Layers* ▸ *Snare Big Room* (or *Kick Room Layer*, *Tom Room Layer*).
2. The track stays whole; the room follows every hit and barely touches the ghost notes.
3. Set the room's level with [MIX], or with the slot's [LEVEL] if you combine it with a sample in another slot.

Your own drum

1. Record or choose a few hits of one drum, from soft to hard, each as its own WAV file.
2. Drop them all at once on slot 1. The slot shows [YOUR SAMPLES] and the number of layers.
3. Set [DYNAMICS] to 100 % so soft hits play the soft files.

Specifications

Type	Drum trigger: audio effect, mono or stereo
Detection	THRESHOLD −60 to 0 dBFS (−24.0); SENSITIVITY 0 to 100 % (50 %: a 6.3 dB rise); RETRIGGER 5 to 250 ms (10 ms); KEY LOW Off to 2 kHz and KEY HIGH 100 Hz to Open, 24 dB/oct; LISTEN; POLARITY Normal or Invert
Velocity	DYNAMICS 0 to 200 % (100 %); FULL HIT −48 to 0 dBFS (−6.0); LEARN from the last 8 seconds
Mix	DRY Off, −60 to +6 dB (0 dB); MIX 0 to 100 % (50 %); OUTPUT −24 to +12 dB (0 dB)
Slots	Four, each ON, sound, LEVEL −36 to +12 dB, PITCH ±12 st, PAN, DECAY 5 to 100 %; six voices each
Library	33 synthesised sounds (9 kicks, 8 snares, 4 rack toms, 4 floor toms, 3 claps, 5 rooms), each 4 velocity layers × 4 round robins
Your samples	WAV, AIFF, FLAC, Ogg, MP3; up to 16 per slot, each a velocity layer; saved by reference
Latency	10 ms with LOOKAHEAD on (reported, host bypass delayed to match); none with it off
Display	The last 5 seconds: input, output, detector, threshold, hits and their velocities; latency and CPU
MIDI	No MIDI output
Presets	31 factory presets in 5 folders, each levelled to its track's loudness, plus your own
Window	1240 × 760 points at 100 %; 75 to 200 % or Fit to screen, from the size button, the corner grip or Cmd/Ctrl + = - 0; opens at 100 %, saved with the session and remembered for new instances
Formats	VST3, Audio Units, standalone; AAX once signed
Plugin ID	Manufacturer Veir, plugin Vtrg

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*.

Nothing triggers. Check that a slot is ON and MIX is above 0 %. On the display, see whether the hits cross the THRESHOLD line: if not, lower it. If the track is very quiet, move FULL HIT down by the same amount, or press LEARN.

The hi-hat, kick or cymbals trigger samples. Raise THRESHOLD above the bleed, and narrow the key with KEY LOW and KEY HIGH (use LISTEN to hear what the detector hears). Lowering SENSITIVITY also helps.

One hit plays two samples. Raise RETRIGGER a little, or lower SENSITIVITY, so the drum's own ring doesn't count as a new hit.

Ghost notes or flams are missed. Lower THRESHOLD towards the ghost notes and raise SENSITIVITY; try *Snare ▸ Ghost Note Snare*. In very fast playing, the quietest ghost notes under a ringing stroke can't always be told apart by level (see *What VEIRA Trigger does not do*); keep some DRY so they still sound.

The blend sounds thinner, not fuller. Try POLARITY INVERT: the microphone may be wired the other way round. Check that LOOKAHEAD is ON.

Every hit sounds the same. Raise DYNAMICS towards 100 %, and check FULL HIT: if it is far below your hits, they all play at full velocity. Press LEARN on the loudest part.

The track is 10 ms late against the others. Your DAW's delay compensation is off, or doesn't reach this track. Turn it on, or set LOOKAHEAD OFF.

I hear the drum filtered. LISTEN is on: it plays the key. Turn it off.

A slot says MISSING. The session refers to a file that has moved or been deleted. Put it back where it was, or load it again with *Load Samples…*. The slot plays its other files, or its library sound.

Can I get the hits as MIDI? Not in this version: VEIRA Trigger has no MIDI output.

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



VEIRA Trigger · User Manual · Version 0.1.0

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

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