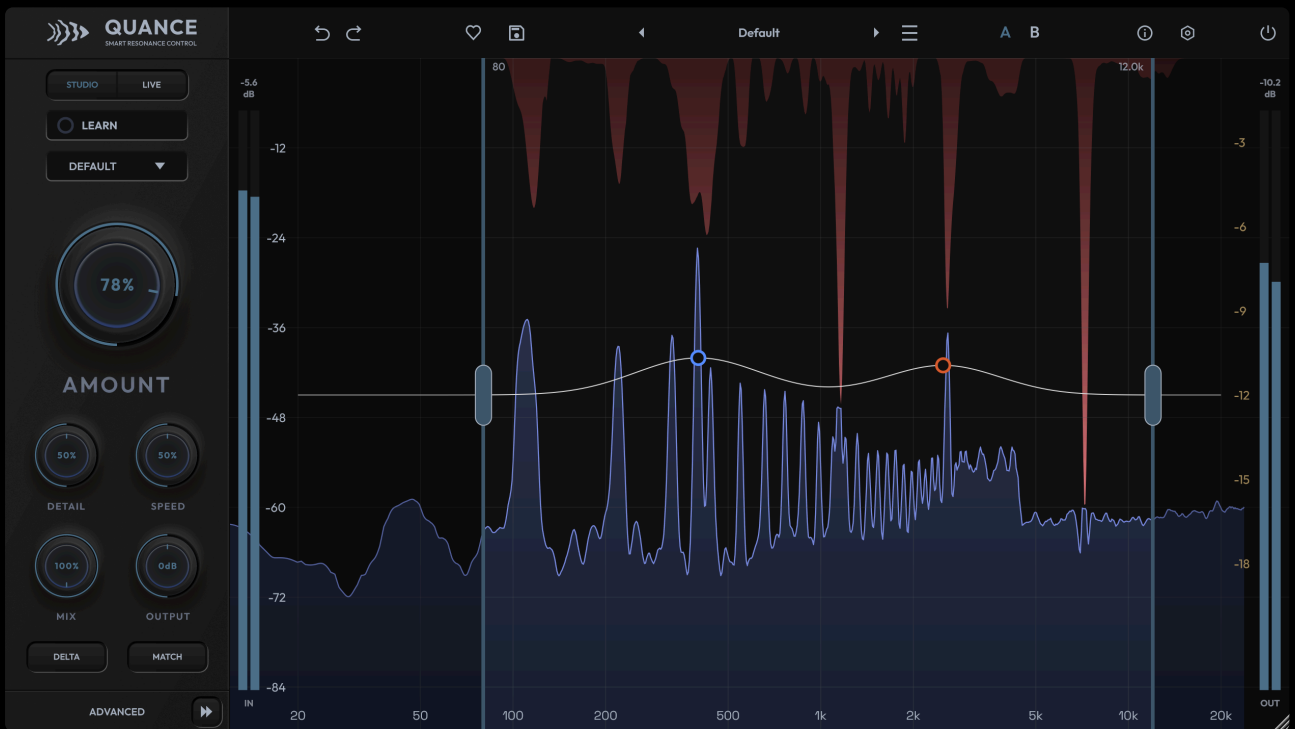


COD WAVES

QUANCE

SMART RESONANCE CONTROL



USER MANUAL · v1.0.0 · 2026

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1. Introduction

1.1 What QUANCE does

QUANCE is an automatic resonance suppressor. It listens to the incoming audio, finds the narrow peaks and harsh build-ups that make a recording tiring to hear, and pulls them down using hundreds of fast, self-adjusting spectral filters.

What separates it from a parametric EQ is that nothing stays still. You set how much cleanup you want. QUANCE works out where to apply it, and it works that out again every few milliseconds. Because the filters only move where the spectrum misbehaves, and only while it misbehaves, the result stays far more transparent than a fixed notch ever manages.

Protection systems run alongside the detector. They watch attacks, harmonics and vocal formants, and hold the reduction back wherever a cut would cost you the character of the performance. Loudness-matched monitoring is built in, so an A/B against the dry signal tells you about tone rather than level.

1.2 When to reach for it

- Harsh or piercing vocals, bright microphones, sharp sibilance
- Ringing snares, harsh cymbals and hi-hats, boxy room mics
- Fizzy distorted guitars, scratchy strings, honky piano recordings
- Muddy low-mid build-up on buses and full mixes
- Samples and loops that need de-harshing before they sit in a mix
- Podcast and dialogue cleanup, room ring on untreated spaces

It is a corrective tool. QUANCE is not a parametric EQ, a de-esser with fixed bands, or a loudness maximiser.

About this edition. This manual describes QUANCE 1.0.0. If your build reports a different version in the info popup (section 6.5), some details here may have moved.

2. Installation

2.1 System requirements

	Windows	macOS
Operating system	Windows 10 or newer (64-bit)	macOS 10.15 or newer (Intel & Apple Silicon)
Formats	VST3, AAX	VST3, AU, AAX
Host	Any DAW supporting one of the formats above, on stereo or mono tracks	
Internet	Required for activation. An offline path is available, see 3.2	

2.2 Formats and locations

Run the installer and follow its steps. Plugin binaries go to the standard system folders, where every DAW already looks:

- **Windows:** `C:\Program Files\Common Files\VST3` and `C:\Program Files\Common Files\Avid\Audio\Plug-Ins`
- **macOS:** `/Library/Audio/Plug-Ins/VST3` , `/Library/Audio/Plug-Ins/Components` and `/Library/Application Support/Avid/Audio/Plug-Ins`

Rescan your plugins afterwards if the DAW does not pick QUANCE up on its own. It appears under **Codwaves > QUANCE**.

3. Activation & Licensing

3.1 Activating online

The first time you open QUANCE on a new machine, a license panel covers the interface with a single **Activate License** button. There is no serial number to type. Activation runs through your Codwaves account in the browser.

1. Click **Activate License**, then **Activate** (secure browser sign-in).
2. Your default browser opens the Codwaves portal. Sign in and confirm the activation for this computer. The plugin shows "Complete sign-in in browser..." while it waits.
3. Once the portal confirms, the plugin unlocks immediately. No restart is needed, and the panel reports "Product activated successfully." alongside your account e-mail.

The browser request stays valid for a few minutes. If it expires you will see "Timed out, please try again!". Click **Activate** again.

3.2 Offline activation

For studio machines with no internet access, choose **Use offline handoff** on the activation panel.

1. **Create Device File** saves a signed request file (`quance_OfflineActivation.dt`) for this computer, by default on the Desktop.
2. Move that file to any connected device, open the Codwaves activation portal and follow its steps. The portal returns a Codwaves access file (`.cw`).
3. Bring the access file back and drop it on the target area of the third step, or double-click the area to browse for it. The plugin unlocks on the spot.

3.3 Background validation and the grace period

Once activated, QUANCE revalidates quietly in the background. If the computer is temporarily offline or the license server cannot be reached, nothing changes for you: the plugin keeps working through a **14-day grace period**, and shows a message with the exact deadline if the problem persists. Validation succeeds silently as soon as the machine is online again, and the counter resets.

If validation keeps failing on a machine that clearly has internet, a proxy, VPN or firewall is usually in the way. Allow outbound HTTPS to `codwaves.com`, switch the proxy off for a moment, or contact support with the message shown. Keep automatic clock synchronisation on as well, because a system clock that jumps backwards forces a fresh online validation.

3.4 Before activation

Until the plugin is activated it produces no audio output, and preset loading, preset saving and Learn stay disabled. Your sessions are never at risk. Session state always saves and restores correctly, so anything you set up before activating survives.

3.5 Managing your machines

Licenses bind to your Codwaves account with a per-machine seat count. Add, review and release machines from your account page at **codwaves.com**, for example before moving to a new computer. If the seat limit is reached during activation, the portal says so and offers to free one up.

The local license lives at:

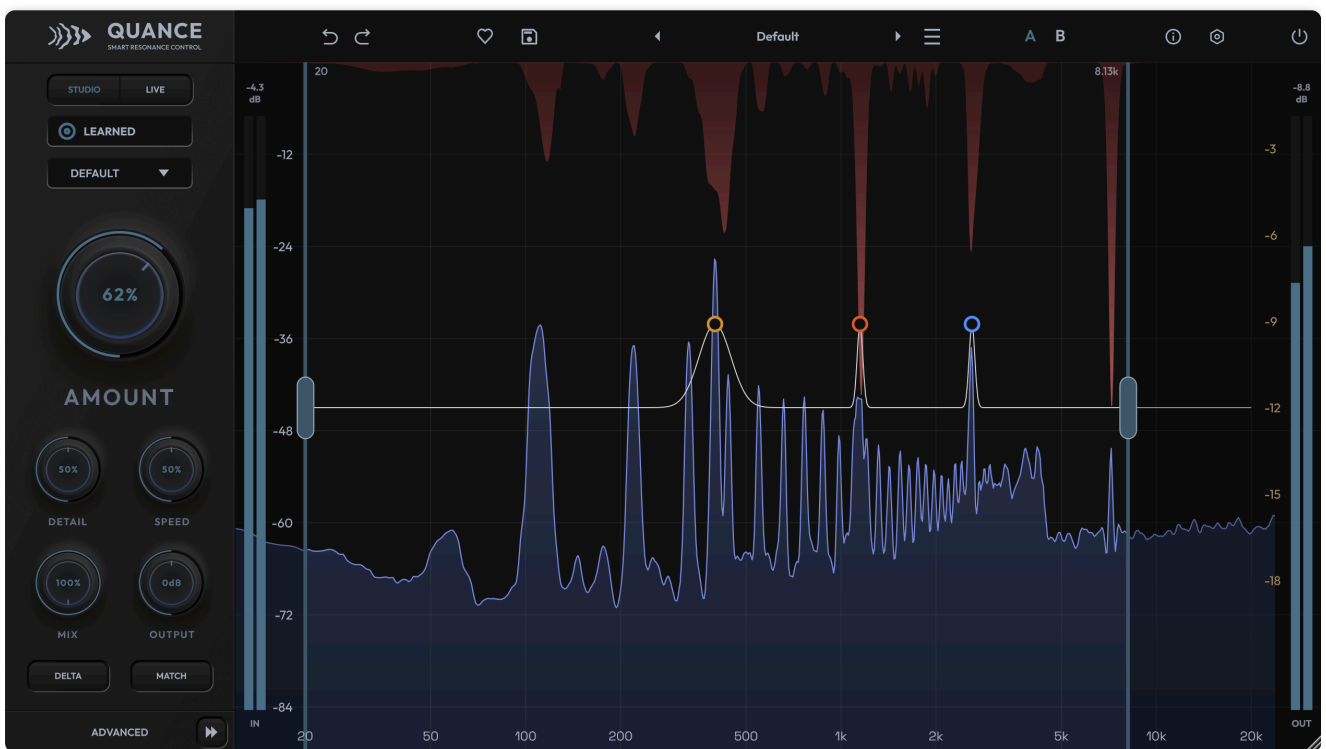
- **Windows:** `%APPDATA%\Codwaves\quance\license.cw`
- **macOS:** `~/Library/Codwaves/quance/license.cw`

3.6 Update notifications

When a newer version is available, a small badge appears in the top-right corner of the plugin: "New Update Available — Download v...". Click **Download** to fetch the installer, **Skip this build** to hide the badge until the next release, or close it for the session. The badge fades out by itself after a few seconds.

4. Quick Start

1. Insert QUANCE on the track, bus or mix that sounds harsh, ringy, muddy or boxy.
2. Play a representative section in a loop. The blue spectrum comes alive, and the red overlay at the top of the graph shows where QUANCE is reducing.
3. Pick a **Mode** that suits the material (Vocal, Instrument, Drums, Mix), or leave it on Default.
4. Click **LEARN** if you want a head start. QUANCE listens until you click again or the audio stops, then places focus points on the strongest resonances it found and narrows the detection range around them. Double-click for a fixed eight-second pass instead.
5. Turn **AMOUNT** up until the harshness goes, then back it off until the sound stays natural. **DELTA** lets you hear exactly what is being removed, and **MATCH** makes the bypass comparison loudness-fair.



After a Learn pass: focus points sit on the detected resonances and the detection range has been set around the affected region.

5. The Interface at a Glance



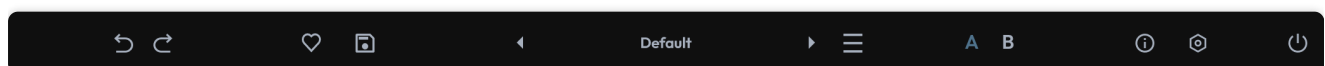
The QUANCE interface in its default state, with audio playing.

The window divides into four areas.

- **Header bar** (top): undo and redo, preset management, A/B comparison, info, settings and bypass.
- **Side panel** (left): the main sound-shaping controls. Quality, Learn, Mode, the big AMOUNT knob, Detail, Speed, Mix, Output, Delta and Match.
- **Graph** (centre): the live spectrum, the reduction overlay, detection ranges, focus points, the Max Cut line and the input/output meters.
- **Advanced panel**, opened with the **ADVANCED** button at the bottom left: Tone Protect, Transients Protect, Stereo Mode, Max Cut and Side Chain.

The window resizes freely. Drag the bottom-right corner, or pick a size in the Settings popup (section 12.2). An optional tooltip bar along the bottom explains whichever control the mouse is over.

6. Header Bar



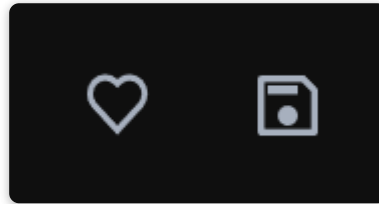
6.1 Undo and Redo

Every parameter change, preset load, Learn result, focus-point edit and range edit lands in QUANCE's own history. The arrows step backwards and forwards through it, independently of your DAW's undo.



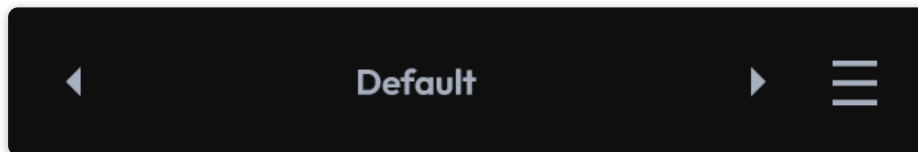
6.2 Favourite and Save

The heart marks the current preset as a favourite, which files it under the Favorites tab of the browser. The disk icon opens the Save Preset popup (section 10.2).



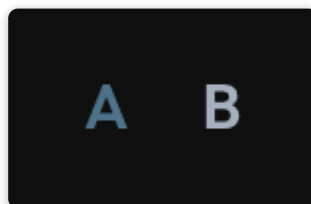
6.3 Preset navigation

The centre of the header shows the current preset name. An asterisk (Default*) means you have modified it since loading. The small arrows step to the previous or next preset, and clicking either the name or the list icon opens the browser. Loading a preset switches Delta off, so you always audition on the normal signal.



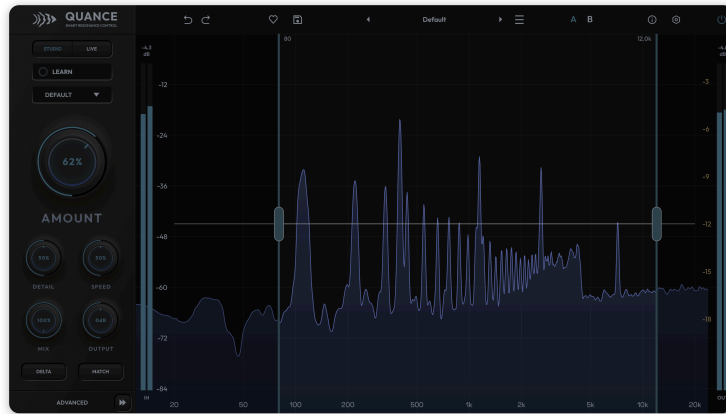
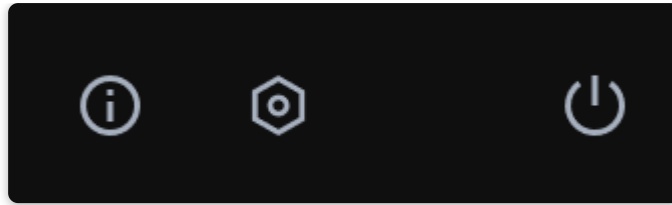
6.4 A/B compare

A and B hold two independent snapshots of every sound-shaping setting. Click the inactive letter to store your current state and jump to the other one, then flip back and forth to compare two rival setups. The Studio/Live quality selection is deliberately left out of A/B so that switching never re-triggers a latency change. Section 11 has the full workflow.



6.5 Info, Settings and Bypass

The ⓘ button, or a click on the Codwaves logo, opens the info popup with the exact build version and links to the website, support and this manual. The gear opens Settings (section 12). The power button bypasses the plugin: processing suspends, the whole interface dims, and the dry signal passes through with latency compensation intact, so toggling bypass never makes the track jump in time.



Bypass darkens the entire interface while the delay-aligned dry signal passes through.

7. Main Controls

All the main controls live in the side panel. Knobs are dragged vertically. Hold **Shift** while dragging for fine adjustment, which slows the travel by a factor of four. Every control here can be automated from the DAW.



7.1 Amount

AMOUNT is the main reduction control, and on many sources it is the only one you will touch. It scales the whole engine at once: how sensitively resonances are detected, how early the reduction starts, and how hard it digs in. With the manual Max Cut ceiling switched off, AMOUNT also decides how deep any single cut may go (section 9.4).

At 0 % the plugin is effectively idle. Somewhere around 20 to 40 % it behaves as a gentle polish, 50 to 70 % is committed cleanup for genuinely harsh material, and past that it becomes a firm resonance clamp best saved for problem sources or deliberate flattening.

Raise AMOUNT until the problem disappears, then back it off a touch. If it takes a lot of AMOUNT to fix one narrow frequency, a focus point (section 8.4) is usually the better tool.



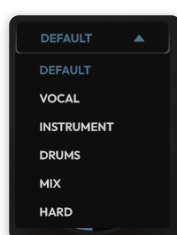
In simple terms: AMOUNT sets how much resonance suppression you get.

7.2 Mode

Mode tunes the detector and the protection systems for a family of material. Your knob positions do not move. What changes is what the engine listens for and what it defends.

Mode	Character
Default	Balanced starting point for any source.
Vocal	Gentler on formants and harmonics, quicker on sibilant peaks. Strong tone protection.
Instrument	Balanced detection with strong harmonic protection for tonal instruments.
Drums	Heavy transient protection. Attacks pass untouched while rings and fizz between hits are tamed.
Mix	Conservative: slower, broader, with a low reduction ceiling. Built for buses and full mixes.
Hard	Aggressive full-range clamping with most protection relaxed. Rescue jobs and creative smoothing.

Mode also steers Learn, which uses the current selection to decide what to prioritise, how many points to suggest and how broad they should be.



In simple terms: Mode tells QUANCE what kind of material it is listening to.

7.3 Detail

Detail moves detection between broad and surgical. Low values react to wide build-ups such as mud, boxiness and general harsh regions, and smooth them gently. High values sharpen the analysis onto narrow, needle-like peaks and leave the surrounding spectrum alone.

Lower Detail if the result sounds EQ'd or hollow. Raise it if a specific whistle or ring survives.

7.4 Speed

Speed controls how fast the reduction filters move, attack and release together. Slow settings breathe with the material and stay the most transparent. Fast settings clamp short events such as consonants, cymbal hits and plucks, though dense material can start to sound processed.

Drums and speech generally like faster settings. Pads, mixes and masters like slower ones.



In simple terms: Detail chooses between smoothing broad areas and sniping narrow peaks; Speed sets how quickly QUANCE reacts and lets go.

7.5 Mix

Mix blends processed against dry. Both paths are time-aligned, so any blend stays phase-coherent. At 100 % you hear only the processed signal. Lower values give parallel-style processing, which is useful when you want strong taming on the peaks while keeping the body of the original.

7.6 Output

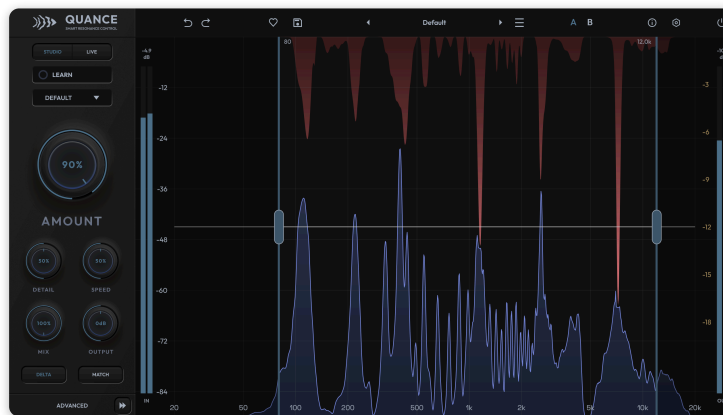
Output trims the final level by up to ± 12 dB after processing. While MATCH is engaged the output level is managed automatically and this knob dims out. Switch MATCH off to take manual control of make-up gain.



7.7 Delta

DELTA flips monitoring to only what QUANCE removes, the difference between input and output. It is the fastest way to check you are taming resonances rather than eating the body of the sound. In Delta you should hear rings, fizz and harsh peaks with very little of the instrument itself.

Delta is a monitoring state. Loudness matching and the output trim both suspend while it is active, and loading a preset switches it off automatically.



DELTA with a deep reduction setting: what you hear is what is being taken out.

In simple terms: DELTA lets you hear exactly what is being removed.

7.8 Match (Loudness Match)

MATCH continuously measures the perceptual loudness of the input and of the processed output, then compensates the difference by up to ± 3 dB (± 1.5 dB in Mix mode, whose conservative engine wants smaller moves), using a psychoacoustically weighted measurement.

Removing resonances almost always lowers the level. Without compensation the processed signal sounds quieter, and quieter reads as worse in a quick A/B. With MATCH on, bypass comparisons and preset auditions become honest, because you are judging tone.

Default changed. MATCH now starts **off**. Engage it before any serious bypass comparison. Earlier builds had it on by default.



In simple terms: MATCH keeps the output as loud as the input so comparisons are fair.

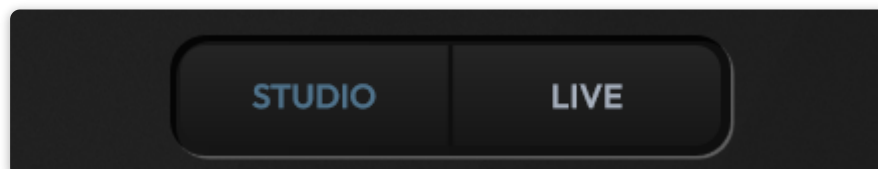
7.9 Studio / Live quality

The STUDIO/LIVE switch at the top of the side panel picks between two families of processing engine.

- **Studio** runs a three-band multi-resolution engine: long analysis windows in the lows, which resolve narrow room modes and bass ring, and short windows in the highs, which keep transients crisp. Highest quality, highest latency. Use it for mixing and mastering.
- **Live** runs a single-window engine tuned for low latency, plus a zero-latency option. Use it for tracking, monitoring, streaming and stage work.

Each family offers grades, selected in Settings (section 12.1): Studio **Pro** or **Ultra**, and Live **Zero**, **Light** or **Normal**. Section 13 covers what each one actually does, with latency figures.

Changing quality changes the reported latency, so your DAW re-aligns the track. QUANCE crossfades through the transition to keep it click-free. The quality selection is not automatable, sits outside A/B snapshots, and presets never override your grade.



In simple terms: Studio for best quality while mixing, Live for low latency while performing.

7.10 Learn

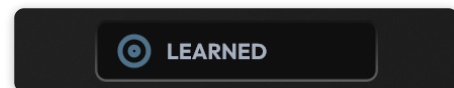
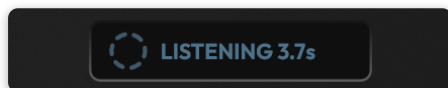
LEARN configures QUANCE from the audio itself. Click it while a representative section plays.

A single click starts an open-ended pass: QUANCE keeps listening until you click the button again, or until the audio has been quiet for about five seconds, when it finishes on its own. That is the pass to use when the thing you want QUANCE to catch does not happen every bar — sibilance, a room ring that only rings on certain notes, a cymbal that only gets harsh in the chorus: let it run through the part that misbehaves, then click to finish. A **double-click** runs the classic fixed pass of roughly eight seconds instead.

1. An open-ended pass reads **LISTENING n s**; the fixed pass reads **LEARNING... n %**. Silence never counts towards the analysis, so the counter only advances while QUANCE can actually hear something; if the input goes quiet the button says **WAITING** until audio returns.

2. When further listening stops changing the answer, an open-ended pass switches its label to **STEADY n s** and the ring turns solid — it has heard enough, and you can click to finish whenever you like. Everything it heard counts, however long you let it run.
3. When the pass completes, QUANCE places up to **four** focus points on the most prominent stable resonances, weighting narrow clearly protruding peaks above broad energy. It sets each point's width to match its peak and narrows the detection range around the affected region.
4. The button shows **LEARNED**. Click it again to dismiss the badge. The learned settings stay until you change them, and the whole result is a single undo step.

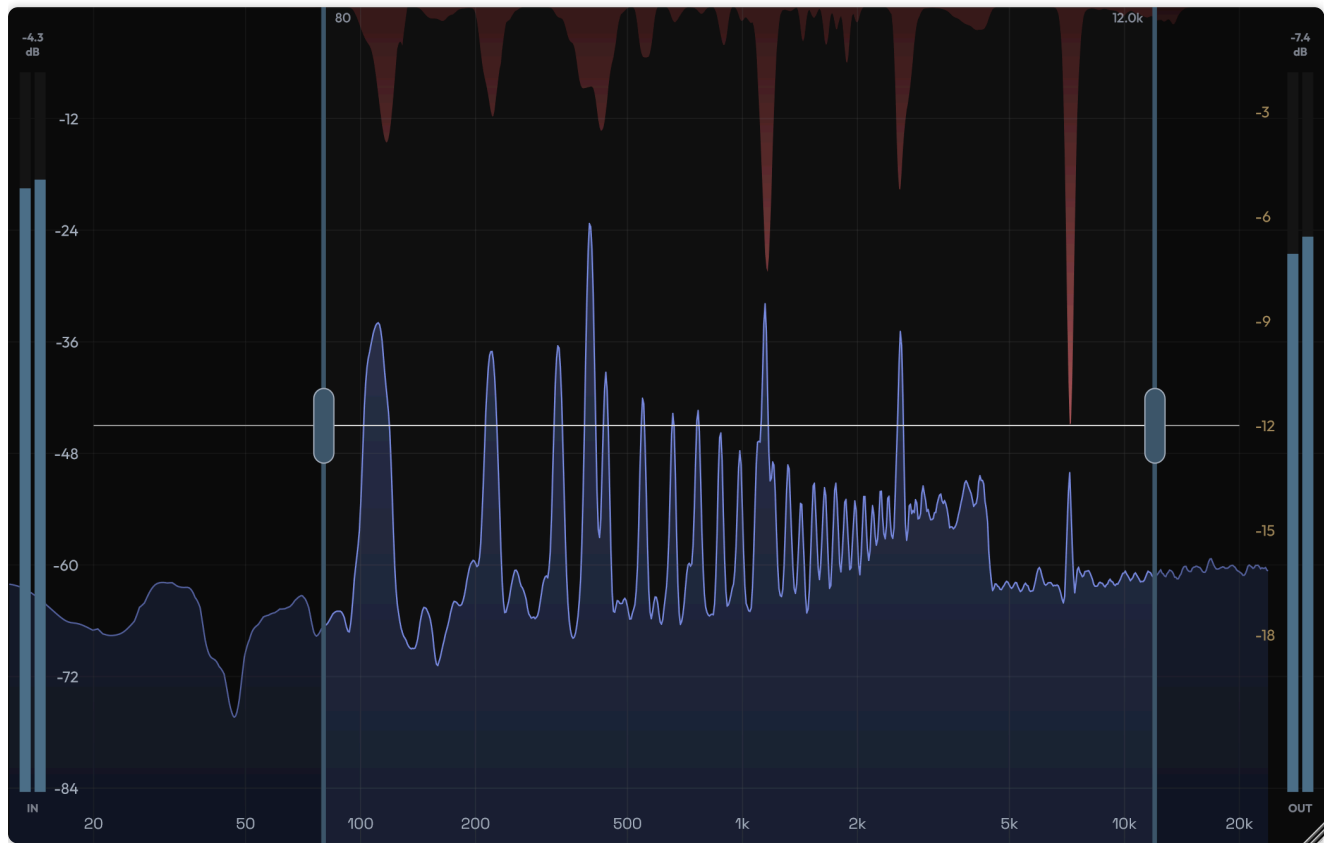
Learn suggests a starting point. It does not move AMOUNT or any other knob, and a pass that finds nothing significant leaves your existing setup alone.



In simple terms: click LEARN to start listening and click again to stop — or just stop the music and it finishes by itself. Double-click for a fixed eight-second pass. Either way it sets up focus points and the detection range for you.

8. The Graph

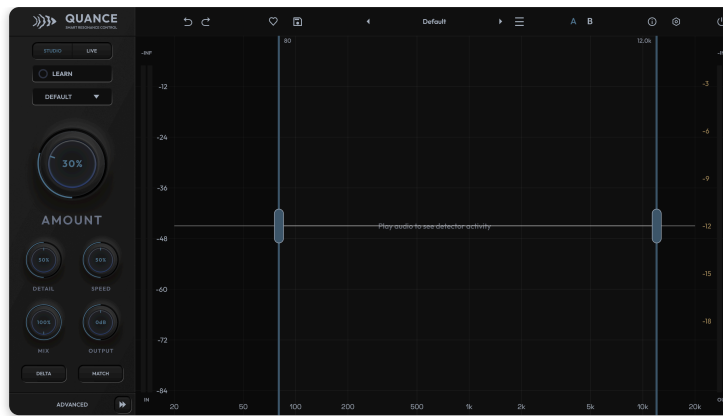
8.1 Reading the display



Audio running: blue output spectrum below, red reduction overlay descending from the top, detection-range handles at 80 Hz and 12 kHz, and the flat focus curve on the centre line.

- **Blue spectrum:** the processed output, drawn with a bright outline against the left dB scale on a logarithmic 20 Hz to 20 kHz axis. That scale runs from 0 down to -90 dB and is marked every 12 dB. It reads in absolute terms: a full-scale sine reaches the 0 dB line at the top. The display is also tilted by 4.5 dB per octave, which lifts the high end so well-balanced material reads roughly level across the window. Anything sloping steeply downhill really is dark.
- **Red overlay,** descending from the top: the current gain reduction per frequency, drawn against the amber scale on the right (0 to -18 dB). Notches reaching down show where QUANCE is working at this instant. The two never blend: a notch keeps its own shape and the blue spectrum parts around it, leaving a thin even gap between them.
- **Dimmed areas:** everything outside the detection range or ranges. The detector ignores them.
- **White curve:** the combined focus curve (section 8.4). It rests flat on the centre line until focus points bend it.

Until audio arrives the graph reads “Play audio to see detector activity”.



With no signal at the input, analysis pauses and the graph says so.

Push AMOUNT hard with the Max Cut ceiling switched off and the red overlay fills a great deal more of the display, because every filter is then free to cut as deep as the detector asks for.



AMOUNT at 90 % with Max Cut off: the reduction overlay spreads across the whole detected region instead of flattening against a ceiling.

8.2 Input and output meters

The two bar meters flanking the graph show stereo peak levels before (IN) and after (OUT) processing, on a -48 to 0 dB scale. The numeric readout above each meter holds peaks for about 1.5 seconds so brief hits stay readable.



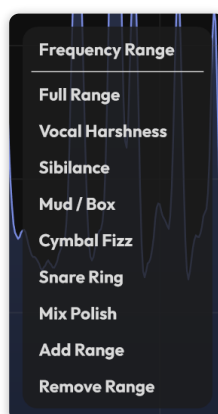
8.3 Detection ranges

A detection range decides where in the spectrum QUANCE may act. Everything outside is dimmed and untouched, and detection, reduction and Learn all respect it.

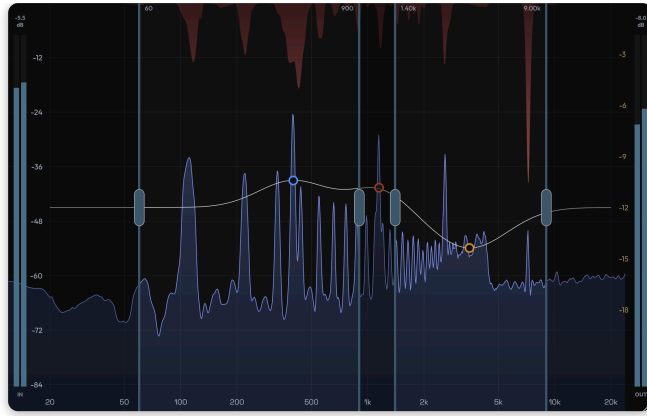
- Drag a handle, the pill on either edge bar, to move the low or high edge. Hold **Shift** for fine adjustment. Edge frequencies print at the top of the bars.
- Drag inside a range to slide the whole thing along the spectrum.
- Right-click inside a range for the range menu and its task presets. Right-click on empty dimmed space to add a new range there.

Up to **four** independent ranges can be active at once, which lets you tame low-mid mud and high sibilance while leaving the presence region completely alone. Ranges cannot overlap, and dragging two together merges them. **Remove Range** deletes the one you clicked, though the last remaining range cannot be removed.

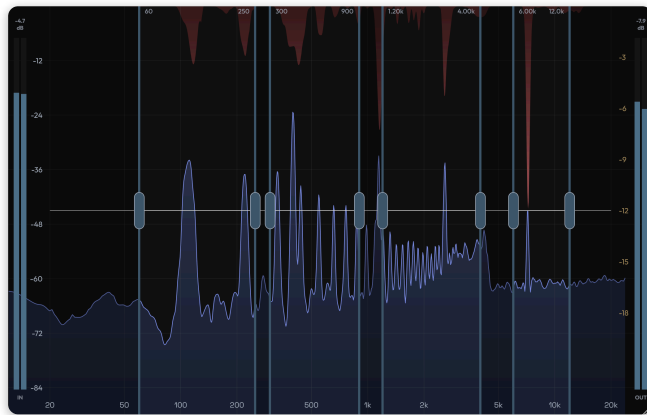
Range preset	Span	Typical use
Full Range	20 Hz – 20 kHz	Let the detector see everything
Vocal Harshness	150 Hz – 10 kHz	General vocal cleanup
Sibilance	4 kHz – 14 kHz	De-essing region
Mud / Box	120 Hz – 1.2 kHz	Low-mid build-up, boxy rooms
Cymbal Fizz	3 kHz – 20 kHz	Harsh cymbals and hi-hats
Snare Ring	250 Hz – 5 kHz	Ringing drums
Mix Polish	80 Hz – 16 kHz	Broad but safe bus range



The range menu, opened by right-clicking inside a range.



Two independent detection ranges. The region between them is ignored.



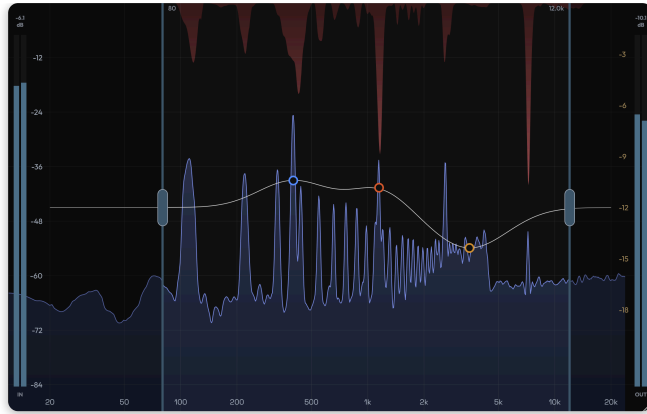
All four ranges in use, each targeting a different problem region.

8.4 Focus points

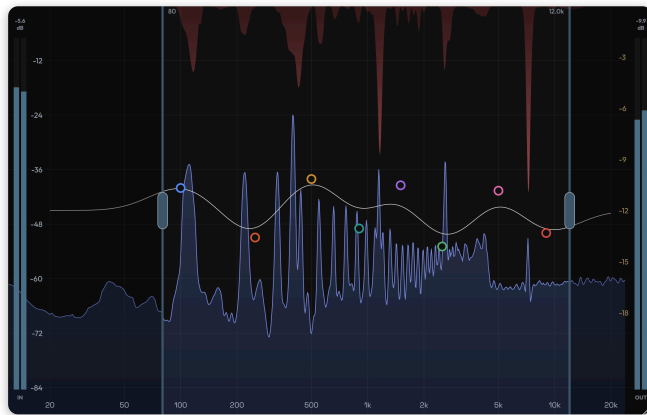
Focus points steer the detector by hand. Each one bends the white focus curve with a smooth bell around its frequency. Pushed up, detection becomes more eager there (**Tame**). Pulled down, the area is shielded from reduction (**Protect**). Up to **eight** points can be active at once, each with its own colour.

Creating and editing

- Double-click anywhere on the graph to add a point at that frequency.
- Drag a point to set frequency (x) and amount (y, from -100 % Protect to +100 % Tame). Hold Shift for fine moves.
- Scroll over a point or its curve to change width, from a surgical notch to a broad bowl. Shift + scroll is finer.
- Double-click a point to reset its amount to zero.
- Delete a point with Alt + click, the Del / <del> key, or its popup and menu.



Three focus points: two pushed up to tame, one pulled down to protect the fundamental.

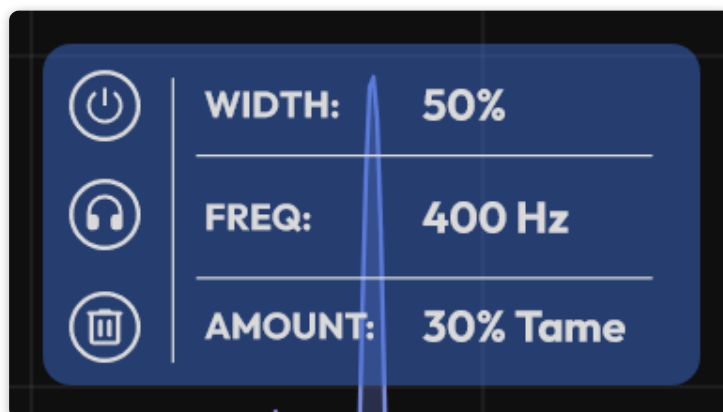


All eight focus points in play, shaping detection across the whole spectrum.

The value popup

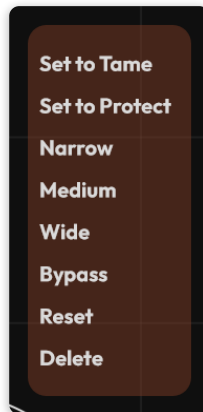
Selecting a point opens its popup. Drag or scroll the WIDTH, FREQ and AMOUNT values to fine-tune them. Three icons sit on the left:

- **Bypass** (power): disable the point while keeping its settings.
- **Listen** (headphones): solo a bandpass at the point's frequency and width so you can hunt the exact resonance by ear while dragging. What you hear is the processed signal through that band, which means you can judge the cut itself. Listening suspends loudness matching. Click again to return to normal monitoring.
- **Delete** (bin): remove the point.



The right-click menu

Right-clicking a point offers quick actions: **Set to Tame** (+40 %), **Set to Protect** (−40 %), the width presets **Narrow**, **Medium** and **Wide**, plus **Bypass**, **Reset** and **Delete**.

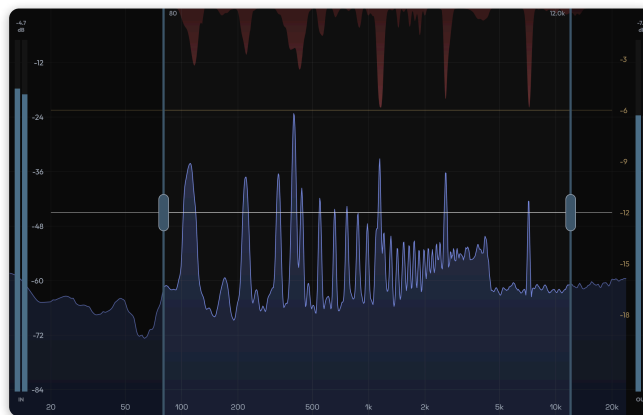


A point placed outside every detection range shows with a dimmed centre. It has no effect until a range covers its frequency.

In simple terms: push the curve up where you want more taming, pull it down over anything you want protected.

8.5 The Max Cut line

The horizontal amber line is the Max Cut ceiling. No spectral filter may reduce more than this many dB. The range runs from 0 to 18 dB and the default is 6. Drag the line down to allow deeper cuts, or up to keep the processing subtle, and a chip shows the exact value while you drag. When filters hit the limit the red overlay visibly flattens against the line, which is a clear sign the ceiling rather than the detector is in charge.



Reduction held under a 6 dB Max Cut ceiling, with the deepest notches pressing up to the line.

The ceiling is now switchable, and off by default. A **Max Cut** toggle in the Advanced panel decides whether the line applies at all. Switched off, there is no fixed ceiling: AMOUNT alone governs how deep a cut can go, scaling from nothing at 0 % up to the full 18 dB once AMOUNT reaches 60 %. Switched on, you get the drag-and-set line described above. See section 9.4.

With the ceiling on, mixes and masters usually want 2 to 4 dB, single tracks 5 to 9 dB, and rescue jobs more.

In simple terms: Max Cut is a hard limit on how deep any single cut can go, and you can hand that decision to AMOUNT instead.

9. Advanced Panel

The **ADVANCED** button at the bottom of the side panel opens the panel. The arrow in its top-left corner closes it again, and it can also open automatically with the editor (section 12.2).



9.1 Tone Protect

Tone Protect watches the harmonic structure of the material, meaning fundamentals, overtone series and vocal formants, and holds the reduction back where it would damage them. Higher values keep an instrument's body and vowel colour intact even under heavy taming. Lower values let QUANCE dig into pitched content too.

Turn it up for vocals and melodic instruments. Turn it down when the resonance you are fighting is itself pitched, such as a ringing note or a howling room mode.

In simple terms: Tone Protect shields the musical harmonics from being treated as problems.

9.2 Transients Protect

Transients Protect spots attacks (drum hits, consonants, plucks) and briefly relaxes the reduction while they pass. That keeps punch and articulation intact, because a transient's broadband burst would otherwise look to the detector exactly like a resonance flaring up. High values suit drums and percussive sources. Low values let QUANCE clamp everything including attacks, which is occasionally useful on sustained pads or as an effect.

Both protection amounts scale per Mode. Drums mode already biases transient protection up, and Vocal mode biases tone protection up.

In simple terms: Transients Protect keeps hits and consonants punchy.

9.3 Stereo Mode

Mode	Behaviour	Use when
Linked <i>(default)</i>	One shared reduction for both channels, driven by the louder of the two. The stereo image never shifts.	Almost always. The safest choice.
Dual	Left and right are analysed and processed fully independently.	Double-tracked or panned sources with different problems per side.
Mid-Side	The signal is processed as centre (mid) and sides, each independently.	Harshness sitting mostly in the centre, or mostly in the sides.
M-S Link	Mid-side matrixing with the two streams linked, so one shared reduction drives both.	You want mid-side targeting without the image moving.

Dual and Mid-Side give each channel its own reduction, and the red overlay shows when the two disagree. A translucent band spans the depths the channels reach, and a thin outline traces the left channel (the mid, in Mid-Side) so you can tell which one is digging deeper. In the linked modes one reduction drives both channels, so the band never appears there.



Mid-Side on strongly centred material. The outline follows the mid channel into the deep notches, and the lighter band shows how far the side channel stays behind.

Like a quality change, switching stereo mode crossfades so it never clicks.

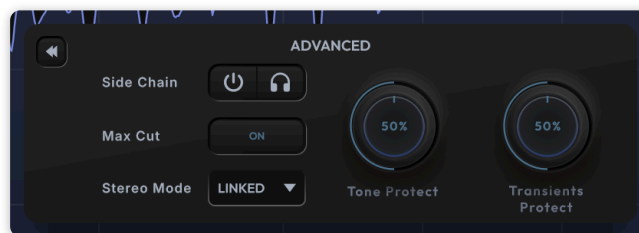


9.4 Max Cut

This pill switches the Max Cut ceiling on and off.

- **Off** (default): no fixed ceiling. AMOUNT alone decides how deep a cut may go, ramping from nothing at 0 % to the full 18 dB at 60 %. Past 60 % the available depth stops growing, and the rest of the knob's travel drives the detector instead. This is the setting that lets a high AMOUNT value open up the whole reduction display.
- **On**: the amber line on the graph becomes active and sets a hard limit you drag by hand (section 8.5).

Switch it on when you want a guarantee about the worst case, which matters most on masters and buses. Leave it off when you would rather let one knob handle both how often and how deeply QUANCE acts. If you nearly always want the ceiling, a global setting can start new instances with it on (section 12.2).

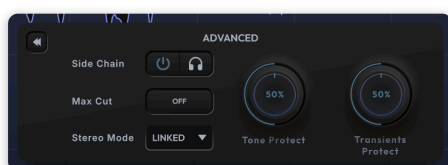


In simple terms: the Max Cut pill decides whether you set the depth limit yourself or hand it to AMOUNT.

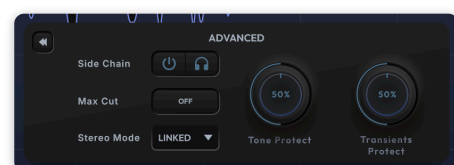
9.5 Side Chain

QUANCE can detect on an external signal instead of the track it is processing. Route a sidechain source to QUANCE in your DAW, then use the two halves of the Side Chain button.

- **Power half:** arm the sidechain. The detector now reacts to the external signal's resonances while the reduction still applies to your track. The classic use is unmasking. Send the lead vocal into a QUANCE on the guitar bus and the guitars dip precisely where the vocal needs space.
- **Headphones half:** audition the incoming sidechain signal to verify routing. This monitors whatever the DAW feeds the sidechain input whether armed or not, so remember to switch it off before you carry on mixing.



Armed.



Listening.

In simple terms: the left half makes QUANCE listen to another track, the right half lets you hear that track.

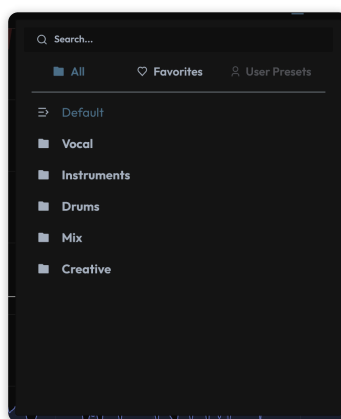
10. Presets

10.1 The preset browser

Open the browser from the preset name or the list icon in the header. It holds:

- **Search**, which filters the whole library by name as you type.
- **All**, **Favorites** and **User Presets** tabs.
- A **Default** entry that restores the factory default state.
- Category folders. Click to expand, then click a preset to load it.

Hovering a preset row reveals a heart to toggle favourite and, on user presets, a bin. Deleting asks for confirmation. Loading any preset is a single undo step.

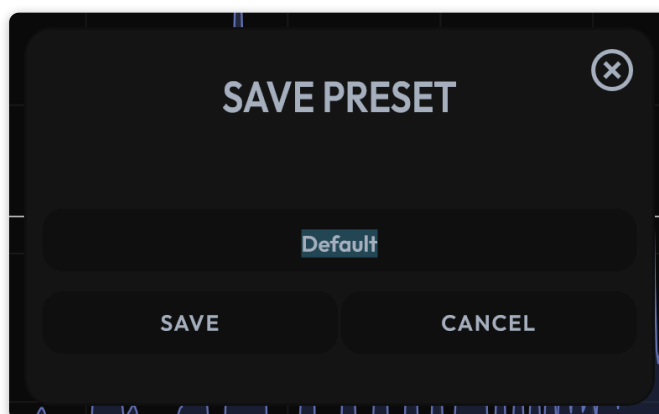


User presets are plain files, so they are easy to back up or move between machines:

- **Windows:** Documents\Codwaves\QUANCE\User Presets\
- **macOS:** ~/Documents/Codwaves/QUANCE/User Presets/

10.2 Saving presets

Click the disk icon, name the preset and press **SAVE** or **Enter**. Factory names and “Default” are reserved. Saving over one of your own warns first: the button turns into **OVERWRITE** and a second click confirms. A preset stores every sound-shaping setting including mode, ranges and focus points. Your Studio/Live grade stays with the machine.



10.3 Factory library

QUANCE ships with **53** task-named factory presets. Each sets the mode, AMOUNT, Detail, Speed, Max Cut, protections and focus points for a specific job, and the names say what they fix.

Category	Presets
Vocal (12)	Vocal Harshness · Vocal Sibilance Soft · Vocal Sibilance Strong · Nasal Vocal · Shouty Vocal · Boxy Vocal · Bright Mic Tamer · Podcast Room Ring · Dialogue Cleanup · Voiceover Smooth · Bedroom Vocal Fix · Rap Vocal Edge Control
Instruments (17)	Acoustic Guitar Fizz · Acoustic Guitar Pick Edge · Acoustic Guitar Body · Electric Guitar Bite · Distorted Guitar Fizz · Piano Ring · Piano Harshness · Harsh Synth · Synth Lead Edge · Resonant Pad · Mellow Pad Bloom · Brass Edge · Violin / Upper Strings · Cello · Double Bass · Boxy Sample · Lo-Fi Sample Cleanup
Drums (10)	Cymbal Harshness · Hi-Hat Bite · Hi-Hat Tizz Control · Bright Percussion Tamer · Overhead Smooth · Snare Ring · Snare Boxiness · Room Mic Tamer · Drum Bus Gentle · Percussion Ring
Mix (9)	Gentle Mix Polish · Master Safety · Low-Mid Cloud · Harsh Bus · Bright Mix Tamer · Muddy Bus · Sample Bus Cleanup · Parallel Smooth · Streaming Polish
Creative (5)	Hard Resonance Clamp · Darken Harsh Loop · Smooth Digital Edge · Extreme Ring Control · Lo-Fi Resonance Tame

Factory presets keep the detection range fully open, so none of them can quietly hide a problem that sits somewhere unexpected on your material. Narrow the range or run Learn after loading if you want tighter targeting.

11. A/B Comparison and Undo

The A/B system holds two complete setting states.

1. Dial in a first candidate. That is your A.
2. Click **B**. The current state stores into A and you carry on editing B. Try a different approach: another mode, another balance of AMOUNT and Max Cut.
3. Click A and B alternately to compare. With MATCH engaged the comparison is loudness-fair.

Everything that shapes the sound travels with the snapshot: knobs, mode, ranges, focus points, Delta and Match. The one exception is the Studio/Live quality selection, which stays put so A/B never changes latency. Both states save and restore with the DAW session.

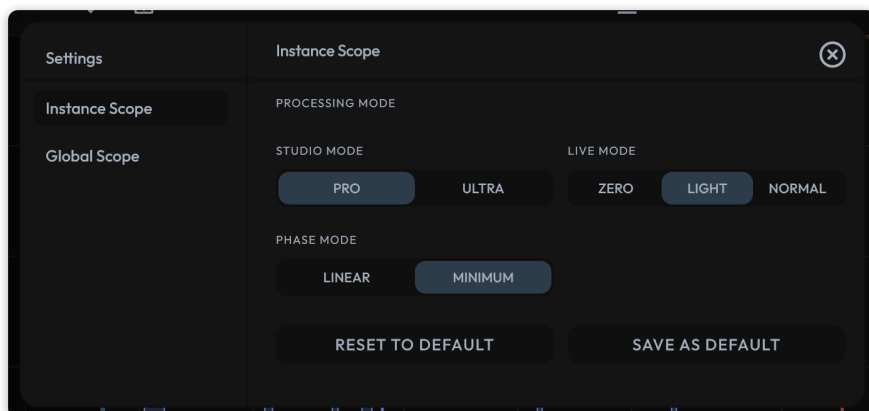
Undo and redo cover every change from both the panel and the graph. Each Learn pass, preset load or point edit is one clean step.

12. Settings

The gear icon opens the Settings popup, split into two scopes.

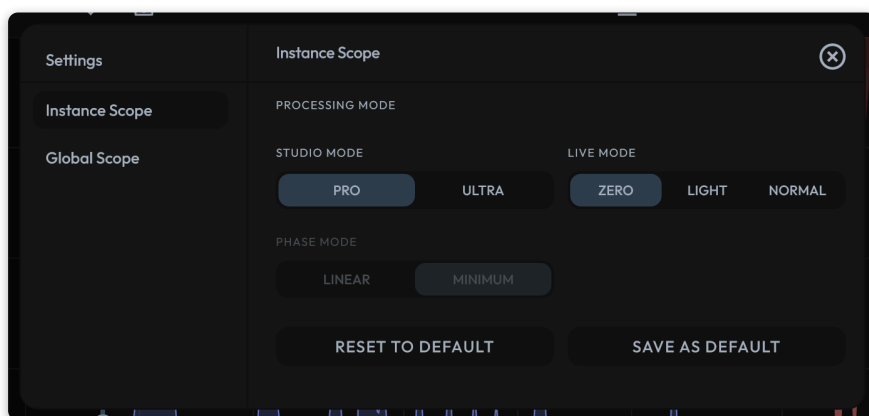
12.1 Instance Scope

These belong to this plugin instance.



- **Studio Mode**, Pro or Ultra: the grade used when quality is set to Studio. Pro is the efficient default. Ultra doubles the analysis windows for the finest frequency resolution at double the latency.
- **Live Mode**, Zero, Light or Normal: the grade used on Live. Zero reports no latency at all, Light is the fastest of the windowed options, and Normal trades a little latency for better low-frequency discrimination. Section 13.2 explains the difference properly.
- **Phase Mode**, Linear or Minimum: how the reduction is applied. Section 13.3 covers this.
- **Save As Default** stores the current quality selection as the default for new instances and asks "Update all running instances?". YES also switches every QUANCE already in the session, NO only saves the default, CANCEL aborts.
- **Reset To Default** returns this instance to the saved default.

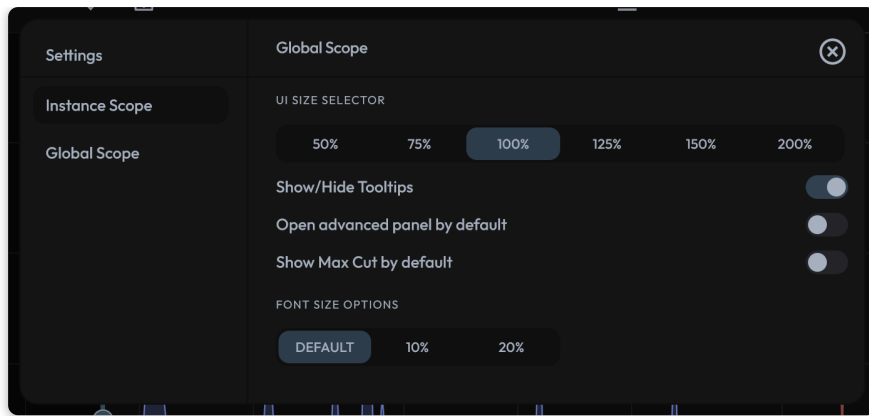
Picking a Studio grade switches quality to Studio, and picking a Live grade switches it to Live, so what you audition is always what you chose.



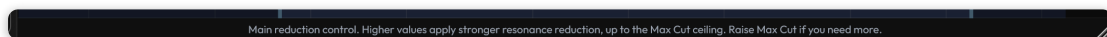
Live Zero selected. Phase Mode greys out, because the zero-latency engine is always minimum phase.

12.2 Global Scope

These apply to every QUANCE instance on this computer, immediately.



- **UI Size Selector**, 50 % to 200 %. You can also drag the bottom-right corner of the window freely, and the aspect ratio is maintained.
- **Show/Hide Tooltips** toggles the slim bar under the graph describing whichever control the mouse is over. It is shown by default.
- **Open advanced panel by default** makes new editors open with the Advanced panel already visible.
- **Show Max Cut by default** starts every newly inserted QUANCE with Max Cut on, so the ceiling is active and its line is there on the graph. It is off by default. Sessions you have already saved are left exactly as they were, and loading a factory preset still switches Max Cut off.
- **Font Size Options** enlarge all interface text by 10 or 20 %.



The tooltip bar describing the AMOUNT knob.

13. Engines, Phase and Latency

13.1 Signal flow

QUANCE runs a spectral chain per channel:

input → spectral analysis → resonance scoring → transient & tone protection → reduction filters → resynthesis → mix / delta → loudness match → output

- The **detector** compares each frequency against its spectral neighbourhood, scoring narrow peaks and broader build-ups separately, which is the balance Detail controls. It adapts its threshold to the long-term spectrum of your material, so a naturally bright source is not punished for being bright.
- A **psychoacoustic weighting** makes detection strongest where the ear is most sensitive.
- The **reduction engine** turns scores into per-frequency gain with a soft knee, your Max Cut ceiling where one is set, and attack and release smoothing scaled by Speed.
- The **dry path** is delay-aligned throughout, so Mix, Delta and Bypass stay phase-true.
- When the input falls silent, analysis pauses to save CPU.

13.2 The four engines

Two families, five grades, four distinct engines underneath.

- **Studio Pro** and **Studio Ultra** both run the three-band multi-resolution engine. Ultra simply doubles every window.
- **Live Light** and **Live Normal** run a single-window STFT. Normal uses the longer window.
- **Live Zero** is a different design altogether. Detection still happens in an analysis-only STFT, but the audio never enters an FFT. Reduction is applied by a bank of 48 minimum-phase bandpass filters, each subtracted from the input with its own smoothed gain. The audio path is causal and sample-aligned, which is why the plugin can honestly report zero latency. The trade is that detection reacts about one analysis window late, and selectivity is limited by the band spacing rather than by FFT bins.

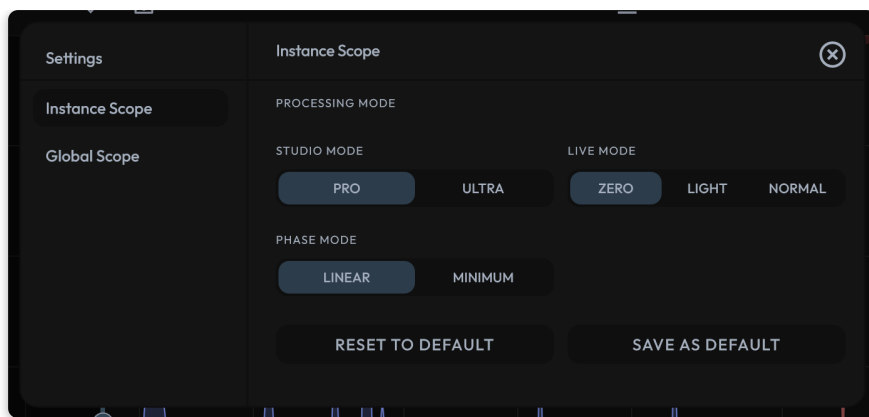
Use Zero when you are monitoring through the plugin and any latency at all is a problem. Use Studio when the DAW is compensating anyway.

13.3 Phase Mode

Phase Mode decides how the computed reduction is applied to the signal. It sits in Settings under Instance Scope, and it is not automatable, because flipping phase mid-note is an audible discontinuity.

- **Minimum** (default) runs the reduction magnitudes through a minimum-phase conversion. Any ringing the filters produce is pushed behind the transient rather than spread symmetrically around it, which generally sounds more natural on percussive material.
- **Linear** applies the gains with zero phase shift. Nothing smears in time and the processed signal blends cleanly with the dry path, which suits parallel work through the Mix knob.

Live Zero is always minimum phase by construction, so the Phase Mode row greys out whenever Zero is the active grade.



Phase Mode set to Linear.

13.4 Latency and CPU

Engine	Grade	Analysis window	Latency @ 44.1 kHz	Latency @ 48 kHz
Studio (3-band)	Pro (default)	4096 smp	≈ 93 ms	≈ 85 ms
	Ultra	8192 smp	≈ 186 ms	≈ 171 ms
Live	Zero	filter bank	0 smp	0 smp
	Light (default)	1024 smp	≈ 23 ms	≈ 21 ms
	Normal	2048 smp	≈ 46 ms	≈ 43 ms

CPU cost rises with window length, so Studio Ultra is the most expensive grade and the Live grades are the cheapest. Zero sits between the Live grades, because it still runs a full analysis STFT alongside its filter bank.

Above roughly 68 kHz the analysis windows scale, so latency in milliseconds and frequency resolution both stay about constant. QUANCE reports its latency to the host, so plugin delay compensation keeps everything in time.

14. Common Workflows

14.1 Cleaning a harsh vocal

1. Insert QUANCE after corrective EQ but before heavy compression, so the compressor never exaggerates the harshness first.
2. Select **Vocal** mode. Loop a busy, representative phrase and press **LEARN**.
3. Raise AMOUNT until the edge goes, typically somewhere around 35 to 55 %. Check with **DELTA**: you should hear harshness and sibilance leaving, with the vowels intact.
4. If sibilance needs more work, add a focus point around 5 to 8 kHz and push it up. If the voice loses body, raise Tone Protect or pull a Protect point down over the low mids.

14.2 Taming cymbals and drum buses

1. Use **Drums** mode, whose transient protection keeps the hits intact.
2. Right-click the detection range and choose **Cymbal Fizz**, or **Snare Ring** for ringing shells.
3. Raise AMOUNT with a slightly higher Speed so the reduction recovers between hits.
4. Watch the red overlay. It should flare on the harsh moments and disappear in between.

14.3 Polishing a bus or master

1. Select **Mix** mode, which lowers the reduction ceiling and slows the engine.
2. Switch **Max Cut on** in the Advanced panel and keep it around 2 to 4 dB. On a full mix a guaranteed worst case is worth having.
3. Keep AMOUNT at 15 to 30 %. Less is more here.
4. Leave MATCH on and A/B against bypass. The mix should sound calmer without sounding smaller.

14.4 Unmasking with the sidechain

1. Insert QUANCE on the accompaniment bus: guitars, keys, pads.
2. Route the lead vocal to QUANCE's sidechain input in the DAW, open the Advanced panel and arm the Side Chain with the power half. Use the headphones half once to verify routing.
3. The bus is now tamed exactly where the vocal has resonant energy, giving you a frequency-selective ducker that clears space without an overall volume dip.

14.5 Tracking and live use

1. Switch quality to **Live** and pick the **Zero** grade in Settings for no added latency.
2. Keep AMOUNT moderate. Extreme settings are harder to judge on stage, and with Max Cut off a high AMOUNT is a large amount of processing.
3. In Settings, **Save As Default** with "update all instances" puts every QUANCE in the show on the same engine.

15. Practical Tips

- Let LEARN make the first move. It is quicker than hunting by hand and one Undo step away if you disagree.
- Judge with DELTA, decide with MATCH. Delta tells you what is leaving; a loudness-matched bypass tells you whether the track actually improved.
- With Max Cut off, AMOUNT is doing two jobs at once: how often QUANCE acts and how deep it goes. If you want those separated, switch the ceiling on.
- Use Protect points as insurance. Pull one down over the fundamental of a bass or the body of a snare before pushing AMOUNT hard.
- Several gentle instances, one per problem area, usually sound better than one aggressive instance fixing everything.
- The narrower the detection range, the more confident you can be with AMOUNT.
- If the stereo image wobbles under processing you are probably in Dual mode. Go back to Linked, or try M-S Link if you specifically want mid-side targeting.
- Resonance taming before saturation or compression stops those processors amplifying the problem. A second gentle instance after heavy distortion catches whatever it created.

16. Troubleshooting

No sound at all

An unactivated QUANCE outputs silence, so open the plugin window and complete activation (section 3). If it is already activated, check the host's bypass and the Mix knob.

The plugin seems to do nothing

Confirm audio is playing and the blue spectrum moves. Check that the detection range covers the problem region, since dimmed areas are ignored, and that AMOUNT is above roughly 15 %. If Max Cut is switched on, check it is not set very low. The red overlay shows every action; if it never appears, the detector considers the material clean, so raise AMOUNT or Detail.

The sound became dull or hollow

Lower AMOUNT. Switch Max Cut on and set a modest ceiling. Lower Detail, since broad smoothing may be eating tone, raise Tone Protect, or pull a Protect point down over whatever lost its life. Narrowing the detection range keeps the air untouched.

Attacks lost their punch

Raise Transients Protect in the Advanced panel, switch to Drums mode, or slow Speed down so the reduction stops chasing every hit. Minimum phase mode also helps here.

Processing sounds fluttery or phasey

Lower Speed and Detail, and check which engine you are on. Live trades some smoothness for latency and Zero trades more again. If Max Cut is on, raising the ceiling a little can stop filters slamming against it.

The track is out of time

QUANCE reports its latency for automatic compensation, so enable PDC if your host has it switched off. For live monitoring use the Live engine, and Zero if you need no latency at all. Some hosts need playback to restart before compensation updates after a quality change.

A/B or bypass comparisons feel louder or quieter rather than better or worse

Engage MATCH, which is off by default. When Match is off, remember the Output trim is manual.

The sidechain does nothing, or I hear the wrong track

Arm the power half of the Side Chain button and route a source to the sidechain input in the DAW. If you are hearing the other track soloed, the headphones half is still engaged. Click it off.

Learn finishes but nothing changed

The pass found no stable resonance worth marking, or mostly silence played. Silent stretches do not count toward the eight seconds, and the button shows WAITING while it cannot hear anything. Loop a denser section and run it again. If the problem you are chasing is occasional, hold the button through a stretch that contains it rather than clicking once.

Activation messages

Message	Meaning and what to do
"Complete sign-in in browser..."	Finish the login in the browser window that opened.
"Timed out, please try again!"	The browser request expired. Click Activate again.
"Machine limit exceeded..."	Free a seat from your account page at codwaves.com , then retry.
"Online validation failed ... will deactivate at ..."	The grace period is running. Get the machine online, disable proxies and VPNs, restart the DAW.
"System clock rollback detected"	Fix the system date and time, enable automatic sync, and go online once.

17. Parameter Reference

Parameter	Range	Default	Notes
Amount	0 – 100 %	30 %	Main reduction control. Also sets cut depth while Max Cut is off
Mode	Default / Vocal / Instrument / Drums / Mix / Hard	Default	Detector and protection tuning; also steers Learn
Detail	0 – 100 %	50 %	Broad ↔ surgical
Speed	0 – 100 %	50 %	Reaction and recovery time
Detection Range Low / High	20 Hz – 20 kHz	80 Hz / 12 kHz	Up to 4 ranges; ranges 2–4 inactive by default
Max Cut	0 – 18 dB	6 dB	Per-frequency reduction ceiling, applied only while Max Cut On
Max Cut On	On / Off	Off	Off hands the depth limit to Amount (full 18 dB from Amount 60 %)
Mix	0 – 100 %	100 %	Latency-aligned dry/wet
Output	–12 – +12 dB	0 dB	Inactive while Match is on
Loudness Match	On / Off	Off	±3 dB compensation, ±1.5 dB in Mix mode
Delta	On / Off	Off	Monitor the removed signal
Side Chain / SC Listen	On / Off	Off	External detection / audition
Transients Protect	0 – 100 %	50 %	Advanced panel
Tone Protect	0 – 100 %	50 %	Advanced panel
Quality	Studio / Live	Studio	Not automatable; excluded from A/B and presets
Studio Mode	Pro / Ultra	Pro	Settings popup
Live Mode	Zero / Light / Normal	Light	Settings popup; Zero reports 0 samples latency
Phase Mode	Linear / Minimum	Minimum	Settings popup; not automatable; forced to Minimum on Zero
Stereo Mode	Linked / Dual / Mid-Side / M-S Link	Linked	Advanced panel
Focus Point 1–8	20 Hz–20 kHz · ±100 % · width 0–100 %	—	Created on the graph or by Learn; per-point bypass
Bypass	On / Off	Off	Latency-compensated dry passthrough

QUANCE · SMART RESONANCE CONTROL

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