

**ORRA AUDIO - PRODUCT MANUAL**

Version 1.2.0

# ORRA PRESS

**MULTI-MODULE SERIAL COMPRESSOR**

*Seven dynamics engines. Six reorderable slots.*

*One waveform at a time.*

Orra Audio LLC - 2026

# Welcome

Orra Press is a serial compressor plugin built around a single idea: that every stage of a dynamics chain deserves its own character. Rather than forcing you to insert separate plugins to shape dynamics, Orra Press gives you six reorderable slots, each of which can host one of seven dynamics engines:

- Classic - VCA-style feedforward compressor, with upward LIFT
- Optical - opto-style dual-release with program-dependent behaviour
- FET - aggressive FET grab with saturation and an all-buttons-in mode
- Multiband - linear-phase FIR 4-band split with per-band compression
- Spectral - FFT-domain per-bin dynamic reduction for resonance taming
- Limiter - mastering-grade brick-wall with ISP-aware true-peak detection and LUFS metering
- Clipper - near-zero-latency peak shaver with three curve shapes and anti-aliased oversampling

Every slot can hold any of the seven types - duplicates allowed. Chain a Classic into a Spectral into a Limiter if the song wants it. Compare four arrangements with the built-in A / B / C / D snapshots, save whole chains as user presets, and give every module its own recallable preset.

Orra Press is a first-class citizen of the Orra Link 2 ecosystem. Its companion sender plugin, Orra Link, streams audio from any track in your project into a cross-DAW sidechain channel, and each card in Orra Press can pick its own sidechain source - internal off, the host's external SC bus, a numbered Link channel, or a live Link track picked by name. See the Sidechaining chapter for details.

New in 1.2.0: the Clipper module; per-slot and master SOLO; a sidechain high-pass on Classic / Optical / FET; TILT and DELTA on Spectral; an AUTO gain button on Classic, Optical, FET and Spectral; upward LIFT on Classic; a selectable 60 / 80 / 100 / 120 dB analyzer range; module descriptions in the tips, which now speak seven languages. Under the hood: activate once and every loaded instance picks the licence up, a large drop in CPU when the editor is opened, scope and meters that keep running with the transport parked, and a move to JUCE 9.

This manual is organised front-to-back: start with the Interface Tour to orient yourself, then skim the module chapters for the engines you plan to use. The later sections cover sidechaining, LIVE mode, module and factory presets, the oscilloscope, the LUFS meter, the A / B / C / D comparison system, a workflow tips section, and a latency appendix.

## System Requirements

|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Formats</b>  | VST3, Audio Unit (AU), AAX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Platform</b> | macOS 10.13 or later (Universal 2: Apple Silicon + Intel). Windows 10 or later (64-bit).                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Latency</b>  | In normal mixing mode, each enabled Classic / Optical / FET / Clipper adds about 33 samples of constant oversampling padding, and one host block is reserved for Orra Link time-alignment. Multiband adds 511 samples (linear-phase FIR); Spectral adds 2048 samples (FFT overlap-add); the Limiter adds its lookahead time. Engage LIVE mode to drop the added latency on Classic / Optical / FET / Clipper to zero for tracking. All latency is reported to the host for delay-compensated routing - see the LIVE Mode chapter and the Latency appendix. |

# Interface Tour

The window is organised top-down into four horizontal regions:

## 1. Header

Spans the top of the window. Contains the plugin title; the global BYP (bypass) button; the SOLO button (clears every slot solo); the LIVE toggle (zero-latency tracking mode); four A / B / C / D comparison snapshots with the RESET button; the factory-and-user preset menu; the SAVE button; the preset LIBRARY button; the UI scale selector (100-200%); and the ? tips toggle on the far right. Right-click the ? to choose the tooltip language.

## 2. Chain Strip

Six cards laid out left-to-right - one per slot. Each card shows the slot's current module type (a dropdown), an enable checkbox, a pair of < / > arrow buttons that move the slot earlier or later in the signal chain, an S (solo) button, a PRESET control for saving and recalling that module's own presets, and a live read-out of gain reduction plus stereo correlation. A coloured left stripe indicates the type-accent colour of whatever engine is loaded. Click anywhere on a card's body to select it - the controls panel below updates to show that slot's parameters.

## 3. Controls Panel + Analyzer

The wide middle region splits into two: the left side holds the selected slot's parameter knobs (grouped into rows), the right side holds the analyzer for that slot. Above the knobs sits the SIDECHAIN source picker (Off / External / numbered Link channels / live Link tracks by name), a LISTEN button with a source level meter beside it, an HPF selector for the detector on Classic / Optical / FET, and a small live GR read-out in dB. The analyzer has its own tab strip at the top, with a dB range selector at the right-hand end of it - tabs vary by module type:

| Type      | Tabs     | Notes                                                                 |
|-----------|----------|-----------------------------------------------------------------------|
| Classic   | Scope    | Envelope waveform. Meters = transfer-curve plot + GR + I/O.           |
| Optical   | Scope    | VU = analog needle GR meter + I/O strips.                             |
| FET       | Scope    | VU = analog needle GR meter + I/O strips.                             |
| Multiband | Spectrum | 4-band overlay with draggable handles. GR = per-band spectrogram.     |
| Spectral  | Spectrum | Per-bin curves with focus handles. GR = per-bin spectrogram.          |
| Limiter   | Scope    | LUFS = loudness history + integrated readouts.                        |
| Clipper   | Scope    | Envelope waveform. Meters = transfer curve at the ceiling + GR + I/O. |

## 4. Footer

A pair of knobs for global INPUT and OUTPUT gain (-24 to +24 dB), sitting in the bottom-left and bottom-right corners. The bottom strip also holds the tips panel (visible when the ? button is on) which displays contextual help for whatever knob, button, or control your mouse is hovering.

# The Modules

Each slot has two layers of parameters: the type (Empty / Classic / Optical / FET / Multiband / Spectral / Limiter / Clipper), and a per-type parameter set that is independent across types. Switching a slot from Classic to FET does not overwrite your Classic settings - the old values are remembered and return when you flip back. This lets you audition different engines on the same slot without losing your dial-ins.

Most slot types also expose an OS (oversampling) pill row - Off / 2x / 4x / 8x - that runs the detector and gain stage at higher rates for less aliasing on hot transients. The Limiter's equivalent is the QUALITY row (STD / HIGH / ULTRA = 4x / 8x / 16x). While LIVE mode is engaged the OS pills on Classic / Optical / FET / Clipper dim, and your choices are restored the moment you leave LIVE.

Classic, Optical, FET and Spectral also carry an AUTO button beside their makeup control. With AUTO on, the module adds its own slow-averaged gain reduction back as makeup - smoothly, over about 300 ms - so bypassing the module compares character rather than level and you can set the threshold by ear. It matches the average reduction, not the peaks, so a limiter after an AUTO stage may have a little more to do. Your own makeup knob still applies on top.

## CLASSIC

### VCA-STYLE - NEAR-ZERO LATENCY - UPWARD LIFT

The workhorse. A feedforward VCA with stereo-linked peak detection, soft-knee static curve, and standard attack / release envelope following. Use Classic for glue on busses, general-purpose track compression, or as the second stage of a fast-then-slow chain. Its behaviour is predictable and transparent - dial it in and it stays there. In normal mode it carries only a small constant oversampling pad; engage LIVE for a truly zero-latency tracking chain.

| Control   | Range         | Purpose                                                                        |
|-----------|---------------|--------------------------------------------------------------------------------|
| Threshold | -60 to 0 dB   | Level above which compression engages.                                         |
| Ratio     | 1:1 to 20:1   | Amount of reduction applied above threshold.                                   |
| Attack    | 0.1 to 200 ms | Time for the envelope to engage on a new peak.                                 |
| Release   | 5 to 2000 ms  | Time for the envelope to recover after a peak.                                 |
| Knee      | 0 to 24 dB    | Soft-knee width (quadratic) around the threshold.                              |
| Makeup    | -12 to +24 dB | Post-compression gain to recover perceived level.                              |
| Auto      | On / Off      | Adds the average gain reduction back as makeup, on top of your Makeup setting. |
| Lift      | 0 to 24 dB    | Upward compression below the threshold. 0 = downward only.                     |
| Mix       | 0 to 100 %    | Wet / dry blend for parallel compression.                                      |

## **LIFT - upward compression**

With LIFT above zero, the Classic's static curve works in both directions. Above the threshold the gain comes down as usual; below it the gain goes UP, following the same RATIO and the same KNEE, by at most the LIFT amount. Bite, sustain and room detail come forward without the peaks moving at all. The card's read-out prints the lift in gold as "GR +x.x dB" whenever the module is adding gain rather than taking it away.

The honest caveat, and it is inherent to upward compression rather than a quirk of this one: everything quiet rises, including the noise floor, room tone and headphone bleed, by up to the LIFT amount. Set the threshold near the quiet parts you actually want lifted, not down in the silence between them. LIFT at 0 is exactly the downward-only behaviour of earlier versions.

### **Use it for:**

- Bus glue on a drum bus - gentle 2:1 with slow attack and medium release
- Vocal smoothing - 4:1 with a soft knee for transparent leveling
- Stage two of a chain - tight ratio with 6-12 dB knee for invisible glue after a faster engine
- Sparse guitar or a close-mic'd room - 4-6 dB of LIFT to bring sustain and air up while the peaks stay put

# OPTICAL

## OPTO-STYLE - PROGRAM-DEPENDENT - FOUR CONTROLS

An opto emulation that trades precision for feel. Its release is a dual-stage envelope - a fast ~120 ms stage layered over a slow ~1.5 s memory envelope that extends release whenever the compressor has been busy. Material with sustained activity releases slowly; isolated peaks recover quickly. The static curve is soft at small over-threshold amounts and climbs toward the user's ratio only as you push harder.

The Optical UI drops the conventional Threshold / Ratio / Attack / Release knobs in favour of the opto's own vocabulary: PEAK RED sets how hard the comp is working, MODE picks between Compress and Limit. Internal timing is fixed because program-dependency is the Optical's character.

| Control  | Range            | Purpose                                                         |
|----------|------------------|-----------------------------------------------------------------|
| Peak Red | 0 to 100         | Drives the compression amount; higher = more reduction.         |
| Mode     | Compress / Limit | Compress = ~3:1 gentle. Limit = ~20:1 hard.                     |
| Gain     | -12 to +24 dB    | Output makeup (same role as MAKEUP on other types).             |
| Auto     | On / Off         | Adds the average gain reduction back as makeup, on top of GAIN. |
| Mix      | 0 to 100 %       | Wet / dry blend.                                                |

### Use it for:

- Vocal leveling - the slow release smooths dynamics without pumping
- Bass guitar - the soft initial ratio leaves transients alone
- Two-bus glue with Limit mode engaged for a gentle ceiling

# FET

## AGGRESSIVE GRAB - ALL-BUTTONS-IN MODE

A fast-attack FET-style compressor with input-driven engagement. Drive the INPUT knob to engage more compression; the hotter input also feeds a tanh saturation stage that scales with the amount of gain reduction, giving you the FET's characteristic harmonic glow when you push it. A separate THRESH knob sets the level the FET reacts to - its default of -18 dB reproduces the classic fixed-threshold behaviour, and you can lower it to engage the comp on full mixes without driving INPUT painfully hot.

Ratio is selected by a five-pill button row - 4 / 8 / 12 / 20 and the ALL all-buttons-in mode. ALL takes the ratio past 20:1, multiplies the saturation drive, and runs the release at half-time - the chaotic British-mode feel, built in. A fresh FET slot opens at 0 dB of drive so loading one never produces a jarring level jump; the hot-input character is one knob-turn away.

| Control   | Range                 | Purpose                                                             |
|-----------|-----------------------|---------------------------------------------------------------------|
| Threshold | -60 to 0 dB           | Level the FET reacts to. Default -18 dB is the classic fixed point. |
| Input     | 0 to 40 dB            | Pre-compressor drive. More INPUT = more engagement and saturation.  |
| Ratio     | 4 / 8 / 12 / 20 / ALL | Button-row ratio selector. ALL is the British mode.                 |
| Attack    | 0.1 to 200 ms         | Sub-millisecond attack is where the FET character lives.            |
| Release   | 5 to 2000 ms          | ALL mode runs this at half-time internally.                         |
| Output    | -12 to +24 dB         | Post-compression makeup gain.                                       |
| Auto      | On / Off              | Adds the average gain reduction back as makeup, on top of OUTPUT.   |
| Mix       | 0 to 100 %            | Wet / dry blend.                                                    |

### Use it for:

- Drum room in parallel with ALL engaged - instant aggression at low Mix %
- Vocals with 8:1 and fast attack for peak control
- Snare top for transient grab - attack at 0.1 ms, release at ~40 ms

# MULTIBAND

## 4-BAND LINEAR-PHASE FIR - 511-SAMPLE LATENCY

A four-band compressor built around a linear-phase FIR crossover network. All four bands share the same group delay, so compressing one band hard does not leak energy into its neighbours - cross-band bleed is eliminated beyond a quarter-octave from each crossover. The price is 511 samples (~10.6 ms at 48 kHz) of reported latency, which the host compensates for via PDC.

The analyzer's Spectrum tab replaces the oscilloscope with a real-time frequency display. Three draggable gold crossover handles sit at the top of the spectrum - grab them to move the crossover frequencies. A draggable red dashed threshold line appears over each band, giving you a visual way to set the engagement point directly against the music's spectrum. The GR tab shows a scrolling spectrogram of compression depth per band over time.

Switch between bands using the four BAND 1 / 2 / 3 / 4 tab buttons above the knob area - each band has its own independent threshold, ratio, attack, release, gain, mix, and enable settings. Clicking a band's region directly in the spectrum view also focuses that band.

| Control            | Range         | Purpose                                                     |
|--------------------|---------------|-------------------------------------------------------------|
| <b>Crossovers</b>  | 40 - 15000 Hz | Three draggable handles, interlocked so $xo1 < xo2 < xo3$ . |
| <b>Band Enable</b> | On / Off      | Per-band bypass switch.                                     |
| <b>Threshold</b>   | -60 to 0 dB   | Per-band. Draggable from the spectrum view.                 |
| <b>Ratio</b>       | 1:1 to 20:1   | Per-band.                                                   |
| <b>Attack</b>      | 0.1 to 200 ms | Per-band.                                                   |
| <b>Release</b>     | 5 to 2000 ms  | Per-band.                                                   |
| <b>Gain</b>        | -12 to +24 dB | Per-band makeup.                                            |
| <b>Mix</b>         | 0 to 100 %    | Per-band wet / dry blend.                                   |

### Use it for:

- De-essing with only the top band active and a tight threshold
- Full-mix mastering glue with all four bands at gentle 2:1
- Kick / bass separation - tightening the sub-band without squashing the mids

### Masking overlay

With a Multiband slot keyed off an Orra Link 2 source and the Spectrum analyzer open, the source's spectrum is overlaid on the display in the source's track colour. Emphasis bands mark where the source's energy crowds within 6 dB of your signal - so you can see exactly where, say, the kick is eating the bass. The overlay uses Link 2's pull-based telemetry: senders only pay the analysis cost while the analyzer is actually visible.

## **Analyzer range**

At the right-hand end of the analyzer tab row sits a dB range selector - 60 / 80 / 100 / 120 dB. It sets the vertical span of the Multiband spectrum and of the Spectral view, and is hidden on the views it does not affect. 60 dB zooms in on the loud part of the picture for mastering work; 120 dB pulls the noise floor into view. Threshold lines, the rulers and the masking overlay all follow the choice. It is remembered with the session but never stored in a preset or an A / B / C / D bank - a view setting, not part of your sound.

## **Performance**

The linear-phase crossover was rewritten in 1.1.0 as a vectorized block convolution (Accelerate / vDSP), roughly 18x faster than before. It drops from a heavy share of a CPU core to well under one percent, putting Multiband in the same CPU neighbourhood as every other module. The filter response is mathematically identical, and renders null against previous versions to floating-point precision.

# SPECTRAL

## FFT-DOMAIN PER-BIN - 2048-SAMPLE LATENCY

A frequency-domain compressor that applies per-bin gain reduction based on a 2048-point FFT with 75 % overlap (Hann window, overlap-add). Each of the ~1000 independent frequency bins gets its own envelope and its own dynamic reduction. Stereo detection is linked (per-bin maximum across channels), so stereo image is preserved.

The Resonance control is the engine's defining parameter. At 0 % it behaves like a broadband spectral compressor - every bin above threshold ducks. At 100 % it compares each bin to a smoothed local neighbourhood and only ducks bins that stick up from their surroundings - so narrow resonances (ringing, harshness, feedback tones) get targeted while broadband content passes through untouched.

Two draggable focus handles on the left and right edges of the spectrum view let you limit compression to a frequency range. Bins outside the focus range pass through untouched; the UI dims those out-of-focus zones.

| Control          | Range           | Purpose                                                           |
|------------------|-----------------|-------------------------------------------------------------------|
| <b>Threshold</b> | -60 to 0 dB     | Per-bin engagement level.                                         |
| <b>Ratio</b>     | 1:1 to 20:1     | Per-bin reduction ratio.                                          |
| <b>Attack</b>    | 0.1 to 200 ms   | Per-bin envelope attack.                                          |
| <b>Release</b>   | 5 to 2000 ms    | Per-bin envelope release.                                         |
| <b>Knee</b>      | 0 to 24 dB      | Soft-knee width around threshold.                                 |
| <b>Makeup</b>    | -12 to +24 dB   | Output makeup gain.                                               |
| <b>Auto</b>      | On / Off        | Adds the average gain reduction back as makeup, on top of MAKEUP. |
| <b>Mix</b>       | 0 to 100 %      | Wet / dry blend (latency-matched).                                |
| <b>Resonance</b> | 0 to 100 %      | Blends absolute-over (0) with neighbour-excess (100).             |
| <b>Smooth</b>    | 1 to 32 bins    | Half-width of the neighbourhood-averaging window.                 |
| <b>Tilt</b>      | -6 to +6 dB/oct | Leans the threshold across the spectrum about a 1 kHz pivot.      |
| <b>Focus</b>     | 20 Hz - 20 kHz  | Frequency range that gets compressed; outside passes through.     |

### TILT - leaning the threshold

TILT tips the threshold across the spectrum, in dB per octave around a 1 kHz pivot. Positive values lower the threshold toward the highs, so bright, thin material hits it sooner - the top end of a bass DI, or sibilance on a vocal - while the lows are left more room. Negative values lean the other way and lean on the lows

instead. A useful landmark: at +3 dB/oct, pink noise compresses by the same amount in every octave, because pink noise itself falls at 3 dB per octave. TILT at 0 is exactly the flat threshold of earlier versions.

### **DELTA - hear what is being removed**

The DELTA button on the Spectral card replaces the module's output with the difference between its output and its own latency-aligned dry signal, scaled by MIX. What you hear is precisely what the module is taking out - the honest answer to "is this doing more than the analyzer suggests?". Because MIX scales it, a delta at 50 % MIX is half as loud as the same delta at 100 %, which is a fair reflection of how much is reaching the mix.

DELTA is an audition state, not a setting. Modules AFTER this slot process the delta signal like any other audio, so a limiter further down the chain will react to it. It clears itself when you select another card, when you close the plugin window, when the slot changes type, and when the project reloads - it is never saved with the session or with a preset.

### **Use it for:**

- Taming a ringy snare resonance - high Resonance, narrow Smooth
- De-harshing harsh vocal consonants in the 2-6 kHz range
- Killing room modes on recorded material without EQ'ing them away
- Bright, thin sources - a few dB/oct of positive TILT so the top end engages before the body does

# LIMITER

## MASTERING-GRADE BRICK-WALL - TRUE-PEAK / LUFS / ISP

A high-fidelity brick-wall limiter built for the end of the chain. Combines a soft-clip pre-stage, a lookahead envelope follower, parallel fast and slow release, intersample-peak (ISP) prediction, and oversampled true-peak detection per the ITU-R BS.1770 standard. The QUALITY pill row picks an oversampling tier - Standard (4x), High (8x), or Ultra (16x) - with the higher tiers trading CPU for tighter ISP control on aggressive masters.

The STYLE button row chooses the soft-clip curve and the fast-release ballistics: Clean (gentle tanh, transparent), Warm (medium tanh with audible second / third harmonic content), or Smash (cubic soft-knee approaching a hard clip for maximum loudness). Gain reduction is downwards by design; the styles' program-dependent saturation is Orra's take on upwards compression.

| Control   | Range                | Purpose                                                                                                 |
|-----------|----------------------|---------------------------------------------------------------------------------------------------------|
| Input     | 0 to 24 dB           | Pre-limiter drive. Push for loudness; the soft-clip stage shapes overdrive before the brick-wall stage. |
| Ceiling   | -6 to 0 dB           | Maximum allowed output level (true-peak aware). -0.3 dB is a safe streaming target.                     |
| Lookahead | 0 to 8 ms            | How far ahead the limiter peeks to anticipate transients. 5-8 ms for transparent mastering.             |
| Release   | 1 to 1000 ms         | Auto-blends with a fast parallel release internally to avoid pumping. 30-100 ms covers most material.   |
| Style     | Clean / Warm / Smash | Soft-clip curve + fast-release time.                                                                    |
| Quality   | STD / HIGH / ULTRA   | 4x / 8x / 16x oversampling for the clipper and ISP detector.                                            |
| Output    | -12 to +6 dB         | Post-ceiling trim for fine A / B level matching.                                                        |
| Mix       | 0 to 100 %           | Parallel blend. Lower mix retains more dynamics.                                                        |

### Use it for:

- Final brick-wall on a master - Ultra quality, -0.3 dB ceiling, 5 ms lookahead
- Loudness boost on a stem - Smash style, drive INPUT until the LUFS hits target
- Transparent peak control - Clean style, gentle Input, watch the GR meter stay below 3 dB

The Limiter's LUFS tab provides full loudness analysis: momentary, short-term, and integrated LUFS readouts; loudness range (LRA); true-peak max. The scrolling 60-second history overlays a horizontal target reference line picked from the dropdown (Off / EBU R128 -23 / Apple Music -16 / Spotify & YouTube -14 / Amazon Music -13 / Loud -9 / Club -8). The RESET button clears the integrated readouts so you can re-measure a fresh take.

# CLIPPER

## PEAK SHAVER - NEAR-ZERO LATENCY - THREE CURVES

New in 1.2.0. A clipper is not a compressor: there is no detector and no envelope, just a curve the signal cannot get past. Where a limiter pulls the whole waveform down around a peak, the Clipper shaves the tops off the peaks and leaves everything underneath untouched. Put one before your limiter and the limiter has far less to do.

CEILING sets where the curve tops out and KNEE how far BELOW the ceiling it starts bending - a large knee eases into the clip over many dB, a small one stays linear until the last moment. SHAPE picks the curve: Hard is a flat top (KNEE is inert and its knob dims), Round is a cubic bend, Warm is a tanh curve with more harmonic content. DRIVE is gain into the curve, so it is the loudness control. The Clipper ignores the sidechain by design, so no SC picker appears on its card.

| Control | Range               | Purpose                                                                 |
|---------|---------------------|-------------------------------------------------------------------------|
| Ceiling | -24 to 0 dB         | Where the curve tops out. The output never exceeds it.                  |
| Knee    | 0 to 12 dB          | How far below the ceiling the bend starts. Inert when SHAPE is Hard.    |
| Shape   | Hard / Round / Warm | Flat top / cubic bend / tanh. Round is the everyday choice.             |
| Drive   | 0 to 24 dB          | Gain into the curve. More drive = more clipping and more level.         |
| Mix     | 0 to 100 %          | Blends the clipped signal against the driven-but-unclipped signal.      |
| OS      | Off / 2x / 4x / 8x  | Off runs the curve raw at the host rate; 2x / 4x / 8x are anti-aliased. |

### Oversampling on a clipper

Clipping generates harmonics above the audible range by definition, and at the host rate those fold back down as aliasing. The 2x / 4x / 8x settings run the curve at a higher internal rate with antiderivative anti-aliasing (ADAA) so the harmonics land where they belong; 4x is the default, where the difference stops being audible. OS Off is the cheapest and the most aggressive - on drums the aliasing is sometimes the sound you want.

Reported latency is constant across all four OS settings, so switching never makes the host re-plan delay compensation mid-stream: as with Classic / Optical / FET, about 33 samples of constant padding, and zero in LIVE.

### Use it for:

- Ahead of the Limiter on a master - Round, small knee, 2-3 dB of drive
- Drum bus transient shaving - Hard, zero knee, OS Off for maximum bite
- Parallel grit - Warm driven hard, blended at 40-60 % MIX

# Sidechaining

Each slot in Orra Press has its own SIDECHAIN source picker, sitting just above the knob area. It offers four kinds of source.

## Off and External

Off - the default. The compressor keys off its own input. Standard compression behaviour.

External - the host's dedicated stereo sidechain bus. Whatever your DAW routes to the plugin's SC input drives detection. Standard ducking-compressor setup - route a kick drum to the sidechain to make a bass duck under every hit, for example.

## Orra Link sources by name

With Orra Link running on your tracks, the picker lists live Link sources by their actual track names, each shown in its track colour - including senders in Orra Link 2's drop-and-forget Auto mode, which never appeared in Press before. Your selection is stored by name, so it survives session reloads even though Auto-mode senders do not keep stable channel numbers.

If a named source later disappears, the picker shows it flagged as "! Name" in a dimmed state, and the compressor falls back gracefully to self-detection instead of keying off a stale channel. A "Link channels" submenu still lets you pick a numbered channel directly, and now lists only the channels that are actually live rather than all 36. Original Orra Link 1 senders are fully supported here.

## LISTEN

Hold the LISTEN button next to the picker to audition exactly what is keying the compressor. While held, the plugin's monitored output is replaced by the key signal so you hear precisely what the compressor is reacting to; release to return to the processed sound. The meters and the scope keep showing the real processed chain the whole time - only what you hear swaps. LISTEN is disabled when the source is Off.

## Source level meter

A small level bar beside LISTEN shows the selected source's live level at a glance - "is the kick actually reaching this card?" is now answerable without pressing anything.

## Sidechain high-pass (Classic / Optical / FET)

Under the sidechain picker on Classic, Optical and FET sits an HPF selector: Off, or a corner at 40, 60, 80, 100, 120, 150, 200, 300 or 500 Hz. It high-passes the DETECTOR only - the audio passes through untouched, but the compressor stops reacting below the corner. This is the fix for a compressor on a mix or drum bus that breathes with every kick: set it around 100-150 Hz and the kick stops driving the gain reduction while the low end stays as loud as it was. Off is bit-identical.

## Per-type behaviour

All five compressor types respect the sidechain; the Limiter and the Clipper ignore it by design (brick-wall limiters and clippers do not sidechain), so their SC picker is hidden. Multiband splits the sidechain through its own FIR crossover bank so each band's detector keys off the matching SC band. Spectral runs a parallel FFT on the sidechain so per-bin detection keys off the SC spectrum - meaning you can carve spectral space in the main signal wherever the sidechain has energy.

## The Orra Link companion plugin

Orra Link is a small sender-only plugin that ships alongside Orra Press. Its job is to broadcast a track's audio onto a shared bus that every Orra Press instance in the project can read from. Drop it on any track or bus, choose a channel (or let Auto mode assign one), and that source becomes available to any Orra Press card in the project - in any DAW, even hosts whose routing will not let you sidechain across busses normally.

Orra Link's controls are a CHANNEL picker, a SEND toggle (mute the broadcast at the source without changing channel assignment), and an OUTPUT gain knob for gain-staging the sidechain feed without touching the source track's fader. A status pip in the header shows whether the channel is broadcasting ("Live") or muted at the source.

Latency: Orra Link introduces one audio block of latency between sender and receiver, which Press reserves for and reports to the host. Sample-accurate alignment is maintained even under host anticipation (Reaper Anticipative FX, Cubase ASIO Guard, Studio One Dropout Protection) because the bus stamps each write with the host's master time and receivers compute their read position from the difference.

Sandboxed hosts: a few DAWs run AU plugins in sandboxes that can block the shared-memory connection. If Orra Link cannot open the bus, its status pip reads "Bus unavailable" instead of "Live". The plugin still passes audio through transparently - only the broadcast is disabled. In that case, fall back to the host's External SC bus.

## Sidechain visualisation

When sidechain is active on a slot, the analyzer shows it:

- Scope (Classic / Optical / FET / Limiter) - a thin red SC strip appears above the GR strip showing the sidechain envelope over time. Filled red from the top, taller = louder SC.
- Spectral view - the red top-down per-bin GR bars are replaced by the sidechain's FFT, showing exactly which frequencies in the sidechain are carving the main signal.
- Multiband spectrum - per-band tinting reflects the sidechain's current band-specific GR drive.

# LIVE Mode

The LIVE toggle sits next to BYP in the header. Engage it when you are tracking or monitoring through Press and cannot tolerate added latency: it removes the plugin's own added latency for real-time use.

With LIVE on, Classic, Optical, FET and the Clipper run at their base rate and report zero latency - their oversampling pills dim, and the OS choices are remembered and restored the instant you leave LIVE. The Orra Link time-alignment buffer is bypassed, so Press's own added latency drops to 0 samples on those modules.

Spectral and the Limiter keep their inherent latency - the FFT overlap-add window and the limiter's lookahead cannot be removed without changing what the module does - and they continue to report it honestly. If you need a truly zero-latency tracking chain, stick to Classic / Optical / FET / Clipper while LIVE is engaged.

Latency changes exactly once per deliberate toggle. Flipping LIVE is a config action, like adding a module, so the host sees a single latency update and re-plans delay compensation once - no PDC churn.

## When to use it

- Tracking vocals or guitars through Press while monitoring in real time
- Live performance or rehearsal where round-trip latency must stay minimal
- Any situation where the delay-compensation offset would be distracting

For mixing, leave LIVE off. You get full oversampling quality back and your OS choices return exactly as you left them.

## LIVE mode and Orra Link

While LIVE is engaged, Link sidechain timing becomes best-effort: the one-block alignment that keeps cross-track keys sample-accurate is part of what LIVE removes. Keyed compression still works, but exact alignment is no longer guaranteed. Turn LIVE off for mixdown when precise Link sidechain timing matters.

## The honest numbers

In normal mode Press adds one host block (the Link time-alignment reserve, always present whether or not you use Link) plus about 33 samples of constant oversampling padding for each enabled Classic / Optical / FET / Clipper module. The constant padding keeps the reported latency stable when you change a module's OS factor, so the host never re-plans PDC mid-stream. As an example, two Classic modules at a 512-sample host block report  $512 + 65 = 577$  samples in normal mode, and 0 in LIVE mode. Multiband (511 samples), Spectral (2048 samples) and the Limiter (lookahead) are unaffected by LIVE and keep reporting their real latency.

# Solo

Every chain card carries an S button. Solo a slot and you hear the chain with only the soloed modules processing - the fastest way to answer "what is this one actually doing?" in the middle of a four-module chain. Solos stack: soloing a second card adds it to what you hear rather than replacing the first. The SOLO button in the header lights while anything is soloed, and clicking it clears them all.

The slots that are not soloed do not stop. They keep running, their meters and scopes keep moving, and each one passes its own latency-matched dry signal instead of its processed output. That is deliberate: if a soloed slot were simply skipped, the plugin's reported latency would change, and your host would re-plan its delay compensation in the middle of a monitoring gesture. Reported latency never moves when you solo, so nothing shifts in time and nothing in the project has to be re-aligned.

Transitions are ramped over about 10 ms, so soloing and unsoloing during playback is click-free. Solo is monitoring state, not part of your sound: it is not saved with the session or with a preset, loading a project clears it, and switching A / B / C / D banks or loading a module preset leaves it alone. Like a mixer's solo buttons, it survives closing and reopening the plugin window - if a card looks dimmed when you come back, something is still soloed, and the header SOLO button will be lit.

# Module Presets

Every module has its own preset system, independent of the whole-plugin presets in the header. Each slot's panel carries a PRESET control that shows the loaded preset name, or reads "PRESETS" when the slot is running unsaved settings.

Click the PRESET control to open a compact browser scoped to the slot's current module type - a Classic slot only ever shows Classic presets. The browser has a FACTORY section and a USER section. A single click loads a preset; the loaded preset is highlighted and its name appears right on the panel face, so you can always see what a slot is running - no more guessing.

## Managing presets

- Save As... - store the slot's current settings as a new user preset. The preset folder is created automatically on first save.
- Rename - rename a user preset. Any slot currently running it updates to the new name.
- Delete - remove a user preset. A slot that had it loaded drops back to showing "PRESETS".
- Set Default / Clear Default - mark any preset (factory or user) as the default for its module type. Insert a fresh module of that type and it lands on your chosen starting point instead of the DSP defaults. The current default carries a DEFAULT tag in the browser.
- Show in Finder - reveal the preset folder in the system file browser.

User module presets live at ~/Library/Application Support/Orra Audio/Press/Presets/Module Presets/, one subfolder per module type.

## Factory module presets

Thirty-five factory module presets ship built into the plugin - five per module type - so there is nothing to install and nothing to lose. They double as reference starting points for what each engine does well.

### CLASSIC

|                       |                                                     |
|-----------------------|-----------------------------------------------------|
| <b>Bass Control</b>   | Firm 4:1 to lock low-end level.                     |
| <b>Broadcast Firm</b> | 6:1 leveling for a consistent, present spoken tone. |
| <b>Drum Bus Glue</b>  | Slow 2:1 that hugs a kit together.                  |
| <b>Parallel Crush</b> | Hard 12:1 blended at 40% for density under the dry. |
| <b>Vocal Leveler</b>  | Soft-knee 2.5:1 for transparent vocal control.      |

### OPTICAL

|                                |                                                  |
|--------------------------------|--------------------------------------------------|
| <b>LA Gentle Leveler</b>       | Light program-dependent ride for a natural feel. |
| <b>Parallel Opto Thickener</b> | Heavy opto blended at 45% wet for thickness.     |
| <b>Peak Tamer Limit</b>        | Limit mode for snappier peak control.            |
| <b>Smooth Vocal Rider</b>      | Moderate reduction for a steady vocal level.     |

|                          |                                                   |
|--------------------------|---------------------------------------------------|
| <b>Warm Program Glue</b> | Gentle opto glue for busses and program material. |
|--------------------------|---------------------------------------------------|

## FET

|                            |                                           |
|----------------------------|-------------------------------------------|
| <b>All Buttons In</b>      | The chaotic all-buttons-in British grab.  |
| <b>Bass Grit</b>           | 8:1 drive for harmonic bass attitude.     |
| <b>Room Crush Parallel</b> | Smashed room-mic tone blended at 40%.     |
| <b>Snare Crack</b>         | 4:1 grab that keeps the transient intact. |
| <b>Vocal Attitude</b>      | Fast 8:1 for front-of-mix presence.       |

## MULTIBAND

|                          |                                                      |
|--------------------------|------------------------------------------------------|
| <b>Bass Tighten</b>      | Fast low-band 4:1 with the upper bands open.         |
| <b>Broadcast Leveler</b> | Moderate 3:1 across all bands for a consistent tone. |
| <b>De-Harsh</b>          | Upper-band control for harsh or brittle material.    |
| <b>De-Mud</b>            | Low-mid reduction to clear congestion.               |
| <b>Mastering Tame</b>    | Gentle sub-2:1 per band for mix-bus polish.          |

## SPECTRAL

|                             |                                                       |
|-----------------------------|-------------------------------------------------------|
| <b>De-Harsh Smooth</b>      | Upper-mid resonance smoothing, blended clean.         |
| <b>Digital Tamer</b>        | High-resonance top-end control for digital harshness. |
| <b>Full Range Smoothing</b> | Broadband frequency-domain leveling.                  |
| <b>Resonance Tamer</b>      | Surgical narrow-resonance removal.                    |
| <b>Vocal Polish</b>         | Mid-band polish blended to taste.                     |

## LIMITER

|                          |                                             |
|--------------------------|---------------------------------------------|
| <b>Drum Bus Catcher</b>  | Fast catch for a drum bus.                  |
| <b>Gentle Safety</b>     | Transparent safety ceiling, no colour.      |
| <b>Loud And Proud</b>    | Smash-style loudness push.                  |
| <b>Mastering Ceiling</b> | Clean Ultra-quality brick-wall for masters. |
| <b>Warm Glue Limit</b>   | Warm harmonic cap for glued busses.         |

## CLIPPER

|                          |                                                            |
|--------------------------|------------------------------------------------------------|
| <b>Drum Smack</b>        | Hard curve, no knee, 6 dB of drive - the aggressive one.   |
| <b>Parallel Grit</b>     | Warm curve driven hard and blended at 50% under the dry.   |
| <b>Round Off</b>         | A gentle cubic bend a dB under, for everyday peak shaving. |
| <b>Transparent Catch</b> | A -0.3 dB delivery ceiling with a hair of knee.            |
| <b>Warm Push</b>         | Tanh curve with a wide knee for harmonic loudness.         |

# Factory Presets

The factory preset bank in the header is built around what Press actually is - a serial dynamics chain. Rather than one module doing all the work, each of these presets stages two to four modules, with each stage taking only about 1 to 4 dB of gain reduction. No single stage is audible on its own, but the chain lands a glued, transparent result. Fast and aggressive detectors sit early, slow and gentle ones late, and a Limiter finishes when loudness is the goal - the chain does the work, not any one squash.

Default loads Slot 1 as a Classic with everything else empty - the feel of a freshly inserted plugin. The remaining entries are the fourteen staged chains below. The single-module starting points from earlier versions now live in the Module Presets browser, where they belong.

| Preset                              | Chain                           | Intent                                                                               |
|-------------------------------------|---------------------------------|--------------------------------------------------------------------------------------|
| <b>Vocal - Radio Ready</b>          | FET > Opto > Spectral > Limiter | FET de-peaks, Opto rides level, Spectral de-harshes, a clean Limiter catches strays. |
| <b>Vocal - Silk Ride</b>            | Opto > Spectral > Limiter       | Opto leads the level, a gentle spectral polish, a low clean ceiling ride.            |
| <b>Vocal - Aggressive Lead</b>      | FET > Classic > Limiter         | FET in ALL for attitude and colour, Classic glue, a warm cap.                        |
| <b>Drums - Punch and Glue</b>       | Classic > FET > Limiter         | Slow Classic glue keeps the punch, a parallel FET crush adds density, clean safety.  |
| <b>Drums - Tight Room</b>           | FET > Multiband > Limiter       | Parallel room crush, low-band tighten, a clean cap.                                  |
| <b>Bass - Even and Gritty</b>       | FET > Opto                      | FET drive for grit, Opto for a slow evenness ride.                                   |
| <b>Bass - Low End Control</b>       | Multiband > Classic             | Multiband locks the sub and low-mid, Classic glues the whole instrument.             |
| <b>Mix Bus - Gentle Glue</b>        | Classic > Limiter               | Soft wide-knee 1.5:1 glue with a safety ceiling.                                     |
| <b>Mix Bus - Radio Loud</b>         | Classic > Multiband > Limiter   | Glue, a broadcast 3:1 balance, warm loudness.                                        |
| <b>Master - Transparent</b>         | Multiband > Classic > Limiter   | Sub-2:1 multiband tame, 1.3:1 glue, a clean Ultra brick-wall.                        |
| <b>Master - Warm Glue</b>           | Classic > Limiter               | Warm-leaning glue into a warm harmonic cap.                                          |
| <b>Master - Modern Loud</b>         | Multiband > Spectral > Limiter  | Firm 3:1 balance, a digital top-end tamer, Smash loudness.                           |
| <b>Serial - Three Stage Leveler</b> | Opto > Classic > FET            | Three detectors each shave ~2 dB - the staged-GR philosophy shown off.               |
| <b>Podcast - Broadcast Voice</b>    | Multiband > Opto > Limiter      | A speech leveler, a close-mic ride, a safe podcast ceiling.                          |

# The Oscilloscope

The Scope tab on Classic / Optical / FET / Limiter / Clipper slots is an envelope-following audio display. Rather than a raw min-max waveform that flickers on busy material, Orra Press uses a smoothed peak envelope (~0.5 ms attack, ~30 ms release) so curves follow musical dynamics rather than sample-level noise. The result reads at a glance even on dense broadband material.

The plot stacks three regions vertically:

- SC strip (visible only when sidechain is active) - a thin red filled envelope of the sidechain signal, hanging from the top of the strip.
- GR strip - a Pro-style red bite that hangs from the top, calibrated to gain-reduction dB. Drag the gold divider below to resize it; double-click the divider to reset.
- Main waveform area - bipolar smooth envelopes. The cool pale outline is the input (the before silhouette); the gold filled envelope is the output (the after); the translucent red fill in the gap between them is your gain reduction made visible. Watching the bite react to transients is the easiest way to dial attack and release by eye.

## Zoom controls

- Vertical zoom (1x - 16x): drag the gold pill in the left gutter, or use the scroll wheel anywhere on the scope. Useful when GR is small and the bite would otherwise be invisible. Double-click the left gutter to reset.
- Horizontal zoom (1x - 16x): drag the pill in the bottom gutter to set the visible time window. 1x shows ~8 seconds; 16x narrows to ~500 ms so individual transients resolve clearly. Double-click the bottom gutter to reset.
- Threshold line - the dashed red horizontal line(s) mirror above and below the centerline at your threshold value. Peaks clearly cross it when compression engages.

Both zoom settings persist when you click through slots so your view stays as you left it. The scope - along with the VU and Classic meters - runs whenever the transport is playing OR audio is arriving, so playing a virtual instrument live with the transport parked shows you the same picture as playback does. Over silence with the transport stopped it freezes after about a quarter of a second, so you can still inspect the last captured frame in detail.

# A / B / C / D Comparison

The A / B / C / D buttons in the header hold four independent full-plugin snapshots. Each snapshot captures every slot's type and parameters, the chain order, and sidechain routing - the entire plugin state.

Each bank auto-remembers its own state. Click a bank to switch to it, then edit freely - your changes follow that bank automatically. Switching to another bank saves the outgoing one first, so there is nothing to store by hand.

- Click A and dial in a setting.
- Click B to branch. Edit; B now tracks your changes.
- Click A, then B, to compare - recall is instant.
- RESET wipes the active bank back to defaults; the other banks are untouched.
- Opt / Alt-click a bank to copy the current state into it, overwriting that bank.

Snapshots persist with the project and with saved presets, so you can ship a preset that includes four variants of the same starting point. Each bank also remembers its own selected preset name.

## Whole-plugin presets

The preset menu in the header lists factory presets and any user presets you have saved. The SAVE button stores the current chain as a user preset with a name of your choice. The LIBRARY button opens a full browser where you can load, rename, or delete saved presets, and reveal the preset folder in Finder. User presets live at:

~/Library/Application Support/Orra Audio/Press/Presets/

# Tips & Workflow

## Working the knobs

Every rotary knob shares the same gestures: drag to set; Cmd / Ctrl + scroll wheel for a fine 0.1x step; double-click to type a value directly; and Opt / Alt-click to reset to the default. The Limiter's ceiling field auto-negates a typed positive value, so typing 4 sets -4 dB.

## Ordering matters

Orra Press is a serial compressor. Fast / aggressive engines before slow / gentle ones generally sounds cleaner - FET first, then Opto or Classic to smooth out what is left. Reversed (slow first, fast last) is valid too and often produces more colour. Use the < / > buttons on each slot card to reorder without losing parameters. End the chain with the Limiter when you are ready to bring loudness up.

## Multiple of the same type

Nothing stops you from loading two Classics, two FETs, or three Opticals. Multi-stage compression - small amounts of GR at each stage - routinely sounds better than one big squash. Try a Classic at 2:1 with 2 dB of GR into a second Classic at 2:1 with another 2 dB. Total 4 dB but the signal barely feels touched. This is exactly the philosophy behind the factory chain presets.

## Tracking with LIVE mode

If you are recording or monitoring through Press and cannot tolerate delay, engage LIVE. Classic / Optical / FET / Clipper report zero latency and the Link alignment buffer is bypassed; Spectral and the Limiter still carry their inherent latency. Turn LIVE off for mixdown to get full oversampling quality back.

## Latency

In normal mode, Classic / Optical / FET / Clipper each carry about 33 samples of constant oversampling padding, and one host block is reserved for Orra Link time-alignment. Multiband adds 511 samples; Spectral adds 2048 samples; the Limiter adds its lookahead (3 ms by default = 144 samples at 48 kHz, more at higher quality tiers). All latency is reported to the host so your mix stays in time (PDC). Toggling any slot's bypass - via the BYP header button or the host's external bypass - is delay-matched, so there is no click or phase jump. See the Latency appendix for the full picture.

## Mix knob for parallel compression

Every engine has a Mix knob. Setting it to 30-50 % with an aggressive compressor setting gives you parallel compression within a single instance - the classic New York drum trick without needing an auxiliary bus.

## The oscilloscope is your friend

When a Classic / Optical / FET / Limiter / Clipper slot is selected, the scope shows input (cool pale outline) vs output (gold filled) envelopes with the threshold line in red and the gain-reduction bite in red between them. If you cannot see a gap between the input outline and the output fill, the compressor is not doing much. Zoom the vertical axis up if you are on quiet material and want to see subtle GR.

## Spectral is not a replacement for EQ

Spectral's Resonance control is powerful but it is a dynamic tool - it only acts when the targeted bins exceed the threshold. For static tonal shaping, use an EQ. For taming peaks that only happen sometimes, Spectral is the right tool.

### **Cross-DAW sidechaining with Orra Link**

If you have struggled with sidechain routing in your DAW - especially trying to send from one bus to another in DAWs that do not support it natively - Orra Link bypasses the host entirely. Drop Orra Link on the source track, pick a channel (or let Auto mode assign one), then on Orra Press select that source by name as the card's sidechain. Works in every DAW we have tested.

### **See what is masking what**

On a Multiband slot keyed off a Link 2 source, open the Spectrum analyzer to see the source overlaid in its track colour, with emphasis where it crowds within 6 dB of your signal. It is the fastest way to find where the kick is eating the bass before you reach for a single knob.

### **Use the ? tips toggle**

The circular ? button at the far right of the header toggles a contextual help panel in the bottom of the window. With tips on, hover any control to read what it does and how to use it - useful while you are still learning the plugin. Hovering a card's type picker, or the module title above the knobs, now describes the module itself: what that engine is and when to reach for it.

Right-click the ? to pick the tooltip language - English, Dutch, Japanese, Spanish, Portuguese, German or French. Picking one also turns the tips on. Your choice is remembered with the session. Only the tips change language; control names and read-outs stay as they are on the panel.

# Latency and Delay Compensation

Orra Press reports its total latency to the host so every route stays in time under plugin delay compensation (PDC). The current numbers, per enabled module:

- Classic / Optical / FET / Clipper - about 33 samples of constant oversampling padding each, plus a shared one-host-block reserve for Orra Link time-alignment. The padding stays constant across OS factors so the host never re-plans PDC when you change oversampling. LIVE mode removes both.
- Multiband - 511 samples (linear-phase FIR crossover, ~10.6 ms at 48 kHz).
- Spectral - 2048 samples (2048-point FFT, 75 % overlap-add).
- Limiter - its lookahead time (3 ms = 144 samples at 48 kHz by default; more at higher Quality tiers).

Bypassing a slot - via the BYP header button or the host's external bypass - is delay-matched, so there is no click or phase jump. Engaging LIVE mode reports its single latency change once, like adding or removing a module.

Solo changes nothing here. A slot muted by someone else's solo keeps running and passes its own latency-matched dry signal, so the reported total is the same soloed or not and the host never re-plans PDC on a monitoring gesture. AUTO gain, Classic's LIFT, Spectral's TILT and the sidechain high-pass add no latency of any kind - they change what the detector hears or what gain is applied, not how far the audio is delayed.

## Offline render, bounce, commit and freeze

When you render offline, Press validates each Link sender's time-stamp. If the sender is not rendering alongside the receiver - the common case when you commit, freeze, or bounce a single track whose Press keys off a Link source on another, non-rendering track - Press cleanly falls back to self-detection rather than baking several seconds of stale-keyed compression into the file. Realtime behaviour is untouched.

For a keyed offline render, bounce the sender and receiver together so the sidechain stays live throughout. In hosts that provide no playhead position during offline render, the time-stamp cannot be validated and Press falls back to the last-written audio - a shared limitation with Orra EQ.

Orra Press is a product of Orra Audio LLC.

For support, updates, and documentation: [orra.audio](http://orra.audio)