

# HE2 Harmonic Enhancer

User Guide | Parish Audio

Four-region harmonic enhancement with Smooth and Focused voicings.



HE2 Harmonic Enhancer brings out warmth, presence, edge, and air using frequency-focused harmonic generation. Switch between Smooth and Focused character, then blend the result to suit anything from individual instruments to a full mix.

## 1. Quick Start

1. Insert HE2 on a track or bus in your DAW, and begin playback.
2. Select **Smooth** for rounder enhancement or **Focused** for more forward harmonic character.
3. Raise **Amount** to set the overall strength, then adjust **Warmth**, **Presence**, **Edge**, and **Air** to taste.
4. Use **Mix** to blend enhancement with the original signal. Start with a partial blend for subtle polish.
5. Choose **1x**, **2x**, **4x**, or **8x** oversampling based on your CPU budget and desired quality.
6. Use **Output** to compare HE2 with bypass at similar loudness, then save your settings as a preset if desired.

## 2. What HE2 Does

HE2 is a harmonic enhancer, not a conventional four-band EQ. It isolates broad areas of the incoming audio and uses nonlinear processing to generate additional harmonic content. The four controls determine the character and contribution of that enhancement; **Amount** provides a master intensity control, while **Mix** determines how much of the processed signal you hear.

A gentle setting may make a bass feel richer, a vocal more articulate, or a mix slightly more open. Stronger settings can add obvious bite, texture, and energy. The source itself remains part of the result; HE2 is designed to enhance existing tone rather than replace the performance.

## 3. Smooth and Focused Modes

| Mode           | Character and best uses                                                                                                                         |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Smooth</b>  | Rounded, blended harmonic color. A good starting point for gentle polish, acoustic instruments, vocals, and mix buses.                          |
| <b>Focused</b> | More assertive harmonic detail and upper-band definition. Try it when guitars, drums, or individual elements need stronger presence and attack. |

The modes use different harmonic-shaping approaches, not simply different Amount presets. Smooth emphasizes a more symmetric response; Focused adds asymmetric shaping to the Presence, Edge, and Air regions. Switching modes changes the tonal balance and feel of the enhancement.

**Practical note:** When comparing modes, level-match the result. A more forward-sounding mode can seem louder even when its tonal balance is simply different.

## 4. Interface and Signal Flow

| Area                          | What it does                                                                                                                          |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b>Mode (upper left)</b>      | Selects Smooth or Focused processing.                                                                                                 |
| <b>Four colored regions</b>   | Warmth (orange), Presence (amber), Edge (green), and Air (blue) shape the tonal character.                                            |
| <b>Amount / Mix / Output</b>  | Amount controls total enhancement, Mix blends dry/wet audio, and Output sets the final level.                                         |
| <b>Power and oversampling</b> | Top-right controls bypass and select 1x, 2x, 4x, or 8x processing.                                                                    |
| <b>Activity indicators</b>    | Four small lights on the center display show approximate activity in the tonal regions; they are indicators, not additional controls. |

The number below each knob shows its current value. You can drag a knob to adjust it or click its value readout to enter a number directly.

## 5. Harmonic and Global Controls

### Warmth (0-100%)

Enhances low-frequency harmonic character, with its source region concentrated below roughly 260 Hz. Add body and perceived weight to bass, guitars, instruments, or a mix. Keep it moderate if the low end is already full.

### Presence (0-100%)

Works primarily in the midrange (approximately 900 Hz to 3 kHz). Use it for vocal articulation, guitar definition, and details that help an instrument speak clearly without relying on a large EQ boost.

### Edge (0-100%)

Emphasizes upper-mid harmonic detail from roughly 2.3 kHz to 6.5 kHz. It can bring out snare crack, pick attack, and forward energy. Back it down if a source starts to sound sharp.

### Air (0-100%)

Adds high-frequency harmonic character from approximately 7 kHz upward. Useful for sparkle, openness, and high-end texture on vocals, acoustic instruments, and full mixes. Small moves can be enough.

### Amount (0-100%)

Adjusts the combined intensity of the four enhancement regions. A region set to zero contributes no enhancement from that control, even if Amount is high. Start at a moderate Amount and use the tonal controls to build your sound.

### Mix (0-100%)

Blends HE2's processed path with the untreated signal. At 0% the result is dry; at 100% you hear the fully processed path. Partial settings are useful for adding harmonic color while keeping more of the original tone.

### Output (-18 to +18 dB)

Adjusts the final level after enhancement and mixing. Use it to match the perceived loudness of HE2 and bypass so that you can judge changes in tone fairly.

### Power (On / Off)

Engages or bypasses HE2 with a smoothed transition. The bypass path is latency-aligned with the processed path.

**Practical note:** *The four frequency regions are broad processing zones, not user-adjustable crossover filters. HE2 creates and blends harmonics from these regions; it does not simply boost those bands like an equalizer.*

## 6. Oversampling and Quality

Harmonic generation is nonlinear and can produce aliasing, especially on bright material and stronger settings. Oversampling processes the enhancement internally at a multiple of your project's sample rate, helping reduce these unwanted digital artifacts.

| Setting | When to use it                                                                                                     |
|---------|--------------------------------------------------------------------------------------------------------------------|
| 1x      | Lowest processing cost; useful while experimenting or on CPU-heavy sessions.                                       |
| 2x      | A practical middle ground for everyday mixing.                                                                     |
| 4x      | Higher quality for prominent tracks and bus processing.                                                            |
| 8x      | Maximum available oversampling; useful for more aggressive enhancement and final renders when CPU headroom allows. |

HE2 smooths changes between oversampling settings while audio is playing and reports a consistent processing latency to the host. Higher oversampling settings generally require more CPU. The interface lights and colors are visual indicators; they do not change the audio algorithm.

## 7. Practical Workflows

### Add presence to a lead vocal

Start in **Smooth**. Increase Presence moderately, add a little Air, and use Warmth only if the voice needs body. Raise Amount until the change is useful, then lower Mix for a natural blend.

### Bring guitars forward

Choose **Focused**, add Presence and a smaller amount of Edge, then adjust Warmth for body. Compare at matched loudness to avoid mistaking extra brightness for a better balance.

### Make bass more audible

Begin with Warmth, then add a little Presence or Edge to generate detail that can help bass remain audible on smaller speakers. Use Mix to preserve the weight and fundamental character of the original.

### Give drums extra attack

Try Focused with moderate Edge and Presence. Snare crack and stick attack may become more apparent. If cymbals feel too aggressive, reduce Air or Edge and blend back with Mix.

### Polish a stereo mix

Start with Smooth and low-to-moderate settings across the four regions. Use a partial Mix setting and compare often in bypass at matched loudness. Small adjustments are usually more useful than pushing every region hard.

## 8. Factory Presets

HE2 includes ten factory presets for common instruments and mix situations. They are starting points: adjust **Amount**, individual regions, and **Mix** to suit the source.

| Preset                 | Mode    | Purpose                                                     |
|------------------------|---------|-------------------------------------------------------------|
| <b>Vocal Lift</b>      | Focused | Brings vocal presence forward with some added air.          |
| <b>Airy Vocal</b>      | Smooth  | Air-led enhancement for a more open vocal top end.          |
| <b>Mix Polish</b>      | Smooth  | Gentle all-around tonal finishing for a mix.                |
| <b>Guitar Presence</b> | Focused | Additional midrange cut and upper-mid articulation.         |
| <b>Bass Focus</b>      | Focused | Warmth-centered weight with restrained higher bands.        |
| <b>Acoustic Shine</b>  | Smooth  | Adds mid/high articulation and sparkle to acoustic sources. |
| <b>Snare Crack</b>     | Focused | Strong attack-oriented Presence and Edge.                   |
| <b>Modern Gloss</b>    | Smooth  | Brighter, polished detail with an Air emphasis.             |
| <b>Classic Exciter</b> | Focused | More pronounced, multi-region harmonic color.               |
| <b>Master Sparkle</b>  | Smooth  | Light, high-frequency finishing for a full mix.             |

**Practical note:** Loading a factory or user preset keeps your current **Output** and **oversampling** settings. Factory presets do select **Mode**, **Amount**, the four enhancement regions, and **Mix**, and they turn processing on.

## 9. Tips and Best Practices

- Begin with one or two enhancement regions instead of turning up all four at once.
- Use **Amount** to scale the overall effect after you find the tonal balance you like.
- Compare **Smooth** and **Focused** on the same source; neither mode is universally better.
- Use partial **Mix** for vocals, acoustic instruments, and mix buses when full processing feels too forward.
- Level-match with **Output** before deciding whether the enhancement improves the sound.
- Increase oversampling if strong settings introduce audible digital roughness, then reassess CPU use.
- Save useful variations as user presets; the plugin also supports undo/redo and a resizable interface.

## 10. Troubleshooting

| Symptom                                                     | What to try                                                                                                                                                  |
|-------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| I hear little or no change.                                 | Confirm Power is on, raise Amount and at least one of Warmth / Presence / Edge / Air, then verify Mix is above 0%. Some changes are intentionally subtle.    |
| The sound is too bright or sharp.                           | Reduce Edge and Air, try Smooth mode, or lower Amount. A smaller Mix setting can also help.                                                                  |
| The low end feels too heavy.                                | Lower Warmth, reduce Amount, or blend in more dry signal with Mix.                                                                                           |
| The processed sound seems better only because it is louder. | Adjust Output to match the bypassed loudness before comparing.                                                                                               |
| CPU use is high.                                            | Choose a lower oversampling factor, such as 1x or 2x, and use higher settings where they make an audible difference.                                         |
| A preset changes my tone but not Output / oversampling.     | This is expected: both settings are intentionally preserved when loading factory and user presets.                                                           |
| A mode or quality change sounds different.                  | Smooth and Focused use different harmonic approaches; oversampling changes the internal signal path and can slightly affect the result. Audition in context. |

## 11. Technical Reference

| Item            | Specification                                                                                     |
|-----------------|---------------------------------------------------------------------------------------------------|
| Processing      | Four-region nonlinear harmonic enhancement                                                        |
| Tonal regions   | Warmth: below ~260 Hz; Presence: ~900 Hz-3 kHz; Edge: ~2.3-6.5 kHz; Air: above ~7 kHz             |
| Modes           | Smooth / Focused                                                                                  |
| Tonal controls  | Warmth, Presence, Edge, Air: 0-100%                                                               |
| Global controls | Amount: 0-100%; Mix: 0-100%; Output: -18 to +18 dB                                                |
| Oversampling    | 1x, 2x, 4x, 8x (user-selectable)                                                                  |
| Audio channels  | Mono or stereo, matching input and output                                                         |
| Workflow        | Factory and user presets, undo/redo, parameter automation, editable readouts, resizable interface |
| Plugin formats  | Windows VST3; macOS VST3 and AU                                                                   |

## 12. More Information

Parish Audio: <https://parishaudio.com>

Support: <https://parishaudio.com/support>

Product page: <https://parishaudio.com/products/he2-harmonic-enhancer>