

PureAmber Technical Reference Manual by Plea Tech

PureAmber features a streamlined interface with rotary controls, toggle buttons, and an interactive frequency curve editor.



1	Sensitivity Knob	The Sensitivity knob determines how easily the plugin detects resonances. Turn it counter-clockwise to make the plugin more sensitive (it will catch quieter resonances). Turn it clockwise to make it less sensitive (only loud resonances trigger suppression). The default position works well for most sources. If you're not hearing enough effect, turn this counter-clockwise. If it's processing too much, turn it clockwise.
2	Safe Vitals Knob	The Safe Vitals knob sets a ceiling on how much gain reduction can be applied. This prevents the plugin from over-suppressing and destroying your signal. At lower settings (counter-clockwise), the plugin can only apply gentle suppression. At higher settings (clockwise), it can apply more aggressive reduction. Think of this as a safety limiter that keeps the processing musical and prevents artifacts.

3	Resolution Knob	The Resolution knob controls how smooth or detailed the spectral analysis is. Turn it counter-clockwise for more detailed analysis that can catch narrow resonances. Turn it clockwise for smoother analysis that ignores small peaks and focuses on broader spectral issues. Lower resolution is more surgical, higher resolution is more musical and forgiving.
4	Dosage Knob	The Dosage knob controls how much suppression is applied to detected resonances. Turn it clockwise to increase the intensity of the effect. At the 12 o'clock position (0.5), you get moderate suppression suitable for most mixing tasks. Push it past 12 o'clock for aggressive resonance removal and noise floor reduction. At minimum (fully counter-clockwise), no processing occurs. At maximum (fully clockwise), you get maximum suppression with noise floor gating.
5	Speed Knob	The Speed knob controls how quickly the plugin responds to changes in your audio. Turn it counter-clockwise for slower, smoother processing that's less reactive to transients. Turn it clockwise for faster, more aggressive processing that catches quick resonances. Slower settings work well for sustained material like pads and vocals. Faster settings work well for percussive material and transient-rich sources.
6	Sharpness Knob	The Sharpness knob determines how narrow or wide the suppression bands are around detected resonances. Turn it counter-clockwise for wider suppression that affects neighboring frequencies. Turn it clockwise for surgical, narrow suppression that only targets the exact resonant frequency. Use wider settings for general taming, and narrow settings for precise problem-frequency removal.
7	Mix Knob	The Mix knob blends between your dry (unprocessed) and wet (processed) signal. Fully counter-clockwise gives you 100% dry signal (bypass). Fully clockwise gives you 100% wet signal (full processing). The 12 o'clock position gives you a 50/50 blend. This knob is disabled when The Biopsy button is active, since biopsy mode outputs only the extracted resonances.
8	The Biopsy Button	Press The Biopsy button to invert the processing and hear only what's being removed. Instead of suppressing resonances, the plugin extracts them and outputs only the suppressed content. This is incredibly useful for identifying problem frequencies and understanding what the plugin is doing. When active, the Mix knob is disabled since you're hearing only the extracted signal. In Mid/Side mode, biopsy outputs a phase-inverted side signal for stereo analysis.

9	HD Imaging Button	Press the HD Imaging button to engage high-resolution spectral analysis. This doubles the frequency resolution from 1025 bins to 2049 bins, allowing the plugin to detect and suppress narrower resonances with greater precision. Use this mode when you need surgical accuracy for problem frequencies. The plugin maintains identical latency in both modes, so you can switch freely without timing issues. HD mode uses more CPU than normal mode.
10	Auto Pilot Button	Press the Auto Pilot button to enable adaptive processing. When active, the plugin analyzes your audio content and automatically adjusts processing parameters for optimal results. The plugin monitors the input spectrum, output spectrum, and gain reduction profile to make intelligent decisions about how to process your audio. This is useful when you want the plugin to "just work" without manual tweaking.
11	Mid/Side Button	Press the Mid/Side button to engage Mid/Side processing with frequency-selective stereo widening. When active, the plugin processes the mid and side channels separately and applies intelligent stereo enhancement based on the gain reduction profile. Frequencies with more suppression get more stereo width, creating a dynamic, responsive stereo image. The low frequencies (below 283 Hz) remain mono for bass stability. This mode also enables the Pan Tilt knob.
12	Aox Phase Button	The Variation Mode selector appears when Aox Phase mode is active. It offers three types of analog-style variation: Mode 0: Sine: Applies smooth, periodic modulation to the suppression envelope using a sine wave. This creates gentle, rhythmic variation that sounds organic and musical. The modulation is synchronized across all frequency bins but varies in phase based on frequency. Mode 1: Random: Applies random noise modulation to the suppression envelope. This creates unpredictable, natural-sounding variation similar to analog circuit noise. Each frequency bin gets independent random modulation, creating a complex, evolving character. Mode 2: Drift: Applies slow, wandering modulation using integrated random walk. This creates gradual, smooth changes that drift over time, similar to component aging or temperature drift in analog gear. The drift accumulates slowly and decays gradually, creating long-term movement.

13	Threshold Gate Control	The Threshold Gate control sets an input level threshold below which processing is reduced. When your input signal falls below this threshold, the Dosage parameter is automatically scaled down, reducing the processing intensity. This is useful for preventing the plugin from processing noise floors or quiet passages too aggressively. At -80 dB (minimum), the gate is effectively disabled. At higher settings, the plugin only processes when your signal is above the threshold.
14	Focus Tilt/Pan Tilt Knob	The Focus Tilt knob adjusts the frequency balance of the detection circuit without affecting your audio output. Turn it clockwise to make the plugin focus more on high frequencies (useful for de-essing or taming bright sources). Turn it counter-clockwise to make it focus more on low frequencies (useful for controlling bass resonances). At the center position, all frequencies are detected equally. The Pan Tilt knob is only active when Mid/Side mode is enabled. It pans the processed signal in the stereo field. Turn it counter-clockwise to pan left, clockwise to pan right. At the center position, the stereo image is balanced. This is useful for creative stereo placement of the processed signal.
15	Freeze Button	The Freeze button stops the spectrum display from updating. When activated, the spectrum visualization freezes in place, showing a snapshot of the audio at the moment you clicked Freeze. This is useful for analyzing a specific moment in your audio or comparing before/after by freezing the display and then adjusting parameters. The audio processing continues normally - only the visual display is frozen. Click again to unfreeze and resume real-time spectrum updates.
16	Gain Button (Curve Lock)	The Gain button locks the curve editor to vertical-only movement. When activated, you can only adjust the gain (vertical position) of nodes, not their frequency (horizontal position). This prevents accidentally moving nodes left or right when you only want to adjust their level. This is useful for fine-tuning gain values without disturbing your carefully placed frequency points. The button is automatically disabled when Auto Pilot is active. Click again to unlock and allow full 2D node movement.
17	Show GR Button	The Show GR (Show Gain Reduction) button toggles the visibility of the per-bin gain reduction overlay in the spectrum display. When activated, you'll see a red/amber overlay showing exactly how much suppression is being applied at each frequency in real-time. When disabled, you only see the input and output spectrum without the gain reduction visualization. This is useful for decluttering the display when you want to focus on frequency content, or enabling it when you want to see exactly what the plugin is doing. The processing continues regardless of this display setting.

18	Delete Button	The Delete button removes the currently selected node from your curve. Click on a node in the curve editor to select it, then click Delete to remove it. You must have at least one node remaining. This button is disabled when Auto Pilot is active.
19	Reset T Button	The Reset T (Reset Tension) button resets the tension parameter of the selected node to 0.5 (default). Tension controls how the curve interpolates between nodes. This button is disabled when Auto Pilot is active.
20	Curve Presets	12 curve shape buttons control how segments interpolate between nodes. Select a node, then click a shape button to change that segment's interpolation: - Std: Smooth exponential (tension: 0=convex, 0.5=linear, 1=concave) - Pk: Bell peak above the line (tension: peak position) - Pls: Hard step (tension: step position) - Wav: Sinusoidal waves (tension: 1-8 cycles) - Str: Staircase (tension: 2-16 steps) - HSn: Half-sine modulation (tension: bow intensity) - S-C: Sigmoid S-curve (tension: steepness) - ExR: Exponential rise (tension: curve intensity) - ExD: Exponential decay (tension: curve intensity) - Tri: Triangle peak (tension: peak position/height) - Smo: Smoothstep (tension: smoothness/bias) - Sqr: Square wave (tension: duty cycle) The active shape is highlighted with amber glow. Shape buttons are disabled when Auto Pilot is active.
21	dB meter	The dB meter displays the current output level in decibels. It shows peak level with a fast attack and slow decay, making it easy to monitor your output levels.

22	Aox Phase Menu	Mode 0: Sine: Applies smooth, periodic modulation to the suppression envelope using a sine wave. This creates gentle, rhythmic variation that sounds organic and musical. The modulation is synchronized across all frequency bins but varies in phase based on frequency. Mode 1: Random: Applies random noise modulation to the suppression envelope. This creates unpredictable, natural-sounding variation similar to analog circuit noise. Each frequency bin gets independent random modulation, creating a complex, evolving character. Mode 2: Drift: Applies slow, wandering modulation using integrated random walk. This creates gradual, smooth changes that drift over time, similar to component aging or temperature drift in analog gear. The drift accumulates slowly and decays gradually, creating long-term movement.
23	Frequency Curve Editor	The Frequency Curve Editor is the large display at the top of the plugin interface. It shows your audio spectrum in real-time and allows you to draw a custom suppression curve. Spectrum Display The spectrum display shows three overlays: - Input spectrum (blue): Your incoming audio's frequency content - Output spectrum (green): The processed audio's frequency content - Gain reduction (red): How much suppression is being applied at each frequency The display updates in real-time, giving you visual feedback on what the plugin is doing. Detected resonance peaks are highlighted with markers showing their frequency and magnitude. Drawing the Curve Click and drag in the curve editor to draw your custom suppression curve. The curve determines which frequencies are eligible for processing: - Draw the curve higher (toward the top) to enable more suppression at that frequency - Draw the curve lower (toward the bottom) to disable suppression at that frequency - A flat line at the top means all frequencies can be processed equally - A flat line at the bottom means no frequencies are processed The curve acts as a frequency-dependent weight on the suppression algorithm. Even with the curve drawn high, the plugin still only suppresses detected resonances, not the entire frequency range.

		Curve Smoothing The curve editor automatically smooths your drawn curve to prevent abrupt transitions that could cause artifacts. You can draw freely, and the plugin will interpolate smoothly between your control points. Frequency Scale The horizontal axis shows frequency from 20 Hz (left) to 20 kHz (right) on a logarithmic scale, matching how we perceive pitch. The vertical axis shows the suppression weight from 0% (bottom) to 100% (top). Real-Time Feedback As you adjust the curve, you'll see the gain reduction display update in real-time, showing you exactly which frequencies are being affected. This makes it easy to target specific problem areas or shape the processing to your taste.
24	Dragable Scaler	For a better experience, you can drag the entire plugin to the bottom-right corner for an improved view.

Workflow Tips:

Starting Point

1. Load the plugin on your track
2. Set Dosage to 12 o'clock (0.5)
3. Set Sensitivity to 10 o'clock (more sensitive)
4. Leave the curve editor flat (full range)
5. Play your audio and watch the spectrum display

Targeting Problem Frequencies

1. Enable The Biopsy button to hear what's being removed
2. Adjust Sensitivity until you hear the problem frequency
3. Draw a curve in the editor to focus on that frequency range
4. Disable The Biopsy button to hear the processed result
5. Adjust Dosage to taste

Surgical Resonance Removal

1. Enable HD Imaging for maximum resolution
2. Set Sharpness to maximum (fully clockwise)
3. Set Resolution to minimum (fully counter-clockwise)
4. Use The Biopsy mode to identify exact problem frequencies
5. Draw a narrow curve around the problem area

Musical Broadband Taming

1. Use Normal mode (HD Imaging off)
2. Set Sharpness to 9 o'clock (wider bands)
3. Set Resolution to 3 o'clock (smoother analysis)
4. Set Speed to 10 o'clock (slower response)
5. Use Mix knob to blend subtly

Stereo Enhancement

1. Enable Mid/Side mode
2. The plugin will automatically widen frequencies with more suppression
3. Use Pan Tilt to adjust stereo placement
4. Watch the spectrum display to see the stereo effect

Common Applications

De-Essing: Set Focus Tilt to +12 dB (clockwise), draw a high-pass curve starting around 4 kHz, adjust Sensitivity until sibilance is controlled.

Vocal Resonance Control: Use HD Imaging mode, set Sharpness high, use The Biopsy mode to find harsh frequencies, draw targeted curves around problem areas.

Bass Tightening: Set Focus Tilt to -12 dB (counter-clockwise), draw a low-pass curve up to 300 Hz, use faster Speed settings to catch transients.

Mix Bus Glue: Use Normal mode, set Resolution high (smoother), set Speed slow, use very low Dosage (around 0.2), blend with Mix knob around 30%.

Mastering Polish: Use HD Imaging, set all parameters conservatively, draw a gentle curve focusing on problem areas, use Mix knob to blend subtly (10-20%).

Have Fun!

