

STUDIO9 PLUGINS

VLA One

Voice Levelling Amplifier One

User Manual | Version 1.3.0 | VST3 / AU Plugin

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1. Introduction

VLA One is a vocal compressor and leveller for VST3 and AU hosts. It combines upward levelling of quiet passages with downward compression of loud peaks, with real-time metering and a history graph showing exactly what the plugin is doing to the signal.

What VLA One Does

A leveller-compressor works by automatically reducing the volume of loud passages and gently boosting quiet ones, resulting in a more consistent, broadcast-ready sound. VLA One combines two stages:

- Low-level amplification — quietly boosts signals that fall below a set threshold so soft moments are never lost.
- Dynamic compression — clamps down on peaks that cross the compression threshold, preventing harsh spikes.

2. System Requirements

Requirement	Details
Format	VST3, AU
OS	Windows 10 / 11 macOS 11+ Linux
DAW	Any VST3-compatible host (Reaper, Fender Studio Pro, Cubase, Cakewalk Sonar, UAD Luna, Ableton Live, Ardour, etc.)
CPU	Very low — VLA One is optimised for minimal CPU overhead
Latency	Near zero latency



3. Quick Start Guide

Get up and running in under two minutes:

1. Insert VLA One on your vocal or dialogue track in your DAW.
2. Play back your recording. Watch the teal INPUT meter — it should be active and moving.
3. Set Input Gain first so normal speech peaks around -18 dB to -12 dB on the INPUT meter.
4. Set the Low Threshold to around -36 dB and Low Gain to +6 dB to lift quieter passages.
5. Set the Comp Threshold to around -12 dB. The blue GR (Gain Reduction) meter will begin to move when peaks are being caught.
6. Choose Ratio: start with Soft (2:1) for gentle levelling or Hard (8:1) for more aggressive control, or Limiter (20:1) for hard limiting the peaks.
7. Choose Knee: Hard for an immediate transition into compression, or Soft / Smooth for a more gradual onset.
8. Set Attack and Release to Slow for natural-sounding compression on speech.
9. Adjust Makeup gain so the yellow OUTPUT meter sits at roughly the same level as your unprocessed signal.
10. Watch the History Graph to confirm the signal is being levelled smoothly over time.

That's it! Fine-tune from there using the detailed control descriptions in Section 5.

4. Plugin Interface Overview

The VLA One interface is divided into three main areas: the Controls panel on the left, the Metering panel on the right, and the History Graph along the bottom.



Figure 1: The VLA One plugin interface

Layout at a Glance

Area	Contents
Controls Panel	Nine rotary/toggle controls — Input Gain, Low Level Gain, Low Level Threshold, Comp Threshold, Ratio, Attack, Release, Knee, Makeup Gain
Meters Panel	Four real-time level meters: Input, Gain, GR, Output — each with a CLIP indicator
History Graph	Scrolling display showing Input, Output and Gain lines with threshold markers over time

5. Controls Reference

Each control is described below with its range and a plain-language explanation of what it does.

5.1 Input Gain

Setting	Details
Range	-12 dB to +12 dB
Purpose	Sets the incoming level before any levelling or compression is applied. Use this as a front-end trim to feed the processor with an optimal signal level.
Tip	Start at 0 dB, then raise or lower until typical speech peaks around -18 dB to -12 dB on the INPUT meter. If the CLIP indicator flashes, reduce Input Gain.

5.2 Low Gain

Setting	Details
Range	0 dB to +18 dB
Purpose	Sets how much gain to apply to signals that fall below the Low Threshold. Acts as a gentle upward compressor, bringing up quiet passages without affecting louder ones.
Tip	Start around +6 dB and increase if soft syllables or breath sounds are still too quiet after compression.

5.3 Low Threshold

Setting	Details
Range	-48 dB to -18 dB

Purpose	Any signal below this level will receive the Low Gain boost. Signals above it are unaffected by this stage.
Tip	If your voice sits around -24 dB, set Low Threshold to around -30 dB so only genuinely quiet moments get boosted.

5.4 Comp Threshold

Setting	Details
Range	-48 dB to 0 dB
Purpose	The level at which compression kicks in. Any signal louder than this threshold will be reduced by the chosen Ratio.
Tip	Aim to have the GR meter moving 3–6 dB on average speech. Too much reduction sounds pumpy; too little and the compressor isn't working.

5.5 Ratio

Setting	Details
Soft — 2:1	Gentle compression. For every 2 dB over the threshold, only 1 dB gets through. Natural-sounding for podcasts and dialogue.
Hard — 8:1	Heavy compression. Very aggressive clamping, useful for energetic performers or vocals in dense music mixes.
Limiter — 20:1	Brick-wall style. Almost nothing above the threshold gets through. Use to prevent clipping on live streams or broadcast output.

5.6 Attack

Setting	Details
Fast	Compressor reacts almost immediately to transients. Excellent for controlling sharp consonants or sudden mic spikes.
Slow	Lets the initial transient through before clamping down. Preserves the natural punch and presence of a voice.

5.7 Release

Setting	Details
Fast	Compression lets go quickly after a peak. Can sound animated or punchy but may cause audible pumping on sustained speech.
Slow	Compressor eases off gradually, resulting in a smooth, transparent sound. Recommended for most voice applications.

5.8 Knee

Setting	Details
Hard — 0 dB knee	Sharp, immediate transition into compression right at the threshold. Matches the plugin's original compressor response — a good default for most material.
Soft — 12 dB knee	Compression eases in gradually over a 12 dB range around the threshold, for a smoother, less noticeable onset.
Smooth — 18 dB knee	The most gradual transition, spread over an 18 dB range. Useful when you want compression to be as transparent as possible.

5.9 Makeup Gain

Setting	Details
Range	–12 dB to +12 dB
Purpose	Restores the loudness lost through compression. Dial in so the output sits at the same perceived level as the unprocessed input.
Tip	Compare the green OUTPUT meter to the teal INPUT meter and add Makeup to match them. Avoid pushing into the red CLIP zone.

6. Level Meters

VLA One features four individual level meters in the metering panel. Each has a CLIP indicator at the top that lights red when the signal exceeds 0 dBFS.

Meter	Colour	Description
Input	Teal	Raw signal level entering VLA One before any processing. Use this to ensure adequate signal level from your recording. The INPUT meter reflects the post-Input Gain signal feeding the processing stages.
Gain	Red	The Low Gain being applied to quiet passages. Rises when signals dip below the Low Threshold, confirming the upward levelling stage is active.
GR	Blue	Gain Reduction — an inverse meter that reads downward to show how much compression is being applied. A 3–6 dB dip indicates healthy compression.
Output	Yellow	The final processed signal level after all stages and Makeup gain. Use this to set a consistent output loudness for your DAW.

CLIP indicators: If the red CLIP light illuminates on any meter, reduce the incoming signal level or lower the Makeup gain to prevent digital distortion.

7. History Graph

The History Graph is a scrolling display at the bottom of the plugin showing the last several seconds of signal activity. Three colour-coded lines are drawn continuously:

Line	Colour	Meaning
Input	Teal	Incoming audio level over time. Peaks and valleys correspond to louder and quieter moments in the performance.
Output	Green	Processed output level. This line should be noticeably more even than the Input line, confirming the levelling is working.
Gain	Red	The Low Gain boost applied to quiet sections. When this line rises, VLA One is actively lifting soft passages.

Threshold Markers

The History Graph overlays two horizontal dashed lines corresponding to the Comp Threshold and Low Threshold settings. These markers move in real-time as you adjust the controls, making it easy to see how much of the signal sits above or below each threshold.

If the Output line still shows large swings, lower the Comp Threshold or increase the Ratio. If the Output sounds over-processed and flat, raise the threshold or switch from Hard to Soft ratio.

8. Typical Use Cases

8.1 Podcast Production

Podcasts recorded at home often suffer from inconsistent levels — the host may be close to the microphone during some segments and further away during others. VLA One smooths these differences automatically.

- Ratio: Soft (2:1) for a natural conversation feel.
- Comp Threshold: Around -24 dB, adjusted to catch the loudest speech.
- Low Gain: $+6$ to $+8$ dB to lift soft asides and questions.
- Attack / Release: Both Slow for the most transparent sound.

8.2 Voice-Over and Narration

Professional voice-over requires tight, consistent delivery with no dynamic surprises. VLA One gives narrators an even, authoritative tone without heavy-handed processing.

- Ratio: Hard (8:1) for tight control of wide dynamic range performances.
- Attack: Slow to preserve the clarity of consonants.
- Makeup: Dial in so the output reads at a consistent -12 to -6 dBFS average.

8.3 Music Vocals

Sung vocals have extreme dynamic variation between whispers and belted notes. Use VLA One early in the chain, before EQ and reverb, as a first levelling pass.

- Ratio: Soft (2:1) to preserve expression.
- Comp Threshold: Set just below the average singing level.
- Low Gain: Apply sparingly (+3 to +6 dB) to lift breaths without over-emphasising room noise.

8.4 Live Streaming

Live streams cannot be edited after the fact, so preventing clipping and managing sudden loudness spikes is essential. VLA One's Limiter mode provides a safety net.

- Ratio: Limiter (20:1) to hard-limit the output.
- Comp Threshold: -18 to -12 dB — anything above this is limited.
- Attack: Fast to catch sudden shouts or mic bumps immediately.
- Monitor the Output meter to ensure you never push into the CLIP zone.

9. Tips & Best Practices

- Record at a healthy level. Aim for an input level of -18 to -12 dB average — this gives VLA One enough signal to work with without headroom issues.
- Use the History Graph constantly. It is the fastest way to diagnose whether your settings are doing what you intend.
- Slow Attack + Slow Release is your safest starting point for any voice application. Add speed only when you need to tame sharp transients.
- Use Makeup to level-match before comparing processed vs. bypass. Our brains perceive louder as 'better', so volume-match to make a fair judgement.
- Large Low Gain values (+12 dB or more) will also amplify background noise. Use a noise gate before VLA One if your room is noisy.
- For broadcast loudness targets (LUFS), use VLA One for dynamic control and a loudness meter after it in the chain to hit your exact target.
- If you hear pumping or breathing artefacts, your Release is too Fast. Slow it down and re-check the History Graph.

10. Version Information

Field	Value
Product	VLA One — Voice Levelling Amplifier One
Developer	Studio9 Plugins
Version	1.3.0
Format	VST3, AU
Copyright	Copyright © 2026 Studio9 Plugins. All rights reserved.
Manual Revision	1.3.0

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