MAXI VERB

USER MANUAL v1.1 - ENGINEERING EDITION

Purpose

MAXI Verb is a stereo algorithmic reverb with four purpose-tuned modes. Its defining Mastering Verb mode adds perceived depth, dimensional continuity and front-to-back cohesion without placing an obvious tail over the mix.

1. Signal flow

1	Input is copied to a protected dry path and measured by independent left/right input meters.
2	The wet path enters a sample-accurate circular pre-delay buffer.
3	Room, Plate, Hall or Mastering Verb maps Size, Decay and Damping into the reverb network.
4	Early / Late crossfades between immediate pre-reverb energy and the generated late field.
5	Mastering Verb applies a dedicated wet spectral window before user wet filtering.
6	Low Cut and High Cut filter only the wet signal.
7	Width applies mid/side scaling to the wet field.
8	Smoothed wet/dry mixing and Output gain feed the independent left/right output meters.

Conceptual equation

For normal modes: y[n] = Gout x ((1 - m) x x[n] + m x W[n]). In Mastering Verb, the effective mix is internally restrained: meff = 0.16 x m. This makes the front-panel Mix control safer and more finely resolved for mastering work.

2. Modes

Room	Compact and reflection-forward. Constrained size mapping keeps the response immediate.
Plate	Dense, bright and wide. Favors higher density and lower damping for sheen and sustain.
Hall	The broadest size and decay mapping, suited to natural depth and ambient tails.
Mastering Verb	A restrained micro-space with stronger damping, a limited size window, wet high-pass near 220 Hz and wet low-pass near 8.2 kHz.

Mastering mode filter interaction

The protected 220 Hz to 8.2 kHz wet window remains in place unless Low Cut or High Cut requests a narrower range. This prevents accidental low-bass or extreme-top buildup while still allowing deliberate tonal control.

3. Control reference

Pre-Delay	0-250 ms. Separates the dry transient from the onset of ambience.
Size	0-100%. Changes spatial scale inside the selected mode.
Damping	0-100%. Controls high-frequency energy loss.
Decay	0.40-12.00 s. Sets tail persistence.
Low Cut	20-1200 Hz. High-pass filtering on the wet field only.
High Cut	1.5-20 kHz. Low-pass filtering on the wet field only.
Width	0-150%. Wet-field mid/side scaling: mono to expanded stereo.
Early / Late	Crossfades from immediate early energy to the algorithmic late field.
Mix	0-100%. Wet/dry balance; Mastering Verb scales the effective wet amount.
Output	-18 to +6 dB. Smoothed final gain after wet/dry mixing.
Bypass	True processing bypass; meters continue to show the passing signal.

4. Mastering workflow

Place MAXI Verb late in the mastering chain: normally before the final limiter when you want it to contain reverb peaks, or after dynamics when you want the spatial envelope to remain more independent.

• Select Mastering Verb and begin from a mastering preset.

• Start with Mix around 2-6%.

• Use Decay around 0.6-2.0 seconds for most contemporary material.

• Raise Low Cut until kick and bass remain centered and unchanged.

• Lower High Cut until cymbals and sibilance stop pulling the ambience forward.

• Adjust Width while checking mono compatibility and correlation.

• Level-match with Output and compare using Bypass.

Engineering caution

Mastering reverb is cumulative. A setting that sounds exciting in a short comparison may soften transient contrast or reduce apparent loudness after limiting. Judge at matched output level, at several monitoring volumes, and after a short listening break.

5. Presets and interface

The factory library contains 101 starting points. Mastering and guest-engineer banks appear first, followed by Rooms, Plates, Halls, vocal and instrument spaces, drums, mix spaces and Init.

• Click the preset name to open the browser.

• Click outside the browser to close it.

• Use the star to add or remove a favorite.

• Use the bin to hide a preset; discarded entries can be restored.

• Use SHOW FAVORITES and SHOW ALL PRESETS to change the view.

• Previous and Next step through available factory presets.

Visual systems

The animated display represents the wet field. Input and Output each contain independent left/right segmented meters. The editor preserves its native aspect ratio during resizing. The top-right utility menu provides interface zoom choices and access to the manual.

6. Automation and technical notes

Processing	Stereo algorithmic reverb with mode-dependent coefficient mapping
Pre-delay	Circular delay buffer, up to 250 ms
Wet tone	High-pass and low-pass stages per channel
Stereo width	Mid/side wet-field scaling
Smoothing	Wet mix and output gain are smoothed to prevent zipper artifacts
Metering	Independent input and output peak metering for left/right display
Formats	AU, VST3 and Standalone targets in the supplied JUCE project

Recommended validation

After installation, verify mode recall, preset recall, automation, bypass, stereo meters, utility-menu zoom and proportional resizing in the target DAW. For mastering decisions, compare mono, headphones and loudspeakers, then audition through the intended final limiter.

7. Quick recipes

Invisible master depth	Mastering Verb; 0.8-1.4 s Decay; 2-4% Mix; 180-350 Hz Low Cut; 8-12 kHz High Cut; 90-110% Width.
Acoustic cohesion	Mastering Verb; 1.2-2.0 s; moderate Damping; 3-6% Mix; 100-120% Width.
Drum room punch	Room; short Pre-Delay; 0.5-1.1 s; Early / Late toward early; 8-18% Mix.
Vocal plate	Plate; 20-60 ms Pre-Delay; 1.5-3.5 s; 150-300 Hz Low Cut; 8-18% Mix.
Cinematic hall	Hall; long Pre-Delay; 3-8 s; wide late field; filter the wet top as needed.

MAXI VERB

A mastering ambience specialist at its core; a complete musical reverb everywhere else.