MIDIVERB

16 BIT DIGITAL EFFECTS PROCESSOR

User Manual

Overview

Midiverb is a digital effects processor emulating three classic Alesis rack units from the mid-1980s: the MidiVerb (1985), MidiFex (1986), and MidiVerb II (1986). Together they provide 228 authentic effect programs including reverbs, gates, delays, chorus, flange, and stereo effects. Enhanced with modern features like pre-delay, input-driven ducking, tilt EQ tone control, and a switchable vintage analog signal chain for professional mixing applications.

Signal Flow

Modern mode:

Input → Tone EQ → Pre-delay → Effect Algorithm → Ducking → Mix → Output

Vintage mode:

Input → Tone EQ → 13kHz Resonant LPF → 31Hz HPF → Pre-delay → Effect Algorithm → 11kHz Reconstruction LPF → Ducking → Mix → Output

Main Controls

Parameter	Description
Effect	Master bypass switch (Off/On). When Off, the plugin passes dry signal only.
Model	Selects the emulated hardware unit: MidiVerb (64 reverb programs), MidiFex (64 delay/echo programs), or MidiVerb II (100 mixed effects). Changing model auto-clamps the program number to the valid range.
Character	Modern: Clean digital effect core only. Vintage: Adds authentic analog input/output filters based on the MidiVerb II schematic analysis — 13kHz resonant Sallen-Key lowpass (Q=2), 31Hz highpass, and 11kHz reconstruction filter. Subtle but authentic coloration.
Program	Selects the effect program within the current model (0–63 for MidiVerb/MidiFex, 0–99 for MidiVerb II). Use the preset browser for named program selection.
Pre-delay	Delay time before the effect begins (0–250ms). Adds separation between dry signal and effect tail. Classic studio technique for clarity on reverbs.
Tone	Adjusts the tonal character of the effect (±10dB tilt EQ at 340Hz–2.7kHz). 50% is neutral. Lower values are darker and warmer, higher values are brighter. Active in both Modern and Vintage modes.
Mix	Wet/dry balance (0–100%). At 100% only the effect signal is output. At 0% the signal is fully dry. Default is 100% for use on send/return buses.

Ducking Controls

Parameter	Description
Duck Time	Release time for the effect to return after ducking (10–500ms). Shorter times = effect comes back quickly. Longer times = smoother, more gradual swell.
Duck Sens	Sensitivity of the ducking detector (0–100%). Higher values make ducking trigger on quieter signals. Increase when using Midiverb on a send/return bus where input levels are lower.
Duck Amount	Intensity of ducking effect (0–100%). At 0%, ducking is disabled. Higher values duck the effect more aggressively when input signal is present.

Effect Models

MidiVerb (1985) - 64 Programs

The original Alesis MidiVerb was one of the first affordable 16-bit digital reverb processors. All 64 programs are reverb-focused, organized by decay time from 0.2 seconds up to 20 seconds. Includes small, medium, and large room sizes with bright, warm, and dark tonal variations. Programs 51–59 provide gated reverb effects (100–600ms), and programs 60–63 offer reverse reverb (300–600ms). Program 64 is Defeat (bypass/silence).

MidiFex (1986) - 64 Programs

The Alesis MidiFex was a dedicated delay and effects processor. Its 64 programs cover single echoes (short to long with HPF/BPF/LPF filtering), 2-tap and 3-tap delays with panning and ambience, regenerating delays, slap echoes, reverb hybrids, multitap effects, thickeners, and stereo generation effects. Program 64 is Defeat (bypass/silence).

MidiVerb II (1986) - 100 Programs

The MidiVerb II expanded on the original with 100 programs across seven categories:

Reverb (Programs 0–29): 30 reverb programs from small bright rooms (0.1s) to extra-large warm halls (15s). Program 0 is Defeat.

Gate (Programs 30–39): 10 gated reverb programs with slow and fast gate characteristics (75–450ms).

Reverse (Programs 40–49): 10 reverse reverb and bloom effects (150ms–8s), including regenerating reverse programs.

Flange (Programs 50–59): 10 flange programs including triggered flanges and stereo panning flanges. These use the internal LFO.

Chorus (Programs 60–69): 10 chorus programs from light to deep, plus fast chorus. These use the internal LFO.

Delay (Programs 70–89): 20 delay programs with fixed delay times from 35ms to 460ms.

EFX (Programs 90–99): 10 special effects including multi-tap, stereo generation, thickener, and regenerating delays (2–4s).

Presets

Midiverb includes 228 factory presets organized in folders matching the three hardware models. MidiVerb II presets are further organized into subcategories (Reverb, Gate, Reverse, Flange, Chorus, Delay, EFX). Each preset sets the correct model and program number, with all other parameters at default values so you can use them as starting points for your own tweaks.

You can also browse effects manually using the Model and Program knobs without using presets.

Quick Start

Lush hall reverb: Model: MidiVerb II, Program 21 (Large Warm 2.2s), Mix 40–60%, Pre-delay 30–50ms

Small room ambience: Model: MidiVerb, Program 01 (Small Bright 0.2s), Mix 25–40%

Classic 80s gated drums: Model: MidiVerb II, Program 30–39 (Gate), Mix 60–80%

Echo/delay effects: Model: MidiFex, browse programs 01–21 for echo variations

Chorus/flange: Model: MidiVerb II, Program 50–69 (Flange/Chorus), Mix 30–50%

Stereo widening: Model: MidiFex, Program 60–63 (StereoGen), Mix 50–70%

Vintage character: Set Character to Vintage for authentic mid-80s analog coloration

Clean mix with ducking: Any effect, Duck Amount 50–70%, Duck Time 100–200ms

100% wet for send/return: Mix 100% (default). Adjust to taste.

Noise Gate

Midiverb includes an automatic noise gate that activates after 16 seconds of silence, fading the wet signal to zero over 6 seconds. This prevents the emulated 16-bit noise floor from being audible during quiet passages. The gate resets immediately when new input signal is detected. This behavior matches how the original hardware would be perceived in a studio environment.

Technical Notes

Midiverb uses authentic decompiled effect algorithms from the original Alesis hardware, running the same DSP code that powered the MidiVerb, MidiFex, and MidiVerb II. The effect engine processes at the original sample rate with 16-bit integer arithmetic and a shared 16K DRAM buffer, matching the hardware architecture exactly.

Vintage mode is based on analysis of the MidiVerb II service manual schematics by John Googler Brombaugh, featuring:

- 13kHz resonant Sallen-Key lowpass filter (Q=2) creating an 18dB peak around 8.5kHz
- 31Hz highpass filter for DC blocking
- 11kHz reconstruction lowpass filter on the output

MidiVerb II programs 50–69 (flange and chorus) use an internal LFO system with triangle and sine waveforms, updated every 8 samples. The LFO parameters are defined per-program and cannot be adjusted by the user, matching the original hardware behavior.

Support

For technical support, updates, and additional information:

Website: ravegeneration.io

Email: support@ravegeneration.io