

EXO'DELAY

MODULATION DELAY

PRODUCT MANUAL

BY

DSPTONE



ExoDelay is a characterful modulation delay inspired by early digital delay designs of the 1980s and reimagined for modern production.

It blends clean digital echoes, subtle saturation, animated modulation, and dynamic ducking into a flexible delay device that feels equally at home on guitars, synths, vocals, and sound design.

ExoDelay is not a single delay – it is several delay eras combined into one, from tight vintage modulation echoes to wide modern rhythmic textures. Dedicated to giving you lush chorusing, flanging, doubling and echo delays.

Features:

- Vintage digital delay character
- Modulated echoes with dynamic ducking
- Three classic ranges + modern triple delay mode

In the early 1980s, digital delay pedals began to appear in guitar rigs and studios.

Unlike tape or bucket-brigade delays (with bandwidth limited to 5 kHz), these early digital units offered: *Clear repeats, Stable delay times, New creative modulation options.*

However, memory was expensive and bandwidth was limited.

As a result, each generation of digital delay had its own distinct character – defined by delay time limits, filtering, noise floor, and modulation behavior.

Some units focused on short, chorus-like delays. Others expanded delay time at the cost of bandwidth.

Later designs pushed clarity and range further, while becoming cleaner and more precise.

ExoDelay captures this evolution by offering multiple delay characters, each reflecting a different design philosophy from that era – and then extends them with modern routing and control.

Why these delay modes still matter today?

Even with unlimited modern delay times, the original ranges and limitations of early digital delays remain musically relevant:

- Shorter delay ranges encourage rhythmic playing
- Narrower bandwidth sits better in a mix
- Subtle modulation adds movement without chaos
- Saturation and noise create depth and presence

ExoDelay preserves these strengths while adding:

- Wider delay ranges when needed
- Dynamic ducking for clean mixes
- Flexible modulation control
- A modern multi-delay mode for complex textures

This makes **ExoDelay** both nostalgic and practical.

DELAY MODES

ExoDelay includes four operational modes:

DMOD	Mode, inspired by the first revision of the digital modulation delay. Tight delay range with darker bandwidth and stronger character. Ideal for rhythmic echoes and classic modulation textures. Delay range: 0-512 ms
DMOD-10	Mode, inspired by the 2nd revision of the digital modulation delay. Extended delay time with smoother tone and balanced clarity. Great for melodic delays and evolving modulation. Delay range: 0-900 ms
DMOD-20	Mode, inspired by the 2nd revision of the digital modulation delay. Widest classic range with brighter bandwidth and cleaner repeats. Perfect for spacious delays and detailed modulation. Delay range: 0-1024 ms
MODERN TRI	Special additional triple mode (all three modes in serial chain). Widest classic range with brighter bandwidth and cleaner repeats. Perfect for spacious delays and detailed modulation. x3 Delay ranges in series: 0-512 / 0-900 / 0-1024 ms

HOW THIS CHANGE SOUND

Mode selection does not only change the delay time range.

Each mode affects the overall nature and character of the sound in its own way.

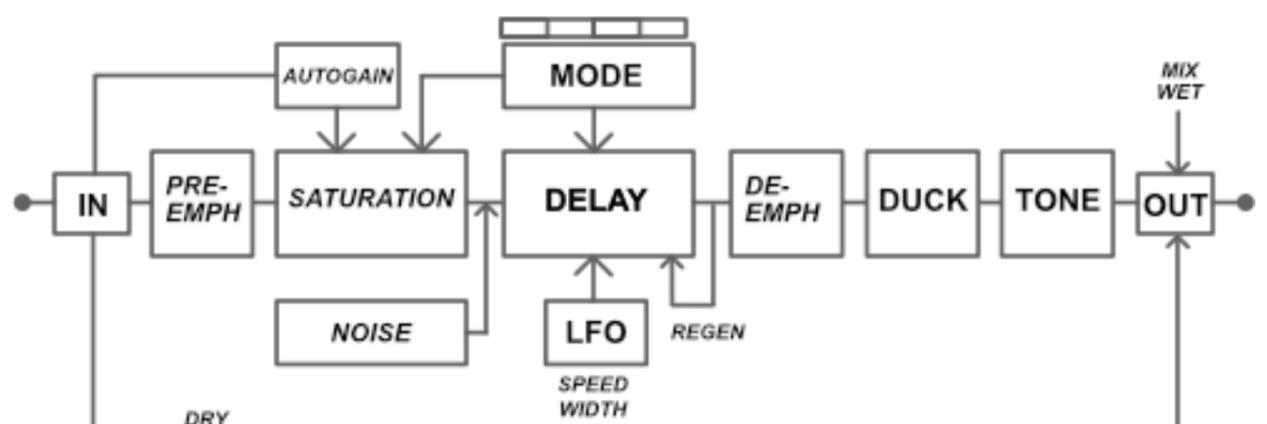
When switching between modes, the processing changes the spectral characteristics, noise behavior, frequency bandwidth, and other parameters.

This design reflects the evolution of vintage digital delay processors.

DEVICE ARCHITECTURE

ExoDelay operates on the same principles as other delays, but with added feature of modulation (LFO changes the delay time).

- Input stage
- Pre-Emphasis stage
- Saturation stage
- Delay stage
- De-Emphasis stage
- Ducking stage
- Tone stage
- Output stage



MAIN CONTROLS

MODE	Switch between 4 internal modes (each with own character & time range): - DMOD: 1st gen delay. Time range 0-512 ms. Scale time value x1. - DMOD-10: 2nd gen delay. Time range 0-900 ms. Scale time value x1.75. - DMOD-20: 3rd gen delay. Time range 0-1024 ms. Scale time value x2. - MODERN TRI: serial chain of 1st, 2nd, & 3rd gen delays with own ranges.
TIME	Sets delay time in ms or beats at selected delay mode at own time range. Extended automatically depending on mode
SYNC	Switch Time parameter between Ms/Beats modes. In Beats mode, Time sets the duration of the delay in beats, synchronized to project tempo
SATURATION	Internal character processing. Automatically adjusted per Mode
NOISE	Noise stage processing white noise injection. Noise is a part of the old delay processing chips, that adds own colours to the final signal. It adds perceived motion, improve depth illusion, makes feedback feel alive. Noise knob sets level of the noise injection for each mode individually. Noise control range: -24..0..+24 dB
SPREAD	Adjusts the stereo width, adds flanger effect
SPEED	Controls the speed rate of the LFO modulation or sweep
WIDTH	Controls the depth of the LFO modulation or sweep
REGEN	Controls the amount of delayed signal fed back into the delay stage
STONE	LP filter control. Sets High Cut frequency value in Hz. Range; 20 Hz - 20 kHz Shapes the tonal character of delay modulation
MIX	Controls the mix level of the effect signal, blending it with the dry signal. * Dry signal remains unchanged by the design
DRY	Set level of the unprocessed input signal
WET	Set level of the processed output signal

ADDITIONAL CONTROLS

INPUT	Adjusts incoming signal level. Range: -inf to +12 dB (Default: 0 dB)
OUTPUT	Adjusts final output signal level. Range: -inf to +12 dB (Default: 0 dB)
AUTOGAIN	Adjusts the output level of the saturation stage to match the input level.
DUCK AMT	Amount of level reduction on the effect signal. Duration of the ducking effect controlling by the delay TIME knob.
DUCK SHAPE	Controls how smooth or sharp the ducking response is

INTERFACE CONTROLS

LICENSE top right	Press to DSPTONE logo to open license information window with plugin version information
PRESETS top center	Built-in preset browser. Click to preset name for preset selection in the browser or switch between presets by clicking to arrows. Save button helps to save your preset to the local presets folder. Open button - open local folder with effect device presets
MANUAL top right	Press to Info icon to open operational manual for current plugin
I/O METERS left & right	Individual Input and Audio meters placed at the left (input meter) and right (output meter) sides of the plugin interface for the gain staging control
RESIZABLE UI bottom right	Helps to resize scale of the plugin interface for comfort work

TIME-BASED EFFECTS GUIDE

Delay time is the foundation of many classic time-based effects.

By adjusting the Time, Speed, Width and Regen controls, ExoDelay can recreate a wide range of classic and modern effects.

FLANGER

Time Range: 0.3 - 4 ms

Classic jet-like sweeps and metallic motion.

Creates moving comb-filter sweeps by mixing the signal with a very short, modulated delay.

Width: Low-Medium

Speed: Slow-Medium

Regen: 0-30%

Mix: 20-50%

THROUGH-ZERO FLANGER

Time Range: 0.5 - 6 ms

A deeper flanging effect where the delayed signal approaches zero delay, creating dramatic phase cancellation.

Width: Medium

Speed: Slow

Regen: Low

Mix: 30-60%

CHORUS

Time Range: 8 - 25 ms

Creates the illusion of multiple voices by slightly delaying and modulating the signal. Longer delay times and gentle modulation produce lush, wide sounds.

Width: Medium-High

Speed: Slow

Regen: 0%

Mix: 20-40%

VIBRATO

Time Range: 5 - 16 ms

(Wet signal only, set DRY to minimum)

Pitch modulation without dry signal mixing. Useful for tape-style pitch movement and subtle instability.

Mix: 100%

Width: Medium-High

Speed: Medium

DOUBLING / DOUBLE-TRACK

Time Range: 15 - 35 ms

Simulates a second performance slightly offset in time.

Excellent for vocals, guitars, and synth leads.

Width: Low

Speed: Very slow or off

Mix: 30-50%

SLAPBACK DELAY

Time Range: 60 - 120 ms

A single, fast echo that adds depth and punch.

Classic rockabilly, country, and early rock delay sound.

Regen: 0-15%

Mix: 20-40%

SHORT ECHO

Time Range: 120 - 250 ms

Clearly audible echo that remains rhythmically tight.

Works well for rhythmic guitar and synth patterns

Regen: 20-40%

Mix: 25-45%

MEDIUM ECHO

Time Range: 250 - 500 ms

Standard delay used for melodic repeats and ambient textures.

This range defines the classic digital delay sound.

Regen: 30-60%

Mix: 30-50%

LONG ECHO / AMBIENT DELAY

Time Range: 500 - 1024 ms

Spacious repeats for ambient and cinematic effects.

Most effective in modern mode.

Regen: 50-80%

Mix: 35-60%

RHYTHMIC / TEMPO-BASED DELAY

Delay times synchronized to musical note divisions.

Keeps mixes clean while adding rhythmic movement.

Duck Amount: Medium

Regen: Moderate

EXPERIMENTAL MODULATION DELAY

Combines long delay times with active modulation.

Produces evolving textures and complex motion.

Any Time Range.

Width: High

Speed: Medium

Regen: Moderate-High

HOW TO USE EXODELAY

CLASSIC MODULATION DELAY

Choose a DMOD mode.
Set Time between 80-200 ms
Use moderate Width and Speed
Keep Mix below 40%

CLEAN RHYTHMIC DELAY

Lower Regen
Use Duck Amount to keep the mix clear
Sync Time to tempo

WIDE STEREO ECHO

Increase Spread
Use slower Speed
Extend delay time using later modes

EXPERIMENTAL & AMBIENT

Switch to Modern Tri Mode
Increase Regen carefully
Combine modulation and ducking for movement

BEST USED BY INSTRUMENTS

GUITAR: Rhythmic delays. Modulated leads. Clean ambient textures

BASS: Short delays with ducking. Subtle modulation for width

SYNTHS: Animated echoes. Stereo movement. Sound design layers

VOCALS: Tempo-synced delays. Ducking for clarity. Darker Tone settings

DRUMS & PERC: Slapback echoes. Stereo rhythmic delays. Controlled feedback textures

ExoDelay is designed to **feel alive**, not perfect.

Explore the interaction between delay time, modulation, internal modes character, and ducking – that's where its character truly emerges.