

SHARK DELAY

PSYCHEDELIC TAPE ECHO



From tight repeats to drifting soundscapes.

Three echo heads. Tape and Analog character. A hidden drawer of Chorus, Phaser and Flanger, all working on the wet echoes.

USER MANUAL

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Covers development build 0.1.5

Your first session

01 / Start with the song

Insert SHARK DELAY on a track. Load a preset from the wide preset bar, then begin with Mix around 20-25% and moderate Feedback. Adjust the output level to fit the track.

02 / Lock the rhythm

Press HOST and turn Time to choose a note division. Start with 1/8 or 1/4. Head 3 plays at the displayed delay time; add heads 1 and 2 for a busier pattern.

03 / Shape the repeats

Use Low Cut to reduce low-end buildup and High Cut to soften the repeats. Turn Drive for saturation, then add a little Wow or Flutter for movement.

04 / Open the hidden drawer

Press MOD FX beside Mix. Add Chorus for width, Phaser for a slow swirl, or Flanger for a moving comb texture. Closing the drawer keeps the effects active.

05 / Make room for the phrase

Raise Duck if the echoes crowd the vocal or instrument. On an auxiliary send, enable Wet Solo or set Mix to 100% so the return carries only the effect.

Starting from the source package

Open SharkDelay.jucer in JUCE 8 Projucer, set the local JUCE modules folder, then save and open in Xcode. Build the AU or VST3 target in Release and rescan your DAW. This package is development source; it is not a signed customer installer.

Time, heads and repeats

HOST / MS / TAP

HOST follows the DAW tempo and makes Time choose musical divisions. MS selects free time from 20 to 2000 ms. TAP uses the interval between two valid clicks and switches to MS; intervals outside 20-2000 ms are ignored.

Read the display

The large number is the delay time in milliseconds, rounded for readability. The smaller line shows the note division and host BPM. Without a valid host tempo, the processor uses 120 BPM. Host tempo is limited to 30-300 BPM; synced time is limited to 20-8000 ms.

Three heads, one time control

Head 1 plays at one third of the displayed time, head 2 at two thirds, and head 3 at the full time. For a 600 ms display, the heads play at 200, 400 and 600 ms. Any combination is available; selected heads are averaged to manage level. All heads off stops the echo taps, though downstream ambience may remain.

Feedback / 0-100%

Feedback controls how much echo returns to the delay input. Low values give a short answer; high values build a long trail. The maximum loop gain is bounded below unity before the filters and saturation, but tails can still be very long. Time changes are smoothed and can bend pitch.

Available note divisions

1/32, 1/16 T, 1/16, 1/8 T, 1/16 D, 1/8, 1/4 T, 1/8 D, 1/4, 1/4 D, 1/2, 1/2 D, 1/1.

D means dotted; T means triplet.

Tone with a little history

Tape / Analog

Tape is the brighter character with stronger wow and flutter influence. Analog is darker and more saturated, inspired by bucket-brigade delay behavior. These are original algorithms rather than replicas of a particular circuit.

Drive / 0-10

Adds input gain and soft saturation to the echo path. It leaves the separate dry path untouched. The scale is an amount control, not a calibrated dB readout.

Low Cut / 20-1000 Hz

Removes low frequencies in the recording and feedback path. Increase it when repeated bass or kick energy makes the mix cloudy.

High Cut / 1-20 kHz

Softens high frequencies in the recording and feedback path. Repeats lose brightness as they circulate. The upper cutoff is limited at low sample rates.

New / Worn / Old

Changes high-frequency loss in the feedback path. Move toward Old for a darker trail. Tape condition does not add a hidden noise generator.

Wow / Flutter / 0-100% each

Wow introduces slow pitch movement at about 0.43 Hz. Flutter adds faster movement at about 7.17 Hz. Each knob controls depth; zero removes that modulation. Analog mode reduces their timing influence.

Open up the echoes

Spring / 0-100%

Adds a dispersive, filtered ambience after the echo taps. This is a compact algorithmic spring-like network, with a roomy, lingering texture.

MOD FX drawer

Open it beside Mix to reveal the three modulation amount knobs. The processing order is Chorus, then Phaser, then Flanger. These effects follow the echo and spring path; they do not feed back into the main delay loop.

Chorus / 0-100%

Blends slow, offset delay voices into the wet sound for width and movement. Its internal rate is about 0.27 Hz.

Phaser / 0-100%

Blends a six-stage all-pass sweep with the wet sound. The internal sweep rate is about 0.13 Hz, giving a slow swirl.

Flanger / 0-100%

Adds a short modulated delay with internal feedback for a moving comb texture. The internal rate is about 0.095 Hz.

Amounts, not rate controls

Each knob sets its effect amount; rates and structure are tuned internally. At zero, that effect contributes no flavor. Hiding the drawer does not change the sound. The nearby activity lamp shows when any modulation amount is above zero.

Routing, balance and meters

Stereo / Ping Pong

Stereo keeps the two feedback paths independent. Ping Pong combines the input into the left delay path and cross-feeds the repeats between channels. Use a stereo output to hear the alternating echoes. Mono output folds the paths together.

Duck / 0-100%

Reduces the wet signal while input is present, then lets it rise as the phrase ends. It follows the input with approximately 6 ms attack and 240 ms release. There is no external sidechain input.

Mix / Wet Solo / Output

Mix is a linear dry/wet blend from 0-100%. Wet Solo forces a fully wet output without losing the stored Mix value. Output applies -18 to +18 dB after the blend, so it affects both dry and wet audio.

Bypass

Returns the original input using a short crossfade and excludes Output gain. The delay keeps running internally, so bypass is not a clear-buffer command.

Input lamp / Output meters

The input lamp follows incoming peak level. The left/right output meters show sample peaks in dBFS, not true peaks. They fall at roughly 24 dB per second. Check your DAW meter too when setting the final level.

Signal path

Input splits into dry and echo paths. The echo path contains Drive, filtering, character and feedback with three taps. Wet taps feed Spring, Chorus, Phaser, Flanger and Duck, then meet the dry signal at Mix. Output gain follows the blend.

Save the good accidents

60 factory starting points

The bank covers Dub, Vocals, Guitar, Drums, Keys and Creative. Click the preset bar to search names or categories. A single click selects; double-click, Enter or Load recalls. The header arrows cycle through the factory bank.

Favorites and user presets

Use the star to mark a favorite. In the browser, enter a name and choose Save new to store a complete sound. Rename applies to user presets. Delete hides factory presets or moves user files into a Trash folder. The hamburger menu can restore hidden factory presets.

A / B / C

Changing slots stores the outgoing sound. An unused slot starts with the current sound, so you can make a variation and return to the earlier version. Slots belong to the current plugin instance and are saved with the DAW session.

Undo / Redo and recall

Use the history buttons to step backward or forward through edits. Audio parameters support host automation and session recall. Drawer visibility, zoom and color theme are interface state rather than audio automation controls.

Make it yours

Click the Shark logo/title to cycle Yellow, Red, Blue and Purple accents. The theme changes appearance only. White outer scales remain clear around the vintage knobs; the selected knob has a yellow focus ring. Use the hamburger Zoom menu for 75%, 100%, 125% or 150%.

Everyday gestures

Drag a knob, use the wheel, double-click to reset, or type a value in its field. Close overlays with Escape or by clicking outside. Find the creator plate in Hamburger > About / Credits.

Keep the session moving

No repeats?

Check Bypass, Mix or Wet Solo, and make sure at least one tape head is enabled. Check the source signal and your DAW routing. With all heads off there are no active echo taps.

Timing seems different?

The display describes head 3. Heads 1 and 2 play earlier. Check HOST versus MS, the selected note division, and your DAW tempo. TAP switches to free milliseconds after a valid interval.

Too much buildup or movement?

Reduce Feedback, Spring or the modulation amounts. Raise Low Cut to clear bass buildup. Reduce Wow and Flutter for steadier pitch. Closing MOD FX alone does not turn the effects off.

Back up your sounds

User presets, favorite flags and hidden-preset flags live in the operating system application-data folder under Shark Plugs/Shark Delay. On macOS this is normally ~/Library/Application Support/Shark Plugs/Shark Delay. Back up that folder along with your DAW sessions.

Build and compatibility notes

This manual covers development source 0.1.5, with AU, VST3 and Standalone targets. The processor supports mono, stereo and mono-in/stereo-out layouts. The source checkpoint includes no commercial activation, signed installer or notarization. Confirm compatibility with your own OS and DAW before a release rollout.

Shark Plugs

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