EMBER ECHO

WARM ANALOG DELAY · WHITE RIVER AUDIO

User Guide
Version 0.5.2

Ember Echo is a warm, analog-style delay. Each repeat passes through a choice of four characters (tube, tape, transformer or bucket-brigade), so the echoes darken, thicken and drift like hardware while the dry signal stays clean, unless you choose to drive it too.



DISPLAY 1 Time display 2 Status light

CONTROLS 3 Time 4 Feedback 5 Warmth 6 Mix 7 Dry Drive 8 Tone 9 Low Cut 10 Wobble 11 Output 12 Character 13 Sync 14 Ping-Pong

Quick start

1. **Insert Ember Echo** on a track or an effects send. On a send, set Mix 6 to 100%.
2. **Set the time** with Time 3 , or press Sync 13 to lock it to the song's tempo as a note value.
3. **Pick a Character** 12 and set Warmth 5 for how coloured the repeats are.
4. **Set how long it rings** with Feedback 4 , and how dark the repeats become with Tone 8 .

What you see

① Time display

The delay time in milliseconds, or the note value when Sync is on.

② Status light

Glows with Warmth and breathes a little with the signal; Dry Drive warms it toward red.

The controls

③ TIME default 375 ms, 10–2000 ms	The delay time. With Sync on, this knob becomes a note value (default dotted eighth).
④ FEEDBACK default 40%, up to 110%	How much of each repeat feeds back. Above 100% the echoes build up into self-oscillation, held in check by the character's saturation. **Change it:** lower for a single slap; higher for long, decaying trails.
⑤ WARMTH default 30%	How hard the repeats drive the selected Character. Each repeat passes through it again, so later echoes get warmer and softer. **Change it:** higher for colourful, saturated echoes; lower for cleaner repeats.
⑥ MIX default 30%	The balance of echo against the dry signal. **Change it:** 100% on an effects send.
⑫ CHARACTER default Tube	The colour of the repeats. **Tube**: warm, mostly 2nd harmonic, the lows kept tight. **Tape**: soft and round, with a low bump and softened highs. **Iron**: transformer weight; the lows saturate first. **BBD**: the dark, lo-fi sound of a bucket-brigade chip, with extra wobble. Click a name, click the switch to step, or drag.
⑦ DRY DRIVE default Off	Saturates the *dry* signal only, through the same Character. The echoes are not affected by it (their colour is Warmth). At Off the dry signal passes clean. The level stays about the same up to the middle of its range. **Change it:** turn up to warm the source itself, like running it through a preamp.

The controls (continued)

8 TONE
default 6.5 kHz, 800 Hz–18 kHz

A low-pass filter in the feedback loop: each repeat gets a little darker.

Change it: lower for dark, vintage echoes; higher for bright, clear ones.

9 LOW CUT
default 100 Hz, 20–1000 Hz

A high-pass filter in the feedback loop, so the repeats don't build up low end.

Change it: higher to keep echoes out of the bass and kick.

10 WOBBLE
default 15%

Wow and flutter: the slow pitch drift and fast waver of tape and old delay chips.

Change it: higher for a woozy, lo-fi feel; 0 for steady repeats.

11 OUTPUT
default 0 dB, –24 to +12 dB

A fixed level trim.

13 SYNC
default off

Locks the delay time to the song's tempo; the Time knob becomes a note value.

14 PING-PONG
default off

The repeats alternate between left and right.

Good to know

Where it goes

Late in the chain: after level, tone and clarity processing, before reverb. On a vocal, a very low Mix adds depth without an obvious echo.

Insert or send

As an insert, use Mix to blend. On an effects send, set Mix to 100% and control the amount with the send level.

Self-oscillation

Above 100% Feedback the echoes grow until the Character's saturation holds them. It is safe, but turn Feedback back down to let the sound die away.

Latency

The dry path adds 49 samples of latency (about 1 ms at 44.1 or 48 kHz), reported to the host, so everything stays in time.