Echo Cube

User Guide

v1.0

Echo Cube

Dual Acoustic Delay Line

Echo Cube is a dual delay plugin inspired by the Cooper Time Cube, a rare analog delay system that achieved echo without tape or electronic delay circuits scush as BBDs. The original unit created delay by sending audio through long coiled tubes, where time was defined by the physical propagation of sound through air.

Echo Cube recreates and expand this concept with two independent delay lines, A and B, each offering dedicated time, feedback, and level controls. Three models are available: **Time Cube** faithfully recreates the original hardware, while **Garden Hose** and **Corrugated** are experimental, DIY inspired variations designed for sound design, expanding on the physical principles of the original unit.

The delay lines can be combined using multiple routing modes, including serial, parallel, ping pong, mono sum, and mid side, allowing precise control over delay interaction and stereo image shaping.

Echo Cube is available for macOS, Windows, and Linux (VST, VST3, AU, AAX, CLAP).

It's also available on the App Store for iOS and iPadOS (AUv3 and Standalone).

Installation

macOS

• Double click on the DMG archive to extract it
• Right click on the PKG installer and click open
• Follow the instructions to install the plug-in(s)

Windows

• Extract the ZIP archive
• Double click on the setup file (.exe)
• Follow the instructions to install the plug-in(s)

Linux

• Extract the tarball archive
• Run ./install.sh
• Follow the instructions to install the plug-in(s)

Registration

When you open the plugin for the first time, the activation window will appear automatically. If it does not appear, open it by clicking the ☰ icon next to the bypass button in the top right corner of the plugin.

Online

- If you haven't created an account yet, you can sign up here
- Enter your email and password and click Log In.

Offline

- Download the license file from your account.
- Drag and drop the license file into the registration window, or click the *offline license file* label below Log In to select the license file.

Parameters

Master

Input — Sets the input gain before processing. Use it to optimize the signal level into the delays.

Mix — Blends the processed signal with the dry input signal.

Output — Controls the final output level after processing. Useful for gain matching.

Model — Selects one of three physical delay models available:

- *Time Cube*, the original Time Cube design.
- *Garden Hose*, long flexible tubing similar to the Time Cube.
- *Corrugated*, corrugated plastic piping for cabling.

Highpass — Applies a highpass filter to the input signal before the delays.

Drive — Adds soft saturation to the input signal.

Delays *(A/B)*

Bypass — Enables or disables the delay channel.

Time — Sets the delay time for the line.

↳ *Sync* — Synchronizes the delay time to the host tempo.

Feedback — Controls how much of the delayed signal is fed back into the delay line. Higher values produce longer repeats and self oscillation.

Volume — Sets the output level of the delay line before routing.

Extra *(character controls)*

Comb — Adjusts the internal resonance of the delay line. This emphasizes or smooths harmonic buildup, simulating the classic comb filtering happening in the unit.

Noise	Adds background noise into the delay path. This recreates the instability and texture of physical delay systems.
↳ *Env*	When the enabled, the noise follows the input signal: it only activates when audio is present.
Phase	Inverts the polarity of the delay line output. This affects how the two delay lines interact, especially in parallel, mid/side, and feedback heavy setups.

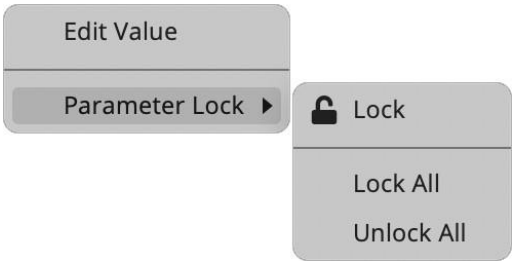
Routing

Signal Flow	Shows the current signal flow between delay lines A and B and the stereo channels. Five modes are available: ● *Serial,* chains lines A and B together to create longer delay times and more complex repeats. ● *Parallel,* lines A and B process the input signal independently. Their outputs are mixed together at the end. ● *Ping Pong,* Routes the left channel into delay line A and the right channel into delay line B, then cross feeds the outputs back to the opposite channels. ● *Mono Sum,* the input signal is summed to mono before entering the delay lines, then processed through the serial routing path. ● *Mid/Side,* splits the input into mid and side components, processes them separately through delay lines A and B, then converts the signal back to stereo.
Send	When disabled, no new signal enters the delay lines, but existing feedback continues to be heard until it naturally decays.
Direct	Controls whether the dry signal is passed directly to the output. Useful for creating wet only delay effects. Independent of the Mix parameter.
Soft Clip	Enables a soft clipping stage on the delay output. This limits peaks in a smooth way and helps keep feedback under control at extreme settings.

Features

Parameter Lock

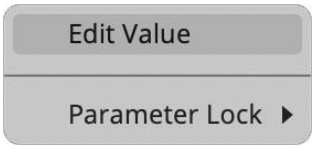
If you want to keep the value of one or more parameters while changing presets, or when using the randomizer button, you can use the *Parameter Lock* feature.
Right click on a parameter and choose *Parameter Lock*.



Lock / Unlock	If locked, the parameter won't be updated when changing presets
Lock All	Locks all parameters
Unlock All	Unlocks all parameters

Edit Value

You can also manually change the value for knobs and sliders. Right click on a parameter and choose *Edit Value*. You can also access this feature with SHIFT + Click.



By clicking on the icon ☰ you can access additional features.

Window Size

You can resize the plugin window using three predefined sizes (*small, standard, big*).
You can also resize the plugin window by clicking and dragging the bottom-right corner of the interface. Double clicking will reset to the standard size.

Preset Copy / Paste

You can easily share presets by using this Copy/Paste feature.

Copy to Clipboard	The status of all parameters will be saved to the Clipboard
Paste from Clipboard	Load a preset from the Clipboard

Enable / Disable Notifications

You can enable or disable the notifications for updates and news (shown by the bell icon). This option is global and it will affect all AudioThing plugins.

Swap Mouse Buttons

If you are using the right button as your primary mouse button, the plugin might not recognize it. Use this option to enable it internally in the plugin.
This option is global and it will affect all AudioThing plugins.

GUI Acceleration

You can enable or disable the GUI acceleration supported by your system.
The current and default library is OpenGL.

Graphics Controls

This feature allows you to modify the User Interface's Brightness and Contrast.

End

Where is everything?

The installer will place the plugins, presets, and other data in these folders.

macOS

AU	*/Library/Audio/Plug-ins/Components/*
VST	*/Library/Audio/Plug-ins/VST/*
VST3	*/Library/Audio/Plug-ins/VST3/*
CLAP	*/Library/Audio/Plug-ins/CLAP/*
AAX	*/Library/Application Support/Avid/Audio/Plug-Ins/*
Data	*/Users/Shared/AudioThing/*

Windows

VST	*custom path from the installer*
VST3	*\Program Files\Common Files\VST3*
CLAP	*\Program Files\Common Files\CLAP*
AAX	*\Program Files\Common Files\Avid\Audio\Plug-Ins*
Data	*\Users\Public\Public Documents\AudioThing*

Linux

VST	*~/.vst/*
VST3	*~/.vst3/*
CLAP	*~/.clap/*
Data	*~/.local/share/AudioThing/*

Credits

DSP & Code	*Carlo Castellano*
Design	*John Gordon*
QA	*David*

EULA

Please visit www.audiothing.net/eula/ to review this product's EULA.

Thank You

Thank you for your purchase! We hope you will have as much fun using it as we had making this product.
For support, please visit www.audiothing.net/support/
For further help or any questions, please contact us here: www.audiothing.net/contact/

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