

Owner's Manual



Table of Contents

Introduction.....	3
Legend.....	4
Effect Parameters.....	5
Advanced Effect Parameters.....	8
Preset System.....	10
MIDI.....	13
AUv3.....	15

Introduction

Zodiak Echo faithfully recreates the spacious tape delay and spring reverb combo that ruled the airwaves since its introduction in 1974. Its combination of analog tones, trippy quirks, and organic modulation effects helps you unleash an immense variety of room-filling retro sounds.

Zodiak Echo is powered by advanced tape delay simulation technologies. It features extensive parameters that help vary tonality, wow/flutter, tape age, saturation, and other analog delay characteristics.

Dedicated parameters for each of Zodiak Echo's three delay heads make it easy to obtain stereo ping-pong delays. Its spring reverb module features two distinct tanks and can be configured to operate in parallel or series to the delay unit. Additional parameters help obtain multi-layered, distinctly analog sounding chorus and vibrato effects characteristic of tape delays.

Zodiak Echo is compatible with iOS, iPad OS, and Apple Silicon Macs. It comes packaged with its AUv3 FX plugin, so that multiple instances can be used in AUv3 compatible DAWs including Logic, GarageBand, and Cubasis. Zodiak Echo supports MIDI learn for over 40 parameters, as well as MIDI program changes.

Legend



- 1) Preset Manager Access / Textual Display
- 2) Tempo Panel Access (Standalone Only)
- 3) Settings Panel Access
- 4) Effect UI Panel Scroll Button (Visible here for iPhone & Small AUv3 Layouts)
- 5) Effect UI Panel

Effect Parameters

POWER SWITCH: Master bypass for the effect.

INPUT VOLUME: Adjusts the gain for the incoming audio signal. If “SAT” mode is selected for the preamp, this parameter also works to adjust the amount of overdrive/distortion on the input signal.

OUTPUT VOLUME: Adjusts the final output volume.

CLN/SAT (Preamp): Selects the preamp type used on the input signal. In CLN (clean) mode, the input signal remains transparent. In SAT (saturation) mode, the input signal is passed through a virtual gain stage to obtain a natural sounding overdrive effect. If the latter mode is selected, the INPUT VOLUME parameter can now be employed to vary the amount of overdrive/distortion on the input signal.

MODE SELECTOR: Specifies a given combination of delay heads/taps to become active. Modes 5 through 11 also activate the virtual spring reverb module. In “REVERB ONLY” mode, delay heads are deactivated, and only the spring reverb unit remains operational. The active delay heads in the current mode are indicated via the corresponding virtual LEDs.

DELAY TIME Selectors: Used to set the delay time for each head independently. If TEMPO SYNC is off, the delay time is set by touching the corresponding UI element and dragging the touch left or right. The time unit is displayed in seconds or milliseconds. If TEMPO SYNC is on, the time units

become note values. In this mode, user touches the UI element corresponding to a given delay head to display a dropdown menu. The menu displays a set of note values to choose from.

TEMPO SYNC Switch: Enables tempo syncing. When used as an AUv3 plugin, the tempo data (BPM) is communicated to the effect by the DAW. For the standalone app, tempo is set manually by accessing the tempo preferences panel on the taskbar.

REPEAT RATE: Changes the delay time at the global level. The range is from 25% to 400% speed, with 100% being the default. This parameter is useful for varying delay times for all three heads at once, or to obtain speed-up and slow-down effects. Under normal conditions, REPEAT RATE should be kept at the default position of 100%.

INTENSITY: Adjusts the amount of feedback into the delay line. At 0% intensity, each head repeats the input signal exactly once. As intensity is increased, the signal is repeated more times until fading away. At values near the max, the effect is pushed into self-oscillation.

ECHO VOL: Master volume control for the delayed signal.

BASS/TREBLE: Individual parameters that provide “active” bass and treble equalization of the delayed signal. Each parameter offers up to 24dB of cut or boost.

REVERB VOL: Sets the audio level for the spring reverb effect. Reverb effect is available only in **MODE SELECTOR** values of 5 through 11, as well as its “Reverb Only” mode.

DWELL (Reverb): Sets the length/duration of the reverb “tail”.

TYPE A/F Selector (Reverb): Selects the type of reverb tank and “circuitry”. Type A is a brighter type of spring reverb, whereas Type F has a “darker” presence.

LO CUT/Hi CUT: Individual parameters that specify the amount of recursive high and low frequency filtering in the delay path. User can employ these parameters to change the “response” of the delayed signal, and its decay characteristics.

WOW: Adjusts the amount of “wow” effect (similar to low frequency modulation) in the virtual tape loop.

FLUTTER: Adjusts the amount of “flutter” effect in the virtual tape loop. Flutter operates at a higher frequency than wow.

EC SEND: When enabled (switch up), input audio is directed into the delay line. When disabled (switch down), input signal is no longer be sent into the delay line. This parameter can be used to obtain a period of repetitive delay. Then the musician can deactivate EC SEND, and continue playing over the repeating delay signal. It behaves similarly to the “trails” feature found on some other delay units.

DRY MUTE: When activated (switch up), the dry signal is no longer audible. However, it continues to be sent into the delay line (provided EC SEND is also active). This feature is useful when only the delayed signal is to be audible. One example is when the effect is used as a plugin in a Bus/AUX channel.

Advanced Effect Parameters

PAN (Delay Heads): Specifies stereo panning for individual delay heads.

GAIN (Delay Heads): Adjusts the volume of each delay head individually.

VARI AMP: Specifies the amount of amplitude modulation (AKA volume drop) on the delay signal. This feature helps replicate the volume variations in old or out-of-spec tape echo units.

HUM: Sets the volume of the electronic “hum” noise.

HISS: Adjusts the volume of the “tape hiss” artifact.

TONE (Hum/Hiss): Controls the tonality of the HUM and HISS signals.

TIME RAMP: Specifies the amount of time it takes for the virtual tape loop speed up or slow down when tap delay time or REPEAT RATE changes occur.

PRESENCE: Specifies the upper-mid presence of the input signal going into the delay line. This parameter can be used to compensate for the natural “roundness” of the delayed audio in certain configurations.

TAPE AGE: Varies the tonality, as well as modulation characteristics of the delayed signal. This parameter helps replicate different conditions of the tape, and of the system’s “mechanical” elements.

HEAD DRIFT: Specifies the amount of time drift among the delay heads. This feature is particularly useful for quickly obtaining a stereo delay effect. This is typically achieved by setting identical delay times for two or more delay heads, panning them in separate direction, and then increasing HEAD DRIFT until a suitable stereo presence is obtained.

PREAMP SAT. MODE TONE: Adjusts the tonality of the input signal through the preamp. This parameter is functional only if the PREAMP parameter is in "SAT" (saturation) mode. Refer to the section on Basic Effects Parameters for more information.

MONO CLLPS: When enabled, collapses stereo input into mono before passing it into the delay line. Only the delayed signal is affected. The dry input audio remains the same.

STEREO FEEDBK: When enabled, changes the way that the feedback is routed among the delay heads. This can help achieve a different stereo "ping pong" feel in patches where delay heads are panned dissimilarly. By default, this parameter is off.

PAN (Reverb): Stereo panning for the reverb signal.

SERIES/PARALLEL (Reverb): Selects the signal flow through delay and reverb modules. In the PARALLEL mode, the input signal is fed into the delay and reverb modules simultaneously. In the SERIES mode, the input signal is first fed into the delay module; the output from the delay module is then fed into the reverb unit. Thus, reverb is applied to the delayed signal instead of directly on the input signal. By default, this parameter is set to PARALLEL.

Preset System

The Preset Manager is accessed by touching the left area of the main taskbar, where selected preset and bank name is usually displayed.

What is saved in a preset?

All the onscreen effect parameters, including input and output levels. All the MIDI CC map data.

Note that a CC LOCK switch is provided on the System Preferences panel. When activated, this lock preserves the existing MIDI CC assignments even if a different preset is selected.

Managing Presets

The app's built-in preset management system is a powerful way to organize, access, and share banks and presets. Here is the function of the buttons found in the preset manager's taskbar, left to right:

Bank Taskbar

- PLUS: Create an empty bank.
- RENAME: Rename the selected bank.
- EDIT: Enable to reorder or delete banks. When finished, touch again to exit editing mode.
- SHARE: Display bank export/import options. See below for more information.

Presets Taskbar

- **SAVE:** Save as a new preset.
- **OVERWRITE:** Overwrites the currently selected preset.
- **[INIT]:** Loads a basic “initial” preset, useful when writing a new patch from scratch.
- **RENAME:** Rename the selected preset.
- **MOVE:** Move selected preset to a different bank.
- **EDIT:** Enable to reorder or delete presets. When finished, touch again to exit editing mode.
- **SHARE:** Display preset export/import options. See below for more information.
- **JOKER:** Randomly load a preset from the file system.
- **SEARCH:** Search for a preset.
- **RESTORE FACTORY:** Reinstall factory presets that came packaged with Zodiak Echo.

Favorites Bank

- You can “favorite” up to 256 presets by touching the STAR button located next to it. These presets are then displayed in the Favorites repository found at the very top of the banks list. To un-favorite a preset, simply touch the star button again.

Importing/Exporting Banks & Presets

You can export banks and presets to iOS Files or via email. Simply touch the bank or preset share task button and make a selection. The banks/presets exported to Files can be accessed through the iOS Files app (just navigate to the Zodiak Echo root directory) and can also be accessed on your desktop computer via iTunes Filesharing.

You import banks and presets in many different ways: you can add them to the Zodiak Echo root folder (either within your iPhone or iPad, or using iTunes Filesharing), and then install them using

YPAT3 > Sharing > Import from Files. Or you can double tap any Zodiac Echo bank/preset file, which will automatically launch the app, and install that asset. Similarly, you can touch an email attachment to install an asset.

MIDI

You can use standard MIDI controllers to “learn” and control the parameters found in Zodiac Echo. Refer to your hardware or host software’s instructions for setting up MIDI connections.

MIDI Learn

MIDI CCs can be mapped onto the knobs and switches found on the screen. The mappings can then be saved to patch and recalled for later use. See the section on the Preset System for more information about saving and loading patches.

To enter MIDI Learn mode, press the LEARN button (found on the settings panel). Touch the overlay on the desired parameter so that it is highlighted. Manipulate the control on your MIDI device until the CC/Channel pair is indicated on the overlay. Repeat with any number of parameters.

To manually enter a MIDI CC, or to access advanced MIDI settings for a parameter, simply double tap on its overlay to reveal the data entry prompt. Select the desired field, use the number pad to enter the desired value, and confirm entry by pressing SET on the number pad.

When finished, go back to Prefs -> MIDI Learn and unselect the LEARN button. Save the changes to patch by launching the Preset Manager.

To load the MIDI map saved into a patch, ensure the CC LOCK button found on the SETTINGS panel is turned off. Then simply select and load the desired patch on the PRESET MANAGER panel.

If you wish to preserve the currently loaded MIDI map even while changing presets, ensure the CC LOCK button is activated. This will prevent the pre-existing MIDI CC map from being supplanted by the map data in the incoming presets.

App Audio / MIDI

These preferences are only available for the standalone deployment of the app. In AUv3 deployments, these and similar settings are canonically provided by the host/DAW app's preferences instead.

Use the HW or VIRTUAL MIDI In buttons to toggle MIDI In from hardware or virtual sources altogether.

To access the dialog for connecting with Bluetooth MIDI inputs, touch the BTOOTH button.

You can manage connections to currently online MIDI input devices via the MIDI Inputs list. To receive MIDI or MIDI clock data from a given source, make sure the associated button next to its listing is highlighted in green. To disable receiving either data, touch the button to un-highlight it.

Enable Audio Backgrounding by touching the BG AUDIO button. Set the buffer size using the BUFFER dropdown. Notice that access and ability to set buffer size works in a first-in-last-out manner, so that if an app is already open and using the audio (including in the background), any app opened after it will not be able to change this settings to anything other than specified by the first app.

AUv3

Zodiak Echo comes packaged with its iOS Audio Units version 3 plugin EFFECTS binary. You can use multiple instances of Zodiak Echo in a DAW or mixer capable of hosting AUv3 effects plugins. Currently supported operating systems include iOS, iPad OS, and Apple Silicon powered Macs.

You will typically access AUv3 effects plugins in the “Inserts” or “Effects” sections of a DAW channel. For more information on how to use AUv3 plugins, you might need to refer to your DAW’s user manual.

IMPORTANT NOTE: Although Zodiak Echo is completely MIDI controllable as an AUv3 plugin, it has come to our attention that there are a few DAWs out there that still don’t allow routing of MIDI data to FX plugins. For most other DAWs, however, you should be able to obtain a MIDI connection by simply following the host’s MIDI routing instructions. The way MIDI is routed to effects plugins will usually be a little different than that for MIDI instruments. Refer to the MIDI section of this manual for more information on these settings.