BOWECHO User Guide

Version 1.1
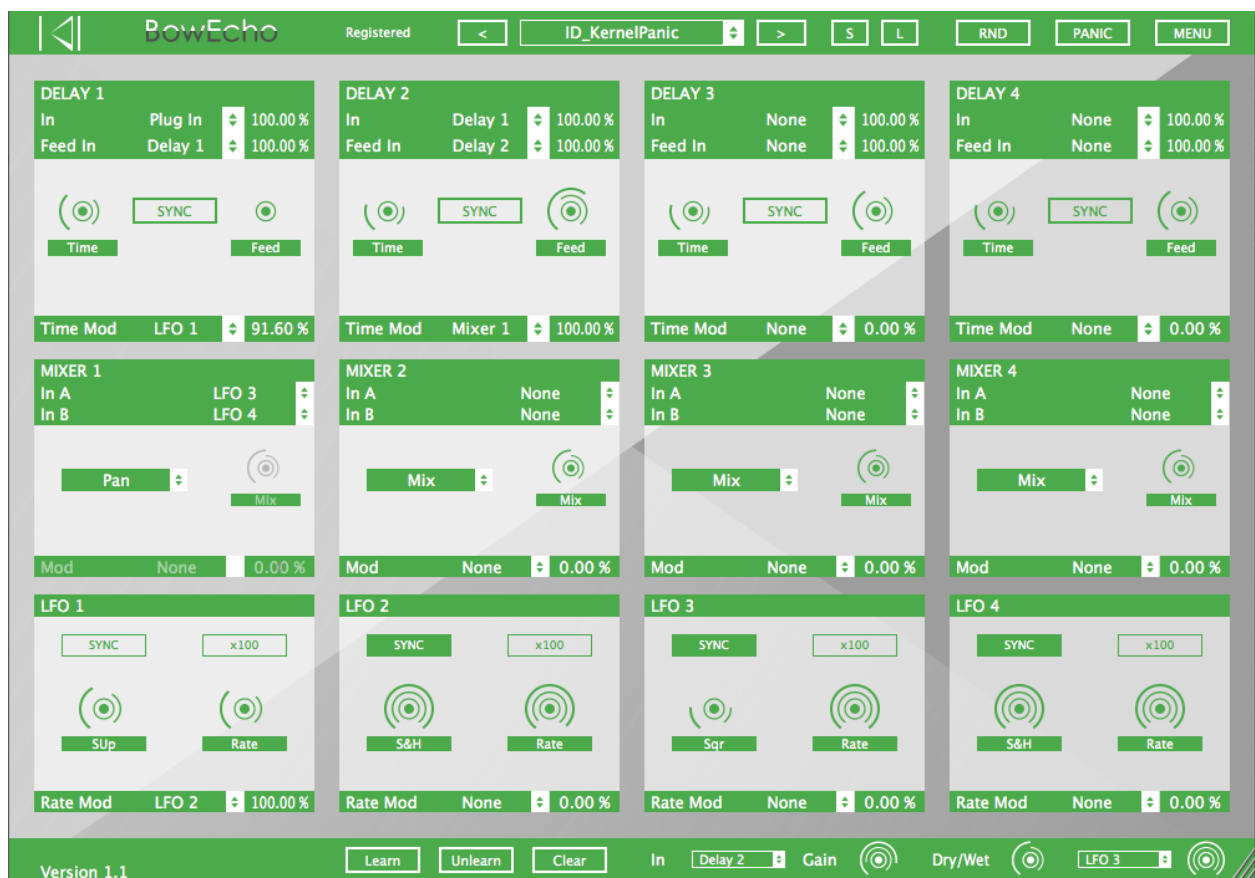
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Thank you for using BowEcho.

This guide will give you an overview of all the functions.

HOW TO AUTHORIZE THE PLUGIN

After your purchase, you should have received a key by email. Copy that key to the system clipboard, open the plugin in your host, click on the **Menu** button at the top right of the panel and select *"Paste Key"*. If the authorization was successful, the message *"Demo"* next to the plugin logo should now show become *"Registered"*. Otherwise the message *"Invalid Key"* will be displayed at the bottom left of the panel.
If you have any problem registering your copy, you can get in touch by emailing
support@ineardisplay.com .

OVERVIEW

BowEcho is a modular sound mangler based on 4 delay lines. It offers a large palette of sound design options thanks to 4 LFOs that can run at control or audio rate, 4 Mixers that can also act as gainers, basic filters, ringmodulators or stereo splitters, and the ability to route the output of each module the way you want. For example the LFOs can act as raw oscillators that can be used to ringmodulate the feedback path of a delay line. The delay times can be modulated over a wide range to generate noisy glitches or basic pitch-shifting of the input. BowEcho is a versatile delay plugin that can adapt to your sonic needs : use it as a simple flanger with only one delay and one LFO, or go crazy and route all modules in absurd ways to produce creepy screaming drones.
As you could easily make BowEcho generate endless feedback loops, the output is clipped : instead of getting exponentially louder, the output will turn into an inaudible DC offset.

ROUTING

You can patch modules together using input selection menus. For the delay modules you can select the regular input as well as the feedback input : that way you can alter the feedback path by processing it by other modules. For the mixer modules, you can select 2 inputs (but only the first one may be used depending on the mode).
The module you want to use as the final output must be routed to the out section at the bottom right of the plugin (**In** menu).
If the sounds goes out of control, clicking on the **Panic** button at the top will clear the delay lines and set all feedback knobs to 0.

DELAY MODULES

This description applies to the 4 delay modules.
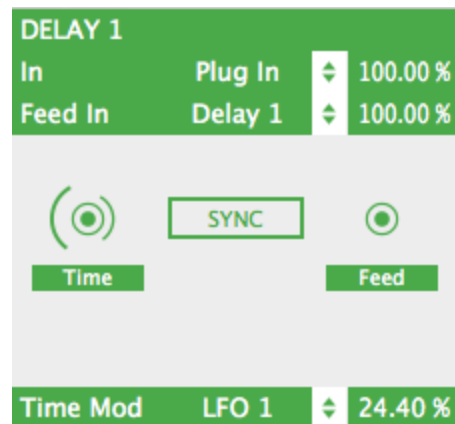
- **In menu :** lets you select the delay line input. The percentage at the right is the level of the input signal.
- **Feed In input :** lets you select the feedback input. For a standard delay effect, just route the delay output to this input. The percentage at the right is the level of the input signal.
- **Sync :** if this button is toggled on, the delay time will be synced to the host tempo.
- **Time :** the delay time. If sync is inactive this parameter will be expressed in milliseconds (from 1 to 1000). Otherwise it will be expressed in bar divisions (from 1/128 to 1 bar).
- **Feedback :** The level of signal fed back into the delay line in percent.
- **Time Mod :** lets you select the signal used to modulate the delay time. You can adjust the modulation depth using the "percentage box" at the right.

MIXER MODULES

This description applies to the 4 mixer modules.

Despite being called a "mixer", this module can act as different processing effects depending on

the selected mode. The **Mix** parameter is used as the main control for these effects if needed. If the mode doesn't need this control, it will be deactivated as well as the **Mod** section at the bottom. The **In B** signal may also not be needed by the active mode and will be disabled in this case.

In A and **In B** menus at the top let you select the inputs of the module.
When the **Mix** control is active, the **Mod** section at the bottom of the module lets you select the modulation signal to use for the **Mix** parameter and set the modulation depth.

Modes :
- **Mix :** This is the default mode. In this mode, you can crossfade between input and input B using the **Mix** control. The input A is at full level (and the input B is silent) when the knob value is 0%. At 50% both inputs are at the same level, and at 100% you can only hear input B.
- **Ring :** In this mode signal A is multiplied by signal B (ringmodulation). The **Mix** control has no effect in this mode.
- **Gain :** In this mode only the first signal is used : it is amplified according to the **Mix** control. At 50% the volume will stay unchanged, at 0% it will be silent and at 100% it will be twice louder.
- **Damp :** In this mode only the first signal is used : its high frequencies are attenuated according to the **Mix** parameter value.
- **Pan :** In this mode the **Mix** parameter has no effect. The module acts as a stereo splitter. The left channel of the A input is sent to the left channel of the module output, and the right channel of the the B input is sent to the right channel of the module output.

LFO MODULES

This description applies to the 4 LFO modules.
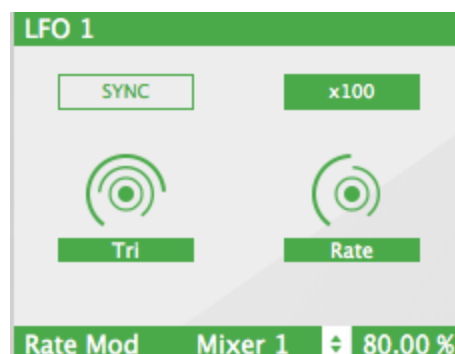
- **Wave :** the left knob lets you select the waveform of the LFO. Choices are *Sin* (sine), *Sqr* (square), *SUp* (saw up), *SDn* (saw down), *Tri* (triangle) and *S&H* (sample and hold).

- **Sync :** When this button is toggled on, the LFO rate will be synced to the host tempo.
- **x100 :** When active, the rate (only if it is not synced to the tempo) will be multiplied by 100 to reach audio rates (the output will be audible and could be used as a raw oscillator).
- **Rate :** If sync is inactive, the LFO rate will be set in Hertz (from 0 to 40). Otherwise it will be set in bar divisions (from 1/128 to 1 bar). If sync is inactive and the **x100** button is turned on, the rate in Hertz will be multiplied by 100.
- **Rate Mod :** the menu selects the signal which will be used as the rate modulator and the percentage box at the left lets you set the modulation depth.

OUT SECTION

- **In Menu :** selects the module that will be sent to the plugin output.
- **Gain Knob :** the gain of the processed signal in decibels.
- **Dry/Wet Knob :** crossfades between the plugin input and the process signal. The menu at the right lets you select the signal which will be used as a modulator for this parameter and the knob at the far right lets you set the modulation depth for this parameter.

PRESET SECTION

You can change the current preset using the built-in menu or the navigation arrows. BowEcho comes with a selection of presets from Ivo Ivanov (http://ivanovsound.com/ , preset prefix II), Daed (https://soundcloud.com/daed , preset prefix DAED), Apparition (https://soundcloud.com/apparitionsounddesign , preset prefix ASD) and Subjex (http://subjex.bandcamp.com , preset prefix SUBJEX).
Preset prefix ID stands for Inear Display.
Clicking on the **S** button will open a dialog box that will let you save the current preset on your hard drive using the extension ".bep". Only the presets saved in the default preset folder (where the dialog box opens by default) will appear in the menu. You can load a preset stored somewhere else by clicking on the **L** button.
Presets can be opened by both the VST and the Audio Unit version on all platforms.

Clicking on **RND** will set most parameters to random values. To prevent too unpredictable results, the routings are not randomized.

MIDI SECTION
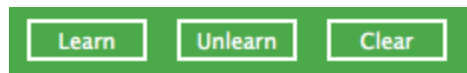
For MIDI functions to work, you first need to send MIDI to the effect. To do so, please refer to your DAW documentation.

BowEcho comes with a simple MIDI learn system. To assign a knob to a MIDI controller, click on «Learn». Then once learn mode is active (while the button is on), move the control you wish to assign on the plugin interface, then move a control on your MIDI controller and the parameter will be bound to that control.

To unlearn a parameter, toggle the «Unlearn» switch on, move the parameter you wish to disconnect on the plugin and it will no longer respond to MIDI CCs.
You can also unlearn all parameters at once using the «Clear» button.
MIDI mappings are saved in a preferences file when the plugin is closed, so they will still be present when relaunching it, but they can be overridden if you open a project in your host with different mappings as they are also saved in the project state.

Program changes
BowEcho will respond to MIDI program changes by triggering the corresponding preset according to their order in the preset menu. Presets are sorted alphabetically, so to prepare a set of presets to be recalled by program changes you can rename the desired presets by adding a prefix like «01» and save them again to sort them in the correct order.

MAIN MENU

- **Reset Audio Routing :** the plugin input will be routed to delay 1 and delay 1 output will be routed to the plugin output.
- **Reset Mod Depths :** set all mod depths back to 0%.
- **Revert to Default Settings :** set everything back to the same state as when you load the plugin.
- **Reset UI Size :** sets the window back to its default size (1000*700 px)

USER INTERFACE TIPS

- You can make finer value changes by holding the Control / Command key while moving a knob.
- Double-clicking a knob or modulation depth box will set it to its default value.

- The modulation depth boxes operate like regular knobs : drag the mouse up or down to alter the value.
- You can resize the plugin window by dragging the bottom right corner (Windows and OS X only).