Galaxy Brain

User Guide, 1.5.x

Introduction

Galaxy Brain is a frequency shifter and delay combo ready to take any sound into outer space. With easy stereo controls, three modulation sources, and optional hardware clipping, things can go intergalactic very quickly!

Galaxy Brain is an audio effect plug-in for macOS and iOS and is available in the AUv3, CLAP, and VST3 formats. It can be downloaded through the Apple App Store. The CLAP and VST3 formats require a quick installation from the standalone app which you can see here:

▶ How to Install Your CLAP Plug-In   ▶ How to Install Your VST3 Plug-In

Modules

Shift

Amount: Sets the amount of shift as a % of the range.

Range: Sets the shift range in Hz. The old modular sported these ranges and we thought Bob made the right choices. Each one has its own flavor and uses.

> **5 Hz** will stretch and strain your sound in the most pleasing way, great for chorusy effects from super subtle to super thick.
>
> At **50 Hz**, the harmonic relationships start to noticeably fall apart. This is a fun setting to move in and out of audio-rate amplitude modulation (set direction to zero).
>
> **500 Hz** is where things start to get wild. The more extreme settings tend to work better with percussion-type sounds and can transform your drums in surprising ways.
>
> **5 kHz** is the wildest and spaciest of all. Use this setting for all your sci-fi SFX needs. Don't forget to modulate it with the sequence!

Direction: Sets the relative mix of the frequency shifter's two directions. At +100%, the shift heard is the value on the main knob. At -100%, the shift heard is in the opposite direction of the main knob. At 0%, the two are evenly mixed and the net effect is *ring modulation (!!!)*.

Wet: Sets the dry/wet mix for the frequency shifter. Disabled when delay is active. (The shifter is 100% wet when in the delay feedback loop.)

LFO: Sets the amount of modulation to the shift amount from the LFO.

Env.: Sets the amount of modulation to the shift amount from the envelope follower.

Seq.: Sets the amount of modulation to the shift amount from the sequence.
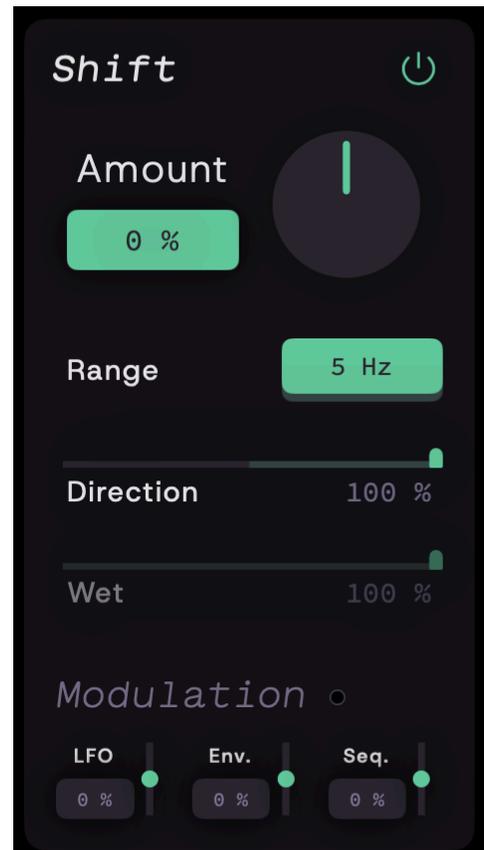
Delay

Time: Sets the delay time.

Sync?: Sets whether the delay time is set in seconds or musical note values.

Feedback: Sets how much of the delayed signal is fed back into the delay.

Wet: Sets the dry/wet mix for the delay module.

Stereo

Ping Pong: Continuously sets the amount of ping pong effect and in which direction.

Skew: Sets the delay time for the right channel with a multiple of the left channel's time. Values close to 1 can create a super wide effect!

Tone

Hi-Pass/Lo-Pass: Sets the cutoff frequencies of gentle high- and low-pass filters (in the delay feedback path).
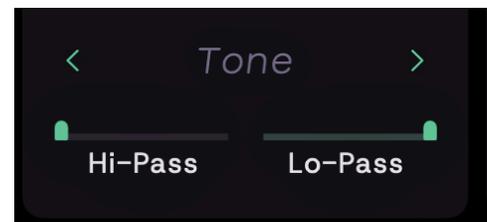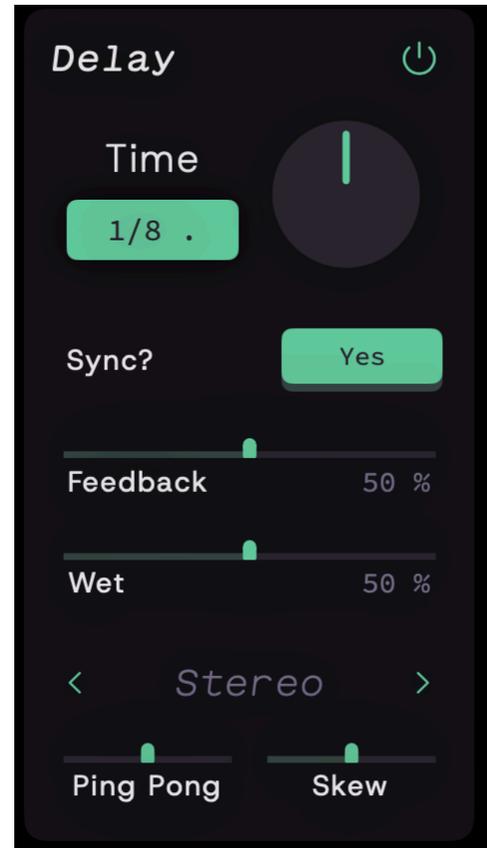
Ducking

Ducking: Sets the amount the delay's wet signal gets lowered relative to the input signal.

Recovery: Sets the amount of time it takes the delay's wet signal to return to full level after being ducked.

Glide

Glide: Sets the amount of time it takes for the delay time to transition between two delay times. Can set up to 10 s!

LFO

Rate: Sets the speed of the LFO. The units of this control depend on the LFO mode. When *free* the rate will be displayed in Hertz. When *synced*, it will be displayed as a musical note value.

Shape: Sets the shape of the LFO. (Available shapes: triangle, square, saw up, saw down, sample and hold.)

Warp: Alters the shape of the LFO waveform. When set positive, the LFO is warped so it spends more time at extreme values. When negative, the LFO spends more time at neutral values.

Stereo: Sets the relative phase offsets of the left and right LFO channels.

Sync?: Sets whether the LFO runs independently or syncs its speed to the host clock.

Mult.: Applies a multiplier to the LFO speed.

Polarity: Sets whether the LFO outputs values from 0 to 1 (uni) or –1 to 1 (bi)
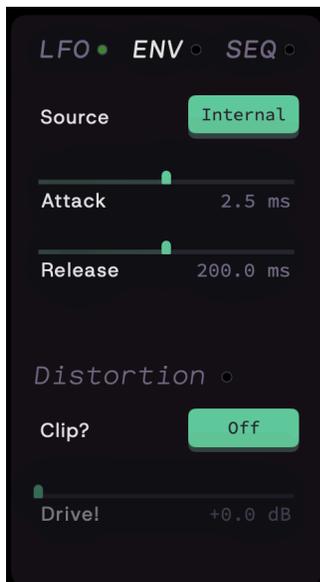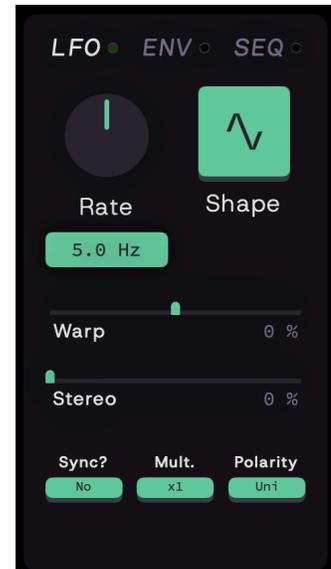
Envelope

Source: Sets whether the envelope follower follows the plug-in's own input or the sidechain input.

⚠️ Be sure to check your DAW's user manual for instructions on routing audio to the sidechain input.

Attack: Sets the envelope follower's attack time. A shorter attack time means that the envelope follower will adapt more quickly to sudden increases in level.

Release: Sets the envelope follower's release time. A shorter release time means that the envelope follower will return to its neutral state more quickly when the level decreases.

Distortion

Clip?: Sets if/when any "hardware" clipping is applied. (Previously on the "Advanced" panel.)

Drive: Sets the clipper drive. (Internally applies auto-gain.)

Sequencer

**Step Values:** Sets the sequencer step values.

Steps: Sets the number of steps in the sequence.

Rate: Sets the speed of the sequencer. The units of this control depend on the sequencer mode. When *free* the rate will be displayed in Hertz. When *synced*, it will be displayed as a musical note value.

Sync?: Sets whether the sequence runs independently or syncs its speed to the host clock.

Mult.: Applies a multiplier to the sequencer speed.

Polarity: Sets whether the sequencer outputs values from 0 to 1 (uni) or –1 to 1 (bi)
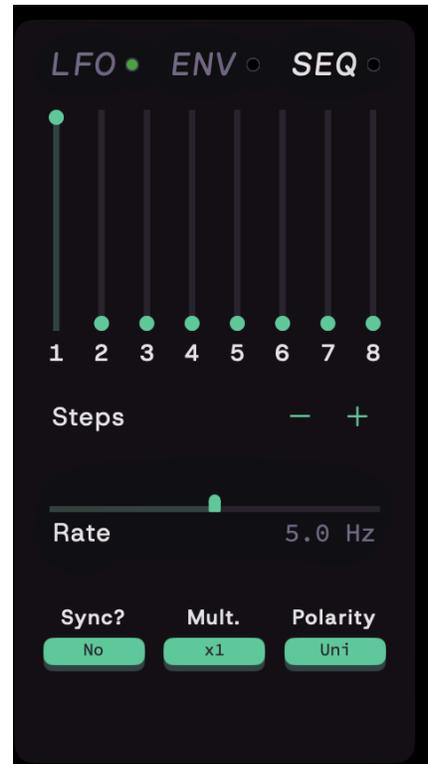
Common Features

General Usage

Adjust a control's value by dragging *anywhere* inside the control's general region.

Fine-adjust a control's value by holding the shift key while you drag (macOS only).

Restore the last-loaded preset value by double clicking on the control.

To restore a default value, right click (macOS) or long press (iOS) and select the "Restore Default" option.

To type in a value, right click (macOS) or long press (iOS) and select the "Enter Value" option.

To see a brief description of what a control does, hover (macOS) or long press and select the "Enter Value" option (iOS).

Top Bar

Bypass Button: Globally enables or disables the plug-in's processing.

Undo & Redo Buttons: Our plug-ins have their own undo/redo stack. Only user actions are recorded into the undo/redo stack. The undo button restores the state before the most recent user interaction. The redo button restores the state before the most recent undo.

AB Settings Buttons: Toggles between two sets of plug-in settings. Use the "A" and "B" buttons to select which set is *active*. Tap the arrow to copy settings from the *active* to the *non-active* settings. This operates independently from the Morph Settings feature, and morph values are not changed by using the AB settings.

Morph Button: Toggles Morph Edit mode off and on. Also displays Morph Actions (right click on macOS). For a full guide to the Morph Settings feature, see here: Manuals – Sketch Audio

Side Bar

Morph Slider: Transitions between the current parameter values and the morph values. Can be set to the left side of the plug-in in the settings menu.

GO! Button: Immediately sets the Morph Slider to the top position. Useful for a quick cut to the morph values. Momentary by default, can be set to latch mode in the settings menu.

Bottom Bar

Preset Menu: Displays the name of the current preset (with a "*" if the preset is modified). Tap the preset name to display the presets menu. The dice button changes to a random factory preset. The L/R arrows cycle through the current bank of presets.

Quality Mode: Toggles between the *Standard* and *High* quality modes. High quality mode enables oversampling plus additional advanced anti-aliasing techniques where relevant. Read more about our quality modes on our blog.

Out: Sets the global output gain of the plug-in (pre-mix). Useful for output level matching in conjunction with Match Gain (see below).

Mix: Sets the global dry/wet for the effect.

Match Gain: Sets the Out gain such that the perceived input and output levels match. Match Gain uses the signal's K-weighted RMS value with a 400 ms integration time to estimate perceived loudness. This means the Match Gain value will vary somewhat depending on when you tap the button.

Settings Button: Shows the settings menu.

Presets

Save Preset Button: Saves a user preset. Your user presets are synced across all your devices. To save to a user-selected location, see *Swipe Actions*.

Import Preset Button: Imports a user preset from a user-selected location.

Share All User Presets Button: Saves all the presets in the user bank to a user-selected location.

Delete All User Presets Button: Deletes all the presets in the user bank.

Swipe Actions: Swipe left on a user preset to reveal the *share* and *delete* actions. The share action lets you save to a user-selected location. You can also right-click to access these actions.