

UBK Pusher

MAGNETIC DSP COLORBOX



Operational Overview

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I. Gestalt

Pusher is an outwardly expanding distortion generator, a new type of colorbox that works its magic by bending the rules of physics, rules that are generally taken for granted as fixed, immovable, and inescapable.

Anyone who has injected color and vibe into their sounds understands that the more you saturate and distort a signal, the more you flatten, smear, and eventually destroy the very things that give a sound its life, presence, and punch: the transients.

Pusher literally turns this behavior on its head; it will do all the things you've come to expect and love from tape and transformers, and then it will go beyond, to the point where the more you distort your sound, the more you will increase transient definition and punch.

Pusher came to me one night, completely intact and fully formed, inside a dreamspace. I was floating inside a spherical black pod filled with an amber liquid that was completely alive and fully breathable. Faintly glowing tendrils connected my brain to a bizarre array of helix-shaped speakers which covered every square inch of the chamber's endlessly curved interior.

Alien sounds more achingly beautiful than anything I'd ever heard began to pulse gently up my spine, and as they passed through the prefrontal cortex of my brain I intuitively twisted and molded them into new forms which then flowed down the wires to the speaker array, where they emerged as three-dimensional shapes that poured out of the pod in a river of songs destined for worlds unknown.

Pusher is my best attempt to replicate, as much as feasible, one particularly memorable piece of that sublime technology which, for a brief few moments in a dream half forgotten, was fully merged with my consciousness. It is yours now, to do with as you see fit.



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II. Signal Flow

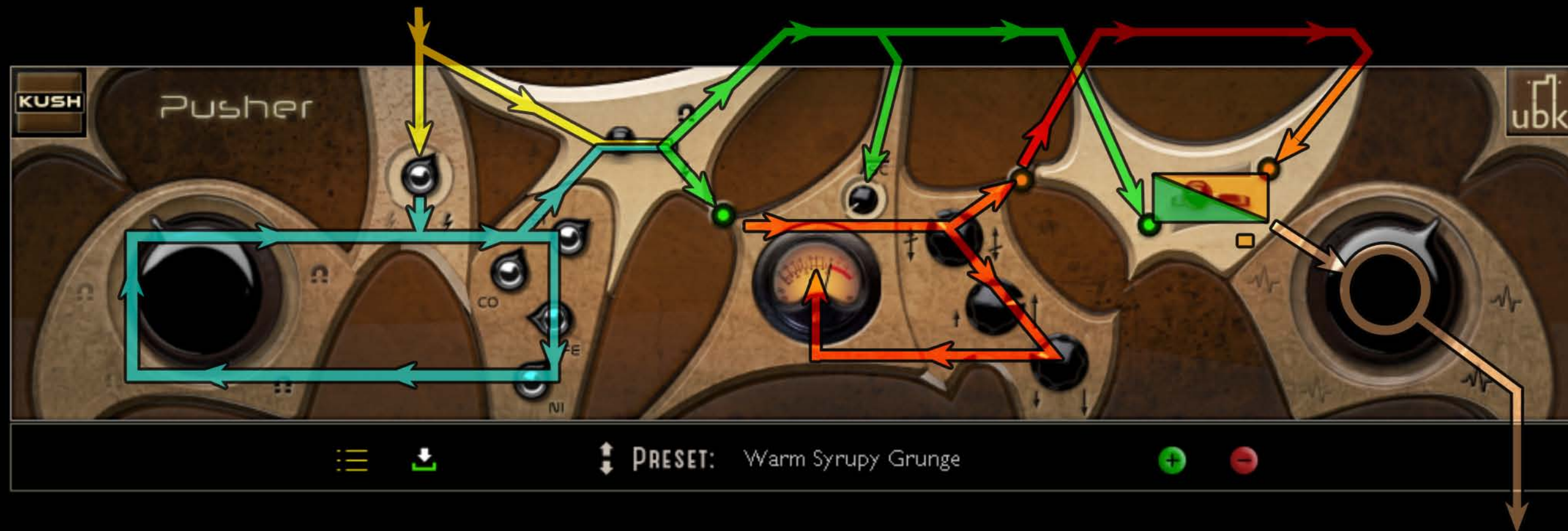
Despite its initially abstract appearance, the layout of the Pusher's controls is anything but random or arbitrary. As it turns out, the geometrics that house the various knobs and sliders actually mimic the flow of a signal through the various processors and mix circuits.

The sketch below shows how this works. The Yellow Dry signal comes in and splits off, heading to the Magnetic EQ as well as the Magnetics Blend. The Blue Magnetic EQ signal also feeds the Magnetic Blend, which takes the Yellow Dry and Blue Magnetic EQ signals and combines them into one Green Magnetized signal.

The Green Magnetized signal is routed to 3 places: the Diode Limiter Input, the Diode Limiter Sidechain, and the left node of the Dynamics Blend. The Diode Limiter creates the Orange Magnetized Limited signal, which is then fed to the right side of the Dynamics Blend.

The Dynamics Blend crossfades between the Green Magnetized signal and the Orange Magnetized Limited signals. The resulting blend is then fed to the Master Output control.

Speculations run wild as to what kind of alien could conceive of such complicated patterns executed with such finesse. Leading theories paint a picture of a being that is both atypically brilliant and unconventionally handsome.



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III. Magnetic EQ

The heart of the Pusher's alien technology is the glorious Magnetic EQ, and the heart of the Magnetic EQ is 4 metal Cores, charged by a Flux Drive that's modulated by a Bias control. Got that?

It all starts with the four Cores: Nickel, Iron, Cobalt, and Steel.

When charged by the Flux Drive, each Core produces a unique magnetic field with a very distinctive harmonic fingerprint.

While each Core's fingerprint is magical in its own right, the real beauty lays in their interactivity; pushing more of one may attenuate, accentuate, or bend one or more of the others. These interactions are chaotic, difficult to predict, and full of 'sweet spots' that produce surprising, gorgeous, and often downright bizarre effects on the tonal and transient character of the sound.

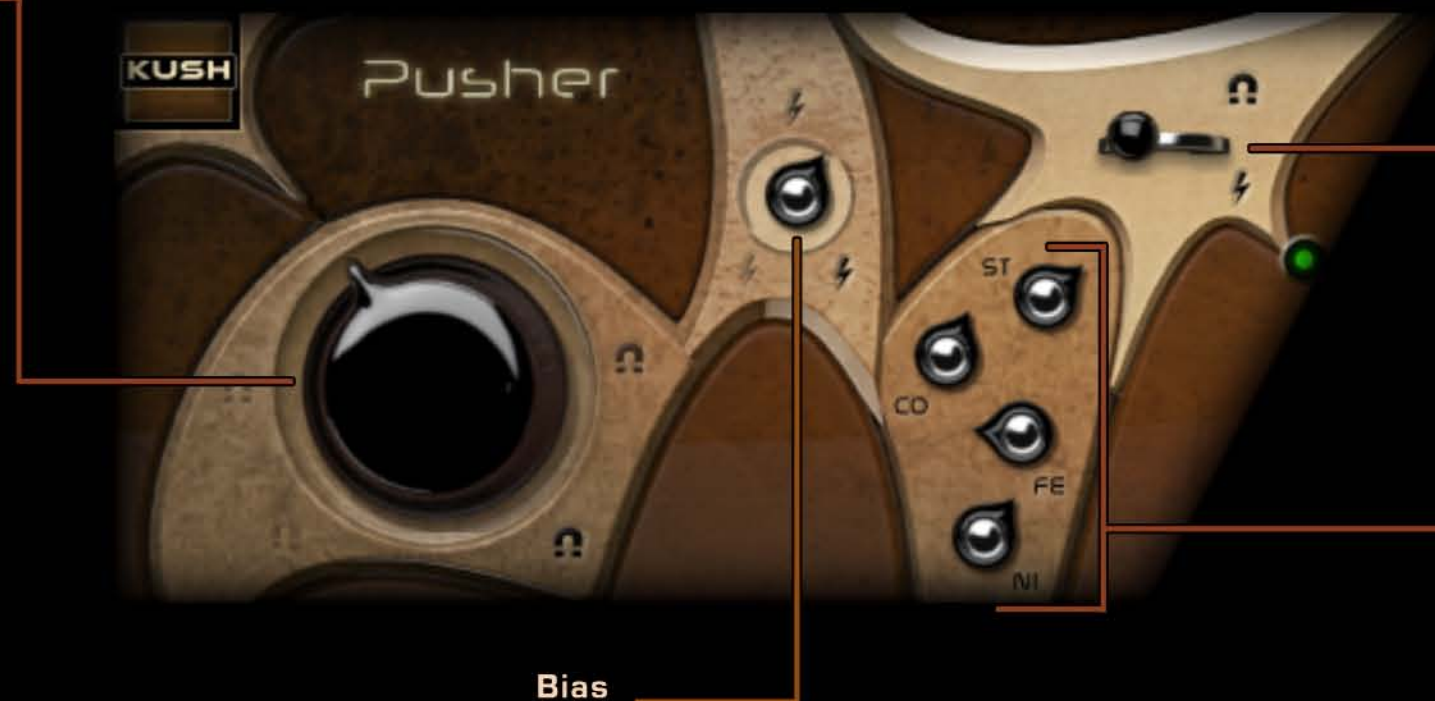
Pusher is not like anything you've used before... the included presets will get you far, but exploration has rewards all its own.

Flux Drive

Once you create a sonic signature with the Cores, use the Flux Drive to control how much you want your sound 'bent' into the shape of that signature.

The more you push the Flux Drive, the more you increase the degree of transient and phase distortions, and the greater the levels of harmonics in relation to the fundamentals.

Pushed hard enough, the Magnetic EQ's signature will dominate the sound, the harmonics will swamp the fundamentals, and the transients will be completely redefined.



Blend - Magnetics

This horizontal fader determines the blend between your original dry signal and the signal that's been passed through the Magnetic EQ.

Left is Dry, right is Magnetized.

Cores

Use these knobs to inject each metal Core's harmonic fingerprint into the Magnetic EQ, blending the various Cores to create one overall 'sonic signature' for the Pusher.

I highly recommend taking your time and experimenting with blends of 2, 3, & 4 Cores in widely varying levels, and in similar levels as well. This is where the magic is born.

When you want the Magnetic EQ's signature to be more radical, dial this up. Increasing Bias 'stresses' the transient, and multiplies the range of harmonic distortion upwards, creating more and more upper-level harmonics with increasing complexity.

This control is interactive with the Flux Drive to further increase the number of possible textures and colors the Pusher can produce. As you adjust one, experiment with adjusting the other and you will discover exponentially more possible colors.

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IV - Diode Limiter

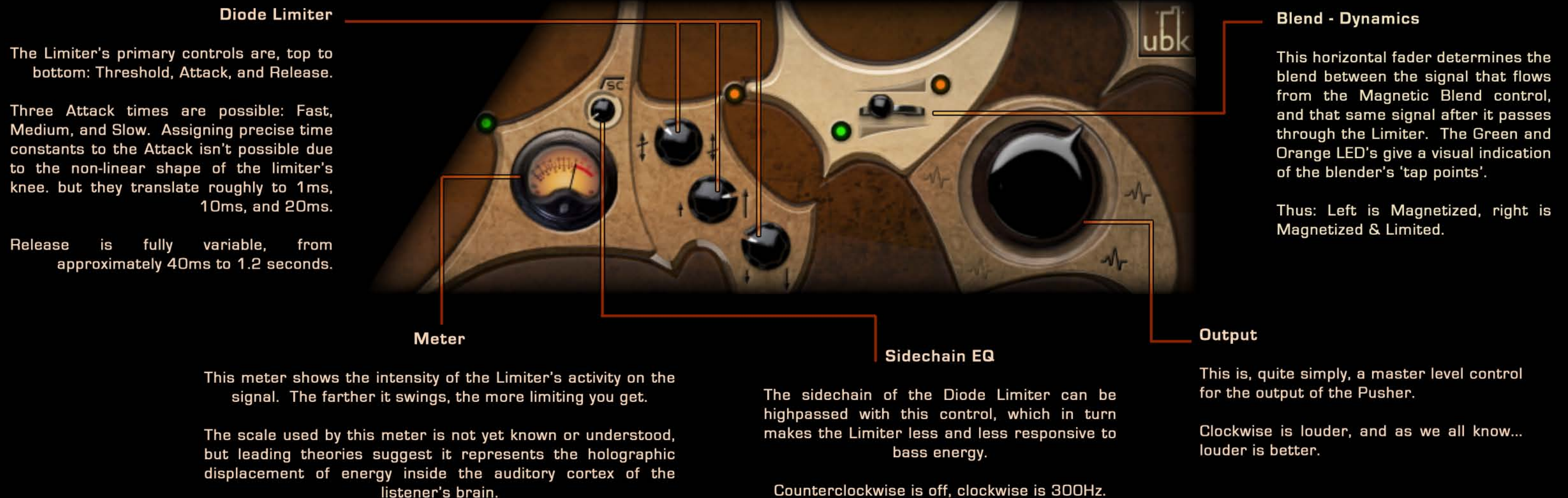
The second half of the Pusher's extraterrestrial processing is more straightforward and familiar than the Magnetic EQ, but it still has the power to surprise and delight.

Diode Limiters are very special compressors in that they've earned a reputation for sounding 'tough', 'heavy', and 'punchy'. If you're familiar with the legendary Neve 2254 or EMI TG12413 limiters or their legions of clones, you know they've earned that reputation.

The Pusher's Diode Limiter is not a model of any particular analog unit; instead, it is an artist's interpretation of a circuit that's been specifically designed to reshape the transient that's been altered by the Magnetic EQ. And, because it was freed from headroom limitations, the Pusher is capable of overcompression and pumping effects the analog boxes simply can't replicate.

The Limiter has 3 Attack times --- Fast, Medium, and Slow --- and a fully variable Release to allow for fine tuning of subtle movement and radical pumping .

Rumor has it that the alien who designed the Pusher keeps the Attack parked on the Slow setting, but scant information exists as to why this might be.



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V. Cheat Mode & Preset Management

The Preset Manager is where you select, store, modify, add, and erase presets for the Pusher.

The factory presets are stored inside the original binary, but they are freely modifiable.

On the left side of the Preset Manager is a yellow control which activates Cheat Mode.

Cheat Mode labels and explains each control succinctly, so you can jog your memory as needed.

Pusher remains fully operational in Cheat Mode, every control is accessible and tweakable.



The screenshot shows the UBK Pusher interface in Cheat Mode. The interface features various controls with labels: FLUX DRIVE (Magnetizes all 4 cores), BIAS (Stresses the cores), BLEND - MAGNETICS (Dry v. Magnetized), SIDECHAIN (Hi Pass 20-300Hz), LEVELER (Smacky Diode Limiting), BLEND - DYNAMICS (LED's indicate tap points), OUTPUT, MAGNETIC EQ (Each core rounds the transients and distorts uniquely), STEEL, COBALT, IRON, NICKEL, GAIN REDUCTION (Shows intensity of the Leveler's grab), ATTACK (Fast, Medium, or Slow), and RELEASE (50-1200ms). A yellow banner at the bottom left reads "YOU ARE IN CHEAT MODE CLICK TO DISABLE." Below the interface, four annotations are provided:

- Cheat Mode On/Off**: A yellow button with a list icon.
- Update Current Preset**: A green button with a download icon.
- Preset Select & Name Display**: A display showing "PRESET: Warm Syrupy Grunge" with up and down arrows.
- Save As New Preset**: A green button with a plus icon.
- Delete Preset**: A red button with a minus icon.

Cheat Mode On/Off

Update Current Preset

This button overwrites the currently selected preset and updates it to reflect the Pusher's current settings.

Red indicates the Preset and the Pusher do not currently match. Green indicates that the Preset has been updated to match the Pusher.

Preset Select & Name Display

Displays the currently selected Preset name.

Click the arrows to scroll up and down through your menu of presets.

Click on the Preset name directly to activate a popup list of all your saved presets, listed alphabetically.

Save As New Preset

Hit this button to save the Pusher's current state as a brand new Preset.

A dialog will appear allowing you to name the Preset. You can also choose a new location, but we recommend the default.

Delete Preset

Be careful: this button removes the currently selected Preset from your list of saved Presets.

This procedure is irrevocable; a dialog box will confirm your choice just to be sure.