CLUSTERFUZZ
User Guide

The Clusterfuzz is designed to be the most flexible fuzz you've ever tried. It can go from a medium gain overdrive to a broken-sounding square wave fuzz machine. The key to this flexibility is the sheer number of control options, some of which are quite interactive. Understanding their function will help you dial in the Clusterfuzz to get the tones you want.

SO, WHAT DO ALL THE CONTROLS DO?

VOLUME – As one would expect, this adjusts the output level of the effect. Turning the control counter-clockwise will cut the volume level.

**TONE** –Turning the control counter-clockwise will cut the treble.

FUZZ – This controls the gain of the pedal. Technically, it is controlling the gain of the first transistor. Turning this clockwise will increase the fuzz level.

8-BIT – This is for dialing in that square wave or "broken" fuzz sound.   Turning this control clockwise will make the sound more aggressive and splatty. All the way clockwise can produce some interesting synth-like tones that are reminiscent of the music from older 8-bit video game systems (thus the name of the control).

FILTER – This is a high-cut switch on the input of the circuit (whereas the tone control cuts the highs on the back end of the circuit). There is a greater degree of high-cut with the switch set to the right. This control can be used to reduce the noise level of the circuit when the controls are maxed out.

CLIPPING OPTIONS – This selects between four different sets of clipping diodes—or lifting them altogether. As you go from top center (none) to lower right (Si2) the clipping level increases, which does three things: it reduces the overall output level, increases compression and sustain, and cuts low-end. At the higher clipping settings, you will likely want to turn up the volume control to compensate for the reduced output level. Even at the highest clipping settings, the volume control can be set to be above unity.

- **NONE** – No clipping diodes. This setting has the most output, dynamics, and low end.
- **LED** – LED clipping diodes. Still loud and dynamic; a bit more saturated; a bit less boomy.
- **FET** – MosFET + Silicon diodes as clippers. Similar to the LED clippers but a bit smoother.
- **SI 1** – Typical silicon diodes. Less volume and notably more compression than earlier settings.
- **SI 2** – Schottky silicon diodes. A bit more scooped sounding (less bass). Highly compressed with a lot of sustain but with less overall output volume.
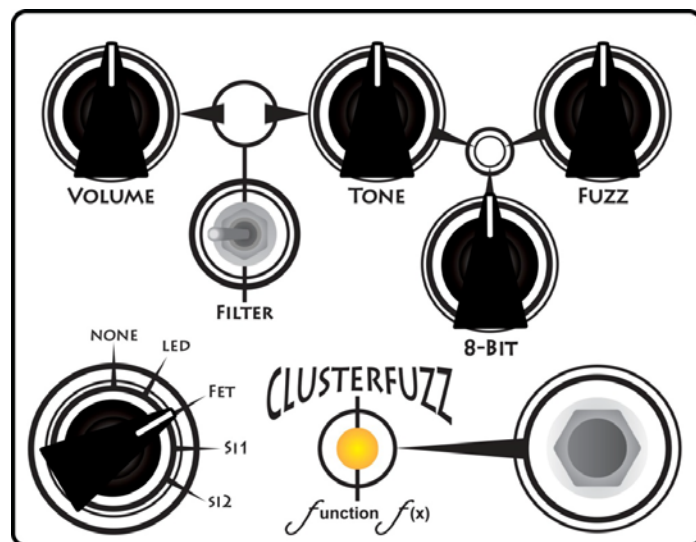
Clusterfuzz control interactions

With some pedals, two or more controls are interactive and a balance must be struck between them. In the case of the Clusterfuzz, many of the controls interact in fun and interesting ways. Understanding how they interact will open up new sonic options.

Fuzz / Tone / 8-Bit – The 8-bit control basically lets the signal from the first transistor in circuit to drive the second transistor harder. Past a certain level on the 8-bit control, the second transistor can't amplify the signal without massive distortion, resulting in the square-wave output that we've all come to know and love with fuzz circuits. As one might guess, controlling the gain on the first transistor (Fuzz knob) will have a significant effect on how the 8-bit control behaves. Additionally, turning the Tone control fully clockwise (least amount of treble cut) will allow more of the wild nature of the 8-bit control to be audible. It can get nasty.

Clipping/Volume – As mentioned above, the volume level will need to be increased at the more compressed settings. Conversely, it's good to turn the volume down before changing back to the least compressed settings. The volume difference is significant and may surprise your band mates, house mates, and/or pets.

Filter / Tone - The higher Filter setting can be useful in noisy situations but sometimes it may be desirable to have a bit more high end. The Tone control can help to recover the treble on the back end of the circuit (unless you want it rolled off of course).

Suggested Settings

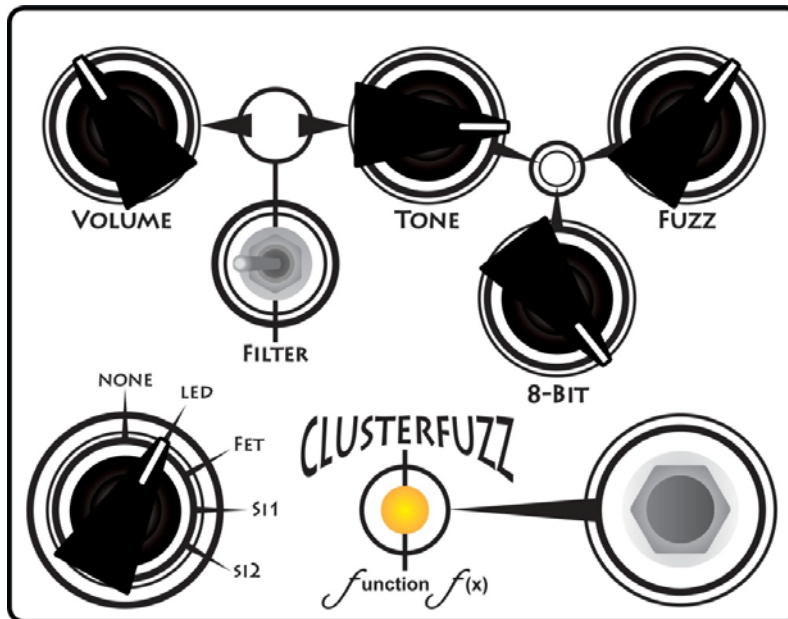### Start Here (Overdrive-ish)

For more of an overdrive type sound keep the 8-bit low and twiddle the Tone and Fuzz knobs. The FET clipping setting gives a good balance of dynamics, smoothness, and clarity.
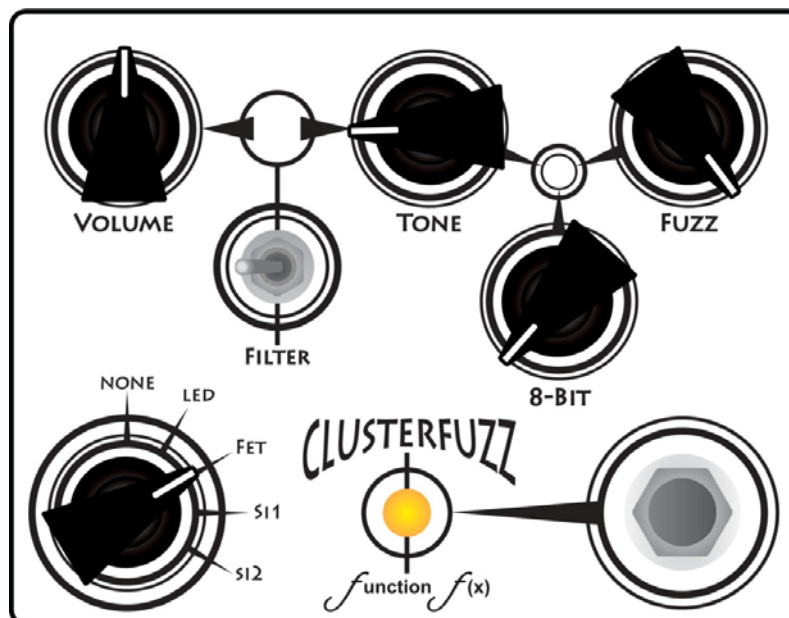
Broken Fuzz

For more of a "broken" or Velcro-like fuzz sound, keep the 8-bit up. This can be more audible in the lower compression settings, such as the LED clipping setting.

Compressed Metal Fuzz

For a metal fuzz sound with more compression, sustain, and a decent amount of gain, crank the Fuzz, move 8-Bit to taste, and try one of the Silicon diode settings (Si1 and Si2). For maximum compression and sustain, choose Si2.
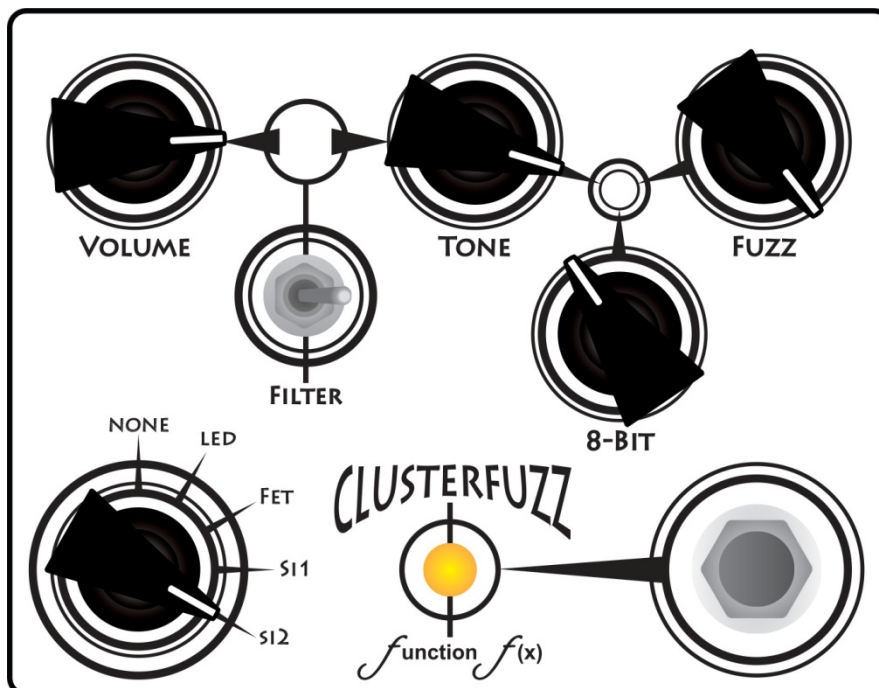
Power Requirements and General Care

Make sure that you use a 9VDC center negative 2.1mm barrel power supply to power the Clusterfuzz. This is the industry standard power supply that most pedals use. If the power supply says AC on it, don't use it. If you aren't sure that a given power supply will work, we recommend that you send us an email (support@function-fx.com) or contact the dealer where you purchased your pedal.

Beyond that, please don't spill beer in the pedal. Pedals don't like beer.

Thank you for purchasing the Clusterfuzz pedal. With a little bit of tweaking, it can take you from a dynamic overdrive all the way to an incredibly compressed fuzz sound. We hope that you enjoy it as much as we do.

Warranty and Support Information

At Function f(x), we stand behind our work. All of our pedals are warrantied against defective parts and workmanship for 1 year from the date of purchase. If the footswitch fails or a pot dies, we've got you totally covered (minus the cost of shipping to and from the repair location) during the warranty period. The warranty does not cover damages caused by user error (wrong power supply plugged in to the pedal or submersion in liquids, as examples). Function f(x) reserves sole right to determine what damages constitute "user error." But we're reasonable guys, so don't sweat it. Further, just because damages are deemed to be caused by "user error" doesn't mean we won't repair it; it just means that the repair may incur a fee to cover parts and/or labor.

After that initial 1-year period, we are still happy to resolve/repair any problems that should happen to arise in our products, but there may be a fee assessed to cover parts and/or labor. We will do our best to keep repair charges as low as possible. In the event that a full PCB replacement is called for, be advised that this may take as long as 4-6 weeks if critical parts are out of stock and need to be ordered. However, we will never ask you to pay any costs upfront, and we will communicate the status of the work regularly.

If you have questions about your Function f(x) pedal, or if you need to reach us to discuss repair service, please send us an email at **support@function-fx.com**. We will get back to you as fast as we can (usually within 24 hours).