

FUEL

VERSION 1.0

h **MUSIK**
HACK

THE MOVES

CLICK any LED indicator to toggle it on and off. You can also click the COMP-OTT, SOFT CLIP, BASS, and THICK controls to bypass each algorithm individually.

CLICK AND DRAG any knob or slider to change or view its value.

DOUBLE-CLICK to open up the manual text box and type in a specific value. Then, press ENTER to lock in the value, or ESC to cancel. Double-clicking works on all sliders and knobs.

ALT/OPTION-CLICK to reset any control to its default value.

HOVER THE MOUSE over any control to display help text for that control. When you move the mouse again, the help will disappear.

CONTROLS

The following table describes each of FUEL's controls in signal chain order:

IN	Adjust the input gain from -12 dB to +12 dB. Use this for simple gain staging, or to drive harder into the saturation and compression, causing a more intense effect.
BASS	Add saturation and EQ to enhance and emphasize the bass. The emphasis is centered around 80 Hz, and saturation is applied only to the low end.
THICK	Broad-spectrum saturation and width. As you push the control higher, emphasis is put on the saturation in the mid-range.
BODY	Upwards compression that adds gentle body to the signal at low values, and pumps a little at very high values. Adds more volume to quiet parts of the signal, and releases back to unity as the signal gets louder.
COMP - OTT	Switch between a versatile downwards compressor and classic OTT (over-the-top) multi-band compression. Use COMP to gently and transparently tame signals with sharp transients, or OTT to level the signal's loudness across the entire frequency spectrum.

- COMP** When **COMP** is selected, the **COMP - OTT** knob controls a versatile, fine tuned 3.5:1 compressor with ultra fast, frequency-dependent attack and release, automatic makeup gain, and no pumping. Use lower values to control signals with troublesome transients, and higher values to smash the sound. Quality is affected by **Live Mode**.
- OTT** When **OTT** is selected, the **COMP - OTT** knob controls a carefully-calibrated multi-band compressor. Use lower values to bring balance to signals that weigh too heavily in the highs or lows, medium values to make any sound occupy more frequency space, and extreme values to flatten the whole sound across the spectrum.
- SOFT CLIP** A saturating soft clipper that adds body and character to the sound as it gets louder while preventing peaks over 1/-1.
- CRUNCH** An analog-like fuzzing algorithm that crushes the signal into warm noise.
- MIX** Mixes all the effects with the dry signal. Useful for toning down extreme effects or using FUEL for parallel compression.
- LOUD** Musik Hack's class-of-its own limiting algorithm. Dial it up to add transparent loudness to any signal, no matter how much you've driven it with the other controls. Quality is affected by **Live Mode**.
- OUT** Control the loudness of the output signal without pushing the limiting algorithm.

OPTIONS

The following table describes FUEL's top-level options:

BYPASS	Latency-compensated bypass. When turned on, the signal passes through FUEL without any changes other than keeping the same latency as when bypass is turned off.
UNITY	Locks the output loudness so that it is the same as the input loudness. Useful for comparing your processing against input without tricking your ear with loudness, or for trying lots of random settings without distracting volume changes.
LIVE MODE	Lowers the latency of the plugin and the expense of slightly less transparent COMP and LOUD algorithms.
OVERSAMPLING	Oversamples FUEL's processing to 192 kHz, regardless of your input sample rate.

METERS & BUTTONS

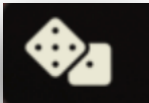
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INPUT METER

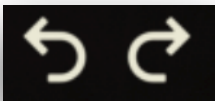
The short-term LUFS of the output signal measure the average loudness over the last three second of input. A small peak meter is displayed above the LUFS value. If your input is clipping, the limiter will kick in. However, you may still want to adjust your input levels for more predictable results.

OUTPUT METER

The same as the input meter, but the measurement is taken just before output.



Randomize most of FUEL's settings, excluding **in**, **out**, and **LOUD**.



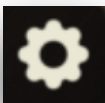
Undo or redo the last change, including randomization.



Save the current settings as a preset.

CHOOSE PRESET

Access the presets screen and select a preset.



Access the plugin's configuration screen, update FUEL, and see other Musik Hack related information.

TIPS AND TRICKS

EASY PARALLEL COMPRESSION — Select COMP, and dial in some heavy compression, then set the MIX knob to 50% or below.

EXTREME GAIN STAGING — To drive THICK, COMP, SOFT CLIP, and CRUNCH to the extreme, push your input gain into clipping. The limiter will always keep your peaks within range, and you can compensate volume with the output knob!

VOX BOX — For vocal leads, COMP does a great job of controlling dynamics without removing nuance or pumping. For background vocals, you'll be surprised how well a lower setting for OTT replaces several layers of compression and dynamic EQ. CRUNCH is a fantastic way to add aggressive analog fuzz to vocal leads as well!

KEYMASTER — The THICK control does a lot of heavy lifting. Combine it with a little OTT to turn simple synth patches into huge sounds!