



Klanghelm

SDRR - The Saturation Chameleon

- USER GUIDE -

Input TRIM: make sure, that the input signal hits around 0dBVU with the VU MODE set to INPUT for optimal plugin operation

CHANNEL MODE: Click to choose from MONO, STEREO and DUAL MONO configuration.

VU mode: Input, Output or OUT-IN: RMS difference Out minus In

Sets the reference level not only for the VU meter but also for the entire signal path. Use mouse wheel or click to enter a value

DRIVE: Determines the saturation amount.

Switches between the four main SDRR modes



OUTPUT gain (dB)

DRIFT: modulates the internal processes to some extent, adding to the liveliness of the saturation. If you turn it off you'll get a more controlled, steady (not static) sound. At maximum it can do some funny things. It's great to add some movement to static sounds.

SDRR can run up to three stages, which are arranged differently in each mode. It's a mixture of parallel and serial processing. In DESK mode the stages are transformer coupled, providing an additional saturation texture (transformer saturation).

How's the effect of the stages on the sound?

In short, with only one stage enabled, it provides the most transparent result, while with all three stages enabled, SDRR sounds most coloured and complex, without necessarily being more saturated/distorted.

Click at the meter to bypass SDRR.

Note that the bypassed signal is post trim!

Mix between unprocessed and processed.

Also, the mix controls undoes the effect of the saturation on the frequency response to some extent. This way the mix controls also adds to the palette of different sounds you can achieve with every mode.

CROSSTALK: Set to MED for a nice, subtle crosstalk on stereo channels. When set to HIGH the crosstalk signal runs through an extra saturator and becomes more obvious



The TUBE Mode

CHARACTER:

Morphs between two different tube preamp models.
WARM: round, warm and woody sounding, the ultimate track warmer. Rounds off transients and adds subtle compression
SIZZLE: intended to capture the heat of tubes in sound while preserving the original transients. Capable of very drastic harmonic effects

HARMONIC BALANCE:

Determines, whether even or odd harmonics are more prominent/accentuated.



RESPONSE:

How the saturation affects the frequency response of the signal:
LF: focus on low frequencies (very transparent on high frequencies, low end oomph)
Middle Position: No frequency weighting
HF: saturating high frequencies more (adding tape like FX, or smooth de-essing), at higher settings an ultra smooth High Shelf is applied

DYNAMICS:

Sets the overall dynamic response of the saturation, from fast, aggressive to more gentle, slower dynamics. Also, the slower the dynamic response is set, the fuller the sound appears.



The DIGI Mode

HARM COUNT:

Morphs between two different dynamic waveshapers.
4: synthesizes only the first four harmonics for subtle harmonics enhancements
INF: all harmonics are generated, a more common saturation character

HARMONIC BALANCE:

Mix of even and odd harmonics.

controls the BIT-crushing amount

when lit, the bitcrushing is combined with additional samplerate reduction



RESPONSE:

How the saturation affects the frequency response of the signal:
LF: focus on low frequencies (very transparent on high frequencies, low end oomph)
Middle Position: No frequency weighting
HF: saturating high frequencies more (adding tape like FX, or smooth de-essing), at higher settings an ultra smooth High Shelf is applied

DYNAMICS:

Sets the overall dynamic response of the saturation, from fast, aggressive to more gentle, slower dynamics. Also, the slower the dynamic response is set, the fuller the sound appears.



The FUZZ Mode

CHARACTER:

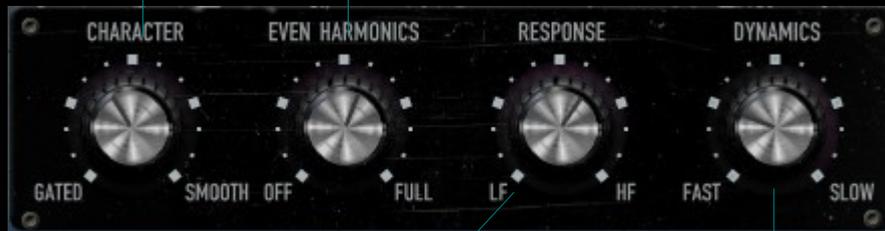
Morphs between two different germanium fuzz models, extremely modified to make them suitable for mixing purposes and even master bus duties.

GATED: inspired by the slightly broken sound of a vintage fuzz pedal,

SMOOTH: very smooth and warm sounding, emphasises the properties, associated with germanium transistor devices

EVEN HARMONICS:

Let's you dial in the amount of even harmonics. Comparable to the bias control in classic fuzz boxes



RESPONSE:

How the saturation affects the frequency response of the signal:

LF: focus on low frequencies (very transparent on high frequencies, low end oomph)
Middle Position: No frequency weighting

HF: saturating high frequencies more (adding tape like FX, or smooth de-essing), at higher settings an ultra smooth High Shelf is applied

DYNAMICS:

Sets the overall dynamic response of the saturation, from fast, aggressive to more gentle, slower dynamics. Also, the slower the dynamic response is set, the fuller the sound appears. Can be used to soften the sound when CHARACTER set to GATED.



The DESK Mode

TRANSIENTS:

Determines, how the saturation shapes the transients of the signal. From soft, smooth transient massage to aggressive, sharp transients. The effect is more apparent at higher drive settings. Best used in conjunction with the COMPRESSION parameter.

COMPRESSION:

One Knob Compressor, turned clockwise increases ratio, time constants and overall strength of the compression. The compression is executed in a feedback arrangement with a very soft knee. Click at the LED to enable compression with fast attack and release.



BASS:

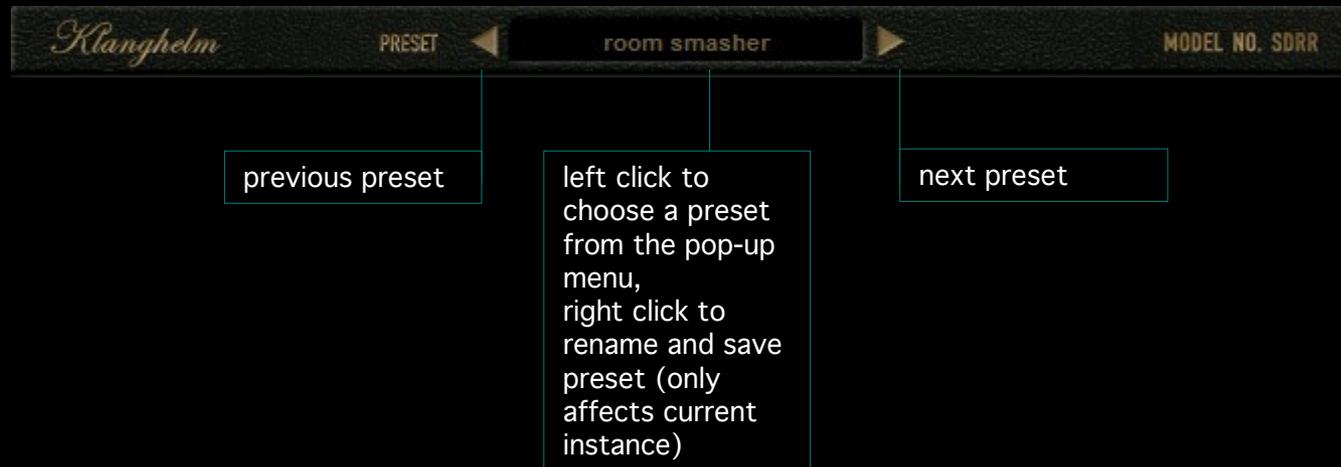
Broad and soft sounding LowShelf. When cutting, the BASS control almost reacts as a super soft high pass combined with a one pole low shelf. When boosting with the LED on, the BASS control is supposed to do the bass trick of famous passive tube EQs, boosting and attenuating at the same time, to provide a huge, but tight low end. Cutting with the LED on provides a slightly resonant HPF to shape your low end.

TREBLE:

When boosting, the TREBLE control acts as a broad passive tube style EQ. When cutting, the TREBLE control acts as a super soft one pole low shelf. The more you cut, the lower the center frequency gets, makes it ideal to clean up your high end. When the LED is enabled, the TREBLE control is similar to the famous 1073 baxandall high shelf with a modified center frequency while preserving the sheen, you'd expect from a high shelf of this kind. Cutting with the LED on, additionally adds a mid range boost.

Workflow:

1. use the input TRIM control to make sure, that your input signal hits around 0dBVU. This is the optimal working level for SDRR.
2. use the DRIVE to adjust the saturation effect to taste.
3. use the OUTPUT control to compensate for any volume loss caused by the saturation effect.

The Preset System**NOTE:**

To save your own presets, you have to use the built in preset system of your DAW.

Code and GUI: Tony Frenzel

Special thanks to **Oli Larkin** (www.OliLarkin.co.uk), **Cockos** (www.cockos.com) for providing the framework (WDL-OL) used to build SDRR, to the beta testers and Don Tyler aka Phase47 for the additional presets.

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