

Klanghelm SDRR

Top Left View of the Klanghelm SDRR software interface. The interface features a dark, textured background with gold-colored knobs and buttons. At the top, it displays 'Klanghelm SDRR', 'A B', 'PRESETS', 'DEFAULT', 'SIZE 100%', 'HQ', 'ON', 'CAL', and '-18'. The main section includes a 'DRIVE' knob set to 2.46, a central meter showing 'SDRR' with 'MONO' and 'OUT-IN' indicators, and an 'OUTPUT' knob set to 0.0. Below these are four knobs for 'CHARACTER' (WARM 0.00), 'HARMONIC BALANCE' (EVEN 0.50), 'FREQ. RESPONSE' (LF 0.00, HF 0.00), and 'DYNAMICS' (FAST 0.00, SLOW 0.00). A 'STAGES' knob is set to III, and an 'X-TALK' knob is set to OFF. At the bottom, there are buttons for 'TUBE', 'DIGI', 'FUZZ', and 'DESK', and an 'AGC' button.

Top Right View of the Klanghelm SDRR software interface. This view shows additional controls. The 'DRIVE' knob is set to 3.87. The central meter shows 'SDRR' with 'MONO' and 'OUT-IN' indicators. The 'OUTPUT' knob is set to 0.0. Below the main section are 'STAGES' (set to III), 'HARM. COUNT' (FIRST 4 0.00), 'HARM. BALANCE' (EVEN 0.50), 'FREQ. RESPONSE' (LF 0.00, HF 0.00), 'DYNAMICS' (FAST 0.00, SLOW 0.00), and 'BIT -> RATE' (LOW 32.0, HIGH 32.0). An 'X-TALK' knob is set to OFF. At the bottom, there are buttons for 'TUBE', 'DIGI', 'FUZZ', and 'JESK', and an 'AGC' button.

Bottom Left View of the Klanghelm SDRR software interface. The interface features a dark, textured background with gold-colored knobs and buttons. At the top, it displays 'Klanghelm SDRR', 'A B', 'PRESETS', 'DEFAULT', 'SIZE 100%', 'HQ', 'ON', 'CAL', and '-18'. The main section includes a 'DRIVE' knob set to 3.13, a central meter showing 'SDRR' with 'MONO' and 'OUT-IN' indicators, and an 'OUTPUT' knob set to 0.0. Below these are four knobs for 'CHARACTER' (GATED 0.00), 'EVEN HARMONICS' (SMOOTH 0.50), 'RESPONSE' (LF 0.00, HF 0.00), and 'DYNAMICS' (FAST 0.00, SLOW 0.00). A 'STAGES' knob is set to III, and an 'X-TALK' knob is set to OFF. At the bottom, there are buttons for 'TUBE', 'DIGI', 'FUZZ', and 'DESK', and an 'AGC' button.

Bottom Right View of the Klanghelm SDRR software interface. This view shows additional controls. The 'DRIVE' knob is set to 2.31. The central meter shows 'SDRR' with 'STEREO' and 'OUT' indicators. The 'OUTPUT' knob is set to -4.3. Below the main section are 'TRANSIENTS' (SOFT 0.00, SHARP 0.86), 'FAST ATT COMP' (OFF 0.86), 'FAST REL' (FULL 0.00), 'BASS' (TIGHT 0.00, +12 0.00), and 'TREBLE' (TIGHT 0.00, +12 0.00). An 'X-TALK' knob is set to OFF. At the bottom, there are buttons for 'TUBE', 'DIGI', 'FUZZ', and 'DESK', and an 'AGC' button.

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Installation

Windows:

Plugins (64-bit VST, VST3, AAX)

- download and unzip the installer from the user area
- run SDRR2-installer.exe and follow the instructions

Troubleshooting:

If you get an error message before or during the installation process, it is very likely due to a false positive from your active virus scanner. In this case either add SDRR2-installer.exe to your whitelist or temporarily disable the scanning during the install process.

Apple macOS:

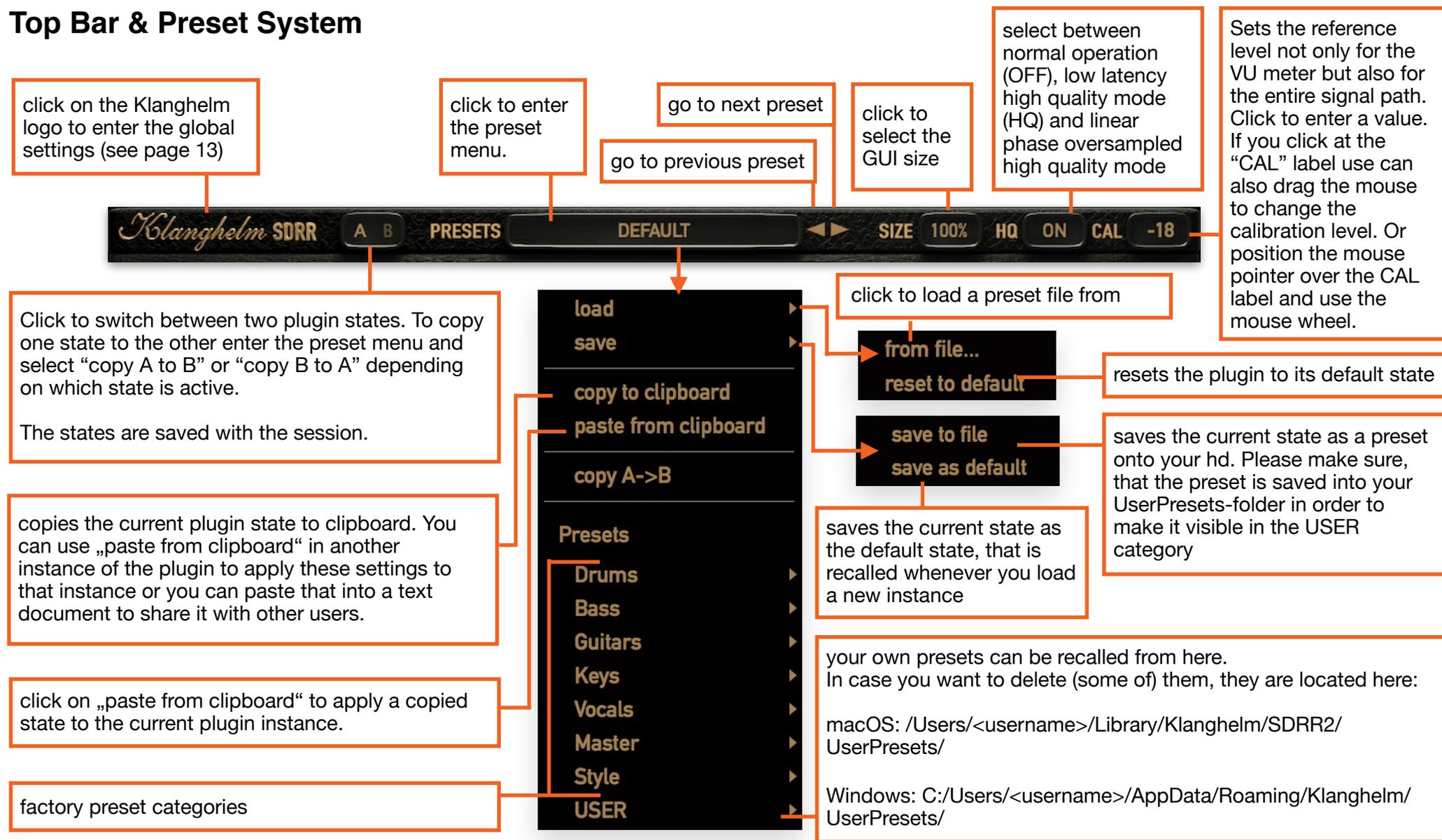
Plugins (64-bit AU, VST, VST3, AAX)

- download and unzip the installer from the user area
- open the SDRR2.dmg, run the included SDRR2-installer.pkg and follow the instructions.

Troubleshooting:

- in case you're getting a message, that the installer can't be executed, because it is „not downloaded from the App store“, do the following:
 - Go to System Preferences -> Security & Privacy
 - In the General Tab of the Security & Privacy window click on the lock icon in the bottom left to be able to make changes.
 - select "Anywhere" in the section "Allow applications downloaded from:"
- Now install SDRR2 again.

Top Bar & Preset System



Note: The SIZE parameter is excluded in the factory presets. The DEFAULT and A/B states include the SIZE. The user presets include the SIZE. There's an option in the global settings, whether the SIZE is being recalled or not with the user presets. 4 See page 8

Meters

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

Mix between unprocessed and processed Signal.

Drift amount in the signal path. Drag to adjust the input trim or click to enter a value. Alt-Click resets to default.

Click on the meter to bypass SDRR.

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

DRIVE:
Determines the saturation amount.

OUTPUT gain (dB)

Click to enable Automatic Gain Compensation:
The calculated output level is based on the RMS-difference between input level and compressed signal. It gets recalculated (and applied) each time when a gain affecting control is being changed. This calculated output gain level is saved with the session. It is recommended to leave AGC OFF when using automation, since it might lead to undesired results when automating.
NOTE: When AGC is ON, you can still fine-tune the output level with the make-up control

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).

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

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

Switches between the four main SDRR modes

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





TUBE mode

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

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

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.



DIGI mode

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

when lit, the bitcrushing is combined with additional samplerate reduction

Mix balance of even and odd harmonics.

controls the BIT-crushing amount



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

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.



FUZZ mode

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, emphasizes the properties, associated with germanium transistor devices

Let's you dial in the amount of even harmonics.



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

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.



DESK mode

Click to toggle through 3 attack behaviors:
 Unlit: slow attack
 Orange: medium
 Red: fast attack

Gain reduction meter:
 Half lit: 10dB GR
 Fully lit: 20dB

3 selectable release behaviors:
 Unlit: slow release, Orange: medium
 Red: fast release

Transient shaper. At 0.00 no processing

VCA-type Compressor with RMS detection and program dependent attack and release.
 Turned clockwise increases ratio and overall compression amount.



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.

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.

Global Settings

The screenshot shows the 'GLOBAL SETTINGS' menu for Klanghelm SDRR. The left sidebar contains 'CREDITS' with the following information: 'KLANGHELM', 'model: SDRR2', 'version: 2.3.0', 'DSP: Tony Frenzel', and 'GUI: Tony Frenzel'. At the bottom of the sidebar is the website 'www.klanghelm.com'. The main settings area includes: 'knob-mode' set to 'vertical'; 'mouse-drag sensitivity' on a slider between 'high' and 'low'; 'recall SIZE when loading user presets' (unchecked); 'show & edit values' (checked); 'enable tooltips' (unchecked); and 'use OpenGL GUI rendering (experimental)' (unchecked) with a detailed warning. A 'save' button is at the bottom. Callout boxes provide explanations for each setting.

Setting	Description
knob-mode: vertical	Sets the mouse drag behavior when moving a knob on the GUI
mouse-drag sensitivity: [slider]	Sets the mouse drag sensitivity when moving a knob on the GUI
<input type="checkbox"/> recall SIZE when loading user presets	Use this option to determine, whether or not the GUI Size is being recalled with your USER presets
<input checked="" type="checkbox"/> show & edit values	Displays a text box below each knob, where you can review and edit the control value
<input type="checkbox"/> enable tooltips	when ticked, an explanation is shown, when hovering over a control
<input type="checkbox"/> use OpenGL GUI rendering (experimental)	Enable OpenGL GUI rendering

Click on the hyperlink to visit the Klanghelm website

Click to save the global settings and close the menu. The global settings are saved to:

macOS: /Users/<username>/Library/Klanghelm/SDRR2/settings.xml
Windows: C:/Users/<username>/AppData/Roaming/Klanghelm/SDRR2/settings.xml

If running into issues, simply delete this file and the factory default global settings will be used again.

Credits

Code and GUI: Tony Frenzel

Manual: Tony Frenzel

Special thanks to the beta testers.

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