

- binary name changed to DC8C2.<pluginformat>
- new plugin ID -> version 1.x and 2.x can be used together
- NEW: preset browser
- NEW: a third main operational mode (besides NORMAL and CLEAN) called SMASH for very fast compression action. Note that SMASH is already internally 8x oversampled. That's why it can be quite CPU heavy.
- NEW: three transfer curve SHAPES now: SOFT, NOSE, SPIKE – see page 10
- NEW: position of the saturation can be set to pre compression, sidechain only, post compression
- CHANGE: new oversampling: DC8C now clearly benefits from oversampling (and additional processing inside the oversampling)
- CHANGE: completely reworked saturation modes
- CHANGE: CRUSH style is now based on the new SMASH operational mode
- CHANGE: new GUI
- CHANGE: RANGE control uses a finer resolution for lower settings

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Activate external stereo sidechain. In the AU version, external sidechaining is only available in DC8Csc

Saturation: 3 states:
Off: no saturation
Orange: light saturation
Red: heavier saturation

Click at the meters to enable / disable soft bypass.

Input level VU (not peak, set your reference level with the calibration control)

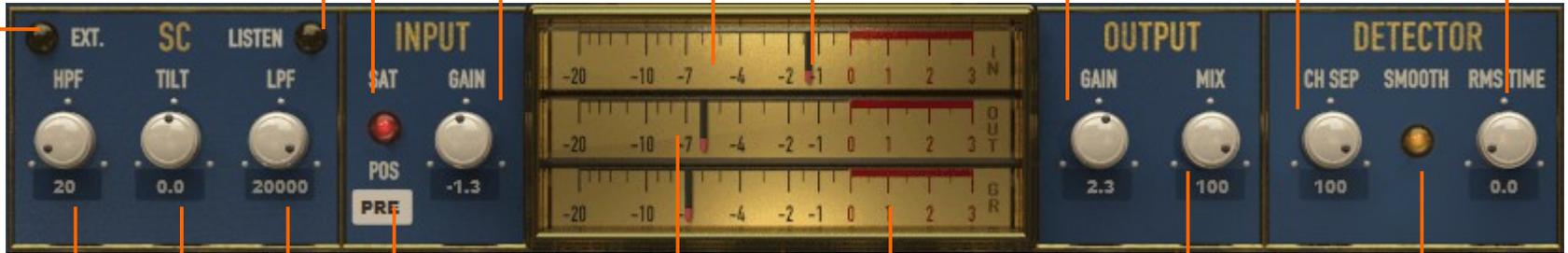
Channel separation in %
0%: mono/stereo operation
100%: dual mono

RMS detection time in ms,
When set to 0.0 DC8C acts as a peak compressor

Sidechain Listen incl. filters

Input gain

Output gain



Sidechain HiPass Cutoff in Hz

Position of the saturation: pre-compression, post-compression or sidechain only

gain reduction meter

mix control in %:
0%: dry signal,
100% compressed signal

Sidechain Tilt in dB:
If set to negative values low frequencies are more affected by the compression, if set to positive values high frequencies are more affected by the compression

Sidechain LowPass Cutoff in Hz

Output level VU (not peak, set your reference level with the calibration control). When EXT. Sidechain and SC LISTEN are activated, the OUT meter displays the level of the external sidechain signal

When engaged, the release of the detector and the actual compression release relate to and depend on each other, LOW: smoother release characteristics

Expert Mode

The image shows the front panel of the Klanghelm DC8C 2 compressor in Expert Mode. The panel is dark blue with gold lettering and features several controls:

- AMOUNT knob:** Controls the amount of compression. Callout: "Sets the amount of the selected compression curve (%). 0%: hardness compression, 100%: selected curve only."
- SHAPE knob:** Controls the compression curve. Callout: "Selects the compression curve. SOFT → very soft knee, NOSE → accentuates the point around the threshold, gets softer at higher levels, SPIKE → spikey, aggressive curve."
- THRESHOLD knob:** Controls the threshold level. Callout: "Threshold in dB"
- FB-MIX knob:** Controls the feedback mix. Callout: "Determines (in %), how much of the compressed signal is fed back to the detector. So you can have a Feedforward compressor (when set to 0%) or feedback compression (when set to 100%) and everything inbetween."
- GR SMOOTHING knob:** Controls gain reduction smoothing. Callout: "Amount of gain reduction smooting in %: determines how sensitive DC8C reacts to changes in gain reduction. when set to 0 % (OFF) no smoothing takes place. When set to 100 % DC8C changes its gain reduction very slowly"
- RATIO knob:** Controls the ratio. Callout: "Ratio x:1"
- RANGE knob:** Controls the range. Callout: "Range control in dB. Limits the max. gain reduction to a userdefinable value"
- NEGATIVE switch:** Enables negative-ratio-mode. Callout: "Enables negative-ratio-mode, for dramatic, obvious compression. More suited for compression effects than controlling dynamics."
- LIMITER switch:** Switches the unit into a zero latency brickwall limiter. Callout: "When switched on, DC8C becomes a zero latency briwall limiter. The treshhold control is the ceiling, attack, feedback, shape and mix controls have no function in this mode"

Controls the program dependency of the Attack
When set to negative values, the attack becomes slower the higher the signal level is,
if set to positive values the higher the signal level – the faster the attack
If set to zero no attack program dependency is taking place

Sets the time in ms, the compressor hold its gain reduction before the release kicks in

Controls the program dependency of the release
When set to negative values, the release gets faster the higher the gainreduction level is,
if set to positive values the higher the gainreduction – the slower the release
If set to zero no release program dependency is taking place

Predelay of the compressor in ms,
Determines the time, before the compressor reacts to the input signal

Main operational mode:
NORMAL → great allrounder
CLEAN → perfectly clean compression without harmonics generation
SMASH → ultrafast compression, almost clipperlike. SMASH mode is more CPU hungry than the other modes due to the very short time constants

If pressed, the release curve changes from a standard logarithmic curve to a s-shaped curve, resulting in a more relaxed release behaviour

Switches to EASY mode
See page 5 for details



Attack in ms

Release in ms

when engaged, the attack curve changes from a standard logarithmic curve to a s-shaped curve, letting more of the transients pass

Sets the reference level not only for the VU meters but also for the entire signal path. You can use this to increase or decrease the saturation amount independently from the input gain.
Use mousewheel to change the value or click to enter a value

Oversampling: Off, 2x, 4x or 8x

Activates external sidechain. If you are using the AU version, external sidechaining is only available in DC8Csc (Stereo only version ATM)

Sidechain HiPass Cutoff in Hz

Input gain in dB

Compression Styles (see next page)

When lit, DC8C operates in dual mono configuration

Output gain in dB

mix control in %:
0%: dry signal,
100% compressed signal



Threshold in dB

Ratio x:1

Attack in ms

reference level,
Description: see previous page

Release in ms

Oversampling: Off,
2x, 4x or 8x

Switches to
EXPERT mode

Easy Mode – Compression Styles

THE FOUR EASY MODES

To get a feeling for different compression character of each style, set all controls to its default value (doubleclick on each knob). Then lower the threshold until you get around 4-5 dB gainreduction. Now switch through the four styles. The differences in character should be obvious now.

Please note: when switching to EXPERT mode, you're essentially switching to another compressor. The four EASY modes are actually four separate compressors. While they are all based on the same compression engine, each of them has some unique tweaks and internal adjustments, so that their behavior is not 100% reproducible in EXPERT mode.

SMOOTH

invisible compression without artifacts, slow compressor action, soft knee, smooth gain riding

Suited for bus duties, vocals, strings, synth pads

PUNCH

Set and forget punchy, natural compression, highly program dependent (as all other EASY modes)

You can leave attack to 0.0 ms and release around 50 ms, sounds great in most situations. Optimised for drum busses

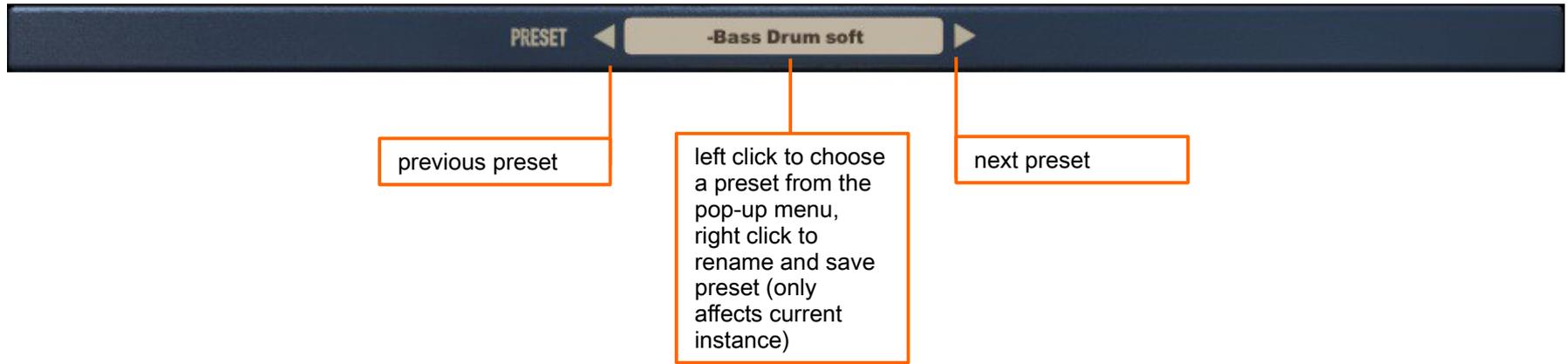
SNAP

This is the transient spitting machine. a gain reduction around -2 dB might already be enough to spice up drums. Also suitable to emphasize the attack of guitar/bass guitar signals. Be careful with the output knob: the differences between transients and the rest of the signal can be huge.

CRUSH

The opposite to SMOOTH mode. Lots of compression artefacts (distortion). You can use it to completely destroy the dynamics and/or misuse DC8C as a distortion device
CRUSH is based on the SMASH operational mode from the EXPERT view. Since SMASH is already internally 2x oversampled to ensure its very short timing constants, it is more demanding on your CPU.

Preset System



Appendix – preset list

Default

DRUMS

- Bass Drum soft
- Bass Drum nail
- Bass Drum snap
- Snare soft
- Snare solid
- Snare snap
- Toms solid
- Toms snap
- Overheads soft
- Overheads aggressive
- Room control
- Room smasher
- Drum Kit parallel punch
- Drum Kit control
- Drum Kit pumping
- Drum Kit snappy
- Drum Kit snare trigger

BASS

- Electric Bass control
- Slap Bass
- Bass sustain

ELECTRIC GUITARS

- picking
- jangle
- crunchy rhythm guitar
- distorted guitar
- solo sustain

VOCALS

- Lead Vox control
- Lead Vox crunch
- Lead Vox limiting
- Backing Vocals

KEYS

- Piano
- E-Piano attack
- Pad sustain
- Synth Bass

MIX BUSS

- just a little
- zero latency brickwall
- make it loud

FX

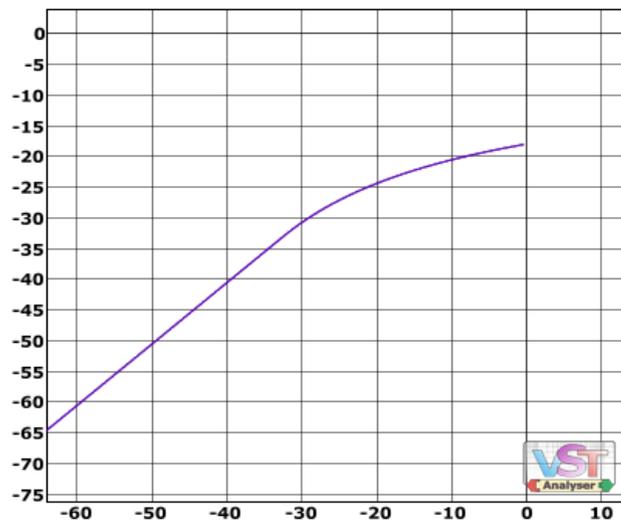
- stutter drums
- distortion
- is it broken?

STYLES

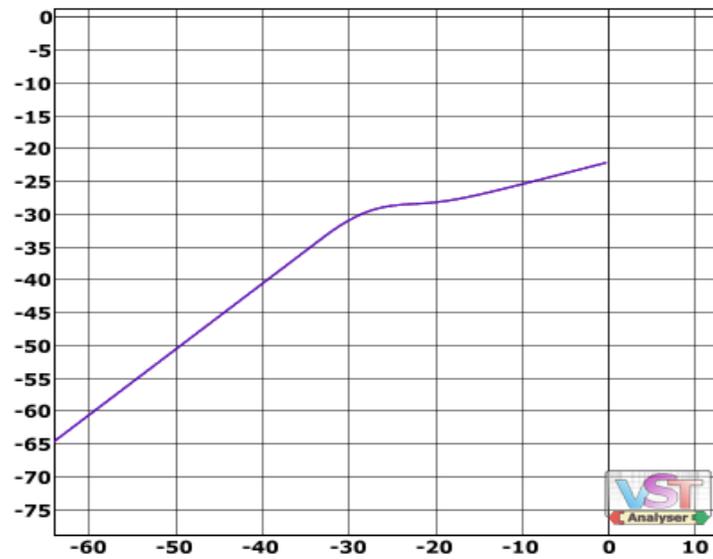
- FeedForward
- FeedBack
- classic opto compressor
- RMS only
- superclean compression
- Limiter
- 160dB
- Ali Toohey
- FX compressor
- stereo enhancer
- transient enhancer
- general purpose
- modern track compressor
- vintage track compressor
- modern bus compressor
- vintage bus compressor
- mastering

Appendix – the three shapes

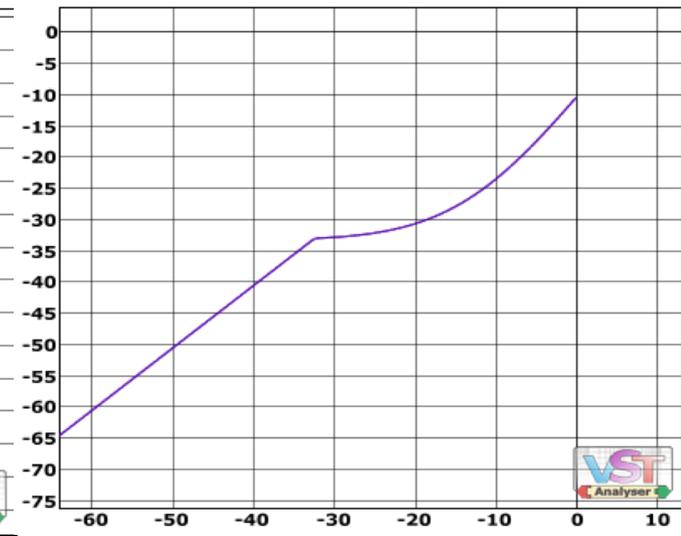
SOFT



NOSE

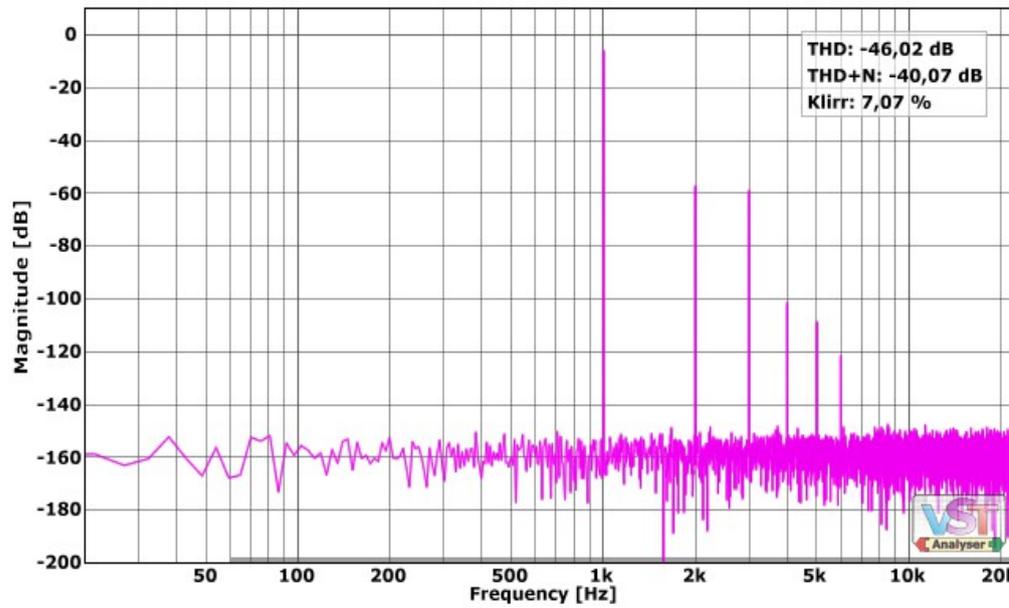


SPIKE

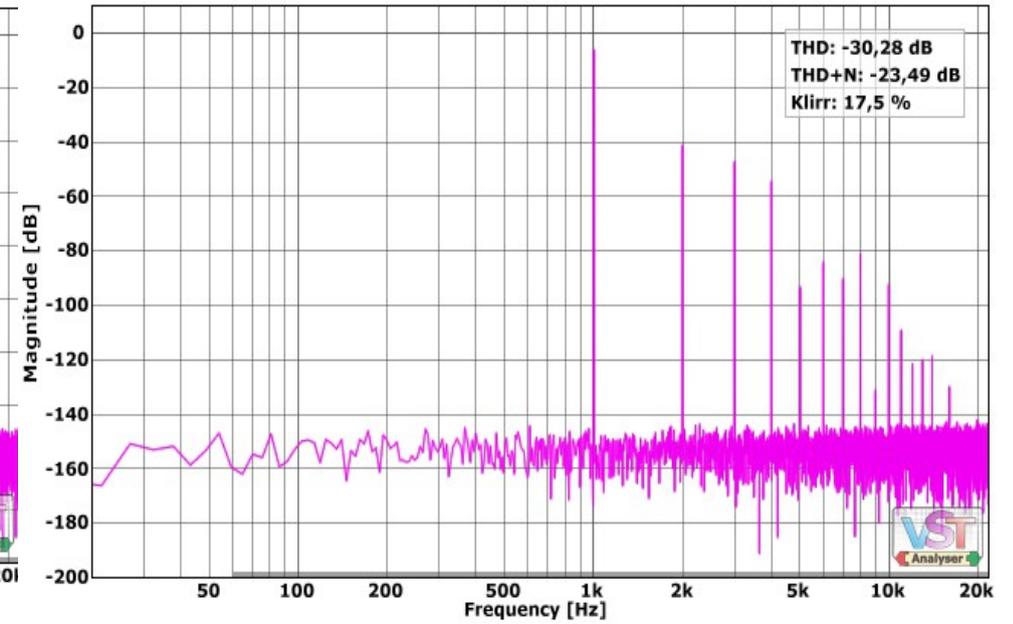


Appendix – the two saturation modes (at unity)

ORANGE



RED



Please, try out the presets. They should give enough starting points for your own explorations into the various compression flavours you can get out of DC8C

DC8C is able to perform very clean compression even at very fast settings (CLEAN COMP switched on)
When doing massive gain reduction you should know, that from time to time transient will pass (popping) through. You can compensate for that with increasing GR SMOOTHING.
When CLEAN COMP is off, you can reach true zero attack, i. e. Transients can be killed completely if desired
If you want 0.0 ms attack you should set the RMS time and PRE COMPRESSION TIME to 0.

The LIMITING mode is not intended to replace your favourite mastering limiter, but it might become your first choice, when zero latency brickwall limiting is required.
I've tried my best to minimize the unavoidable distortion in this mode. When switching on the DETECTOR SMOOTH and THE S-RELEASE CURVE you can lower the distortion more. Keep in mind, that in limiting mode the following controls have no function:
RMS, SHAPE, FB MIX, ATTACK, PRE ATT, ATT DEP, RANGE, MIX & the SC FILTER section

When using the saturation, keep in mind, that I've also modeled the noise and small fluctuations found in analogue circuits. These are barely noticeable. And compared to the real world the noise floor is really low. So don't panic :-)
When the saturation is off, the fluctuations and the noise are completely gone.

Code and GUI: Tony Frenzel

Special thanks to **Oli Larkin** (www.OliLarkin.co.uk) and **Cockos** (www.cockos.com) for providing the framework (WDL-OL) used to build DC8C and the beta testers..

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