

BLEVINS AUDIO

COMPSTORT

5-BAND COMPRESSOR · SATURATOR · AUDIO UNIT · VST3

User Manual



WELCOME

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SECTION 1

Introduction

Compstort is a five-band compressor with its own saturation stage in every band. It splits your signal into five frequency ranges, compresses each one separately, then lets you drive each band into one of five styles of saturation, from warm tube to a torn, rattling speaker.

Use it gently to even out a mix bus or a bass part, band by band, without the pumping of a single-band compressor. Push it hard to rebuild a drum loop, add grit to just the low mids of a guitar, or put tape-style warmth on the top end only.

Inside Compstort

- **A five-band crossover** with four adjustable split points. The bands are phase-aligned, so with nothing switched on they add back together perfectly flat.
- **A full compressor in every band:** Threshold, Ratio, Attack, Release and Makeup.
- **Saturation in every band**, after the compressor: Transistor, Tube, Tape, Clip or Torn Speaker, from 0 to 100.
- **A gain-reduction meter** for each band, and a VU meter on the master output.
- **A master section** with Mix (dry to processed, for parallel compression) and Output.
- **Oversampling** so the saturation stays clean of digital aliasing: 2x as standard, 8x in HQ (new in 1.1).

New in version 1.1

- **NORMAL / HQ / HQ BOUNCE switch** at the top of the window. HQ runs the bands at 8x oversampling for cleaner saturation; HQ BOUNCE uses HQ only when you bounce or export. See *Quality: Normal, HQ and HQ Bounce*.
- Normal mode sounds exactly as version 1.0 did, so existing projects are unchanged.

SECTION 2

Installing Compstort

Compstort comes as a standard Mac installer. It installs two versions of the plug-in, so it works in almost any recording app:

- **Audio Unit (AU)** for Logic Pro, GarageBand, MainStage and other AU hosts.
- **VST3** for most other recording apps that load VST3 plug-ins.

What you need

- A Mac running macOS 11 or later (Apple silicon or Intel; it runs natively on both).
- A 64-bit AU or VST3 host.

Install

- 1 Quit your recording app.
- 2 Double-click the installer (.pkg) and follow the steps. Click **Customize** if you only want some of the plug-ins.
- 3 Open your recording app. If Compstort doesn't appear, ask the app to rescan its plug-ins.
- 4 **Logic Pro:** on a track's Audio FX slot, choose **Audio Units › Blevins Audio › Compstort**. **Other apps:** look in the VST3 list under **Blevins Audio**.

If something goes wrong

Problem	What to do
Compstort doesn't appear in Logic	In Logic, open Settings › Plug-in Manager , find Compstort, and click Reset & Rescan Selection .
Compstort doesn't appear in another app	Make sure the app is scanning /Library/Audio/Plug-Ins/VST3 , then rescan its plug-ins.

PLUG-IN LOCATIONS

The installer puts the Audio Unit in **/Library/Audio/Plug-Ins/Components** and the VST3 in **/Library/Audio/Plug-Ins/VST3**. To uninstall, delete **Compstort.component** and **Compstort.vst3** from those two folders.

SECTION 3

Quick start

A good first result takes about a minute:

- 1** **Insert it.** Put Compstort on a track or bus and play the part. It loads with every band at a gentle 3:1 and no saturation.
- 2** **Set the split points.** Leave the crossovers at their defaults (100 Hz, 250 Hz, 700 Hz and 3 kHz) for most material, or move them so each band holds one part of the sound, such as kick, bass body, mids, presence and air.
- 3** **Compress band by band.** Lower a band's Threshold until its meter shows 2–4 dB of gain reduction. Do the same for the other bands that need control.
- 4** **Match the level.** Raise each band's Makeup to bring back the level it lost.
- 5** **Add colour.** Pick a saturation style for a band and raise its Sat fader. Try Tube on the low mids or Tape on the top band.
- 6** **Blend.** Lower Mix to bring some of the untouched signal back in (parallel compression), then set Output.

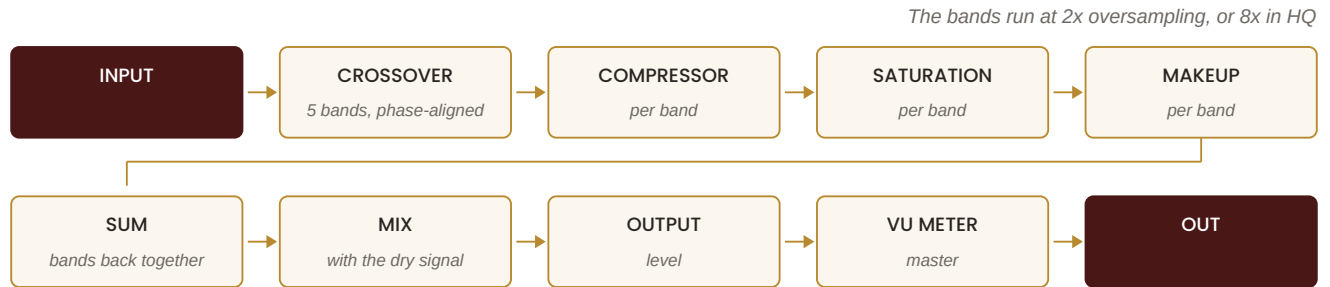
LISTENING TO ONE BAND

Switch the other bands' IN switches to bypass to hear what a band is doing on its own. Bypassed bands still pass their audio, unprocessed.

SECTION 4

Signal flow

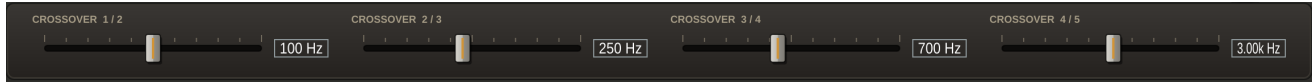
Compstort splits the input into five bands, processes each band separately, then sums them and blends the result with the dry signal.



- **Compression comes before saturation** in each band. A band that is compressed hard hits its saturation stage at a steadier level, so the colour stays more even.
- **Makeup comes after saturation**, so raising it never changes how hard the saturation is driven.
- **The dry path is phase-matched** to the bands, so the Mix control blends cleanly with no comb filtering.

SECTION 5

The crossovers



The crossover sliders run across the top of the window.

Four sliders set where one band ends and the next begins. The readout beside each slider shows its frequency.

Control	Default	What it does
Crossover 1/2	100 Hz	Between the sub/kick band and the bass band.
Crossover 2/3	250 Hz	Between bass and low mids.
Crossover 3/4	700 Hz	Between low mids and upper mids.
Crossover 4/5	3 kHz	Between the upper mids and the presence and air band.

The crossover filters are matched so the five bands always sum back to the original signal. You can move them anywhere between 20 Hz and 16 kHz; each one stays in order with its neighbours.

SECTION 6

The band controls

All five bands have the same controls. Each band's faders run left to right in signal order.

Control	Range	Default	What it does
THRES (Threshold)	−60 to 0 dB	−18 dB	The level where compression starts. Lower it for more compression.
RATIO	1:1 to 20:1	3:1	How strongly the band is turned down above the threshold. 2–4:1 is gentle; 10:1 and up is limiting.
ATTK (Attack)	0.1 to 200 ms	10 ms	How fast the compressor reacts. Slower attacks let transients through for punch.
REL (Release)	5 to 2000 ms	150 ms	How fast it lets go. Short releases are lively and can pump; long releases are smooth.
SAT (Saturation)	0 to 100	0	How hard the band drives its saturation stage. At 0 the band stays clean.
SAT STYLE knob	5 styles	Tube	The saturation flavour (see the next section). Click a style name to jump straight to it.
MKUP (Makeup)	−12 to +24 dB	0 dB	Level of the band after compression and saturation.
IN / BYP switch	In or bypass	In	Bypass passes the band through unprocessed, so you can compare or switch a band off.

The band meters

Each band has a needle meter that shows its gain reduction: how many dB the compressor is turning that band down right now. A bypassed band's meter is dimmed.

TIPS

Double-click any fader to return it to its default.

The number under each fader shows its exact value while you work.

SECTION 7

Saturation styles

Every band has its own style knob, so the low end can be warm tube while the top band is tape and the mids are clipped.

Style	Character	Try it on
Transistor	Firm clipping with mostly odd harmonics. Bright, forward and aggressive.	Snare and guitar mids that need bite.
Tube	A biased, soft curve that adds even harmonics. Warm, round and thick.	Bass, vocals, the low mids of a mix (the default).
Tape	Soft compression with the high frequencies gently rounding off as you push.	Top bands, drum overheads, anything that sounds too sharp.
Clip	Hard, digital-style clipping with a sudden edge.	Aggressive drums, sound design, extreme loudness.
Torn Speaker	A dead zone around silence, uneven excursion and fold-over. Rattly and broken.	Lo-fi effects, broken-radio sounds, character on one band only.

USING SATURATION IN ONE BAND ONLY

Because each band is saturated separately, Compstort can add grit to the low mids of a bass without fuzzing its sub, or warm the top end of a vocal without touching its body. That is much cleaner than saturating the full signal.

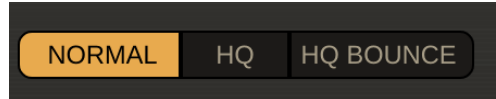
SECTION 8

The master section

Control	Range	Default	What it does
MIX	0 to 100%	100%	Balance between the dry input and the processed bands. Lower settings give parallel compression: the dry signal keeps its transients while the processed signal adds density.
OUTPUT	–24 to +12 dB	0 dB	Final level out of Compstort.
VU meter			Shows the output level. 0 VU equals –18 dBFS RMS, a comfortable mixing level.

SECTION 9

Quality: Normal, HQ and HQ Bounce



The three buttons at the top of the Compstort window choose how much Compstort oversamples its saturation and dynamics. Oversampling runs those stages at a higher internal sample rate, so the harmonics they create don't fold back as harsh, unrelated tones (aliasing).

Setting	What it does	When to use it
NORMAL	2x oversampling, exactly as version 1.0	Tracking and mixing; lowest CPU
HQ	8x oversampling: aliasing from the saturation drops from about -21 dB to below -60 dB	Heavy saturation on the upper bands, final mixes; uses about 2.5 times the CPU
HQ BOUNCE	Normal while you play; HQ automatically when you bounce or export	Best of both: light on CPU while you work, highest quality in the final file

- HQ adds two samples of latency. Your recording app compensates automatically.

WHICH ONE SHOULD I USE?

Leave Compstort on HQ BOUNCE. You work at the lighter Normal setting, and every bounce or export is made at HQ without you having to remember. The setting is saved with your project.

SECTION 10

Starting points

These are places to start, not rules. Adjust Threshold by ear until each band's meter shows about the amount of gain reduction listed.

Use	Bands	Saturation	Master
Mix bus glue	All bands 2:1, Attack 30 ms, Release 200 ms, 1–2 dB of reduction per band	Tube 15 on bands 2 and 3	Mix 100%
Bass guitar	Band 1 4:1, Band 2 4:1 (3–5 dB), other bands 2:1	Tube 40 on band 3 for growl	Mix 100%
Drum bus punch	Bands 1–3 4:1, Attack 20 ms, Release 100 ms	Transistor 30 on band 4, Tape 25 on band 5	Mix 60%
Vocal smoothing	Band 4 3:1 (2–3 dB) to tame harshness, Band 2 2:1 for body	Tape 20 on band 5	Mix 100%
Lo-fi loop	All bands 8:1, fast attack and release	Torn Speaker 60 on band 4, Clip 40 on band 2	Mix 70%

SECTION 11

Tips and troubleshooting

If you hear...	Try this
Pumping or breathing	Lengthen Release on the busiest band, or lower its Ratio.
Dull or lifeless transients	Lengthen Attack so the first part of each hit gets through, or lower Mix.
Harsh or fizzy saturation	Lower Sat on the upper bands, change those bands to Tape or Tube, or switch to HQ.
The output is louder than the input	Lower each band's Makeup, or lower Output, until switching Compstort on and off sounds equally loud.
Nothing seems to happen	Check that the bands are IN and that Threshold is low enough for the meters to move.
Crackles	Raise your recording app's buffer size one step, or use NORMAL or HQ BOUNCE instead of HQ while you work.

SAVING YOUR SOUNDS

Every control is saved with your project and can be automated. Use your host's preset menu to store favourite settings.

SECTION 12

Specifications

Item	Value
Formats	Audio Unit (AU) and VST3 effect; universal binary (Apple silicon and Intel)
Channels	Mono or stereo
Bands	Five, with four adjustable crossover points (20 Hz to 16 kHz); phase-aligned so the bands sum flat
Per band	Threshold, Ratio (1:1–20:1), Attack (0.1–200 ms), Release (5–2000 ms), Saturation (0–100, five styles), Makeup (–12 to +24 dB), bypass
Master	Mix 0–100%, Output –24 to +12 dB, VU meter (0 VU = –18 dBFS RMS)
Quality	Normal (2x oversampling), HQ (8x), or HQ when bouncing
Latency	A few samples (well under 1 ms; two more in HQ), reported to the host for automatic compensation
Requirements	macOS 11 or later; a 64-bit AU or VST3 host

SECTION 13

Legal

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