BACKWARD PRODUCTION

BW THREE

TONE COMP

VERSION 2.0.0



User manual · VST3 · AAX · Windows 64-bit

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1. Introduction

BW Three Tone Comp is a compressor with a fixed threshold: the amount of compression is set by the **Input** level and the **Ratio**. It has a sidechain filter with a boost / cut EQ, adjustable attack and release, two independent saturation stages (Drive and Warmth), a transformer colour (Xform), a dry / compressed Mix for parallel compression, and a large display that shows what the compressor hears and what it does. It uses the same interface platform as BW Four Tilt EQ.

This manual describes **version 2.0.0**, a major update: new interface on the BW Four platform, one display with ANALYZER and TIME views, the red threshold curve and a gain reduction read-out, BW Four presets, About card and OPTIONS | HELP window, a window that can be resized by its corner, OpenGL rendering and an AAX build. The sound of the compressor is unchanged: sessions and presets made with version 1.0.x load and sound the same.

2. Installation

Run **BW_Three_Tone_Comp_v2.0.0_Setup.exe** (administrator rights required) and choose VST3, AAX or both. Or copy the files by hand:

VST3: `C:\Program Files\Common Files\VST3\BackWard\BW Three Tone Comp.vst3`
AAX: `C:\Program Files\Common Files\Avid\Audio\Plug-Ins\BW Three Tone Comp.aaxplugin`

Rescan the plug-ins in your host. Click the BackWard logo in the plug-in: the About card must show **Version 2.0.0**. Close the host before replacing an installed copy, otherwise the file is locked. The plug-in was renamed in 2.0.0 (it was "BW Three"): the installer removes the earlier `BW Three.vst3`, and your projects and presets load as before.

> **AAX.** The AAX build is not signed. A commercial Pro Tools needs a PACE / iLok signature; a development Pro Tools loads it as is.

System requirements: Windows 10 or 11 (64-bit), a VST3 or AAX host, a graphics driver with OpenGL support (recommended).

3. Quick start

1. Insert BW Three Tone Comp on a track or a bus. Pick a preset from the footer, or start from **Init**.
2. Choose the **Ratio** with the big knob in the centre.
3. Raise **Input** until the GAIN REDUCTION read-out in the display shows the amount you want.
4. Set **Attack** and **Release** (left card), then compensate the level with **Output**, or use **Link**.
5. Add colour with **Drive**, **Warmth** and **Xform**, and use **Mix** to blend with the dry signal.

4. The interface at a glance



Top rail	Bypass (round button, top left) and the gear (top right) that opens OPTIONS | HELP.
IN / OUT strips	Stereo level strips on each side: level bar, hold tick, values in dBFS.
Display	The large card in the centre. Switch **ANALYZER | TIME** at its top right; a small selector next to it picks the analyser view (PRE, POST, PRE+POST, SC, CURVE).
BALLISTICS and DRIVE / WARMTH	Left card: Attack, Release, Drive, Warmth.
INPUT · RATIO · OUTPUT	Centre card: the two gain knobs and the big stepped Ratio knob.
SIDECHAIN	Right card: SC, Mix, SC EQ, Freq.
Footer	Preset bar (arrows, name, Save, A / B), the LINK and XFORM switches, the BackWard logo and the plug-in name.

5. Level strips IN / OUT

- IN (left) reads the signal before any setting, OUT (right) after all of them. Each strip is stereo (L and R).
- The top number is the current level in dBFS, the bottom number the peak hold. Click a strip to reset its holds, or use "Reset peak holds" in OPTIONS.

6. Gain: Input, Output and Link

Input pushes the signal into the fixed threshold: the higher it is, the more the compressor works. **Output** sets the level that leaves. Both go from -24 to +24 dB. Double-click or Alt-click a knob to reset it.

LINK (footer) moves Input and Output in opposite directions when you turn one of them, so the loudness stays about the same while you change how hard the compressor works. It only follows your own gesture: loading a preset, automation or recalling a session never moves the other knob.

7. Ratio

Ten positions on the big knob: **1:1, 1.5:1, 2:1, 3:1, 4:1, 6:1, 8:1, 10:1, 20:1** and **All on!**. 1:1 to 6:1 are progressive, 8:1 to 20:1 act like a cliff and All on! is a limiter. Drag the knob, click a value around it, or use the mouse wheel. The name of the family (progressive, cliff, limiter) is shown above the knob.

8. Ballistics: Attack and Release

Attack (0.1 to 100 ms) and **Release** (10 ms to 1 s) set how fast the compressor grabs the signal and lets go. The TIME view shows their effect on the gain reduction.

9. Drive, Warmth and Xform

DRIVE	0 to 100. Saturation with odd harmonics, after the compressor. Works even when nothing is compressed.
WARMTH	0 to 10. Saturation with even harmonics. Independent from Drive.
XFORM	Footer switch. Adds the transformer colour. On by default.

10. Sidechain

SC is a high-pass filter (12 to 400 Hz) on what the detector hears, never on the audio. **SC EQ** boosts or cuts (-12 to +12 dB) around **Freq** (40 Hz to 10 kHz), again only on what the detector hears: boost the highs to make a de-esser, boost the lows to make the compressor react to the kick.

The two controls are also on the analyser: drag the **left dot** sideways to move the SC cutoff, drag the **right dot** sideways for Freq and up or down for the SC EQ gain. Double-click a dot to reset it.

11. Mix

Blends the compressed signal with the untouched input, for parallel compression: 0 is the dry signal, 10 is fully compressed.

12. The analyser

The ANALYZER view shows the spectrum of the signal on a logarithmic frequency axis (20 Hz to 20 kHz). The same analysis engine as BW Four is used: smooth, fluid and calm.

Input	Grey spectrum: the signal before the compressor.
Output	Violet spectrum: the signal after all settings.
Sidechain curve	Amber curve with its two dots: the response of the sidechain filter. Green where it boosts, red where it cuts. Scale on the right, -12 to +12 dB.

The small selector next to the ANALYZER | TIME switch picks what is shown:

PRE	The input spectrum.
POST	The output spectrum (the input as a thin line behind it).
PRE+POST	Both: the difference is what the compressor and the colour stages do.
SC	What the detector hears: the input spectrum through the sidechain filter.
CURVE	The transfer curve of the selected ratio (output against input) with a live dot at the current level.

13. Threshold and gain reduction

The compressor has one fixed threshold, but because the detector hears the signal through the sidechain filter, the level a tone needs to start compressing depends on its frequency. The dashed **red THRESHOLD curve** shows exactly that: it is the sidechain curve turned upside down. Where the grey input line goes above it, the line turns **red**: this is what the compressor is working on.

The **GAIN REDUCTION** tile (top left of the plot) shows how many dB are taken at this moment. It follows the compressor quickly and lets go slowly, so the number can be read.

> The threshold curve is calibrated on pink noise, the spectrum shape of a typical mix: a signal whose spectrum runs along the curve is right at the knee of the selected ratio. The gain reduction value is the real one measured in the compressor.

14. The TIME view



The TIME switch shows the last **2, 5 or 10 seconds**: the output level (violet), the input (grey line) and the **gain reduction hanging from the top** (red) with its deepest peaks marked. Hover the plot to read the values at any moment (Inspector). The window length, the range (-24 / -36 / -48 dB), the peak labels and the inspector are set in OPTIONS.

15. Presets and A/B

The footer bar: the arrows step through presets, the name opens the list, **Save** stores your own preset (a factory preset asks for a name), **A / B** keep two complete settings. The list has two sections: FACTORY and MY PRESETS (Save as, Rename, Delete, Open folder, Init). A star after the name means modified. When you load a user preset, every parameter first returns to its default, then the preset values are applied, so a preset always sounds the same.

User presets are files `.bw3preset` in `Documents\BackWard\BW Three\Presets`.

The 21 factory presets: Mix Glue, Master Touch, Kick, Snare, Rack Tom, Floor Tom, Overheads, Room, Drum Bus, Drum Punch, Drum Smash, All Buttons, Bass Control, Vocal Leveler, Vocal Tamer, De-Ess, Guitar Smooth, Acoustic Guitar, Keys, Percussion, Warm Color.

16. Options and Help

The gear opens one movable window with two tabs.

Analyser	Top (-6 / -12 / -18 dB), floor (-48 / -60 / -72 dB) and default view (PRE / POST / PRE+POST / SC / CURVE).
History	Window (2 / 5 / 10 s) and range (-24 / -36 / -48 dB) of the TIME view.
Displays	Peak labels, Inspector, Spectrum: ON / OFF.
Rendering	Normal or OpenGL (see 17). Reset peak holds. Restore defaults.
HELP	The twelve help sections of the plug-in: gain, ratio, ballistics, drive and warmth, sidechain, mix, analyser, threshold and GR, time, meters, presets A/B and link, tips.

17. Window size and OpenGL

The window is resizable by its bottom-right corner (75 % to 200 %, fixed ratio). OpenGL rendering follows the same policy as BW Four: it is only active while the editor is on screen, a limited number of editors share it, and it switches itself off if the host crashed while it was starting (turn it back on in OPTIONS, Rendering). With OpenGL, several open windows stay fluid.

18. Tips and shortcuts

- Alt+click, Ctrl+click or double-click resets any control.
- Drag the two amber dots of the analyser to shape the sidechain without leaving the display.
- Use A / B to compare two settings; use Mix below 10 for parallel compression.
- Use SC to see what the detector hears, and the red line to see which frequencies make it work.
- Click an IN / OUT strip to reset its peak holds.

19. Technical specifications

Formats	VST3 and AAX, 64-bit Windows, stereo in / stereo out
Gain	Input and Output: -24 to +24 dB
Ballistics	Attack 0.1 to 100 ms, Release 10 ms to 1 s
Ratios	1:1, 1.5:1, 2:1, 3:1, 4:1, 6:1, 8:1, 10:1, 20:1, All on!
Sidechain	High-pass 12 to 400 Hz, peak EQ ±12 dB at 40 Hz to 10 kHz
Analyser	8192-point FFT, Gaussian smoothing, 400 points from 20 Hz to 20 kHz, +3 dB per octave display slope

Window	1200 × 920 at 100 %, resizable 75 % to 200 %
Bundle id	`com.BackWardProduction.BWThree`

20. Parameter list (automation)

Parameter	Range	Default
Input	-24 to +24 dB	-4 dB
Output	-24 to +24 dB	+4 dB
Attack	0.1 to 100 ms	5.6 ms
Release	10 to 1000 ms	260 ms
Drive	0 to 100	40
Warmth	0 to 10	5
Ratio	10 positions (1:1 to All on!)	4:1
SC Freq	12 to 400 Hz	12 Hz
SC EQ	-12 to +12 dB	0 dB
SC EQ Freq	40 Hz to 10 kHz	6.5 kHz
Mix	0 to 10	10
Bypass	Off, On	Off
Xform	Off, On	On

21. Troubleshooting

Old version shown	Close the host, replace the file, rescan the plug-ins. The About card gives the installed version.
Window looks flat or slow	Check OpenGL in OPTIONS, Rendering; it may have been switched off after a host crash.
The analyser is empty	It only shows something while audio is playing, and only when "Spectrum" is ON in OPTIONS.
Nothing is compressed	The threshold is fixed: raise Input or choose a higher ratio. The red line and the GAIN REDUCTION tile show when it works.
AAX not loaded	Commercial Pro Tools needs a signed AAX.

22. Version history

2.0.0	Major update: BW Four look and platform (strips, knobs, preset bar and menu, About card, OPTIONS | HELP window), one display with ANALYZER and TIME views, red threshold curve and gain reduction tile, Link, corner-resizable window, OpenGL, AAX installer option. The audio is unchanged.
1.0.x	First releases (VST3 and AAX).

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