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Warm Audio BUS-COMP

Classic British stereo VCA bus compression, with added sonic colors and features at a killer price

BY ALEX HAWLEY

Warm Audio builds affordable gear based on the designs of time-trusted studio classics. It offers a range of microphones, preamps, compressors, and EQs, all built and priced with the working class musician and engineer in mind.

The BUS-COMP is based on the bus compressor found in a certain line of large format British consoles. One of the most-used bus compressors of all time, it's known for its smooth character and ability to glue a mix together. It's a staple in the industry and has been the go-to secret sauce for many engineers for the last three decades. I'm lucky enough to get to work on an SSL console equipped with one of these bus compressors in my day job, so I was very excited to hear the new Warm Audio BUS-COMP in action.

Overview

BUS-COMP is an all-analog stereo VCA bus compressor that performs just as well on the mix bus as it does on acoustic guitar, overheads, room mics, piano, voice, and everything else in between. The circuitry has been modeled to capture all of the same gluey, smooth, and fat sonic characteristics as its British counterpart. It's housed in a 1U steel chassis with a black finish, vintage style black push-buttons and a backlit VU meter with white needle. The back panel has connections for either XLR or TRS.

Classic

Not simply a clone, the front panel stays with tradition while including some features not found in the original design. Attack, release, and ratio all have stepped knobs with fixed parameters, while threshold and makeup gain have a free range of motion. Attack times range from .1 to 30ms, with similar increments as found on the original design. Fixed ratios include 1.5:1, 2:1, 3:1, 4:1, and 10:1. Release times range from .1 seconds to 1.2 seconds; auto-release is available as well.

Modern

As mentioned, Warm Audio has made a few additions to the design, most notably the inclusion of CineMag transformers. These can be inserted into the signal path with fully discrete op-amps at the touch of a button. Other new features include an internal highpass filter and an external sidechain input.

Engage The Transformers!

Straight out of the box, this is one button that jumps off the unit; any button that's labeled 'Engage Transformers' is just begging to be pushed! Even though it isn't part of the original design, it's a great addition that gives the compressor more sonic variety. Engaging the USA-made CineMag iron 1:1 transformers is intended to add more depth and harmonic richness to the sound. The transformers are driven by a couple of fully discrete op-amps that kick into action at the makeup gain stage when enabled.

To my ears, the added character from the transformers is subtle, which is not a bad thing. It becomes more noticeable as the compressor works harder. I love kicking them on for drum room mics or overheads—the cymbals get just a bit

Warm Audio BUS-COMP

warmer, and the drums a bit livelier. As a whole, it's a much more transparent experience than I had during my recent review of the Warm Audio Tone Beast (February 2020). I love the overt coloration that Tone Beast offers; I only mention it as a frame of reference for the BUS-COMP. Engaging the transformers does not over-saturate or drench the signal in analog coloration, like what's possible with the TB-12. Still, it does add a subtle smearing of harmonics that lift and thicken the signal. It's an excellent complement to the smooth character of the compressor.

techniques is to send kick drum to the bass guitar, which compresses the bass guitar by carving out space for the kick drum every time it hits. The compressor only engages when the kick drum is present in this configuration. This allows the kick to cut through the mix without overloading or muddying up the same frequency range as the bass guitar.

On the Drum Bus

I often use VCA bus compression on the drum bus, so naturally that's where I started with BUS-COMP. Before making any direct comparisons, I dialed in one of my basic settings: a 4:1 ratio, .6 ms attack time, auto-release, and between 2-3dB of gain reduction. That smooth and gooey British VCA vibe was immediately apparent. The nuances in the room came out a bit more, and the entire signal seemed

Other Observations

The BUS-COMP feels right at home on the mix bus. I like to start with a 1:5 ratio, 10ms attack, .3s release, and then tweak the threshold until the gain reduction needles start to dance on the peaks. I bump up the ratio from there, depending on the genre, but I find that's a great starting place for catching the peaks and smoothing everything out. The BUS-COMP does a great job of adding that famous glue to everything, and to help all the instruments feel more embedded with the vocals. At lower settings, it's easier to hear how much it's adding once you bypass the compression a few times and instantly miss it. The peaks get rounded off, and the moments in between feel more exciting and musical. The push-button on the front panel to bypass the compression is a convenient gut check.

Tone Shaping

By default, a compressor's RMS detection circuit is triggered by the full frequency spectrum of the input. The main downside to this design is that the entire mix can feel like it starts to pump or breathe when low-frequency content triggers compression sooner than the rest of the mix. During higher levels of compression, it can make the entire mix feel like it pumps every time the kick drum hits. This can be a cool effect, but sometimes it's nice to alter the detection circuit to achieve a more balanced or transparent output.

Warm Audio added an internal HPF for sidechaining the detection circuit, as well as the ability to add an external sidechain to the BUS-COMP. The internal HPF bypasses anything below the specified frequency from detection. This is extremely useful when dialing in a drum or mix bus—it allows the kick drum to pass through, unaffected, while the rest of the spectrum triggers compression. It results in a much more smooth and transparent sound. The stepped HPF knob ranges from 0 (off), all the way up to 185Hz.

The external sidechain is another great tool for shaping the compression, and its uses are endless. One of the most common

to get a bit warmer and thicker. Dialing in more gain reduction brought out more grit and breathing, which was accentuated even more with the transformers engaged. I exaggerated the compression to hear the character shine through, and it translated the British sound faithfully.

After getting some impressions of the BUS-COMP on its own, I geared up the SSL AWS900+ to see how they compare. I routed the same drum group out of both the mix bus and record bus of the console, with the mix bus triggering the SSL bus compressor, and the record bus triggering the Warm BUS-COMP; this allowed me to toggle between them in real time.

I thought the BUS-COMP would sound pretty close, but I didn't expect it to sound *this* close. The differences are most noticeable when they are pushed and working harder. Generally speaking, the BUS-COMP sounds a touch punchier, while the SSL sounds a little bit warmer and more pillowy. The SSL compressor seems to grab the transients slightly quicker despite matching the attack and release times. In the context of a full mix, it's tough to distinguish, and even tougher to distinguish at lower to moderate levels of compression.

I also enjoyed using the BUS-COMP on grand piano and the guitar bus as well. The transformers pair nicely with the grand piano, adding that depth and extra harmonic richness to bring out the best of what's already there.

Final Thoughts

The Warm Audio BUS-COMP rivals VCA compressors far exceeding its price point. Warm isn't the first, and certainly won't be the last to build off of that legendary circuitry, but the iconic, grabby, British VCA sound is adequately represented with the BUS-COMP. The addition of the HPF and external sidechain expand further on its functionality, while the discrete CineMag transformers add that extra percent of harmonics. It would be nice to have the option of running this compressor in multi-mono, but it's hard to complain when stopping to think about the value of the unit. Some compressors are best known for a single task, but this is one compressor that works well on pretty much anything you throw at it.

Price: $699
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