Buzz Audio SOC 1.1 Stereo Optical Compressor

FIELD TEST

by Barry Rudolph

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Leave it to the Kiwis to come up with a more reliable and clean-sounding version of the tried-and-true opto-compressor. Retailing at $2,200, the SOC 1.1 from New Zealand's Buzz Audio is a stereo opto-compressor that expands on this familiar and popular dynamic controller's style and sound.

The SOC is housed in a two-rackspace black cabinet with large, easy-to-grab control knobs. Two large Sifam VU meters are backlit by a row of yellow LEDs highlighting the arc of the VU scale. A look inside reveals good construction with many field-replaceable circuit boards interconnected with ribbon cables or hand-wired looms. All of the op amps and line drivers in the signal path are DC-coupled Analog Devices OP275 chips with high-quality coupling capacitors. The opto gain-change element is Buzz Audio's and uses a Hewlett Packard Quad LED light block and four specially selected, light-dependent resistor elements.

ON THE FRONT PANEL

The SOC's front panel has identical controls for channels A and B. When compressing a stereo pair, you'll have to separately adjust both channels and then engage the Separate/Link A/B switch. I found both channels to match exactly: You can set the knobs the same and get equal results, a sign of careful design and quality components. When the two channels are linked together, audio sent to the sidechains is a composite of the A/B channel signal, but not a L+R sum. Assuming equal settings on both channels, with 6 dB of gain reduction on channel

A, channel B will reduce 3 dB with no input signal present.

The Drive (threshold) control sets the amount of gain reduction. The Output level control goes up to +15 dB of makeup gain. There is no way to lower the output level when driving -10dBV semi-pro inputs.

Ratio allows users to select from 2:1/5:1/10:1/20:1 settings. The manual points out that the SOC is a soft-knee compressor, where the selected ratios of either 2:1 or 5:1 are reached only after 10 dB of gain reduction. The higher ratio settings are achieved sooner, with slightly less than 10 dB for 10:1 and 5 dB for 20:1.

The Release knob is labeled 1, 2, 4, 8 and 16 for 100, 200, 400, 800 and 1,600 ms, respectively. Release time is defined as the time it takes the compressor to recover or return to 0 dB of gain reduction from an initial reduction of 20 dB. In Auto mode, the SOC releases from fast transients quickly, but also releases more slowly for sustain or continuous signals such as entire mixes or sustaining sounds. Auto-Release is still fairly fast, and I noticed that switching to this mode lowers the amount of indicated gain reduction as measured by the VU meter.

The Attack switch is a simple, 3-position toggle for Slow at 70 ms, Fast at 1 ms and Auto for program-dependent attack timing. You could think of Auto as a medium-fast position; the manual calls this the Classic Sound setting when used with low ratios. The two 3-position meter toggle switches change the meters to input, output and gain reduction. The hard-wired bypass design bypasses audio only around the compressor section, leaving it to continue operating with all controls and metering active. Live sound mixers will like this feature as they can "fly by instruments" beforehand and then engage the compressor between songs.

AT THE SESSION

I used the SOC for typical compression chores and then compared it to other compressors in my rack. Both Auto Attack and Release modes are well-designed, getting solid results on drum overheads and room mics at moderate gain reductions. Auto was useful, unlike other compressors where I'm not exactly sure what is going on in Automatic mode.

With an Avalon AD2044 set approximately the same, the SOC was more forward-sounding with not as much top and bottom. My best vintage 1176LN Rev D sounded thin and boxy, and a Summit TLA-100 sounded tubey and round, but duller and with less accuracy and positive dynamics control than the SOC. An old dbx 160 exhibited a transistorized, "in your face" quality, but was much thinner and smaller-sounding than either the SOC or the other compressors.

On snare drum tracks and overheads, the SOC was the best in the rack. Even if you like an extreme clamp on drum tracks, the SOC does it cleanly with less distortion and compressor artifacts. I found it warmer than the 1176LN and, although the Summit seemed to make the snare track sound more present, the SOC didn't dull as much.

Acoustic guitars, electric bass and upright bass sounded modern through the SOC. Compared to the Avalon, I found it just as clean and noise-free, with upright bass sounding better in the SOC because I could set a longer release time. The 1176LN and dbx were not great on these

instruments. The Summit sounded good, but it didn't offer tight enough control (with its fixed ratio) at only 3 to 5 dB of gain reduction.

Vocal recording and optos have a long history together, and strict dynamic control of a rangy vocalist usually required big squashes, with the vocal sometimes sounding more like the compressor than the singer. With the SOC, you get the whole vibe, sound and action of a good opto but with faster attack times for less overshoot of occasional vocal peaks. The SOC changed the singer's sound very little, even under gain reductions of up to 10 dB (VU) during big chorus sections. I used either 2:1 or 5:1 ratios, Fast or Auto attack, 400- or 800ms release time and about 2 to 7 dB (VU) of compression.

With more control, and quieter and cleaner sound even at extreme settings, the SOC 1.1 is a fine choice for a neutral-sounding, general-purpose compressor. I liked its simple and accurate operation, reliable performance and modern sound.

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