RADIOWORLD

Writer

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INconSIStent STREaming LEVels? Get Angry!

Angry Audio offers the Chameleon C4 Livestream Processor with AI

Radio on-air processors typically include a plethora of controls that are not required for streaming audio, such as composite clipping, stereo generation and filtering. Meanwhile streaming has its own considerations including loudness standards or guidelines set by the likes of Amazon, YouTube, Apple and AES.

Streamers also may not have the benefit of on-site engineers with the knowledge to adjust the controls of a traditional audio processor for a streaming context. And as anyone who has set up an audio processor knows, the more controls there are, the deeper a hole you can dig. It's easy to make a great processor sound very bad if you aren't sure of what you're doing.

Along comes Angry Audio with the Chameleon C4, an audio processor designed specifically for streaming applications. It is part of a lineup of easy-to-use audio processing and loudness control products that also includes the Chameleon C3 Headphone Processor and the just-introduced Chameleon C-Level for normalizing contribution audio.

Cost-effectiveness is part of the story here. The C4 lists for $989, the C3 is $689 and the C-Level is $999.

But simplicity of operation and audio quality are the headliners.

The Chameleon is pretty much plug-and-play. There's a control for density, with a selector that lets you choose light, medium or heavy processing, or bypass mode. There is a recessed screw for LUFS and level calibration. And on the back are two DIP switches, one to enable or disable precision loudness control, the second to choose analog or digital audio for your feeds. That's it!

The Chameleon's multi-band audio processing, using artificial intelligence, does the heavy work itself, adjusting its parameters continuously to fit the audio. The processing algorithms are created by Cornelius "Corny" Gould, well-known for his work in broadcast technology at companies like CBS Radio, Telos Alliance and Futuri Media.

The processor is only 1 RU tall and a half-rack wide; an optional rack frame can hold two Chameleons.

Wiring is easy and flexible. Stereo analog inputs and outputs are on XLRs and StudioHub+ connectors, while AES/EBU ins and outs are on StudioHub+.

(Angry Audio now owns the StudioHub product line.) An analog input pass-through connector allows you to feed other devices.

The front includes both full-size and mini headphone jacks, with volume control. The C4's power supply is built in, so there is no wall-wart.

Open and natural

I spent a number of hours listening to C4-processed stream demos; you can listen yourself at *https://angryaudio.com/c4/*.

I was able to listen to a pop station with the heavy setting, and an alternative station with the light and medium settings.

Angry Audio promotes the C4 for its loudness, consistency, punch and clarity, and I found that for streaming applications it delivers on those promises, particularly given its price tag. I believe I heard some gain riding, indicating that the box was doing what it was supposed to do; it was slow and thus not jarring.

Angry also promises "a very open and natural sound that preserves the character of the content," and that's what I found — C4 doesn't "color" audio like on-air broadcast processors can and sometimes do, especially if settings are abused. Chameleon is true to the original unprocessed audio with no coloration.

Its precision loudness control works flawlessly. It holds the audio to a targeted level (–24 LUFS to –14 LUFS).

There is not the stereo enhancer that many radio processors have, nor are there multiple parameters to adjust to produce, say, a more pronounced vocal, a heavier punch or crisper highs. The intention here appears to be to maintain your material in its original form, while making sure levels stay consistent throughout all the program content, including within each song.

The Angry Audio Chameleon C4 at $989 might be what many streaming stations truly need: a very clean processor that keeps the levels consistent within each song and from program content to program content. As Angry Audio says, it will put an end to the problem of "blasting commercials and mumbling voices." Your programming will sound consistent even with wildly disparate source material.

The best part for many streamers is you simply can't adjust this processor incorrectly. Choose your processing level and rotate the switch. Easy! RW

> ❝ **Cost-effectiveness is part of the story but simplicity of operation and audio quality are the headliners.** ❞