Rane C4

Compressor/Limiter

By Jamie**Rio**

If one compressor is good, then four should be much better... right? Well, I think that more is better, and so does the R&D department at Rane. In reality, four compressor/limiters are not that many and can certainly be used in about any mix situation. But the C4 is much more than just four compressor/limiters. As a matter of fact, this frequency-dependent unit is loaded with lots of very cool and functional features.

The Gear

At first glance, you will notice that the C4 has lots of knobs—40 in total, along with many toggle switches and LEDs. The device looks very analog, which worked for me considering my brain leans towards the analog side of everything. There are four identical units, which I also like because I only have to describe what 10 of those 40 knobs do.

The knobs are laid out in three rows (see picture). From left to right in the first row are the compressor threshold, ratio and gain knobs, plus the active/bypass toggle switch. Above that is a row of triple function LEDs that let you see what the compressor is up to at all times. The next row gives us the attack, release, knee and limit threshold, plus the headroom LEDs for the limiter.

This area also boasts an automatic feature, which is accessed by turning the release knob clockwise until the auto light is lit. This automatically sets your attack and release for most programmed material. However, unlike some other units with auto functions, you still have control over threshold, ratio, gain and knee.

But on the last row, we will travel right to left. Mainly be cause we have a ve ry impo r-tant toggle switch, which will allow us to select the compressor, de-esser or listen, and choose exactly what the detector hears. When listen is selected, the side-chain signal is ro u ted to the channel output, which is very im port antwhen making PEQ adjustments.

And PEQ is the parametric gain, frequency and bandwidth knobs just left of the toggle switch. In compressor mode, the PEQ section operates like a regular second order filter with independent bandwidth, frequency and gain controls. Boosting or cutting a particular frequency makes the detector more or less sensitive to that frequency, and broadband compression still takes place. In the de-ess mode, the PEQ controls define a bandpass filter in the side-chain and a dynamic EQ in the main signal path. I don't want to get too technical with this description, so let me just say this section of the C4 is really fun to use at live gigs.

Before I address how the Rane unit performed in the real world of live mixing, let me first say a word about the Rane owner's manual. As part of my job as an *FOH* writer, I have to read a lot of manuals. Usually, they are a difficult read at best and absolutely indecipherable at worst. Not the Rane manual—I actually leaned some new things about compression and de-essing while I was checking out the overview of the C4 unit, so I want to give two thumbs up to whoever wrote it.

On With the Show

I arrived at the show a little late, so time was of the essence. My mission was to supply sound for a four-piece blues band. It would have been a walk in the park, but the lead singer also doubled on harmonica, and he used the same microphone for both vocals and harp. He also switched between electric guitars and a National Resonator that he played slide on. The National was a potential feedback nightmare.

There was also no sound check.

I started with the lead vocalist. I set the attack and release to auto, the ratio to 3-to-1 and the knee to soft. I figured I would set the compressor and limit thresholds once the lead vocalist started singing. But my real co nce rn was when he started playing his harmonica. So, I adjusted the PEQ section, and I set my bandwidth to 1.5 oct ave s, frequency to 1.5kHz and left the gain at ze ro. This wa s all on the fly, so all additional tweaking would be done after the show began.

Next, I set up for the electric/resonator guitars. Once again, attack and release were at auto, ratio at 4-to-1 and I set the knee to the hard side of medium. I was again counting on the PEQ giving me some control over that hollow-bodied, resonator slide guitar. I put the bandwidth at 2 octaves, frequency at 1k and left the gain alone for the moment. I still had two compressors/limiter/de-esser left, so I set one up for the bass and one for a monitor mix. For the bass, I put attack and release on auto, compression at 4-to-1 and the knee to hard. In addition, I basically bypassed the PEQ.

For the monitors, I was looking at limiting the signal and controlling the potential for feedback. So I set the compressor threshold just under the limiter threshold, and I figured I would work the PEQ once we we re underway. This ent i re setup took less than five minute s.

After the show started, everything was good. Not just in the ballpark, but in the infield of the ballpark. I of course made adjustments along the way, but the vocalist transitioned from singing to harmonica without hurting the audience, and he switched from electric guitar to slide resonator without any howling of feedback.

I think the PEQ section of the Rane C4 is the most useful feature. The entire unit is good and easy to operate, but the PEQ really helped smooth out the mix.

What is it: Quad compressor/limiter unit
What it's for: Anyone who does sound reinforcement
Pros: Feature-rich and they all work well
Cons: I really couldn't find any
How much: $999