



Red 3: Dual Compressor / Limiter



The Red 3 employs an unusual and original single-VCA design to achieve high quality and truly independent compression and limiting, without the compromise and unnecessary processing involved in traditional designs. The success of the design is attested to by the Red 3's TEC award for Outstanding Technical Achievement in the Signal Processing Technology category



- Stereo switch for true stereo operation from a single set of controls
- Key inputs with illuminated push-button selection
- Illuminated push-button switches for compressor/limiter in/out on each channel
- Precision VU metering of signal level or gain change (switched)
- Can operate as a discrete channel unit

The VCA used is a proprietary Focusrite design, fully discrete and balanced, offering superb low noise and distortion, and excellent common-mode rejection. In order to separate compression and limiting, the side-chain electronics contain three VCAs in series to generate compression and limiting control voltages which drive the main VCA. The result is true compression followed by limiting, rather than the more common characteristic of compression that turns into limiting. The side-chain electronics are class A, ensuring superb transient response. Both compression and limiting therefore, offer true peak response, not averaging RMS response.

The use of such a high quality audio VCA as the only element between input and output means a very short signal path, and an ability to retain a natural, unobtrusive sound even when significant compression is being applied.

Each channel has clear and identical controls, for compressor ratio, threshold, make-up gain, attack and release, and limiter threshold. A program-dependent auto-release mode is available, and the VU meters can be switched to show levels in two ranges, or gain change. In stereo mode the lower set takes control of both channels.

"...possibly the cleanest, quietest, most unobtrusive compressor I have ever used..."

Dave Foister, Studio Sound.

"...the Focusrite Red 3. I always put finished, stereo mixes through the Focusrite. It pulls the mix together a bit. I call that 'kissing the Focusrite'".

Tom Lord-Alge; Recording/Mixing Engineer - derived from an interview in Sound on Sound.

RED 3 SPECIFICATIONS

Input sensitivity	+4dBu
Input Impedance	10kΩ ±15% (20Hz to 20kHz)
Balance	>60dB
Frequency response	5Hz to 200kHz (-3dB points)
Noise	Better than -80dB below +4dBu output level
Distortion	0.02% with input at 0dBu at 1kHz 0.006% (+10dBu @ 1kHz) 0.004% (+20dBu @ 1kHz)
Output	+24dBm with output loaded 600Ω, balanced and floating