

Most compressor/limiters without a ratio control are variable ratio designs. When the threshold is reached, the unit compresses at a mild ratio that increases with the signal strength until at some point (between 10 and 20 dB into the threshold) the ratio exceeds 10:1—meaning that for every additional 10 dB increase in gain, the output rises by 1 dB. At that point the compressor becomes a limiter.



Anthony DeMaria ADL 1000

A limiter will usually have a ratio of 10:1 or 20:1 with extremely fast attack and release times. The best use of a limiter is to stop occasional peaks from causing distortion. If many successive signal peaks are limited, the gain reduction would be very noticeable. If this happens, the limiting threshold should be raised and the gain reduced manually so that only occasional extreme peaks are limited. Effectively, a compressor can be used as a musical tool, while a

limiter erects a wall and says “beyond this point you shall not pass.”

What they're using

You're saying “A musical tool? How can a compressor be musical?” Dave Sinko, whose engineering credits include albums by Trisha Yearwood, Bela Fleck and the Flecktones, and the Sony Classical release *Appalachia Waltz* with Yo Yo Ma, Edgar Meyer and Mark

O'Connor, says, “You should adjust the attack and release based on the tempo of the music. If you do it right, the compressor dances with the track. That's the beauty of using compression in a mix.”

Dave is one of many engineers who believes that compressors should be used sparingly, particularly in a tracking situation. “If you are using more than 2 or 3 dB, it gets into the realm of bad gain staging. In fact, too much compression pisses me off.” There was

no compression or eq on *Appalachia Waltz*—everything was done by using the appropriate microphones and mic placement. Like everything else, there are exceptions to the practice of minimal compression. “When recording crunch guitar, you have to take off your engineering hat and put on your musician hat,” he says.

Richard Dodd, best known for his work with Tom Petty, George Harrison, and the Traveling Wilburys, approaches compressors from a different perspective. “I tend to use a compressor instead of an eq,” says Richard. This statement highlights the fact that compressors change the signal. Some changes are subtle, others are more dramatic. Dodd's favorite compressor is the Aphex 661 (not one of the products in this article), which he says is “the most usable.”

Bill Vorndick is very well known in acoustic music circles, and has engineered albums for, among others, Bela Fleck, Jerry Douglas, Mark O'Connor, and Allison Krauss. Bill also believes in setting the attack and release times to fit the tempo of the music. Watching Bill check out these compressors was an enlightening experience; he would set them so there was a minimal amount of