

MIX

Professional Audio and Music Production

API 527 Compressor

by [Barry Rudolph](#)

FIELD TEST

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API's 527 single-channel compressor is a 500 Series module based on the company's 225L discrete channel comp and their rackmount 2500 stereo bus compressor. All in the same family of VCA-based compressors, the 527 has continuously variable attack, release and ratio controls (unlike the 2500), better metering resolution (than the 225L), an output level control, upgraded VCAs and API's Thrust® technology. The Thrust filter passes audio at unity gain at 1 kHz; for frequencies below, a 10dB-per-decade filter is applied to the sidechain signal for less compression of the low frequencies. For a better signal-to-noise ratio, the 527 uses two THAT Corporation 2181 VCA chips in parallel.

Inside the API 527

The 527's steel case reveals all surface-mounted components, an API 2520 discrete op amp as the differential input stage, a 2510 VCA output driver and another 2520 to drive the large output transformer. A 10-segment red LED gain-reduction/VU meter with +27dBu overload indicator works in reverse, starting with all segments lit and denoting gain reduction by segments going dark. The meter can be switched to read output level in a more conventional way with LEDs lighting from the bottom from -20 dB to +3 dB at maximum.

Detented Noble pots are used for Threshold (+10 dBu to -20 dBu), Ratio (1:1 to 1: infinity) and Output (+10dB to off). A concentric detented control handles Attack (1 to 25 ms) and Release (.3 sec to 3 sec).

Borrowed from the 2500 is a choice of compressor styles: Feedforward (called New) and Feedback (called Old). Feedforward is the typical way newer compressors push input audio into the detector sidechain circuit of the VCA. Feedback recalls classic compressor circuit designs where the input signal is replaced with the VCA's output to feed the sidechain. Other features include a Link switch where the sidechain equally controls signals of several 527s summed together; the above-mentioned New/Old modes; a Hard/Soft compression curve knee switch; Thrust in/out; and a switch for a hard-relay bypass.

On My Tracks

With my first experience recording bass guitar, I found the 527 to produce a modern "tall" sound--both the high and low frequencies were retained in a natural and clear way with no special emphasis placed on any frequency band. Adjusting to slower attack times produced the desired increase in string attack and brightness, as well as any fret and pick noise.



In all my applications, the output level tended to stay fairly constant when using typical threshold ranges although the output goes up as you increase ratios starting from 1:1. While taking the necessary time to get to know the 527, I found all the controls highly interactive yet nearly impossible to set badly.

I liked that I experimented more with different settings--I would not set its controls to what "I think" they should be adjusted based on my compression knowledge or the expectation that it operates the same as other compressors. There is more to it here with many more sounds possible with this little guy!

On electric guitar tracks, I found the Thrust feature especially worthwhile. Thrust turns out to be a way to control the low frequency "size" of guitars (and other instruments too) by not allowing the 'grabbing' and compressing (for a given threshold setting) of the lows as much as the rest of the source's frequencies.

On a pumping 7-string rhythm guitar part, using Thrust allowed the percussive nature of the low B and E strings to be heard well, yet it still provided an overall "lid" on the internal dynamics of the guitarist's performance. This feature is especially noticeable on medium to heavier squashes. I got a desired density without compressing the "life" out of the sound.

On program buses, I found the true worth of the New/Old and the Hard/Soft controls. Although I didn't have two 527s for stereo bus compression, I did put a mono mix through my single unit and discovered a supermodern bus compressor. Even at 10:1 ratios, the sound is impressively loud and clear. I liked using the New mode and either Hard or Soft curves, depending on the track's percussive nature. With the Thrust in, you'll keep the bass and kick drums up front and hear less pumping caused by them on the rest of the track.

Drum compression with the 527 also becomes a modern-sounding process. If you take a little time, you can get anything from easy leveling, spanky attacks or an extended decay time for tom toms. It's easy to get solid, bright kick drum levels, no matter what the drummer happened to be playing.

I'll Take Two Please!

PRODUCT SUMMARY

COMPANY: Automated Processes Inc.

PRODUCT: 527

WEBSITE: www.apiaudio.com

PRICE: \$995

PROS: Clean, accurate and high-fidelity compression in a 500 Series chassis.

CONS: GR (gain reduction) meter works in reverse.

In all of my tests, I was impressed by the 527's excellent sound and versatility. On electric guitar tracks, the Thrust feature was especially worthwhile. As a vocal compressor during an "in-the-box" Pro Tools mix, at any reasonable setting the 527 was clearer and more upfront sounding as compared to my best compressor plug-in. The 527 is the first 500 Series module compressor I've found to be great for vocals because it has a clear and transparent sound--definitely a good unit for also recording vocals, too. This is not a vintage-sounding "color box" compressor. It functions as a precision gain-control tool--as transparent as you'd like or less. I'll take two, please!

Barry Rudolph is an L.A.-based recording engineer. Visit his Web site at: WWW.BARRYRUDOLPH.COM



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