



Roger Nichols Digital Dynam-izer Compressor Plug-In

FIELD TEST

 by [Barry Rudolph](#)
[Back To The Home Page](#)

This "mirrored" page is published through the kind permission of MIX Magazine and Prism Business Media Inc.
 Visit MIX Magazine's WEB Site at: <http://www.mixonline.com>

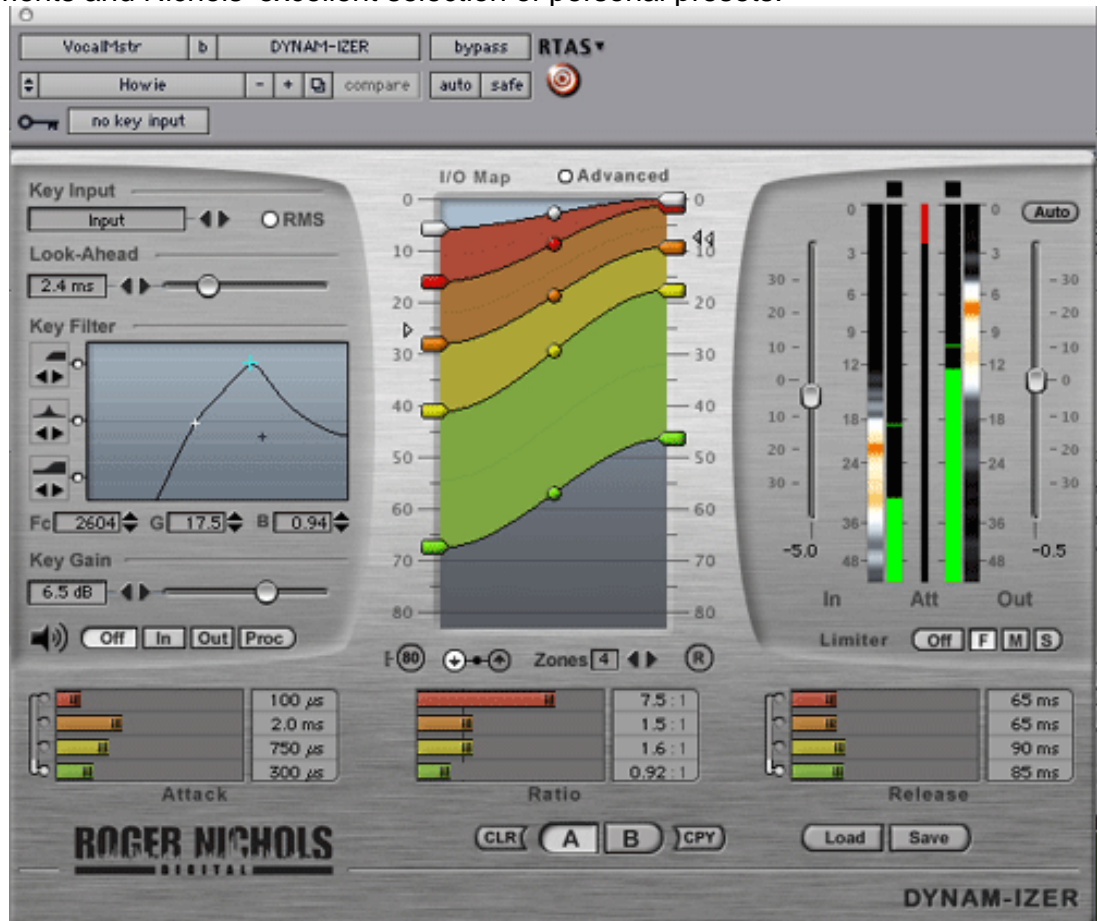

 You Are Here: www.barryrudolph.com > [mix](#) > [rnddynamizer.html](#)
[Mail A Link To This Page To A Friend!](#)
[Download](#) A Printer-Ready Copy Of This Review. You'll Need A [Free Acrobat PDF Viewer Plug-In](#) For Your Browser.

Dynam-izer is one of six new plug-ins from Roger Nichols Digital (RND), which now acts as the exclusive distributor and licensee of Elemental Audio products, the plug-ins' original designer and manufacturer. RND adds iLok authorization, operational improvements and Nichols' excellent selection of personal presets.

The five other RND plug-ins are: Inspector Free, a stereo metering/analyzer system downloadable at no cost; Inspector XL, the full-featured, advanced version; Frequal-izer, an Finite Impulse Response EQ with spectrum analyzer; Uniquel-izer, a totally configurable equalizer with unlimited number of frequency bands and all known filter shapes; and Finis, a stereo loudness maximizer. All are 24-bit plugs utilizing 48-bit precision and work in stereo or mono to 192kHz and come in VST, AU and RTAS for both MACs and PC hosts. By the time you read this, TDM versions will be available.

Dynam-izer is a revolutionary dynamics processor that will change the way you use and think about compressors and compression. Dynam-izer is NOT a multi-band compressor where different compressors work on separate frequency bands of audio. Dynam-izer uses up to four zone compressors and controls and graphically monitors their operation using a unique GUI.

Zones are non-overlapping discrete sections of the input signal's total dynamic range each bounded by a user-defined upper and lower compressor threshold level in dB. The desired compressed dynamic output range for each zone is also user-specified when setting up this plug-in. As the input signal passes through each zone, the resultant



processed audio output is different--depending on the output level, ratio, attack, and release time settings for each particular zone. Previously, all compressors whether software or hardware are, by design, only single zoned.

FEATURE-RICH GUI

Dynam-izer's GUI has four main sections: Attack, Ratio and Release controls, Key Filter Processor, I/O Map, and the Output/Meter section/.

Spanning horizontally at the bottom are four sets of controls for attack and release--one set for each zone. Attack times range from 20 microseconds to 500ms and release times range from 5ms to 5 seconds. Each set is color-coded the same as the zone compressor graphics and can be locked or ganged together in any combination to track together.

In between the Attack and Release reside the Ratio controls--a set for each zone. Also with the ganged/locked ability, ratios from 0.50:1 (expansion) to a maximum of 40:1 (compression) are available. When these limits are exceeded in any zone, that zone's display graphic will "hatch" or checkerboard as a warning.

KEY FILTER PROCESSOR

On the left side of the GUI is the Key Input selector and processor. Key refers to the source that triggers compression/expansion--usually the audio track you want Dynam-ized. You can select between peak (default) and RMS level detection and up to 10 ms of look-ahead. If your DAW host supports it, then you can also select the side-chain for the key input. The default is the input signal or either left plus right channels, or left or right for stereo instantiations.

For hosts that do not support side-chain--connect your external key to the left channel and pass the mono audio you want to affect through the right. The stereo version always links left and right channels.

The comprehensive Key Filter section preconditions the key signal with a three-band equalizer with seven different EQ/filter shapes available for each band. There are: parametric, high and low shelves, low/high/band pass, and a notch/peak filter capable of extremely sharp slices. There are adjustments for gain, Q/bandwidth and frequency plus Key Gain. Key Gain fine-tunes the depth of compression by adjusting either the input signal's level or the level of the external key signal going to the compressor's detectors.

Key Audition lets you hear the key signal before and after the Key Filter and Key Gain processors. The Proc function runs the key signal (be it external or input) through Dynam-izer to audition its effect and check that the actual input signal is affected, as you desire.

WELCOME TO THE I/O MAP

Compression settings are shown and controlled with the I/O Map. You can select and view the signal's entire input and output dynamic range in 24, 48 or 80dB resolutions and select from one to up to four color-coded zones that match their attack, release and ratio controls.

I/O Map shows the "shape" of each zone compressor as defined by its threshold level setting, ratio and output level. It is easy to see what the new, reduced dynamic range is and how it compares to the original uncompressed signal's dynamic range.

By click/dragging the threshold-level lever of any zone up or down, you'll instantly see the relationship between it and the output level predicated on the ratio selected. Click/dragging the output lever up and down effectively changes the ratio setting and dynamic range of that compressor zone. Cool!

In Advanced mode, (default is Simple mode) a drag node will appear above each zone that simultaneous changes both the threshold and output level ranges. The ability to see this information graphically is new and far exceeds what you normally have to deduce (or guess) from the front panel settings or a transfer function input/output graph

on a hardware compressor or software plug-in.



Although true input and output levels along with gain reduction are shown on the Output/Meter section of Dynam-izer (more later), small white triangles show key input levels (the output of the Key Filter section) on the left side of the I/O Map graphic. On the right side are both key processed output levels and key target levels shown with two separate white arrows.

The key target level and key processed levels track one another based on how you have set the attack and release controls. If the processed output is always higher than the target, try using a faster attack time and conversely if the processed output lags behind the target, slow the attack time. Most of the time both of these indicators will be together and may or may not be correct for the sound you're looking for--these indicators are for reference only.

OUTPUT/METER SECTION

The input and output peak meters have five-second hold times, a gain attenuation indicator (colored red when compressing and blue when expanding) and the fascinating "cloud" meters that show the long-term distribution of audio energy. The heaviest level concentrations are colored orange to red and lower levels go to white then to black for no level. Finally, there is an auto-limiter with three response modes--fast, medium and slow--to ensure that the output level never exceeds 0 dB.

EXPERT PROBLEM-FIXER

Dynam-izer amazed me every time I used it as an RTAS plug-in in my Pro Tools HD3 Accel system. It worked wonderfully on all sources, from individual instrument tracks and vocals to full program mixes. I found Dynam-izer to be very good at converting problematic and/or extremely dynamic recordings into remarkably finished and professional-sounding tracks.

My torture test was on a female vocal track in a song I had already mixed. This particular singer sang the verses very quietly with a somber tone and the choruses very loud with a much thinner and strident tone centered on 2 kHz.

Before Dynam-izer, for the verse sections I compressed using a 4:1 ratio, automated an equalizer boosting the 1.5 to 4kHz area to recover intelligibility and added a low roll-off filter to reduce the proximity effect whenever she sang too close to the mic. Choruses required me to automate the EQ to cut the same mid-range frequency I boosted in the verses. Along with a lot of break-point level automation, I was able to come up with a credible lead vocal track, albeit not a stellar one.

With Dynam-izer inserted, I started over and turned off all automation and bypassed the EQ and compressor plug-ins. Using all four compressor zones, I arrived at a setting that did about 80 percent of the work I'd spent hours doing previously. I was able to expand in the lowest-level zone, bringing up the quiet verses, and I used the Key Filter to de-emphasize the aberrant 2kHz buildup when she sang loudly in the choruses. I found I had to go easy with Key Filter because it also affected the second compression zone where I was compressing at a 1.6:1 ratio.

I had to get used to the idea that changing the ratio of any zone not only affects that zone's compressor action but the other zones and the overall compression results too. To adjust interaction, there are controls and options for decoupling zones depending on what you ultimately want. The metering is a big help by always indicating what's going on at any instant from overall gain compression to moments of expansion.

Lucky for me there are two workspaces: A and B. You can save settings in A and copy them to B and tweak B

further. If you go a 'tweak too far', revert and call up the A workspace. Of course, you can save/store these settings as presets.

After a couple of vocal rides and an automated low roll-off filter in the verses, my work was done. The real benefit was that the vocal sounded much more natural and fit the track better than after all of my previous machinations with automated EQ and microscopic vocal rides.

The vocal's compressed sound was great--modern-sounding and real--even at extreme squashes. (Assuming realistic attack, release and ratio settings) This is because I tended to use much lower compression ratios. Each zone compressor has to work less, focusing on a narrow input level range rather than the entire range a conventional compressor has to deal with.

IT'S DYNAMIC

Dynam-izer has become my first go-to compressor for serious and transparent dynamic control. That Dynam-izer will function as an expander in one zone and completely different compressors in other zones is a major reason to own this plug-in! There is no compression challenge that Dynam-izer will not meet or exceed the performance of any other plug-in compressor.

Dynam-izer sells for \$249 MSRP and includes a must-read 96-page manual. It is available both in a box or as a download from the Website.

Roger Nichols Digital, 727/230-1603, www.rogernicholsdigital.com.

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



[Learn More Now At Musician's Friend!](#)

[Click Here To Return To The Mix Directory](#)

This Review Is Copyright © 1995 Through 2006 By [Prism Business Media Inc.](#) All Rights Reserved.



[Back To Home Page](#)

[Back Up To The Top](#) 

[All Web Page Design Is Copyright © 1995 through 2006 By Barry Rudolph](#)