

[Back To The Home Page](#)

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

[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.

[Click On The Image Below To Return To The Mix Directory](#)

A trio of new plug-ins brings Yamaha's proprietary digital processing technology to your VST/AudioUnits-based projects. The Pitch Fix pitch-correction tool, Vocal Rack effects processor for vocal tracks and the Final Master multiband compressor/limiter mastering processor borrow DSP algorithms found in Yamaha's digital consoles and stand-alone effect processors. They also support up to 24-bit/96kHz operation, dynamic automation of all parameters and snapshot settings recall.

PITCH FIX

I successfully installed all three plug-ins in my flat-panel iMac (Cubase SX 2, OS 10.3.2), Hewlett-Packard PC (Wavelab 4, XP Pro) and a super PC (Nuendo, XP Pro) and they ran perfectly with minimum CPU drain and no differences in features, performance or sound quality from one platform/OS to another. (Plug-ins are Windows XP/2000/ME/98/98SE and Mac OS 9.x/X-compatible.)

My immediate favorite was Pitch Fix, the first software implementation of Yamaha's formant/pitch correction and pitch-shifting technology, as it offers simple real-time operation, ability to retain formants and good sound.



While Pitch Fix does not offer a Graphical mode, there are other ways to define its operation with the compact GUI. When instantiated, the plug-in defaults to automatic detection and correction. The Type button selects Normal (default), Male for low voices or Female for soprano. Normal mode worked fine as a quick tune-up for a rough lead vocal on a demo song that needed backing singers. After those vocals were recorded, I had the lead singer record a final vocal. I pulled a few difficult-to-pitch phrases from the tuned track and dropped them into the new vocal take--they matched perfectly. I found with most vocals, once I got the window and rate knobs tweaked, Normal mode worked well on the fly about 90 percent of the time.

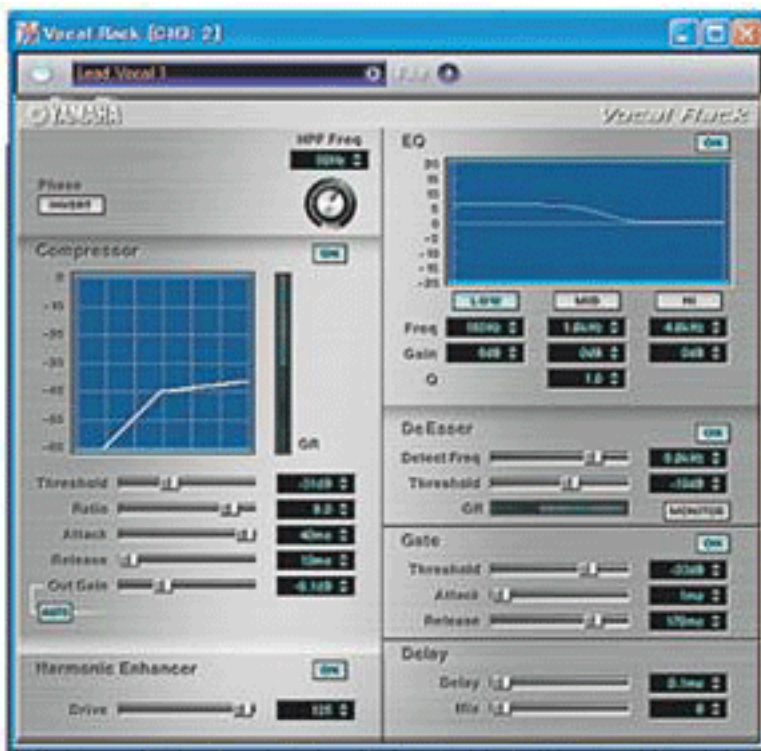
For a few tough spots, I used an external MIDI controller or the onscreen octave keyboard to "play" target pitches. You can play a scale of target pitches here or click on a customized set of acceptable pitches above each keyboard key. The high/low limit faders set the maximum operating pitch range and increase pitch change accuracy. The onscreen keyboard lights with every corrected pitch, and a linear tuning meter reads incoming pitch and deviation from true pitch, which is defined as concert, or A = 440 Hz. There are controls to change this if you need to re-reference the plug-in. There are also choices of song key, major or minor scales, or chromatic (every half-step) to automatically set the universe of acceptable target pitches.

Pitch Fix's biggest feature is that, by default, it uses formant shifting to preserve the original signal's quality without creating artifacts or distortion. If Keep Formants is set to Off, then formants raise and lower with the pitch. Moving formants up or down produces strange vocal affectations that are still in pitch even though they sound cross-gender.

If you use several different Pitch Fix setups throughout a song, you can store snapshots (called Scenes) and recall them using keyboard shortcuts chosen from a drop-down menu. This feature is good for songs that change scales or modulate to new keys.

VOCAL RACK

Vocal Rack comprises six main vocal processors and 20 factory presets. The eight processing stages include highpass filter, phase flip, compressor, harmonic enhancer, 3-band parametric EQ, de-esser, gate and delay. The 20 presets are good starting points--similar to tutorials on vocal chain processing for novices--though most are set over the top. Also good for students is the classic audio textbook input vs. output transfer function graph, where you can see threshold, ratio and output control fader changes. The Auto mode automatically re-adjusts the output level as threshold is changed--a nice feature. I liked the sound of the compressor, though I found it a bit fiddly when making subtle adjustments. Unfortunately, only Pitch Fix lets you click on a parameter box and type in a value.



The graphical 3-band EQ does not let you grab a point on the graph and drag it, but rather you must first select one of the three bands and then click-and-drag only that band. Control+click changes the Q of the midrange band from 1 up to 12. All three bands generously overlap and boost or cut up to 12 dB. I found that they worked well for any instrument track or vocals.

The de-esser has just threshold and frequency controls, but does the job well, even on vocals with hard-to-detect "S" problems. A Monitor feature lets you listen to the band of frequencies being reduced. Both the compressor and de-esser have non-calibrated gain reduction meters that only intermittently work making it difficult to make fine adjustments. This was true even on the

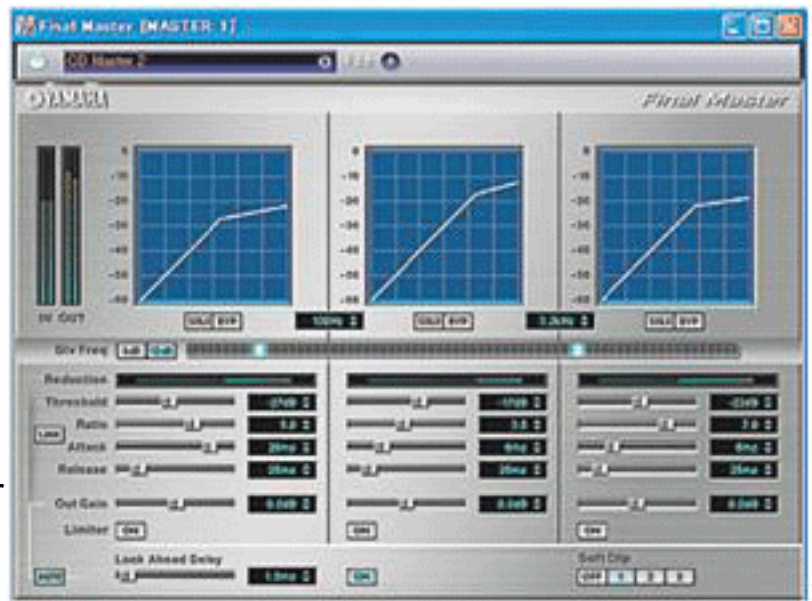
2.4GHz P4 system running Nuendo.

Although noise gates are not normally needed for vocal processing, with just simple Threshold, Attack and Release controls (no depth, frequency consciousness or sidechaining), I didn't consider this a fully professional section but it did fine for suppressing headphone leakage. The same goes for the Harmonic Enhancer and Delay sections. Harmonic Enhancement is a brighten effect that works in moderation on extremely dull sources. The Delay section only goes to 50ms, has no feedback or LP filter controls and limits you to a simple mono doubling effect.

FINAL MASTER

Final Master is a stereo 3-band compressor/limiter with adjustable frequency control, three soft clipping models and look-ahead technology. This three-band compressor/limiter has a two adjustable crossover points: one between the low and mid-band and the other between the high and mid-bands. Multiband compression works well to get a tight and compressed low end, yet retains a transparent midrange and high-end openness. This plug-in reminds me a little of the 3-band compressor in the TC Electronic Finalizer, although I'd use the Finalizer if I wanted a more brutal sound.

Final Master was perfect for an acoustic guitar and bass-only track recorded live to DAT. After transferring to Cubase SX 2 and without any way to remix, I was able to jump the level up and re-balance the two instruments for a more listenable final result. I soloed or bypassed to check any combination of the three bands for quality. I also liked the immediate change that the overall mix's sonic signature took when sliding the crossover points up and down. Each band has a complete set of compressor controls and gain-reduction meter. Once you are close to the sound that you want, click Link and move all similar controls together while keeping their relative positions intact. You can Unlink and change something in one of the bands and then go back to Link to proportionately change them.



Like Vocal Rack, Final Master's Auto mode adjusts all three bands' output level together relative to threshold. Look Ahead sets the delay of all three outputs together so that the detecting algorithm has time important for very fast attack time settings and running the plug-in on a slower computer. There are also three choices of soft-limit clip curves that suppress excessive peaks in the overall audio.

A GOOD COLLECTION

Great for the beginner to the seasoned audio pro, these plug-ins make for a good starting collection from Yamaha with their ease of use and great sound. I found Vocal Rack and Final Master to be good tools, although a bit pricey. On the other hand, Pitch Fix is as good, or better, than other pitch-change plug-ins that cost much more.

MSRPs: Pitch Fix, \$299; Vocal Rack, \$199; and Final Master, \$199.

Yamaha Corporation of America, 714/522-9011, www.yamaha.com/dmi.

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

WWW.BARRYRUDOLPH.COM



[Buy Pitch Fix](#)

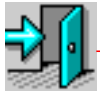


[Buy Vocal Rack](#)



[Buy Final Master](#)

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



[Back To Home Page](#)

[Back Up To The Top](#)

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