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JANUARY 2016

A ROUND MAN CANNOT BE EXPECTED
TO FIT INTO A SQUARE HOLE

MUSIC IN **BY KALMAN RUBINSON** THE ROUND

THIS ISSUE: A subwoofer and two USB accessories are thoroughly auditioned.

Advanced Add-Ons

In my last column, in the November 2015 issue, I talked about Marantz's AV8802A preamplifier-processor and two accessories: UpTone Audio's USB Regen, and a DIY battery supply for my DAC. This month's column is *all* about accessories, and for me that's unusual. Some items, like interconnects and speaker cables, are usually considered accessories because they're not fundamental components (eg, source, amplifier, speaker), even though they're essential to getting any sound at all.

As far as I'm concerned, an *accessory* is something without which your system would still work just fine. By definition, accessories are preferential, not essential: You buy them in the hope that they'll improve the sound of your system, or make it easier or more convenient to use.

Back in analog days, I could decide whether a different tonearm counterweight was a good idea because my undergraduate study of physics had covered the mechanics of mass, compliance, and frequency. I could also wrestle with the electromagnetics of transformers and motors. At the time, digital signal processes were still mostly theoretical.

Today, I'm losing ground. While I grasp more than a bit of how music is digitally encoded and decoded, I find it difficult to understand how different data-transmission methods (USB, HDMI, Ethernet, FireWire, etc.) affect the quality of the analog output signal and, ultimately, listening enjoyment.

Consider such products as the AudioQuest JitterBug and UpTone's USB Regen. Many people, whether skilled or naïve, biased or impartial, have attempted to test such gadgets, but I'm not aware of anyone who has demonstrated a link between variables in data transmission—beyond basic hardware specs—and what we can actually hear. Of the correlations we *do* see between hardware/software variables and the condition of a product's output signal—measurements that can reveal either improvements or deteriorations in signal quality—most changes are so slight as to be considered below the level of audibility, amounting no change at all. (Of course, in all such cases, one can question whether relevant parameters were being tested.)

On the other hand, some manufacturers offer products accompanied by a technical description and a statement of goals for that product—but without test-bench specs. "Try it!" they say, and offer return privileges. Hope and expectation play big roles in deciding whether to add an audio

accessory, choosing the particular one(s), and determining whether they're worth the cost and bother. Expectation bias is a friend to such vendors, regardless of whether the product makes an essential difference or is a placebo.

Is there hope? I think so. First, several websites are hosting ongoing, apparently candid, and often contentious public discussions of the testing and measuring of data-transmission accessories. When the smoke clears, this give-and-take can have led only to better understanding of these technologies. Limited by my technical competence, I am a fly on the wall, but it's fun to watch the sparks fly.

As for the "Try it!" approach, that works, too. Most of us have a closet stuffed with old accessories that didn't stand

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the test of time. I've bought many gadgets, hoping they would improve the sound of my system by at least one audible increment, but most I've tossed aside. Some made no difference from the get-go. Others offered an initial flush of excitement, but the effect faded over the ensuing months. Few accessories have lasted long in my system: As audio technology advances, the worthwhile improvements effected by today's accessories are sometimes incorporated into tomorrow's new primary components.

These days, I might try an accessory because of word-of-mouth, so long as it doesn't cost the sky. Despite my general skepticism of tweaks and accessories, I'm as much subject to expectation bias as the next guy. I'll just tell you what I hear; as for the rest, I'll wait for the dust to settle.

JL AUDIO FATHOM f113v2 POWERED SUBWOOFER

Are subwoofers accessories? I think so. They're important to home-theater fans, but many audiophiles loyal to two-channel stereo refuse to consider them, even when their preferred speakers are quite limited in bass power and extension. Perhaps bass isn't all that important to them, or perhaps they're daunted by the complexity of properly setting up a sub. I lived for years without a sub in my main system, in Manhattan. My Connecticut system included

subs because I sometimes use it to watch movies—but with my NYC rig including three Bowers & Wilkins 802 Diamonds and a pair of 804 Diamonds, I did not lack for bass.

Or so I thought until late 2006, when I reviewed the predecessor of JL Audio's Fathom f113v2, the Fathom f113¹ (which I'll now call the v1). The v1 didn't so much give me more bass as *better* bass. I was sort of pleased with Automatic Room Optimization (ARO), its one-band auto-equalizer

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software, which handily dealt with a 50Hz room mode. But, over time, I came to rely on outboard EQ in the form of DSPeaker's Anti-Mode 2.0 digital room equalizer or Dirac Live. Apparently, my room needed more help than any single-band filter can supply.

Enter the Fathom f113v2 (\$4500), with *Digital Automatic Room Optimization* (DARO)! Aside from its new EQ software, the f113v2 is almost identical to the v1, with some subtle changes in the I/O panel on the back and the controls across the top front. Under its hood, the v2 boasts 3000W RMS short term, compared to the v1's puny 2500W, and its single, front-firing, 13.5" driver has a modified suspension for greater linearity and lower distortion. In addition, the v1's circuitry has been reconfigured so that no audio signal is routed through the v2's control panel, and all small-signal circuits are contained in a cast-aluminum housing attached to the rigid rear-panel heatsink. Finally, because EQ is now accomplished by DARO, digital-signal processing (DSP) has supplanted many analog components, presumably leading to improved unit-to-unit matching and product reliability.

DARO differs from ARO in several ways. Instead of a single filter, it has 18 bands of cut-only correction, with automatic output-level realignment post-EQ. Each band is adjusted independently by the DSP. In addition, microphone gain and output levels are adjusted automatically, without user effort, which results in greater ease of use and, more important, more accurate and consistent results.

I placed the v2 in the same spot just vacated by the v1, measured its response, then ran DARO. Because ARO and DARO address only peaks, that position for the sub was chosen to minimize, as much as possible, troughs in the frequency response. (True nulls are bottomless pits, and are thus uncorrectable.) DARO was easier to operate



The JL Audio f113v2 front bears the controls and is normally covered by a sturdy grille. The rear panel (bottom) sports the connections.

than ARO, especially for anyone who's used the latter. You simply set the provided calibration microphone at the listening position, push a button, and get out of the way. Band-limited pink-noise pulses are pumped through sub and room for a couple of minutes. That's it!

The measured and audible results were much better than I could get with my v1, and all previously observed peaks were corrected. As before, the payoff was not more bass (although that was available on demand): The v2's improvement over the v1 was the complete disappearance, from my conscious awareness, of the subwoofer's existence. Switching from five full-range channels to five channels crossing over at 40Hz to the f113v2 produced greater clarity below 100Hz, as the main speakers were relieved of powering the bottom end (perhaps resulting in reduced Doppler distortion?), and the low bass was cleaner, due to the f113v2's more advantageous position in the room and more efficient EQ. A win-win.

There was more. JLA's Fathom subs can be daisy-chained, allowing DARO to handle as many as you can afford. If you have two f113v2s, the recom-

mended arrangement is to run DARO on the first and set up the second sub as a slave. The first v2 will EQ the two subs' combined output. In my situation, the second sub was a v1; I was advised by JL that "the gain structure for the slave paths is different between the

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V1 and V2. As such, run your V1 in Master mode with all signal processing defeated and adjust the Level control (in Variable gain mode) as needed to match the V2 master." This worked flawlessly, but with most recordings, switching from one to two JLA subs made no audible difference to me.

I do understand that those who play different music (eg, techno), and/or who play it much louder than I do, might appreciate the additional power. When I *could* detect differences, they were most apparent with recordings made in highly reverberant spaces in which the venue's modes are in the ultralow, nearly subsonic range. In stereo, it was the Cowboy Junkies' familiar *The Trinity Session* (CD, RCA 8568-2-R). In multichannel, try the Berlin Brass's disc of music by Gabrieli: *Berliner Dom: Music for Brass & Organ* (SACD/CD, Pentatone PTC 5186509), and that spectacular recording of Biber's *Missa Salisburgensis*. With these, I was embraced by the sense of place even before the music began, and remained engaged more deeply because of it.

The verdict is easy. JL Audio's Fathom f113v2 is everything good from the Fathom f113 and more. DARO is a huge and needed improvement, and the backward-compatibility with the v1 is appreciated. In 2006, I hadn't thought I needed a subwoofer—and certainly not two. Now, it's hard to imagine listening without at least one Fathom f113v2. This is one *accessory* that does realize its potential to improve my system. ■

¹ See my column in the November 2006 issue: www.stereophile.com/musicintheround/1106mitr/index.html.

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