

Review: Aurender A10 digital music server and DAC



by John Richardson

I come from a do-it-yourself type family. To the best of my knowledge, this handy trait started out with both of my grandfathers and got handed down from there. One was a country boy who liked to build stuff for his own use just for the fun of it. He used to build wooden boats for both work and pleasure, well, just because. His son, my father, took the do-it-yourself concept to a new height out of some ingrained sense of thrift. As I was growing up, that man could pinch a nickel so tight that Thomas Jefferson would be forever confined to Monticello. We kids learned to be self-sufficient and never bought something we could otherwise put together from stuff laying about the place. My maternal grandfather, on the other hand, was an engineer, and it was his constant goal to build a better mousetrap. If someone else had designed and built something, he could certainly improve upon it, or so he thought. I ended up benefitting from his labours: when I was really young, I swiped a home-built audio receiver from his workshop and used it to set up my very first hi-fi rig. As I recall, the thing had tubes in it, and it was cool to pop the top (which, of course, in true engineer fashion was never permanently attached) to stare at the tubes glowing in the dead of night. If Grandpa ever figured out I took the gear, he never said anything about it. He was probably just happy I showed some interest in something remotely technical.

This little introduction serves to hopefully explain my general attitude (at least up until now...) toward computer audio and music servers. I'd like to think I was somewhat early to the game when I first started cruising down this avenue around 12 or 13 years ago. There weren't a lot of commercial music servers around at the time, so home-brew was probably the best bet, starting with a computer and

building out from there. For me, that meant a Mac Mini hooked up to some kind of a pro DAC, using iTunes as a means of organizing and playing back my files. All I knew was that I wanted to be rid of my compact disc player so that I could march confidently into the digital future of hi-end audio.

Of course, as the years moved on, it became harder to do a home-brew music server, primarily because so many choices were suddenly available. Designers began engineering and selling consumer-level DACs that could be easily interfaced to a computer (think companies such as Wavelength and Benchmark). I don't want to even think about the available software platforms for playback and organization, or the decisions about how to best interface the computer and DAC, or even the choices in cabling that supposedly made such a difference. Fun? Yes! But also irritatingly mind-boggling, as every week seemed to bring forth some new technology that you just had to have.

After some time, I finally ended up with a home-brew server that I liked and could be satisfied with, provided it was updated and tweaked on a regular basis. I still use and enjoy it today, as it makes up the heart of my digital front-end. Happy as I am with my rig, I still wonder if I could do better, and at what cost? Or, might it finally be time to consider simplifying?

Introducing the Aurender A10

Alright, so this isn't the first "real" music server I've spent time with or reviewed, but it's most certainly the slickest. Let me explain: other servers I've used were really tweaked out computers with lots of internal memory that were carefully laid out internally to shield against RF grunge and carefully regulate the myriad power supplies that were required to run the whole operation. It was up to the user to provide and interface a DAC, which of course is fine for the typical tweaky audiophile. While well-appointed and relatively easy to use (some were even operated "headless" using something like a smartphone or iPad), they still looked only a generation or two removed from the home-brew option. And they tended to be expensive: one that I reviewed some time back was well over \$10,000 for what was essentially a very tweaked-out computer.



One box stop.

What Aurender – a young Korean company – has done here is to take the music server concept and combine it with a top-notch DAC and sell the thing as an integrated, one-box package. Home-brew it isn't. The \$5,500 USD Aurender A10 looks like a modern, sleek, and well-designed audio component. Of course, there will always be the inveterate tweekers and audio snobs out there (think Grandpa) who actually want to worry about optimizing every little thing themselves, and that's fine. That's part of the fun. I'm betting though, that there are also an awful lot of audio enthusiasts that want to enjoy the

benefits of a true music server/DAC combination who want the plug 'n' play option, and I can't say I blame them. Leave it to the pros, and you might just get a phenomenal interface, a butt-load of data storage, and a top-tier DAC all rolled up in one compact and attractive box. Feel free to nitpick and grouse if you must, but I'm at the point in life where I want to spend more time listening to new music and less time obsessing about gear. I'm reminded of the day a few weeks ago where I had my sailboat hauled for routine maintenance and painting, and I noticed a few small blisters in the fiberglass of the hull. I asked my buddy who works at the boatyard what he thought, and his advice was to quit worrying about the small stuff and get out on the water. Point taken.



Think of the A10 as three separate modules.

To best acquaint oneself with the Aurender A10, I like to think of the device as three separate modules: the user interface, the data storage/processing section, and finally, the DAC assembly. While the unit really isn't hard to get up and running, it's not quite as plug 'n' play as say a pair of speakers or an amp. I'll admit to feeling a bit intimidated at first by the A10, not because it's especially difficult to get my mind around, but only because it is different from what I'm used to. That's why I ended up feeling better about breaking the unit down into its separate modules and learning how each module is optimized to do what it does.

Let's start with the user interface.

The first step toward getting started with the A10 is to download Aurender's Conductor app onto your iPad: *iPhones need not apply*. Conductor is an intuitively laid-out and easy to use interface for moving music files to the A10, organizing them, and playing them. It also serves as a portal for accessing streaming music services such as Tidal and Qobuz. If you're used to navigating an iPad or iPhone, most of the associated actions will be intuitive. My first goal was to move at least some of my music files from an external hard drive over to the A10's internal storage drive. This process was quite easily accomplished and can be done using the "Smart Copy" option, which lets you move selected files and then house them in organized sub-folders by genre, etc. I wasn't so smart, and just dumped my whole library onto the hard drive, which in the end worked just fine. Any album art is automatically located and transferred as well.

Conductor also allows the user to access Tidal, a music streaming service which is the talk of the back-room audiophile parlors these days due to its ability to deliver and "unpack" streamed high-resolution files via the MQA algorithm (more about this later), which I found to be a true Godsend.

The Conductor app also allows for some basic control functions such as volume, fast forwarding through tracks, and setting up playlists, to name just a few. While some of these functions can also be accessed by way of an included remote or at the front panel of the A10 itself, I found it most convenient to just use Conductor as “home base.”

Moving on now to the hardware aspect of the A10, we have an elegant and sophisticated chassis that contains 4 TB of permanent magnetic-data storage, as well as another 120 GB of temporary storage in the form of a solid-state hard drive. The idea here is to cache music files to be played onto the solid state drive in order to cut down on jitter and noise associated with on-the-fly reading of a spinning magnetic drive; in fact, the main storage drive is “put to sleep” after the files are transferred, thus minimizing noise. According to Aurender’s literature, great pains have been taken to physically and electrically isolate the data storage from the highly RF-sensitive processor parts of the device. As someone who has studied the important design factors that make a music server sound good, it seems to me that Aurender’s designers are doing all the right things. Good power supply regulation and lots of careful noise reduction pay dividends when it comes to achieving good listening results.

Finally, the DAC unit itself is quite sophisticated, and it shares the chassis with the aforementioned data storage units. Utilized are dual AK4490 786 kHz/32-bit DAC chips that can handle pretty much any hi-rez file you can throw at them (2xDSD included). Based on the sound, I’d say that a great deal of attention was taken toward delivering clean, well-regulated power in tandem with a superbly rendered analog output stage. Implementation appears to be first class. Furthermore, the A10’s DAC is MQA certified, meaning that it can “unwrap” MQA files to their fullest extent.



LAN connection.



Three USB options.

A quick look at the rear panel of the A10 suggests a most basic layout, consisting of a pair of single-ended RCA analog outputs, a set of balanced XLR analog outputs, as well as an optical (Toslink) digital input if one were to choose to feed the DAC from an external digital source. Also present are three USB interfaces, which are particularly useful for transferring files from an external hard drive to the A10. Finally, we have a LAN connection so that a hard-wired link can be made to a digital router or NAS storage setup, as well as provide communication for real-time music streaming *à la* Tidal.

Setup and Operation

As suggested earlier, I was somewhat concerned that initial setup of the Aurender A10 might be a bit daunting. Such was actually not the case. Enclosed with the unit was an 18 page “Quick Start Guide,” which covers in sufficient detail pretty much everything a beginner would need to know to get things up and going. Topics include how to connect the A10 to a local network, how to load music content, how to prepare for music streaming, and finally, how to organize playback of either stored or streaming files. If further, more detailed information regarding setup is required, it can probably be found at Aurender’s website in a useful FAQ section. There’s also an ongoing blog/forum that can be quite helpful if the going gets truly rough.

My suggestion to the neophyte user is to follow the Quick Start Guide to the letter, especially if setting a device up on a network isn’t something you do every day. I found the instructions to be straightforward and understandable, especially when helped along by the frequent screen shots taken from the Conductor control app. By far the most time-consuming task was getting my music library transferred from an external hard drive onto the A10’s permanent internal storage drive. Other than that specific ordeal, pretty much everything else one would need to do can be done in minutes, especially if you already have an account with a music streaming service.

Allow me to pause here to say a bit about Tidal, as it became an integral part of my enjoyment and assessment of the A10. First off, I’m not a stranger to digital streaming audio, as I’ve enjoyed listening to streaming radio broadcasts for years. I also had a subscription to Rhapsody (now Napster) for a couple of years. It was good for exploring different artists, albums, or genres, but I didn’t end up using it all that much because it was lossy, or low resolution. By this, I mean less than compact disc quality, and often considerably so. Played back through my audiophile system, the music just didn’t sound that good. Of course, if your only music device is a phone with cheap earbuds, or maybe a simple bluetooth speaker, then lossy should be fine. I just couldn’t deal with it, so I let the subscription drop.

Enter Tidal

For 20 smackers a month, I can now enjoy a seemingly unlimited treasure trove of music of all genres by artists both known and unknown, all at CD or better resolution. And it gets better from there, as more and more files are becoming available from Tidal's Master Collection, which means that the files are digitally identical to the recording masters, with resolutions up to 24 bit/192 kHz. Streaming these hi-rez files is now possible due to the aforementioned MQA technology, where MQA stands for Master Quality Authenticated. As I understand it, MQA is an algorithm that allows really large music files that otherwise would take up huge amounts of bandwidth when streamed or downloaded to be compressed, or "folded" into much smaller files for transport and storage. When ready for decoding, these files are then "unfolded" back into their original hi-rez glory. In order to take full advantage the technology, a DAC that is MQA certified is required, which means that it can properly and fully apply the "unfolding" part of the process. Supposedly, you can still use an uncertified DAC, but you won't be able to take full advantage, as software only (such as the Tidal app) can only "unfold" to 96 kHz resolution. You'll need the right DAC to take it all the way, and fortunately, the Aurender A10 has such a processor.

That said, though the A10 has to be returned at the end of the review, Tidal is staying! For me, there's a crap-ton of music to explore, all at acceptably good resolution for audiophile enjoyment, and for the monthly cost of about one hi-rez album from HDTracks. I consider that proposition to be a pretty good value when it comes to musical access and enjoyment.



Sonic Impressions

So setup and operation don't seem too bad, but how well does the A10 deliver sonically?

Let's first have a look at my evaluation setup. Since the A10 has built-in volume control, it can serve as its own preamplifier, and it can thus be used to drive a power amp directly. For the sake of simplicity, this is how I set it up, specifically driving my Benchmark AHB2 amplifier by way of its balanced inputs (keeping noise to a minimum was a primary goal here). The Benchmark amp in turn drove a pair of floor-standing, full-range Zu Audio Dirty Weekend Omen II speakers I picked up a couple of months ago. As a quick aside, these Dirty Weekend Omens are a hell of a bargain. For the paltry \$950 USD plus shipping that I paid I got a great introduction to the world of Zu speakers in a super-affordable package that really delivers the goods. At any rate, I've found the Benchmark amp and Zu speakers to mate wonderfully, as that amp has enough grunt to really control the deep bass and move those full-range drivers, yet it is neutral enough to yield an unadulterated and easy-to-enjoy tonal balance. Of

course, I found this setup to be a great way to both evaluate and enjoy the Aurender A10 at the same time.

All right then, let's get down to business.

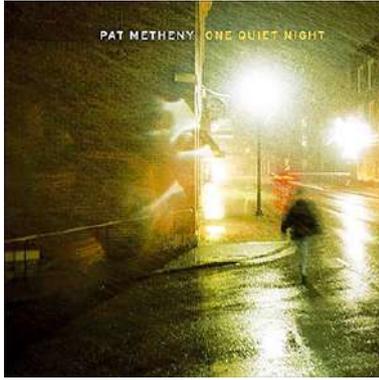
In a nutshell, I'd safely say that the A10 delivered a modern, exceptionally enjoyable musical experience. Keep in mind that my digital front end, while quite satisfying to me, is a bit out of date and probably not representative of the very cutting edge of performance now available. Therefore, I'm not exactly in a position to report on how the A10's musical playback quality might compare to today's state-of-the-art. What I can unequivocally state is that I could hear definite differences, and the balance most definitely is tipped in the favour of the Aurender.

If I had to pin down the A10's big sonic advantage, I'd have to say that it has to do with "flow." Somehow, my older digital setup sounded disjointed or hesitant in comparison. I suppose the term "flow" might be hard to define here, but it has to do with a correct sense of smoothness helped along by precise timing, as if the natural rhythmic and dynamic ebb and flow of the music were being fully experienced from the listening chair. More like really good analog, if you catch my drift. Perhaps these improvements come about due to either the advantages of optimizing DAC and storage under a single chassis, or to the general improvement of digital audio, or some combination of these two things. I'm guessing that I'm mostly hearing the results of the latter situation.



Davis: Tutu

Just for fun, I decided to find out if I could hear a difference between the A10 playing a regular 44.1 kHz file and the equivalent hi-rez cut from Tidal's Master Collection. I searched about and settled on Miles Davis' somewhat controversial 1986 album *Tutu*. Oddly, this was the only Miles Davis album I could find (out of quite a few available in regular resolution) from the Master Collection. It's an enjoyable album that features the great horn-master blowing over a bunch of dubbed-in electronica, in all its 1980s glory. As silly as that era's use of synthesized sound could be, the album does offer up some really cool spatial and tonal effects, not to mention Miles blowing away in top form. Both versions of the album were reproduced superbly by the Aurender server, but I could most definitely hear minor differences between the two files. Focusing in on the cut "Portia," which opens with some ethereal synth work leading into Miles' opening bars, I could easily ferret out more soundstage depth, airiness, and delicacy of tone in the 24/96 Master version. Regardless of version, however, I kept coming back to how approachable the sound was with this simple system I was using, spearheaded by the Aurender A10. My thoughts kept taking me back to that idea of a smooth and continuous sense of "flow" to the music that kept me going hour after hour with no fatigue.



A man and his guitar.

Another great bonus of the A10 when coupled with Tidal is that it has allowed me to explore albums from favorite artists that I had never before had the chance to hear. As such, I flung myself headlong into the more modern works of guitarist Pat Metheny, an artist who always seems to have something new and enjoyable up his creative sleeve. Two of his albums that I had never before experienced were *Upojenie* and *One Quiet Night* (both streamed via Tidal at 16/44.1 resolution). The former is a collaboration between Metheny and Polish vocalist Anna Maria Jopek while the latter is a solo album featuring Pat all by himself, locked in a room, playing an acoustic guitar. I found both albums to be beautifully recorded and quite well performed.

Focusing first on *Upojenie*, one is initially struck by Ms. Jopek singing only in her native language, but my does she sing beautifully. She has that airy, almost evanescent kind of voice that we audiophiles swoon over. Can you say sexy? Every cut on the album is at least as good, as it includes a number of Metheny's classics, as well as some folksy Polish tunes. One of my favorites is Anna Maria putting words to the hauntingly wistful Metheny tune "Tell Her You Saw Me." Man, does she reel me in like a fish on a hook with that one, and I don't have a clue as to what she's even saying! Via the Aurender A10, I could just close my eyes and picture myself there, Anna Maria singing only to me; the rest of you folks can leave now ... Timbre was spot on (again, a strength of this system), and dynamics had a wonderfully realistic touch. I won't comment too specifically on stereo imaging, as the Zu speakers, for all they do so well, sort of fall short in this regard. Ms. Jopek's voice, for example, wasn't quite as focused in the soundstage as it probably should have been and often seemed to take up a little too much space laterally between the speakers. I don't blame the A10 for this slight sin, as I think it's just part and parcel of what you get with the Omens, at least as I have them presently set up. One thing I can't complain about though would be the width and depth of the soundstage, which just seemed huge. You might give up a bit of spatial accuracy and precision with these inexpensive Zu speakers, but you gain back a lot of excitement and fun on the positive end of the bargain. Sometimes "bigger than life" isn't such a bad thing.

Switching over to Metheny's solo album *One Quiet Night* really allowed the A10 to stretch its wings and fly. I like listening to solo guitar because it really shows off the digital source's ability to dig down into the weeds to gather the minute details of attack, decay, and harmonic/tonal inflection associated with the almost laser-like focus of the microphones on the solo instrument and its human master. With well-recorded and up-close material such as this, a guitarist (obviously not me) could probably tell you what guitar he is playing, as well as exactly what strings he has on it. All I know is that via the Aurender A10, I almost feel like I'm present there in the room with Metheny, such are the details that jump out at me. I really don't think there's much of anything that's been captured on the recording that the A10 isn't conveying to me from where I sit. What amazes me is what a huge recorded sound, both dimensionally and dynamically, has been captured here, and the A10 seems to bring it out in all of its opulence. Especially pleasing for me is how the lower registers of the acoustic guitar are captured; I'm not sure I've ever heard one go this low before in a recording. The sound is just so woody and resonant, and the system signals that feeling oh so well. Thanks to that great sense of "flow" offered up by the A10, I'm definitely feeling the emotion Mr. Metheny meant to get across to his fans in this strikingly intimate recording.

As a final set of comparisons, I decided to stream the same albums using Tidal from my Mac Mini, which ultimately feeds my first generation Antelope Zodiac DAC via my Sound Devices USBPre2 interface serving as a usb to S/PDIF converter. Both the Zodiac and the USBPre2 employ custom linear power supplies built by Your Final System (YFS) to wring that last bit of resolution and performance out of them. My Zodiac DAC then fed signal to the same Benchmark amp and Zu speakers used to evaluate the Aurender server. My playback software was the latest version of Pure Music 3 from Channel D. My goal was to verify that my initial impressions of the superiority of the A10 over my house digital front end were indeed justified. I tried first playing tunes back using the Tidal interface alone, and found that the sound I was getting wasn't quite up to par with what the A10 offered. Next, I tried streaming through Pure Music (which can be done using that software's Playthrough Audio Driver (PAD) option), and indeed the sound smoothed up a bit. Unfortunately, I couldn't get the Master MQA files to play nice with Pure Music, so I was limited to playback of regular content. The 44.1 kHz files actually sounded quite nice via Tidal streamed through Pure Music, giving me perhaps some of the best sound my digital setup has offered to date. Even so, I couldn't quite capture that last little bit of magical "flow" that I described before that made listening so pleasurable via the Aurender A10. Oh, and lest I forget to tell you, I had the same sort of feelings about my personal music files stored on the Aurender's hard drive. Perhaps all of the trouble the designers went to in order to enable such quiet and well-regulated playback really did pay off. Home-brew be damned, there's just something about a well-designed single-box integrated unit like the A10 that just seems to press all the right buttons sonically for me.



Summing It All Up

If you have managed to wade through this review and actually reach this point, you'll know that I'm pleased as punch at both the performance and the user friendliness of the Aurender A10 music server/DAC combination. It's a great one-box option for those who don't want to mess around with the do-it-yourself modular option. As always, one of my main concerns is value. Thinking back on my dad, maybe the acorn really didn't fall far from the tree after all. The A10 costs \$5,500 USD, which is no small bit of change for a digital front end, even in the audiophile world. I decided, then, to do a few back-of-the-envelope calculations, specifically to see what my own digital front end would cost if I were to put it together today. Considering the costs of the DAC, interface, computer, external data storage, custom power supplies, and fancy cabling, I came to a figure of around \$7000, give or take. When I examine the situation in that light, the Aurender A10 seems like a pretty fair deal after all.

Highly Recommended!