# Equipment Reviews

## Aurender X100L Music Server



Created on Tuesday, 15 April 2014 00:00 Written by Jeff Fritz


When I heard that Aurender was releasing two new music servers at lower prices than their original S10 ($6990 USD), I was encouraged. I found the S10 -- the company's first commercial product, released in 2011 -- to be a remarkably good server. It was so good that I included it in my The World's Best Audio System 2012 -- a no-holds-barred spectacle designed to explore just how good reproduced sound could be. The S10 was one of two source components, the other being an Esoteric P-02 disc transport ($23,500). In 2013, Aurender upped the ante with their flagship W20 ($16,800), their best effort at creating the perfect music server, but at a price that only the most well-off audiophiles could even consider. I welcomed the announcement of less-expensive Aurenders.

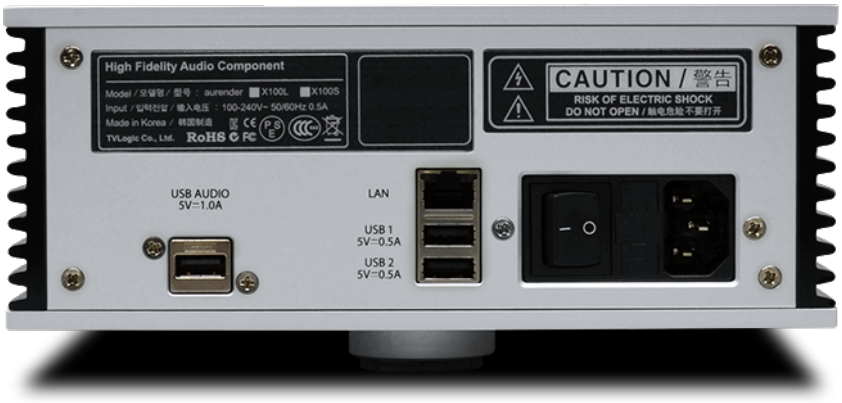

Then my excitement turned to concern. What would the company have to do to make a product at half the price of the S10? Would it have a cheaper case? Cheaper connectors? Less advanced software? What would be compromised, and would those compromises ultimately lead to a disappointing product? There was only one way to find out.

**X100L and X100S**

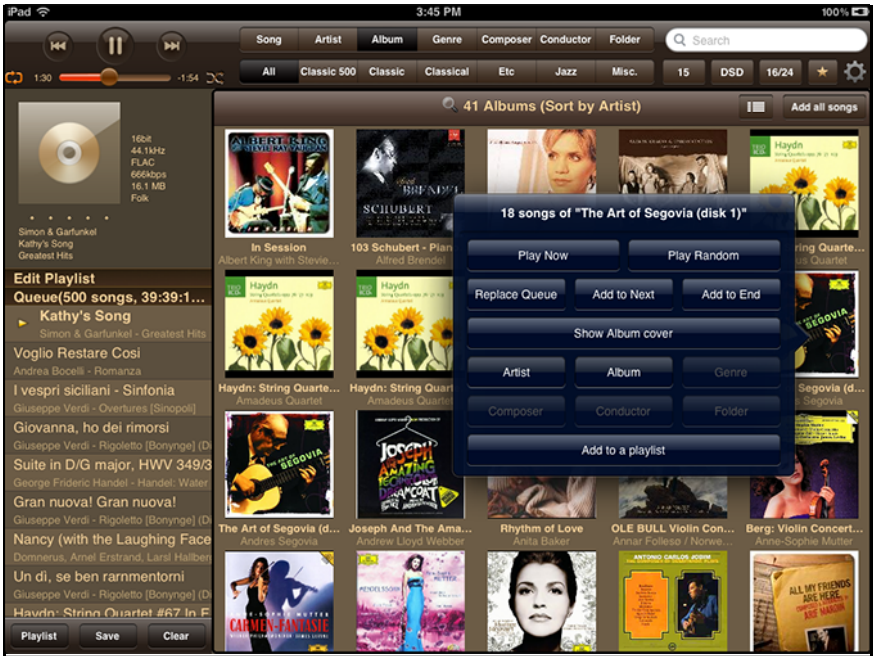
My concerns began to be allayed when I received the first details from Aurender's Charles Kim. The two new models were the X100L ($3490) and the X100S ($2980). The differences between them have mainly to do with the amount of internal hard-disk storage: the X100L (L for *Large*) has 2 x 3TB of storage, while the X100S (S for *Small*) has a 1TB hard drive. I decided to review the X100L. To accommodate its greater storage capacity, the X100L is the larger model, at 8.4"W x 3.25"H x 13.8"D (215mm x 83mm x 355mm); the X100S is only 10" deep (257mm). Both models feature a 120GB SSD, which they use to cache music files for what Aurender says is latency- and jitter-free playback. Each compact chassis contains a new switch-mode power supply.

When I unboxed the X100L, I was impressed -- and relieved. It's built *just like* the S10 -- and that model, when it was released, was the most elaborately built, commercially available music server I had seen. The X100L's aluminum case has a thick faceplate and heatsinks that run horizontally down the sides. The top, bottom, and rear panels are also thick slabs of aluminum, all bolted together with vault-like solidity. Centrally placed on the front panel is a large, crystal-clear display of active-matrix organic light-emitting diodes (AMOLEDs), and to the right of that are four buttons for skip forward and back, play/pause, and stop. To the display's left is the on/standby button -- and that's it for the front.

The main differences between the S10 and the X100L/S are in connectivity. Whereas the S10 has coaxial, optical, AES/EBU, and USB Audio Class 2.0 outputs, the X100s make do with a single, custom-designed USB Audio Class 2.0 port. According to Aurender, this output -- based on one developed for use in Aurender's flagship, the W20 -- uses "proprietary power circuitry to eliminate noise in the audio signal and is carefully shielded against RF interference." While I could see a single-output structure being a limitation in some systems, it sure wasn't in mine. I feed music to my DAC exclusively via USB, so any other outputs would go unused anyway. For a system such as mine, I'd rather keep the quality of the S10 and do away with superfluous connections than cut quality and keep all of those outputs. I think Aurender made the right trade-off here. There are also two USB data ports and a gigabit LAN 2 Ethernet port for connection to your network for transferring files, and for upgrades from Aurender. Also on the rear panel are an IEC power-cord inlet and the main power switch. Supported file formats include AIFF, ALAC, FLAC, WAV, M4A, APE, and DSD (DIFF/DSF).




Most users will no doubt control the X100L through the Aurender Conductor app for the iPad and iPad Mini. Although you can use the front-panel controls to navigate a playlist, almost all who buy music servers as fancy as the Aurenders are paying, at least partly, for the ability to easily scroll through their music collections from the comfort of an easy chair. For this review, Aurender supplied an iPad Mini (not included with purchase), and I spent a few hours getting used to how the Conductor app enabled me to access and explore my music files. I really liked the iPad Mini for this function; being not much bigger than most remote controls, it was just perfect -- a standard iPad would be too big to fit on my end table with all my other remotes. The app didn't take long to understand, and within half an hour I was using it fluidly. You can sort files by Song, Artist, Album, Genre, Composer, Conductor, or make custom folders. And being able to sort files by sample rate/bit depth, or by DSD, for example, will be a great boon to audiophiles. And unlike when using physical media, you can instantly change the sorting system you're using to suit your needs or whims. Of course, you can also create and save custom playlists, something almost everyone alive is familiar with these days. Basically, anyone who's used iTunes or any commercially available music-player software will be able to intuitively use Aurender Conductor in very little time.



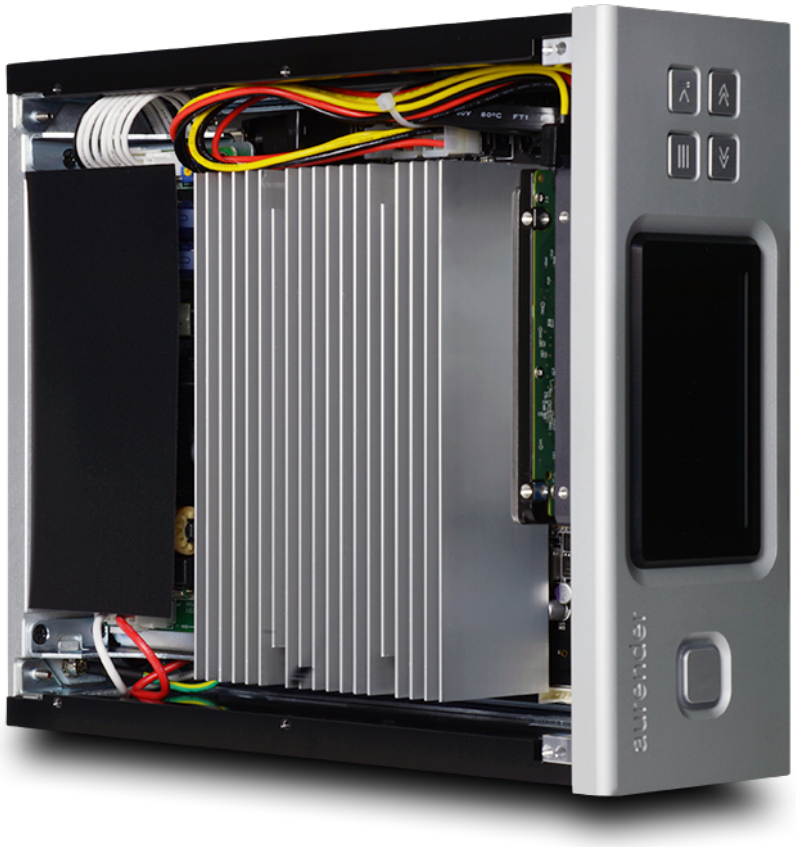

Setup was easy. To connect the X100L to my network, I plugged an Ethernet cable into its LAN input and accessed my home's wireless network via the iPad Mini, which allowed the Aurender Conductor app to communicate with the X100L. I connected the X100L to my Calyx Femto DAC via an AudioQuest Carbon USB cable, and away I went.

**Sound**

No matter how many times I sit down to listen to a new component, I continue to be amazed at how *much* difference a single component can make. Even so, with a music server -- which replaced, in this case, an aging Apple MacBook laptop -- I would not have predicted the magnitude of change I heard. After all, I know that my MacBook is passing along to my digital-to-analog converter a bit-perfect signal, and that when those bits reach the DAC, the signal is reclocked -- at which point, you'd think, any vestiges of any sonic signature of the preceding component would be stripped away. But despite the seeming airtightness of this logic, when I inserted the Aurender in place of the

MacBook, I instantly heard an improvement. Most aspects of the sound remained the same, and the tonal balance didn't change at all -- no increased bass, no more-prominent highs. Nor did the soundstage get bigger, or the imaging more precise. In many ways, the sound I now heard was just the *same* as before, and a good thing too -- for weeks, my system had already sounded ultra-dialed-in.

Still, the sound *was* better. I remembered having heard the same phenomenon a couple years before, when I first connected the Aurender S10. My first thought then, odd as it might seem, was that the sound was *calmer* -- as if the music were flowing through my cables and components with greater fluidity and ease. Admittedly, that's not a very concrete description of what I was hearing. I listened some more.

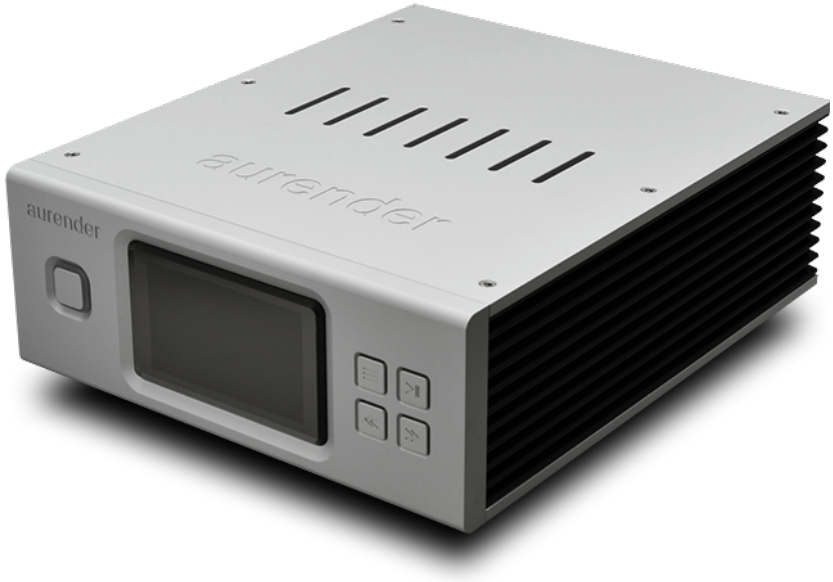



Over the weeks that I listened to the Aurender X100L, I came to realize the one major way in which it was improving on what I'd been hearing with the MacBook in the system: less noise. And that lowering of the noise floor was what made for the calmer, more fluid sound I was hearing. The result was that music emerged from a deeper silence. What was interesting to me, however, was that the lack of noise itself was not what I tended to focus on. Without that extra mist that filled the *silences* between the notes, I was able to more easily concentrate on the music itself.

At least, that was my experience with *some* music. For example, "Over the Rainbow," from Jane Monheit's *Come Dream with Me* (16-bit/44.1kHz FLAC, Emarcy), made me aware of just how quiet my system had become with the X100L in the mix. Monheit sings unaccompanied in the first 30 seconds of this track, and her voice stood out in bold relief against an ultra-silent backdrop. This made me extremely aware of the breaths that she takes at 8, 15, 20, and 24 seconds into the track. It wasn't that my MacBook had overly obscured these inhalations -- far from it -- but now they were simply easier to hear into. I could hear more microdetail, and found it of the musically relevant variety. I heard more and more of these sorts of subtleties the more I listened, particularly to specific types of music and at certain times of the day. When my house was superquiet -- in the early morning hours, before my kids awoke -- this more revealing sound was most welcome. It allowed me to play my system at very low volume levels even as I reveled more deeply in all the finer details contained in some of the finest recordings I own.

To further explore what I was hearing, I played one of my favorite tracks for assessing low-level detail: "Isn't She Lovely," from the hi-rez version of Livingston Taylor's *Ink* (24/96 FLAC, Chesky/HDtracks). In the first 40 seconds, Taylor whistles while strumming his guitar. I listened to this segment over and over, first focusing on the whistle, then on the guitar, then on the combination. The soothing sound flowed effortlessly from my system, allowing me to relax even as I micro-inspected what I was hearing. The backdrop was quiet and peaceful. I couldn't help but think that any mechanical vibrations in my system -- such as a slight hum from a transformer -- would have been hugely distracting.

But since my system is dead quiet, thanks largely to the excellent Ayre Acoustics components that I use as references, there was nothing of the sort, and it made for some enlightening listening sessions. The sound was as perfect as I could have wanted.




I then switched back to my MacBook, verified that the levels were matched, and again fired up "Isn't She Lovely." I had to get up out of my seat to switch sources (my DAC has only one USB input), and I hit Play on my Amarra software before I got back to my seat. As soon as I clicked the button -- even before my backside hit the chair -- I could hear a difference. There was a faint but unmistakable scrim of noise that rode right along with Taylor's whistling that hadn't been there with the X100L. *Wow, that sucks!* I thought. This was a tiny distraction, barely audible -- so why did it suck? Because I knew that now, whenever I listen to this track through my laptop, I'm going to hear this noise, and my mind will involuntarily focus on it -- and remind me that it can be removed by an Aurender X100L.

And so it went. The more I listened, the more it became obvious that the Aurender was improving the sound of my system in that same calming, quieting way. This helped me not only to hear the music's fine details better, but I could now relax into this more fluid, flowing sound, uninterrupted by the speed bumps placed on that road to musical nirvana. Granted, some music didn't benefit as much. Recordings that themselves possess a higher level of noise, as well as more raucous music (*e.g.*, most rock and rap), didn't reveal the same level of improvement. But when it came to solo acoustic guitar, a cappella voices, and even such instruments as cymbals, the improvement was consistently there.

**Conclusion**

The Aurender X100L is a welcome product, and I'm glad to say that all of my initial concerns about compromises of quality in a less-expensive model were unfounded. More important, my high hopes were met and then some. The Aurender Conductor app makes browsing music files a snap -- I saw several attractive ways I could use the app for my music library, were the Aurender to become a permanent part of my system. I think most people will be able to adapt to the Conductor quite easily.

Most important, the sound of my system improved. The caveat is that it improved only with certain types of music -- simpler arrangements of soloists, or smaller ensembles of only a few players, and more from the midrange on up. Of course, this describes much of the music in many audiophile collections. If you want to be able to hear deeper into a whistle, a whisper, a solo acoustic guitar, or a cymbal's shimmer, the Aurender X100L might be exactly the right product for you.

If you've wanted an Aurender S10, but were put off by its price and don't need its myriad connection options, then I see nothing that should hold you back from the X100L. It's a killer little product.

. . . *Jeff Fritz*
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**Associated Equipment**

- **Speakers** -- Magico Q7 and S1, Sonus Faber Venere 3.0
- **Amplifiers** -- Ayre Acoustics MX-R monoblocks
- **Preamplifier** -- Ayre Acoustics KX-R

- **Sources** -- Apple MacBook running OS X Snow Leopard, iTunes, Amarra 2.4.1, Audirvana; Calyx Audio Femto DAC
- **Cables** -- Nordost Valhalla interconnects, speaker cables, power cables; AudioQuest Meteor speaker cables, Niagara interconnects, Carbon USB cable; Siltech Explorer speaker cables, interconnects, power cords

**Aurender X100L Music Server**

**Price: $3490 USD.**

**Warranty: Two years parts and labor.**

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