



## Audioengine HD6 Powered Speakers

Posted by [Alex](#) on Mar 7, 2016 in [Gear](#) | [4 Comments](#)

### Introduction



Grounds for divorce.

Here's a major first-world problem I have: I want a traditional home stereo setup for the living room but I don't have the room nor budget for a pair of ginormous floor standing speakers. As of today, my wife and I use an [Amazon Echo](#) when we want to listen to music in the living room. No lie. I can't tell you how many times a week I hear the words, "Alexa, play **Carcass!**" Crazy, right? I mean don't get me wrong, the Echo is a fine device for listening to the weather report or the news, but a reference level stereo system it is not. By the way, my wife has never, ever requested **Carcass**. Ever. Think **John Mayer**.

Anyway, as I said, no floor standing speakers, so I'm thinking bookshelf sized. And even though I'll probably mount them on some snazzy looking speaker stands, for the time being they are going to have to be strategically placed on my mantle. So whatever I do get needs to be somewhat forgiving with respect to room acoustics. I also need to be able to stream music through them since my wife can easily replace me but not her Spotify playlists. Finally, I don't really have room for a dedicated amp and/or DAC right now, which means any pair of speakers I do decide on has to be either self powered or require a Raspberry Pi sized amp to juice them.

Does any of the above sound even remotely familiar to you? I'm going to go out on a limb and say that it does, or some flavor of it. If so, step into my office, and meet the HD6.

### Start Your Audioengine



I think at this point anyone who calls them self an audiophile knows of, or at least has heard of [Audioengine](#). But in case you have been living in a True Norwegian igloo for the past decade, Audioengine was founded in 2002 by a team of audio professionals. Their first prototype, a pair of studio monitors, was originally meant for the professional studio market; until the team came to a realization that with a little tweaking these new monitors could easily be adopted for general purpose use. Fast forward to 2005, where lead engineer and co-founder Dave Evans discovered that his new babies also sounded good playing lossy AAC files over the air via Apple's then relatively new Airport Express base station. He then had an epiphany: if he modified the enclosure slightly he could retro fit a built-in amplifier and basically create an entire stereo system in one tidy little package. Soon after, the A5 was born.

Suffice it to say, it was a smashing success. How could it not be? It was sleek, affordable, sounded better than most of its contemporaries, but most importantly, it embraced the digital revolution on day one. And by "embrace" I mean that the A5 and its follow-up, the A5+, were products that were geared for audiophiles who have no qualms whatsoever using their iPhone or other smart device as a source, which is why both products featured a USB charge port. And ever since, Audioengine has continued to make great sounding products that are affordable yet *modern*, offering features that give audiophiles what they really want but afraid to actually admit it in public. Trust me on this one.

But though Audioengine has always built great sounding products, they've never really built high-end ones. Well, perhaps that's not completely fair – their A2 computer speakers are certainly "high-end" but they still don't compare to a real, honest-to-goodness reference stereo system. Putting it another way, a lot of audiophiles may begin their journey with Audioengine but don't necessarily finish it with them. But in 2015, that all changed with the introduction of the HD6, Audioengine's new flagship bookshelf speaker system. And the price? \$749 buckaroos. Hold on a minute. That must be a typo. Let me double check their website. Stand by. Flagship. \$749. Flagship? \$749? Flagship! \$749! Hot damn.

## The Setup



When I finally received my review sample (thanks Brady!) my first reaction as I was taking them out of the most well-designed, well-packed shipping box ever conceived by man was, "Holy cow! These little beasties are heavy!" The right passive speaker weighs in at 12.5 lbs. while the active left side that has the amplifier and other circuitry in it clocks in at whopping 17.5 lbs.! Heavy metal indeed. And as I soon discovered, their impressive girth also has a lot to do with the enclosures themselves which are made of thick

medium dense fiber that comes in a walnut, cherry, and black satin finish. If you are on the fence of which one to buy, don't be. Get it in a wood finish. I assure these pictures do not do the HD6 justice. The walnut finish looks gorgeous.



Moving to the front of the speaker, the left one has a white power indicator light as well as the volume control knob. Both speakers come with a magnetically attached black mesh grill that can be easily detached for a more pro-studio look. I actually prefer the grill on as a protective measure for daily use and the “naked” look when I want to impress friends and family. Either way, you can't go wrong. Oh, and if manual knob rolling isn't your thing, no problem, Audioengine ships a really nice solid aluminum brushed remote at no extra cost.



Starting from the top of the left active speaker, you have your Bluetooth antenna and pair button, 3.5mm coax and optical inputs, dual RCA L/R inputs as well as a variable output, speaker binding posts to connect to the right speaker, power switch, voltage select, fuse, and last but not least, the power inlet. Speaking of power, the transformers used in the HD6 are gapless core toroidal, which is cooler and lighter than your typical transformer but without any loss of power. That also translates into better bass response and more efficient operation.

Now the absolute easiest way to get these puppies going is to connect the left speaker to the right with the included 13ft 16AWG speaker cable, select your country's appropriate voltage setting (the HD6s are US ready right out of the box), plugin the power cord and then hit the switch. The front white power indicator will then turn on and the speaker will go directly into pairing mode (the Bluetooth LED light on the back will start blinking). Switch back to your desktop or other Bluetooth capable device and you should be able to pair with the HD6. Note, the HD6 will remember up to six different devices so you only really have to pair once. Awesome. If you aren't so keen on wireless operation however, then use the provided mini-coax or RCA cables and hook the speaker's analog inputs directly to your favorite source. I was in up and headbanging in about two minutes flat.

## Driving The HD6



The HD6, at least spiritually, is really no different than any of the other speakers Audioengine offers in that it is another two-way design. But how Team A went about implementing it is quite another story entirely. The newly designed 5.5" woofers are made from a Kevlar woven glass aramid composite and are set in with rubber surrounds. By using Kevlar, which is a very strong material, each woofer is able to retain its shape despite having a much larger excursion pattern. That equates to tighter and deeper bass response (Audioengine claims the HD6 has no problem hitting the 50Hz mark with ease!). On the other side of things, the 1" tweeters are a ferrofluid-cooled silk dome type that uses neodymium magnets. The astute reader will note that this type of design is fairly common in a lot of audiophile grade reference designs, but Dave Evans and Co. have meticulously tuned each driver so that under heavy load they still exhibit a smooth response.

The built-in amplifier is a class A/B type capable of a whopping 150 watts of peak power, which equates to 50 watts RMS or 75 watts peak per channel, i.e. these puppies get pretty loud. THD+N is less than 0.05% across all power settings with a respectable >95dB SNR (A-weighted). Clearly, Audioengine went out of their way to ensure that the HD6 looks and at least on the surface, measures well.

On the digital side of things, Audioengine uses the AKM4396 chipset, an industry stalwart and capable of handling sampling rates up to 24-bit/192kHz. Why the 4396? Well first, the folks over at Audioengine have a lot of history with this particular chipset, as it is at the heart of their well-received D1 portable DAC. Next, the 4396 has built itself a solid reputation over the years for its clean sound and has been vetted by companies like Schiit and CEntrance. Now I'll be honest with you, the 4396 has never wowed me. However, I'll be the first one to admit that it's a solid chipset none the less and certainly a fine choice for the HD6.

## Racer aptX



Historically speaking, audiophiles don't pair well with Bluetooth (*Drum roll, please. -Dave*). And a lot of that has to do with the fact that Bluetooth as a technology was never really meant for high fidelity playback. So that begs the question, why would Audioengine include it then into their top of the line speaker system?

Let's step back for a moment and understand a little about Bluetooth and its relationship with streaming. Since its inception, Bluetooth has always been about devices wirelessly communicating with each other over short distances. And in order to do that, the Bluetooth spec defines a common set of protocols that every device must adhere to in order to earn that Bluetooth compliant logo. These protocols are further broken down into functional units called profiles. For a device to support streaming audio over Bluetooth, it must implement the [Advanced Audio Distribution Profile \(A2DP\)](#), which states that if a device wants to stream audio it must be able to handle the [Low Complexity Subband Coding \(SBC\) codec](#) and can optionally support other codecs such as MP2, MP3, AAC, and of course good 'ol ATRAC (*Viva la Minidisc! -Dave*).

Notice something? All the codecs are lossy, and that's by design since Bluetooth as a protocol is very bandwidth limited. Worse still is the fact that out of all the codecs listed above, only SBC is mandatory, which has a really low bitrate. So it's no wonder why the first time audiophiles heard **Moonsorrow** over Bluetooth it sounded like hot garbage.

However, in [their wonderful write up](#), Audioengine outlines why the company is a big believer in Bluetooth as a streaming technology and more importantly, why their implementation of it addresses a lot of the concerns I outlined above. First, in the HD6, Audioengine implementation supports AAC natively. So if you are buying all of your music off of iTunes, you're covered. For the rest of us sane people however, it also includes native [aptX](#) support, a codec which has gotten a lot of attention over the past few years as a third-party, higher fidelity alternative to SBC. That's good news too since most Android devices default to using aptX when it's available for streaming. I even verified that my Macbook supports aptX as per Darko's great article found [here](#). If you're curious whether or not your device supports it, check the [official list](#) to confirm. Finally, I experienced practically no drops outs, pops, poops, you name it while streaming over Bluetooth. The range of the HD6's receiver is just downright incredible, and you will be hard pressed to lose connectivity during normal operation. Bottom line: if you are on the fence about streaming directly to the HD6, don't be. I'm fairly confident that you won't walk away completely blue in the face. Or maybe you will?

## Pick A Room, Any Room



If you go on the Audioengine website right now, you'll note that not only do they claim the HD6 is their best sounding speaker to date, but also their most versatile. And though that probably has a lot more to do with the sheer number of ways you can connect the HD6 to your favorite source, I also got to believe it partially has to do with the fact that these speakers sound pretty much great any where you put them. So far I have deployed the HD6 in my living room, on a pair of pseudo-speaker stands, as well as even tried them as desktop speakers with no really issues to speak of.

And that brings me to another interesting point about these little beauties, their near field performance is excellent, and if your desk is indeed big enough, I can whole heartily recommend the HD6 as an all out desktop speaker replacement. I realize at \$749 that sounds ridiculous (*Or maybe I just roll that way! -Dave*), but I just want to instill in you that these speakers are very versatile. Obviously, my favorite setup was in the living room since that is their natural habitat (read: my wife really likes them so any attempt I made to hide them from her for this review was met with heavy resistance). For the most part though, these "walnut wonders" were able to image properly without too much fussing. There were of course a few times where it was obvious my placement choices were so bad that even the HD6 revolted. But the bottom line is that they aren't very directional, and I was easily able to get them to sound good to great in almost every room I tried them in.



## Listening Notes © Metal-Fi

Short story: the HD6 did not disappoint.

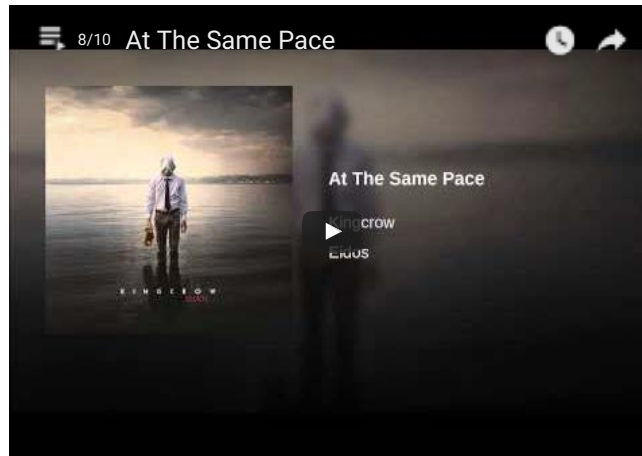
Long story: When I evaluate any kind of serious stereo setup, I'm not looking for just clinical accuracy. Save that for the studio. What I want from a stereo is a setup that is involving and actively engages with its audience. And by 'engage,' I mean a system where when I hear music playing through it, I immediately want to sit down and truly absorb the sound waves hitting me. Oh, and by "sit down" I mean air guitar – lots and lots of air guitar. Anyway, here are some of my listening notes.



I've been on a massive **Darkthrone** kick of late, literally listening to their entire back catalog starting from their 1992 classic, *A Blaze in the Northern Sky*, on up (I'll get to *Soulside Journey* eventually). Obviously, their early records aren't exactly stellar examples of high fidelity, but no matter. They will always hold a special place in my black heart. And to this day, *Blaze* is still an absolute bona fide classic, and to my ears, still holds up against all the wannabees and copy cats that have come after it. The tag team of Nocturno and Fenriz really broke new ground when they unleashed this beast on the world, and metal has never been the same ever since. This is True Norwegian Black Metal at its finest.

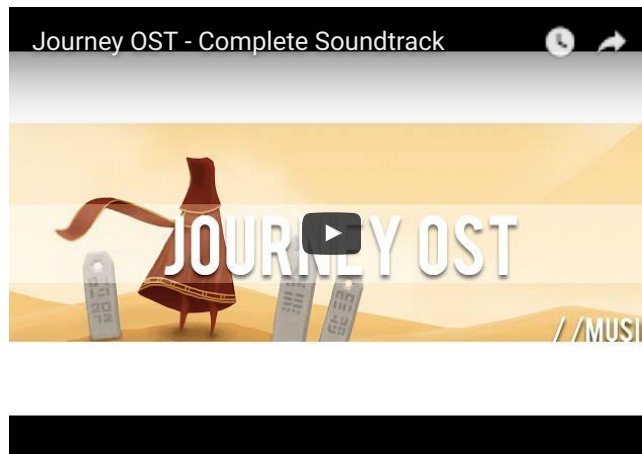
How did the HD6 do? Really well, almost surprisingly so. The first aspect of the HD6 that was immediately apparent is that as I mentioned above, they image well. The musical picture they present to your ears and brain is quite coherent, giving you a true sense of the album's mix (or in **Darkthrone's** case lack thereof). Transients were also excellent too out of the box, since I found the overall experience to be highly energetic – Fenriz really sounds like he banging away smack dab in the center of my living room. Horns up!

With respect to 20-20, bass was always present, sounded deep, but not as tight as it could be, which comes to me as no surprise given the size of these speakers. I did try to weigh them down a bit with some heavy hardcover books which made a slight improvement, both in the bass and soundstage departments. This came to me as no shock since given their bookshelf size, they can only do so much. The highlight of the show by far was the mids, which probably has some emphasis in the mid-bass region that gives them a very warm sound, almost tube like. Put simply, Nocturno's buzzsaw was literally dripping off the HD6, and I was loving every minute of it.



The only reason why this record was not on my top ten list last year was because it was on Dave's. But far and wide, this maybe the album I listened to the most in 2016. **Kingcrow's** *Eidos* is nothing short of a prog metal masterpiece, both musically and sound wise. Clocking in at a healthy DR8, *Eidos* sounds glorious on every setup I've thrown at it. So as you can imagine, I was more than a little excited to have the HD6 tackle it. Like with **Darkthrone**, **Kingcrow** sounded fantastic through the HD6, with the speakers again presented a very coherent soundstage.

One aspect of the HD6 I found surprising is that they sounded very good at low volumes, eeking out just enough sonic nuisance to make my ears continue to perk up from time to time. If you're listening to the above track now, then that acoustic guitar intro that just passed you by sounded dynamite at any volume. Moreover, this track also highlighted the HD6's wonderful lush midrange, which combined with what I suspect is a slightly recessed frequency response, making them sound larger than life. Warning: if you are looking for a flat FR curve and/or clinical accuracy, the HD6 is definitely not for you. This is a stereo system meant for folks who want to sit down and enjoy their music, not analyze it.



Remember I said I had to share this review with my wife? Well, that meant some form of sonic compromise. So I decided to pick something for her as a way to prove my worth as a husband (*For now at least. -Dave*). If you ever find yourself in this same exact boat then may I recommend [Austin Wintory's incredible soundtrack](#) to the game *Journey*. It is in my humble opinion a sure fire crowdpleaser. For this test I decided to hook the iDSD's line-level output to the HD6 directly and use it as a source instead of the built-in AKM. The result? Sublime. Again, the 4396 is a fine chipset, but the iDSD's innovative bit fondling is a lot better, and the HD6 rewarded me with a much richer, fuller sound. Tina Guo's cello was just jaw-dropping beautiful. Same goes for Amy Tatum's flute, which had a new level of clarity through the iDSD. What all of this tells me is that there is room for growth here which is exactly what you want out of a pair of reference level speakers.

## The Finish Line





The HD6 is a fantastic product. Now obviously, if you already have a primo dedicated amp and DAC just collecting dust and itching to juice a pair of speakers, the HD6 is not your only option. Sure, there are plenty of passive bookshelf speakers on the market today that will also offer great sound at this price point. No doubt about it. However, the HD6 is not just a pair of speakers, but an entire stereo system that both looks and sounds high-end, all for an extremely sensible asking price – a rarity in the audiophile world I assure you. So whether this is your first stereo system or you're just looking to upgrade your existing setup, you absolutely need to put the HD6 on your short list. They may very well be the first Audioengine product where you can begin and end your audiophile journey happily. And that my friends is a beautiful thing.