# THE FLOW BY AURENDER

marcusd ⊙ January 31, 2015 ▥ $1000+, DAC's, Gear Reviews, Portable Amps

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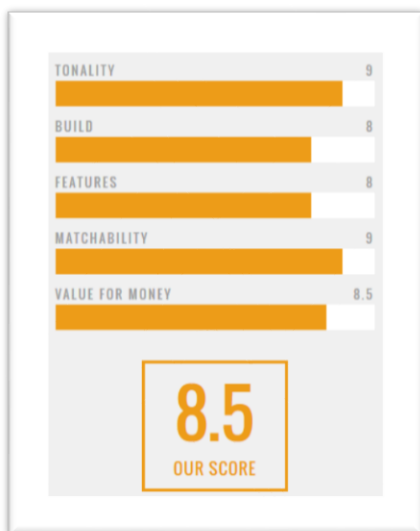
Recently there has been a bit of a drive to make the portable amplification and decoding device relevant again in the face of the all conquering DAP revolution headed by the likes of Astell & Kern, FiiO and Ibasso to name but a few. Chord and their mighty Hugo was one such variant that claimed to go that extra mile your high end DAP and make it sound truly special as well as play a central role in your desktop system that was as good if not better than purpose built desktop units. Aurender from Korea, better known for their snazzy music servers and component systems have opened up a 3rd channel now focusing on what they call "Personal Entertainment". The first such product from this new channel is a transportable convergence device much like the Sound Blaster E5 from Creative but on a whole other "audiophile" level and priced at $1295. This is no mere dip in the ocean for Aurender; this is feet and all given the pitch and price. The question is does this make the right ripples or is it a $1k belly flop?

**The Concept and the connections**
The concept and purpose of the Flow is to bring together all your audiophile amplification and decoding needs under one well constructed unit and with that the Flow is packing technology and accessories that allow you to connect it to a very broad range of audio sources as well as itself becoming a source component (DAC) and feeding another independent amplification to a very high level, DSD128 native in actual fact.

Where it might differ though from say the more budget conscious E5 from Creative and to some extent the high end Hugo is the majority of this convergence, though managed on multiple levels software wise, physically is routed though just three (3) input/output ports; a USB 3.0/2.0 port, an optical or spdif input stage and the headphone jack which operates also as an analog line out jack. What Aurender have instead decided to do is provide you with a veritable feast of cable options through which you can setup a wide variety of system configurations simply by changing the cable. These cable options include :

1. A long white USB cable 3.0 (for pc/laptop/mac/charging)
2. A nice well constructed short optical cable (My AK120 and Meridian 506 CDP thanks you)
3. A short (black) OTG micro USB to regular USB B cable (Android OTG host)
4. a short (white) microUSB to Micro USB cable (Android OTG e.g. mobile phones)
5. Analog quarter to dual RCA output (line out to amps with RCA input)
6. Spare gold plated quarter jack (headphone and earphones using 3.5mm)
7. 5V 2A USB AC plug (in White) for speedy charging



Oddly enough it does not come with a lightning cable for iOS devices which would have completed this cable party in a box extravaganza. In fact Aurender have taken a rather old school (and dare I say cheaper licensing route) with the Flow's iOS connectivity by simply instructing you to buy the good old USB Camera kit to properly connect the Flow to an iOS device such as an iPad or an iPhone. I flirted with buying that once until the likes of Cypher Labs came along and said no need, we bought the license and here is a small convenient cable. So this will not be the first time I allude to the total cost of ownership but if you are an Apple fan, as always be prepared to pay that little bit extra to set up the Flow with your iGadget.

**1TB mSATa**

The Flow is also created with an added unique selling point of being able to pack in an mSATA drive up to 1TB in memory size as a functional reservoir for storing your reference tracks and music in general and acts as a secondary hard drive when plugged into your laptop or PC of choice. Rather handily Aurender have included a high quality Vessel screwdriver for allowing you to conduct your minimal DIY requirements to open up the base of the Flow and insert the mSATA much like you would on the Hifiman HM-901 by simply slotting it in and then closing it all up. You will be required though to format before you begin loading it with music of your choice. It is a memory driver after all so you can take with you anything really on the drive and access it later on your laptop or desktop PC or Mac should you need to.

I can see benefits of this in terms of always being able to bring your favorite tracks around with you regardless of the laptop or PC/MAC you plug it into it. It is also less bulky than carrying around a spare USB portable drive though these days a 2TB drive is quite small in form factor but ahhh those darn cables connecting everything in the cheap solution. However I can also see drawbacks given the total cost of ownership of a Flow. Including a 1TB mSATA drive pushes it up by almost another $400 making even the hardened spender pause for a few moments on whether it should be included or not. The fact that Aurender shipped the Flow out without any mSATA included makes me feel Aurender already considered this as a possible barrier to a successful market entry given the added price and sensibly left this as something the end user could either buy into or not depending on their budget.

Scanning the local flea markets in PC and storage accessories and the cheapest I could find was a 128GB for around $50 used. Not bad at all and puts the price closer to microSD prices but then again it does make you wonder why not add a MicroSD card slot or two like FiiO and AK and carry around 128Gb for whole lot less? 1TB does sound imperious but at $400 it could be a case of the "Emperor's New Clothes" for many.

**'Flowing'**

That scarcity of inputs and outputs, as well as the mSATA storage space, makes the Flow a rather uniquely designed portable device. Portable is probably a slightly stretched term in relation to other devices such as say the Theorem 720 or even the budget Creative E5. It does indeed have a Li-ion battery but rated at a somewhat as only acceptable in portable terms at 4450Mah which is half the capacity of the smaller Theorem 720 which sports a gargantuan 8700mAH battery. True enough the Theorem 720 does sell on the ability to adequately charge your mobile phone or mobile device but it is still rated at 18 hours playback time compared to the rather shorter rated 7-9 hours (possibly lower depending on usage) of the Flow. Long periods of portable usage on long flights, long journeys or even just a day's solid listening without going anywhere will come up a bit short unless you can plug it into a PC or its AC plug at some point in the journey or the day.

Secondly the weight, size and the rather offbeat design of the Flow do not make it the most stackable or pocketable of devices. I personally love the design, it's unique and stands out amongst the crowd but it is really form over function so this emotive applause from me may not be shared by others. The washing machine meme has indeed been used more than once by fellow local forum members and encouragingly the members have not lost their unique sense of humor by backing it up with a washing powder accessory fake ad in our FB Group. Love it as I do it is rather hard to escape that image once someone mentions it.

**How much db?**

Central to that meme is the rather fetching central display console and integrated volume dial which Aurender terms as "Velocity Sensitive Volume & Playback Control". Sorry but I love this even if the execution is not quite up to the promise I still think of it as some sort of spare bit from the Enterprise flight control system. My hand rests so easily on this. If you remember [The Island from ALO Audio](#) and how I really like the ability to work the volume without taking my eye what else I was doing then this is the same sort of concept from Aurender for the Flow.

Except on the Flow the volume works on a digital db scale rather than an analog pot and starts at -110db and works itself all the way up to 0db with a default start at -90db. It does not retain the previous volume when you power down in the memory nor can you select a default starting volume. The sweet spot for me using 32ohm or thereabouts IEM's seem to be around -50db. To be frank I found the starting point of -110db impossibly low for most things I had with detectable audio indeed starting at -90db but nothing I could appreciate or monitor until around -55db or -50db. That is a heck of a lot of -db at the really low end unless you like your music dead quiet to almost nothing. After around -35db things get a bit too loud for comfort. That is rather a small sound level sweet spot for those using medium efficiency IEM's and customs like myself. There is of course a bit more give for headphones but powering the more demanding Alpha Primes the sweet spot didn't' really take hold until about -30db and got decent volume levels at -20db. yes there is power, good power but I got the feeling half the pot was a bit wasted in just getting there.

The whole velocity sensitive system mechanics though are quite smooth moving up faster as your hand moves the dial around faster. Mind you on a analog pot that is just physics and your finger dexterity combined but for a digital pot it is a nice touch and the Flow is setup to be very accurate and linear in the pot control which is very pleasing also.

**The Buttons & Menu**

The Flow's button arrangement is to the right hand side and they consist of a bracket of 3 playback control buttons(play,/pause, back and forward), a menu access/selector button and a power button. They are built flush into the side panel of the Flow which does a good job of minimizing any disruption to the aesthetic. They are also pretty tactile in their response and the raised bevels give a nice indication of which button to touch or press without looking down or double checking.

There must be a bit of a blooper either in the driver, firmware or the button physical config though as forward = back and back = forward when controlling via the DAC function connected to my PC. It is not a huge issue and one which I got quite used to but it did guive me pause for thought. Aurender explained this to me by saying that in actual fact they viewed the control as relative to the headphone jack facing the listener and therefore a more natural flow and not an error.



The Menu and control settings of the Aurender Flow are indeed controlled by the physical buttons with the display GUI in the middle of the volume dial panel. The Flow menu system controls both the type of connection you want to use and the default you want it to revert to upon boot up. For example, USB or optical can all be adjusted via the menu button using the forward and back buttons for default selection and source management as well as the mSATA management. You can also check your battery percentage levels, the USB host mode itself, whether to charge during playback or not, the display brightness and the firmware number. There is a further menu called the Advanced Menu and can be accessed by pressing the menu button and the hold button (long-press). This menu affects those mainly working form hi-res tracks including filters for PCM and cut off frequency points for noise shaping. You have three options for PCM; 0 for a fast roll off, 1 for a minimum phase (ringing in signal), and a slow roll off for a slightly attenuated sound. The DSD cut off is selectable at:

- dsd0: BW=47.7 kHz in DSD
- dsd1 : BW=50 kHz in DSD
- dsd2 : BW=60 kHz in DSD
- dsd3 : BW=70 kHz in DSD

The final option is the VAR option which is not really affected by headphone use since it covers the output jack and selecting line out or headphone out. It can detect a headphone automatically and you will not be able to change anything which is a handy safety feature but if connecting to amps you can change the voltage output from 2V to 5V or back again depending on how much voltage you want to output to the amp of choice.

**The Display**

The Flow display, small as it is, covers just about every option I could need for source information and what option I am selecting and it is one of the better displays I have seen recently.
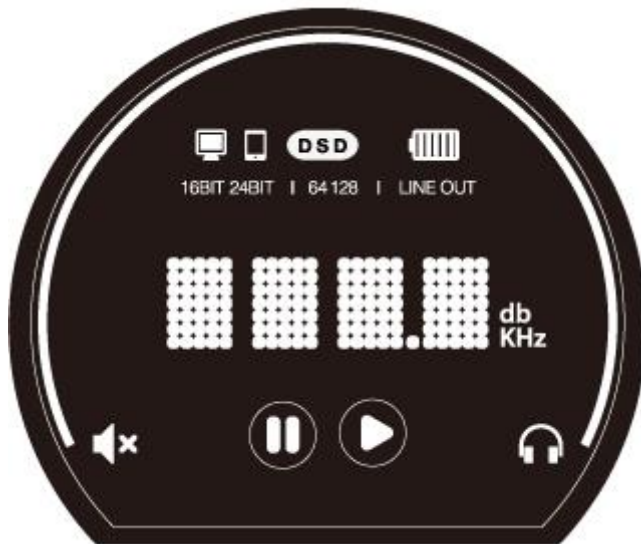


The Flow is built to cover a very wide range of resolutions using a Sabre ESS9018K2M DAC (32-bit/384kHz with DSD64/128 capability). Lossy MP3 right up to DSD128 is all covered so it is very handy indeed to be able to see from the display what my format is and resolution of that track that is playing. Outside of that it can tell me what my modality of connection is such as DAC, Android, optical or iOS. It will also display my current playback mode (play or pause) as well as whether I have a set of headphones plugged in or its in line out mode.

The battery icon will also blink when in charge mode as well as using menu to see actual percentage. Its top notch and well thought out by Aurender and the quality of the LCD itself is excellent with a very wide viewing angle. Even as I slouch in my chair, and I do that a lot, being almost parallel to the display I can still read it with minimal ease.

**Tonality**

The Aurender Flow's ability to scale while retaining detail, body and control is simply wonderful. Here is a convergence device, amp and DAC that not only stays firmly within the boundaries of having a very musical after taste but lacks any perceived or overriding coloration that sacrifices detail and clarity. It is by no means a cold tonality, it is a precise presentation but it has a hint of warmth and smoothness right across the range that keeps everything ticking along without a hitch. It is a tremendously difficult challenge to offer up this level of clarity without sounding overly dry or monitor like or simply being a bit boring. That is not the case with the Aurender Flow.

**Treble**

I have a tendency to be distracted heavily by peakiness or tizzy treble responses on cans or any sort of amplification or decoding flavors. Even if the rest of the reproduction is either exciting or tonally correct that overworked cymbal or sibilant vocal performance is going to kill it for me. The Flow displays not of that treble peakiness and instead drives smoothly as far north as you can imagine without a single duff

or sizzling note. It is very clear indeed but more importantly there is space and separation for the top end to sparkle and remain very much a coherent part of the overall presentation. The Flow is not a treble dominant device but the treble is present and very much a performer and gives that extra added dimension with headphones or IEM's that really need that type of performance to shine.

**Scaling on the Treble**

Remember I said scale also? Yes the Flow can scale. The treble on the VE6 Xcontrol custom monitor was detailed, articulate and perfectly balanced without a hint of harshness. Sensitivity was handled pretty well by the Flow with a very noise free and black background. Swapping over to the 300ohm HD800 brought a surprisingly smooth and extended treble performance and oddly the peakiness sometimes prevalent on other sources dissipated slightly with the Flow. The jump in volume demands was noticeable from -50db to -15db to get the HD800 singing but it was again just on the right side of smooth and musical. It is an awful meme to use but it really did "flow' (there I said it, it was on the tip of my fingers for about 30 minutes now). Queen's "A Kind of Magic" (SCAD/DSD64) sounded full and engaging without being colored, that slight peak from the Senn was still there but minimal and Freddie's vocals where sibilant free right out of the jack. The Alpha Primes were a little bit harder to drive at -20db but still sounded confident and full. Though I wouldn't put at EF6 levels of power the Primes in no way sounded shrill or lacking for treble performance. Something I know Dan worked a lot to perfect and improve upon over the Dogs.

**Mids**

Aurender have been quite restrained also in the midrange tuning keeping it relatively neutral but ensuring it remains uncongested and clean much like the treble performance. That is a dual edged sword because while it its accurate and remarkably realistic it tends to be more standoff in its presentation than intimate or euphoric to my ears. Perhaps it is more of a question of preference but I like my vocals to be a bit thicker and richer with plenty of detail and emotion. Yes the Flow is wonderfully smooth and there is not a hair out of place in the mids, vocals are blissfully sibilant free but it just lacks a little bit of character to handle raw or hard hitting vocals with conviction.

It really is a question of matching for me. Vocals such as the operatic female vocal and string interplay on Saint Preux's "Concerto Pour Une Voix & Le Piano Sous La Mer" sounds so deliciously clean and insanely accurate. Katherine Jenkins 2008's "Panis Angelicus" is both absorbing and controlled with excellent separation not once getting lost behind the plethora of supporting choir vocals in the background. Quite the match really especially with sound stage kings such as the UM Merlins, the HD800 and the VE6 Xcontrol custom monitors. However Adema's 2005 'Shoot The Arrows" sounded a bit lacking in body, aggression and character. This is a grungy raw male vocal that needs to soar and drip with angst and I didn't get the feeling the Flow wanted to go in that direction. Perhaps I like my rock vocal presence a bit more forward with more body, perhaps dare I say it a bit more colored?

**Bass**

The Flow's bass is detailed, smooth and fast without ever sounding too lean or shallow. It can extend with the right matchup but never really humps or blooms on its way down. It is tuned to behave but with an ever so slight midrange elevation just to keep things musical and weighted rather than analytical and sterile. I actually found the bass to possess a slightly warm edge to it which keeps lower frequencies smooth and engaging. Using the Flow the bass on the Primes, the HD800 and the VE6x customs felt really coherent and detailed without ever sounding over emphasized or lacking in dynamics.

**Matchability**

The Flow is just about the "matchiest" DAC/AMP I have reviewed to date for head gear. Not only does it scale well from sensitive earphones to 600ohm cans without missing a beat and has enough power for demanding planars such as the Alpha Prime but it also possesses a very addictive tonality that is both clean and detailed as well as smooth and musical. That is a tough thing to achieve indeed given how other combinations often display a fatal characteristic somewhere in such a broad range of headphones or earphones.

**The Smooth K501**

A wonderful example of the Flow's ability is my old warhorse the AKG K501 which is a 94db efficiency rates 120ohm can. On paper it is on par with say the new HE400i but power wise I always need a bit more, maybe a lot more for it to really shine. A slightly underpowered or poorly matched K501 is shallow and anemic with a complete lack of punch. The mid section of the K501 is where it shines but without that punch its a frustrating headphone. Delightfully the K501 sounds full with solid extension and depth and match extremely well tonally with the Flow. It is rare I found a match as good as outside of desktop systems. Pink Floyd's 'Talkin Hawkin' from their new Endless River on DSD128 is a track that really needs a huge sound stage to shine and on the K501/Flow combo it gets all the room it needs yet at the same time individual instruments such as the Floyd's signature guitar solos sound full, accurate and very present.

David Elias very kindly allowed me to review his new "Acoustic Trio DVD Sessions" album a while back and this is a real wow moment with the K501. The detail and clarity on "Vision of Her' is excellent. There is not a hint of coldness in the presentation with excellent depth and a midrange that plays to the strength of the Flow. The flow offers a really delicate but pleasurable treatment of David's sometimes soft yet

emotionally driven 'Simon & Garfunkel' like vocal. Whilst the K501 hits its stride around -15db on the Flow it never sounds like it is about to max out and it was rare I needed to go further than about -10db.

**Taming the K550**

The more accessible and modern K550 had no issues around -30db and whilst it sounded a bit more clinical than the more natural sounding K501 its inherent tendency to sound tizzy and peaky at 5-7k was felt less prominent using the Flow matchup. No issues on bass extension and imaging also with the K550 sounding full, agile and pleasingly dynamic without the usual K550 abundance of hot treble interfering.

**Better than expected with the IE800**

The Sennheiser IE800 is another one that I have a love hate relationship with. Many times I am equally enthralled and frustrated with its sometimes uneven treble that can at times sound brittle and tizzy with some matches. The Creative E5 and IE800 was just such a match that didn't gel at all for me in treble performance. The Flow on the other hand kept the excellent and deep bass that the IE800 is known for, laid down a noiseless black background and smoothed out that treble range almost perfectly. That sibilant nature I sometimes found in the upper midrange was also very well behaved, more so than I expected. Buika's husky vocals on "La Falsa Monedo" were tight and sibilant free with the IE800/Flow match. This is a vocal range that very prone to dropping an "s" or two when poorly matched and this pairing didn't drop the ball once.

I am still not a fan of the Flow with heavier rock or emotionally driven rock vocals and the IE800's more neutral midrange vocal presence can feel a bit lost as a result. Gavin Rossdale's vocal performance on "Comedown" from 1994's *Sixteen Stone* just felt a bit too distant and lacking in grit to really convince with the IE800 and the Flow. Chris Cornell's soaring vocals on "You Know My Name" are pitch perfect and clear but with the IE800/Flow it lacks a bit of soul and character. Again this is preference in some ways but the Flow for me it not a complete 'rock out' source for hard hitting vocal performances.

**The noise free UE900**

Again a noise free experience matched with the UE900. I have yet to find a sensitive IEM in my collection that did have any noise with the Flow thankfully. The UE900, a more mature offering in my mind over the older TF10, surprisingly needs a lot more oomph on the Flow than other earphones with a sweet spot more in the headphone range at around -33db but the smoothness and clarity where off the chart for this pairing. It has been a while since I came across a source that drives the UE900 so well without it sounding uneven in the treble range. I had noted before that the UE900 maybe lacked a bit of bite in the treble and whilst the Flow doesn't change that overall perception it does add a better sense of space and clarity in the UE900's top end. Mid are beautiful with the UE900 and the Flow especially with acoustics sets such as Delta Goodram's "Hypnotized" acoustic version Diana Krall's "Exactly Like You" which was clear, controlled and played to the strengths of both the UE900 and the Flow's treatment of mids and vocals.

**Final Thoughts**

I thoroughly enjoyed my time with the Aurender Flow and despite some design quirks and worries on the total cost of ownership to get at some of those USP's I would heartily recommend it for those thinking of buying a well behaved transportable DAC and Amp solution. The codec resolution capability of the Flow is right in keeping with modern DAC trends with both PCM, DSD up to 128 as well as the usual plethora of lossy and lossless codecs from Mp3 to Flac and ALAC and Wav.

The whole "cable for this, cable for that" I could have done without and would have preferred to see some more dedicated ports such as coaxial and a dedicated line out rather than use a single port and fiddle with menu options. I am also not totally sold on the mSATA feature other than a small storage for bringing out to meets your favorite reference tracks for quick access from a laptop but otherwise this feature just raises the total cost of ownership unnecessarily and thankfully Aurender have made that an optional feature.

It is certainly a unique and well designed device though. The Flow waves might not be the most stackable but it looks a stylish companion to the digital desktop and possesses a more than capable LCD display and a very smooth pot. I would have preferred the pot to have skipped a few steps up to around -db as its starting point though but power wise there is no question the Flow can handle just about anything you connect it to and still sound pretty good. I wouldn't call it completely portable though, more transportable than anything else. That battery life won't get you as far as you might think especially if you hit that DSD option every 5 seconds and work the menu equally but as an office or stationary quiet moment device away from your main desk that Flow has it covered pretty well.

Sadly I don't have a Hugo from Chord, not sure if I ever will but given the fact the Flow comes in a good bit cheaper might encourage high end rollers to pause and do an AB between both because by all accounts so far the Flow maybe a real and viable competitor.