

# **Review: Aurender Flow**



That was how the conversation went as we headed towards the Emilie offices in Tokyo for an evening of pizza and ...something I'd never heard of from a company that was completely unknown to me. That was the first surprise of the evening. Mystery gear I know nothing about is always good. No preconceived notions. Plenty of questions though, and the presence of Harry Lee of Aurender was surprise number #2 of the evening.

So, the Flow is a wavy-shaped aluminium box with USB and optical sockets on one end, a headphone socket the other and a round display in the middle of a large volume control knob. After the recent spate of off-the-wall case work coming to market (eg: The AK240, Hugo and various DACs and streaming servers from other companies that have tried to strongly break from conventional design), the Flow's design wasn't such a shock, more par for the course now.

The Flow was originally called the V1000, which doesn't sound very interesting. Aurender decided to call it the Wave, to match the physical design, but BOSE has trademarked that name, so Flow it is. Aside from being a DAC/amp with a fancy case, what makes the Flow unique is that it can be purchased with an optional Samsung 1TB mSATA SSD drive to hold music.

The Flow's box includes a screwdriver, allowing one to DIY a Samsung mSATA drive of one's choosing. The purpose of the Flow's USB 3.0 socket then becomes apparent — while Flow won't play

music all by itself, you can use it to take your music collection with you. If your system allows the connection of external storage, the Flow can double as both storage and DAC/amp. iOS won't support this, unfortunately, but a "regular" computer will. Android devices require playback software that can read from the external drive. Note that discussion on Head-Fi suggests that the mSATA has to be formatted as FAT32 if it is to be recognised by Android phones.

The models on the table were plugged into Android smart phones; an Apple Camera Connection Kit was on hand (and I had mine, along with Moon Audio Black Dragon micro-USB cable which I'd brought along just because), encouraging us to hook up and take a listen. Headphones were now just about the standard for demos: Sennheiser HD-800s and Audeze LCD-3s. Any other time I might have thought to ask what was inside, but I didn't. I did wish I'd brought my Hugo to compare, though there was a Centrance M8 on hand. I decided to start with that and the HD-800s to get a reference, as I was familiar with them.

Going back and forth between the Flow and M8, the latter sounded flat. Now, in my experience, the M8 is a good match with the HD-800s, at least in balanced form, which it wasn't in this case. That made the Flow rather an eye-opener, with a more dynamic, clear sound that presented the — okay, I'm going to say it — flow of the music at both the micro and macro level very well.



I made arrangements to get one home for a more serious audition.

#### The Flow

Once I finally got home with a unit and removed it from its box, I found that the Flow, functionalitywise, is both novel and a bit irritating in some respects.

Though it can be switched on manually, the Aurender switches itself off after a few seconds if no source is plugged in. The normal way to use it is to plug-in a computer or phone via USB (OTG or CCK cable required for Android and iOS devices respectively), whereupon the Flow switches itself on and off when unplugged. While the auto-on is good for battery life, it meant that attempting to A/B-compare sources was inhibited somewhat by the switch-on delay. To use the optical input, one

switches the unit on manually and selects optical input from the menu, the unit staying on. However if it is going to sit on a desk connected via USB to a computer, its behaviour will become convenient, switching itself on and off and charging itself as required, only requiring the volume to be turned up.

The volume itself is entirely in the digital domain and its control is moderately velocity-sensitive, jumping somewhat quicker through the range if turned fast; but if turned slowly, it will change in 0.5dB increments, allowing one to dial in the exact volume desired with a suitable degree of precision. The small display shows a plethora of information, the frequency dominating the middle by default, and a speedometer-like lit curve lengthening around the inside edge of the volume control as the volume goes up. Status for everything, from the battery to input and output jacks as well as the playback state, all have suitably descriptive illumination when relevant. A DSD indicator and the bit-rate of the optical input are included as well.

On the side of the Flow are buttons for play/pause, forward and back which work with all devices, computer or mobile. When not used for this purpose, they are used to select settings in the functions menus.

To change the settings, one presses the menu button, which accesses selection of the input (USB or optical, the former the default), display dimming, charging on or off or automatic (only when music isn't playing) and whether to activate the optional SSD. A long press of the menu button brings up the option for line-level output (2V or 5V, fixed, to use with an included TRS to RCA adaptor) and filter options for both PCM and DSD. I set the filter to the "warmest", or rather, "minimum phase" for PCM, and left DSD at the default.

Most useful of the settings is the one to set the USB input type. Options there are USB2, USB3, iOS, Android and Mac, the latter of which will allow faster charging from Apple's high-output ports. As well as altering the behaviour of the USB input, they alter the charging settings, switching it to automatically charge if music isn't playing for the PC/Mac options, and turn charging off for iOS and Android. Forgetting to set, for example, "iOS Mode" to use with an Apple device results in a power warning and no music from my iPhone 6 or iPad Mini.

While there is the option to have the Flow charge automatically if music isn't playing, Harry informed me that to preserve battery life, charging is forced by the firmware to be about 3-4 hours long. After a couple of hours of playing with charging off and the unit only very slightly warm, the battery had gone to down to 66% suggesting only about a quarter of a day of continuous playback only, roughly in line with specifications. Using a PC or especially Mac as the source with auto charging, the overall usage time could be larger, especially if one pauses during periods of listening, allowing the unit to charge.

For safety, if something of a nuisance when trying to compare devices, the volume automatically resets to -90db if the headphones are unplugged, and the volume can't be adjusted until they are plugged in again. For comparisons, I used cable systems on my HD-800s and Audeze headphones that terminate in a 4-pin mini-XLR then use tails with different plugs to connect to different amplifiers. Leaving the tail plugged in to the Flow and switching the headphones allowed me to avoid the volume reset. The volume itself goes all the way down to -120dB, as a result of the suggestion of a friend of mine who uses sensitive custom in-ear monitors.

All of this makes the Flow rather like my Nikon digital SLR camera: Once you set everything up just right for what you want to shoot, it takes brilliant pictures without further intervention, but setting it up requires a bit of time. Once set up, it is just plug in (on both ends) and listen.



# Listening

Appropriately, given its elegance and simplicity, I placed it under my iMac beside my Hugo, where it made its British competitor look cluttered and confusing. Unlike the Hugo, I don't have to worry about switching it off when I turn my computer off, nor selecting the input when I turn it on (if I'm not using the default high-res USB). Plugging in a variety of headphones, from Sennheiser HD-800, Audeze LCD-X and XC, MrSpeakers Ether and any of my universal or custom IEMs, I was pleased to not hear any hiss or noise at all with the volume at any setting. Unfortunately, I don't have any super-sensitive IEMs such as from Westone or Ultrasone, which are reputed to pick up hiss from any electronics, but I don't expect any significant issues if a device is silent with what I have here. From there, I directed Audirvana Plus to output to the Flow and picked my latest playlist, a somewhat eclectic mix of music, with The Derek Trucks Band, Radiohead, Medeski Martin & Wood, Joshua Redman Quartet, Chet Atkins, Samantha Crain and Fiona Bevan in binaural.

The Flow is engaging from first listen with a good sense of dynamics and detail that results in an involving presentation. Fresh out of the box, the Flow initially overdid it a bit with some almost fatiguing aggression that settled down after being left to run for a few hours.

What was especially remarkable was how it managed to achieve this engagement with such a wide variety of headphones and IEMs. The Flow's in-built amp is more than satisfying enough and didn't seem phased by either current-hungry planars nor my HD-800s. Where it was my confusingly named FitEar FitEar IEMs or the big LCD-Xs, the music seemed to be attention-grabbing without overlooking the delicacy of instruments or voices.



Bill Evans' Sunday at the Village Vanguard has long been my favourite choice when I just want to relax. At the same time I am picky about how I listen to it. If the piano doesn't sound natural, or if the bass is overbearing, then it troubles me. For this album, I brought out my least relaxing headphones, a pair of now discontinued Symphones Magnums — Grados modified with special aluminium sleeves and custom-made high-resolution drivers. They have an intensity of presentation that can be thrilling, but at the same time are brutal on revealing the tonal imperfections of equipment.

The Flow includes a TRS to RCA adaptor cable to attach it as a DAC, but when I tried it external amplification didn't seem to help the Flow in a way that was pleasing. ALO Audio's Studio Six for example just seemed to emphasise its character while adding nothing new.

I thought it a good opportunity to see how a USB isolator would fare if added to the chain. I'd read comments suggesting that the Flow sounds better if not charging during music playback, as well as comments about better USB cables making an improvement. While I didn't test the charging claim, putting a Schiit Audio Wyrd USB isolator in the chain seemed to remove a very slight edge from the music to a degree roughly akin to switching digital filters.

That made the music from Bill Evans and Co. very pleasant indeed.



#### **Chord Hugo**

Turning to Chord Electronics, the Hugo showed a superior presentation of the nuances and nature of acoustic instruments compared with the conventional DAC in the Flow. That said, it was quite often that the Flow was the more engaging listen, livening things up a bit more without sounding forced, bringing out the bass better, whereas the Hugo could be too much of a good thing with a more spacious sound that can at times seem "thin". The Hugo's main benefits are where acoustic

instruments were the main course of a top-quality recording, where the more natural rendering is apparent. While I prefer the Flow on its own, the Hugo is most aptly paired with a top amp that is on the warmer side; my favourite pairing at present being the Aurorasound HEADA, which balances the spread-out and detailed sound of the Hugo with grace and body. As well, the Hugo can be elevated to a level of magic with the addition of a high-end USB to S/PDIF converter or a good USB isolator.



The Hugo presents more of a 3D image to each note, whereas the Flow feels more like one is looking at a canvas or screen. This was most apparent using MrSpeakers new Ether headphones to compare. The clarinet on "Tangerine" from The Essential Dave Brubeck sounded a bit wooden through the Flow, the depth of texture in each note missing compared to the same experience with the Hugo. This seemed to be true no matter what acoustic music I tried.

Thankfully, unlike the input type which cannot be changed during playback, the digital filter options can. It took an effort to notice any difference at all between them, and given that the slow roll-off filter is slightly attenuated I would hesitate to give impressions. In the end, I settled with the slow-rolloff filter, the default fast roll-off filter seeming to be a tiny bit too aggressive and the minimum phase a minute bit more vague-sounding. However, none of the filter settings seemed to result in an overall improvement, so as an experiment I set Audirvana Plus to up-sample everything in multiples of 2 to 352.8 or 384 kHz using the in-built iZotope software, reputedly the best on the market. This would effectively bypass the DA converter's filters, which are the default ESSTech ones that come with the ES9018K2M.



With my own tweaked Audirvana settings, based on recommendations I found on the Computer Audiophile forums, there was a noticeable improvement in instrument texture and naturalness coming out of the Flow, bringing the sound closer to what the Hugo is capable of achieving.

"Castilian Drums" from The Dave Brubeck Quartet's At Carnegie Hall came up next on my playlist, with its mix of piano and percussion that is a good a test as any. Now I had the sound of cymbals that met the capabilities of the Ether headphones' ability to deliver a precise and realistic treble.



### Calyx M

Given the Flow's intensions as a portable device, I thought it only fair to compare it to it's distant cousin, the Calyx M. Like the Flow, the Calyx M seemed to give just the right amount of warmth, but with a touch more spaciousness, something I couldn't help wondering if it wasn't a sign of it being a bit weaker in its headphone-driving ability, as it felt the dynamics weren't delivered as strongly, the flow sounding more "meaty".



# iPhone and CEntrance

Through all of this, I couldn't help wondering if it would be possible to achieve similar results from my iPhone as a source. Harry Lee had joked when demonstrating the Flow that he was using a competitor's software, the Onkyo HD player which allows native high-res and DSD playback. Up-sampling 44.1 tracks or playing high-res resulted in sound quality almost as good as Audirvana and iZotope. Notes were still a little flat-sounding with the Onkyo up-sampler, but pleasant enough that I'd be satisfied if using the combination while working, if not for dedicated listening.

I borrowed back my Centrance Hi-Fi M8, since I hadn't given it a fair chance back in Tokyo, and gave it a spin with the Ether headphones. At CanJam SoCal, Dan Clark had kindly lent me both single-

ended and balanced cables; this allowed me to try the M8 again using its balanced output. Using my iPhone, and the Onkyo HD player up-sampling, the M8 still sounded a bit flatter and less detailed than the Flow, which brought out the nuances of each note better and seemed to give the bass a subtle kick-in-the-pants for musicality at the same time. In spit of that, the M8, especially considering that it is around a third of the price, holds it own very nicely and is still thoroughly enjoyable to listen with, even using the revealing Ethers.



# Conclusions

I find the Aurender Flow compares to the Chord Hugo in much the same way that the \$999 Calyx M compares to the vastly more expensive Astell&Kern AK240 — while not as ultimately competent or featured (the SSD storage excepted), the Flow will be the far better value choice for many people and, in some cases, the sonically preferred one. Indeed, my good friend and fellow Head-Fi moderator Sean Chan preferred the Flow even over his Resonessence Invicta, which isn't portable as the Flow is. Given his habit of sitting in Tokyo cafes listening to music with IEMs, I imagine the only regret he might have is that the travel case for the Flow doesn't have holes allowing anything to be hooked up until it is removed, or even access to the play/forward/reverse buttons on the side. Hooked up to a computer using a USB isolator (better value than expensive USB cables, in my experience) with high-quality up-sampling, the Aurender Flow makes for an excellent, neat one-box solution for headphone listening alongside being easily transportable and able to carry one's music, which is handy even if limited to just a MacBook (Air), netbook or Surface.

The other day, I was playing some old cassettes (self-help tapes rather than music) through an old Sony Walkman that I'd held on to for many years, for just this very purpose. I happened to notice that it is about the same size as the Aurender Flow. It is worth a moment to think about how amazingly far we've come with audio, not only the improvements in digital technology, but that we can take high quality sound with us in ways not possible before.

Prior to owning the Aurender Flow and Chord Hugo, I had a vastly more expensive rack of gear to provide my music listening needs. Now I have not one, but two devices that have abolished the rack and either can sit under my iMac.

This is simply fantastic.