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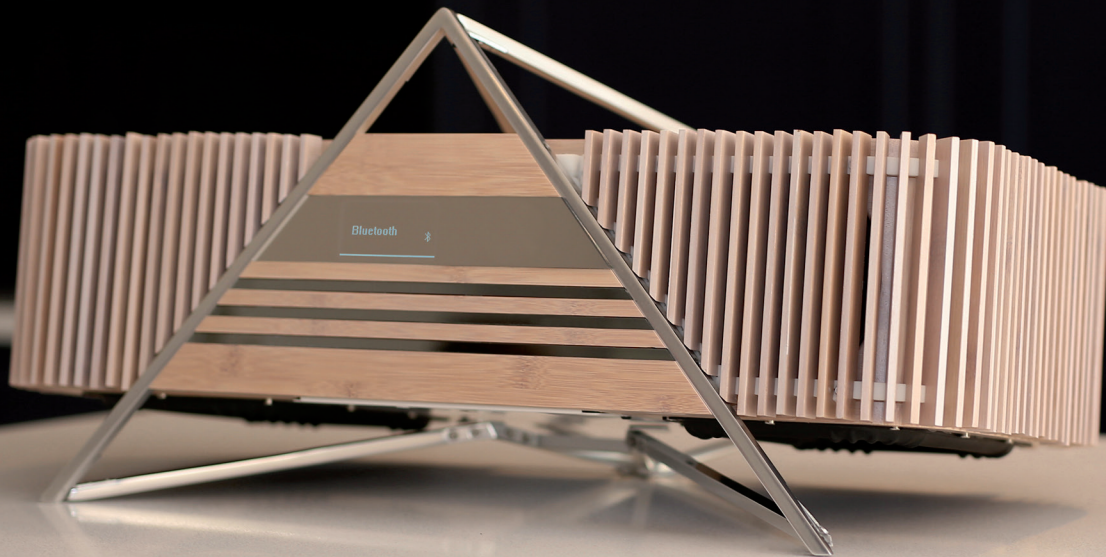
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REPRODUCING THE RECORDED ARTS JANUARY 2020 • 179
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£5.99 ISSN 1465-5950
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iFi Audio Aurora network music system

by Chris Martens



Many enthusiasts think of iFi Audio as being primarily a 'personal audio company', meaning a firm geared toward the needs and interests of headphone and earphone listeners. The Aurora, however, shows that there's another important aspect to personal audio that should not be overlooked: namely, the market for affordable and compact alternatives to full-size, speaker-based hi-fi systems.

All-in-one single-chassis audio systems are not a new idea and several strong and credible products of this type have arrived of late. Indeed, many would say the two benchmark products in this category have both come from Naim Audio in the form

of that firm's recently released Mu-so 2nd Generation and the Mu-so Qb 2nd Generation (both recently reviewed in *Hi-Fi+*). Given that such strong competitors are already on the field, why has iFi Audio chosen to enter this market? The answer, I suspect, has much to do with iFi having goals and intentions for the Aurora different to those Naim holds for its Mu-so products.

From personal listening experiences and conversations with *Hi-Fi+* Editor Alan Sircom regarding the Naim 2nd Generation Mu-so models, my take is that both aim to serve as compact and well-engineered general purpose music sources that offer surprisingly full-bodied sound for their sizes—a mission both components address well.

In contrast, iFi Audio's Aurora stands more as a compact, single-chassis surrogate for full-fledged, two-channel loudspeaker-based audio systems. Where many single-chassis products strive to produce a 'big' sound, the Aurora not only manages to play 'big' but to do so with serious sonic refinement and an eye toward delivering unexpectedly expansive soundstages and believable stereo imaging. Similarly, the Aurora shows surprisingly high levels of textural and transient nuance and subtlety—again, offering performance more like a traditional hi-fi system than is typical for the all-in-one genre. ▶

“The entire Aurora is suspended at a gently upturned angle from an attached ‘A-frame-like’ structure.”

▶ Perhaps as a reflection of this ambitious mission profile, the Aurora offers a bold and striking industrial design—one I find very appealing but that, realistically speaking, may not suit every taste. Where the Naim Mu-so models emphasise simple, elegant lines and subtle, subdued surface textures, the Aurora deliberately seeks to make a more vivid and intense visual statement.

Accordingly, the Aurora stands as a functional *objet d’art* whose oblong rectangular chassis sports rounded corners (as viewed from above) and whose sides are covered with narrowly spaced vertical ribs of natural bamboo. The Aurora’s smooth top and rear surfaces are covered in panels made from laminated strips of natural bamboo, matching those vertical ribs.

The entire Aurora is suspended at a gently upturned angle from an attached, ‘A-frame-like’ structure that serves both as the stand and as a lifting handle for the unit. The inverted or downward-facing ‘A’ of the structure neatly frames the face of the Aurora, defining a centre section that serves as both a display and control panel. In case this description of the A-frame sounds a bit scary, not to worry; the sharp points of the frame come with translucent moulded rubber covers designed to protect furniture surfaces below and listeners—or small children—from above. A slender, matt silver remote control completes the package.

The centre panel of the Aurora offers alternating horizontal strips of bamboo and black Perspex, with three narrow strips of black below and one much broader band of black above. (If you step back a bit, the frame and face of the Aurora almost create a stylised capital letter “A”.) The narrower black strips offer rear-illuminated touch controls for the Aurora’s many features and functions, while the broader black band conceals an OLED display panel plus a viewing window for its valve-powered preamp section. As you can imagine, the Aurora makes a great first impression when you first see it powered up in a darkened room.

The Aurora is the creation of French designer Julien Haziza, who says he “drew inspiration from Japanese industrial designers and architecture – namely Shigeru Ban, Tadao Ando, Omotesandō and Harajuku districts in Tokyo.” I found the design reminiscent of the works of the Finnish architect Alvar Aalto, but no matter where its design influences come from the Aurora is undeniable a visually striking product. In fact, readers might find – as I have – that it is satisfying to gaze at the Aurora much as one might meditate upon an engaging sculptural object in an art gallery.

The Aurora is highly versatile and features a host of inputs including Ethernet for accessing NAS drives or other servers; Wi-Fi for streaming Spotify, TIDAL, and other online music sources; Airplay for audio playback from iDevices and Mac computers; Bluetooth 5.0 with aptX HD/aptX/LDAC/HWA/AAC compatibility; a USB type ‘A’ source host connection for accessing USB music storage devices, a micro SDHC cardslot for accessing micro SD music

storage cards; coaxial and optical S/PDIF inputs (where the latter facilitates connecting Aurora to TV sets for use as a soundbar); and two stereo analogue inputs (via RCA jacks or a 3.5mm jack). iFi Audio intends for Wi-Fi and Ethernet/LAN sources to be managed through the MUZO Player App. In turn, Aurora supports UPNP/DLAN protocols and can be managed through apps such as AudioNet Remote Control Point, Linn Open Source Apps or dBPoweramp Asset UPNP, among others.

Aurora’s DAC section is based upon a 32-bit ESS Sabre Hyperstream DAC chipset with, says iFi Audio, a “time domain jitter eliminator, discrete oscillator, and 112dB dynamic range.” The DAC section’s performance is enhanced through use of the iFi Audio/Abingdon Music Research Global Master Timing (GMT) Memory Buffer System, which promises to “solve S/PDIF jitter once and for all.”

The Aurora amplifier section features iFi Audio’s PureEmotion circuit topology, which features a preamp stage driven by a Russian 6N3P valve coupled to a ‘current multiplier circuit’ featuring a distinctive, wide bandwidth switching amplifier. The amp’s switching frequency is, notes iFi Audio “fixed at an ultra-high level – around 1.5MHz, far beyond the audible frequency spectrum.” The circuit is said to provide, “a high level of efficiency, multiplying the current output of the valve several thousand-fold, whilst maintaining far greater linearity and lower noise than typical switching amplifiers.” Finally, the amplifier’s output is coupled to a low-pass circuit and feedback loop, where everything is ‘clock-locked’ to the aforementioned GMT circuit. The PureEmotion amplifier supplies a total of 320 Watts to Aurora’s six active drive units and two passive radiators. ▶



▶ Aurora uses four 120mm wideband drivers with coated paper cones, which run without crossover networks and that cover the lion's share of the audio spectrum. Two wideband drivers are side firing, while two drivers face forward on the face of the Aurora. Angled outwards at the left and right front corners of the unit are two of 28mm silk dome tweeters that cross in at 8kHz and whose response extends up to 40kHz. iFi points out that these tweeter function more as 'supertweeters' since the response of the wideband drivers extends to quite a high frequency as well. Finally, two oblong, bottom-firing, 120mm × 200mm steel passive radiators handle the lowest bass frequencies down to a useful low frequency cut off point of 27Hz.

Three other proprietary iFi Audio technologies help shape the overall sound of the system. The first is the firm's Automatic

Room Tailoring (ART) 'room correction' system, which uses six rear-mounted ultrasonic sensors to measure the Aurora's position relative to nearby wall surfaces and then uses a 32-bit ARM Cortex processor to calculate analogue adjustments to the unit's driver outputs to create a best sonic fit for the room. iFi Audio stresses that no DSP or feedback is used, so that room correction adjustment occur in the analogue domain only. ART is switch selectable so listeners can forego ART settings to listen in 'Audiophile' mode if desired. However, I found ART was so beneficial on so many levels that I soon discontinued experiments with 'Audiophile' mode. I experimented with the various challenging placements for the Aurora, such as locating it too close to a rear wall or near a corner, and in each case ART adjustments enabled Aurora to produce a well-balanced and well-centred sound with no egregious peaks, valleys or channel imbalances to spoil the sound. In short, ART works as advertised.

Second, iFi offers its proprietary Soundspace matrix, which is said to adjust "the level of specific drivers at certain frequencies..." to create, "... an immersive room-filling performance, enabling the soundstage to extend beyond the single cabinet." On paper this might sound like something that potentially could be gimmicky, but in reality it is the key to the Aurora's exceptional performance. With Soundspace disabled, Aurora delivered a credible albeit narrow and comparatively flat-sounding stereo presentation. ▶

“The TrueBass system is different, adding readily discernible depth while preserving a very good measure of bass transient snap.”

- ▶ However, with SoundSpace engaged Aurora’s sound came alive, throwing a soundstage that extended laterally far beyond the dimensions of the enclosure and that had plausible depth and unexpectedly good stereo imaging. Listen to ‘Talking Wind’ from Marilyn Mazur and Jan Garbarek’s *Elixir* [ECM, 16/44.1] through the Aurora and you will observe a widely-spaced array of percussion instruments with each occupying a specific space both laterally and front-to-back within a 3D soundstage—performance few competing all-in-one systems can even approach, let alone equal.

Last, TrueBass is iFi Audio’s name for Aurora’s passive radiator driven low bass system, which is said to enhance both low frequency extension and definition. In truth, it’s fairly easy to get all-in-one systems to produce a large quantity of bass if one is willing to accept a general lack of bass clarity, definition, and depth. However, the TrueBass system is different, adding readily discernible depth while preserving a very good measure of bass transient snap and textural refinement. Try Renaud Garcia-Fons’ ‘Ghazali’ from *Oriental Bass* [Enja Records, 16/44.1] and listen to how the Aurora renders the subtle, earthy, and expressive textures of Garcia Fons’ acoustic bass. Its sound is rich, vibrant, appropriately woody, and dynamically alive. Similarly, listen to ‘Chant’ from Nils Frahm’s *Solo* [Erased Tapes Records, 16/44.1] and pay close attention to the Aurora’s rendering of Frahm’s occasionally very low frequency acoustic and electronic keyboard passages. The Aurora maintains clarity, composure, and serious textural refine on the acoustic piano passages (preserving the sound and feel of the piano’s action), while offering up downright stupendous depth and weight as the very lowest electronic keyboard notes are sounded. Perhaps many of you reacted, as I initially did, with scepticism to iFi Audio’s claim of a low frequency cut off frequency of 27Hz for the Aurora system. But, once you hear it reproduce the lowest notes from ‘Chant’ with voice-of-the-Lord-like sonority, I suspect you, too, will become a believer.

In thinking carefully about the Aurora, I have come up with three suggestions for possible improvement in the future. First, I think the unit cries out for a headphone output on its front panel. This is an area where iFi Audio typically excels, so it only makes sense to play to the company’s strength. Second, I would like to see Aurora include a USB DAC input. While I recognise that the Aurora can function as its own server, those of us who already own and use servers would benefit from being able to connect them directly to Aurora’s DAC input. Third, I feel the Aurora User Manual can and really should provide more (much more) detail on setup and use of the MUZO Player App. Maybe it’s just me, but I found MUZO far from self-explanatory.

Setting the foregoing ‘wish list’ aside, though, I must say I found Aurora to be a stunning and satisfying product. For those who want a richly rewarding hi-fi experience without the cost, complexity, and size of a full-fledged speaker-based audio system, Aurora offers a delightful alternative. +

TECHNICAL SPECIFICATIONS

Type: All-in-one network music system

Inputs: Hi-res Bluetooth 5.0 with aptX HD/aptX/LDAC/HWA/AAC; Networked Audio with playback from NAS or server, Airplay, streaming audio (Spotify/Apple Music/Amazon Music/Tidal Hifi/Deezer etc.) and USB storage /SD Card 44.1kHz/16Bit – 192kHz/32Bit; coaxial and optical S/P-DIF (Blu-ray Player, Games Console, smart TV, etc.) 44.1kHz/16Bit – 192kHz/24Bit; and RCA & 3.5mm (for Alexa or analogue audio)

Driver Complement: 4 × 4.5" (120mm) coated paper cone wideband driver, 2 × 1.1" (28mm) silk dome tweeter (8 kHz crossover), and 2 × 4.5" × 8" (120mm × 200mm) steel passive radiators

Frequency Response: 27Hz–40kHz

Maximum SPL: 115dB/1m

Amplifier Topology: Hybrid with valve class A amplification. Power buffers operating at 1.411MHz/1.536MHz clock-locked

Amplifier Frequency Response: 15Hz–150kHz

Distortion: <0.05%

Maximum Power: 320VA (12v input for Marine/Car power supplies)

Dimensions (H×W×D): 27cm × 59cm × 28cm

Weight: 15kg (or 20kg in shipping carton)

Price: £1,299, or \$1,399 US

Manufacturer: iFi Audio

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