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A NEW ERA FOR MULTICHANNEL MUSIC

ATMOS AND SURROUND MUSIC LISTENING WITH YAMAHA'S AVENTAGE RX-A8A

Reviewer Jez Ford

◁ THE TRONDHEIM SYMPHONY ORCHESTRA PERFORM STÅLE KLEIBERG'S CONCERTOS AROUND 2L'S AURO-3D/ATMOS MICROPHONE ARRAY.

Hey wait! Don't turn the page! I'm guessing that all the stereo hi-fi-loving readers of *Audio Esoterica* are wondering what the heck an AV receiver is doing slap bang in the middle of the magazine. For sure it's a top-of-the-line integrated model from a company with a long heritage in stereo as well as multichannel equipment. And of course AV receivers are built to play music as well as movie soundtracks. It's just unlikely that many of you *Audio Esoterica* readers will be doing so, I'd guess.

But here's the thing. We've been listening in two-channel stereo since, what, 1958? Yet we've had quadraphonic sound for nearly 50 years; Pink Floyd released 'The Dark Side of the Moon' in quad in 1973 (on LP, cassette and 8-track indeed). Some of you may once have had four speakers and a quadraphonic decoder, and wasn't it fun?

Well those days are back. Multichannel music is going mainstream again. Apple Music and Tidal are serving up songs in Dolby Atmos from their streaming services. Increasing numbers of today's new releases are getting Atmos mixes as standard.

Even more exciting, for my subscription money anyway, is the great many major remastering and remixing projects which are now emerging with not only 24/96 stereo mixes but surround and/or Atmos mixes too. 'Sgt Pepper', 'Abbey Road', the new 'Let It Be/Get Back' release, Steven Wilson's Yes and Rush mixes, Kraftwerk's 3D collection, even the likes of Elton John and Marvin Gaye — many classics are being reissued with all the information required to energise your room from every angle. On disc, too, the highest of audiophile jazz, classical and acoustic labels — the likes of Norway's 2L and Mark Waldrop's AIX — are now focused on surround and Atmos recordings as much as on high-resolution sound.

HEADPHONE ATMOS

With Apple and Tidal driving the uptake, it seems unlikely that this will eventually prove a '3D-TV' fad which rises for a while, then falls. Yet its mass-market implementation is built on the questionable assertion that all this additional information can be effectively delivered using headphones.

Head to Apple's primer article "about Spatial Audio", as it calls Atmos tracks, and you'll find it begins with how to listen to Atmos on your iPhone or iPad, using AirPods or Beats headphones or even, dear Lord, *the built-in speakers*.

Impressive for their size as the built-in speakers are on, say, the latest iPad Pro or MacBook Pro, they are not what Dolby envisioned

when it created the hemispherical soundfield of which Dolby Atmos is capable.

It's true that Dolby Atmos does not define or require any particular speaker layout — it adapts to what you have. So you can play Dolby Atmos in mono if you like, or in stereo. When you play Atmos using the 'Spatial Audio' of Apple's excellent AirPod Max headphones, the mixes deliver a forward-facing soundtrack with impressive wrapping to the sides, as compared with a more over-the-head stereo heard with the standard files. But while there's sometimes the impression of a 'behind you' element in the mix, don't expect to hear things whizzing around your head. It's not going to happen.

For that, you need a proper surround sound system and an AV receiver. Then you can play Apple Music on your MacBook, say, and send multichannel audio out via HDMI, or — far easier — use the Music app on an AppleTV 4K, with that plugged into the receiver. Which is what I've been doing. And then the sound… oh goodness!

BEST TOOL FOR THE JOB

I could not have hoped for a better tool for this job than Yamaha's Aventage RX-A8A, which is the very toppermost integrated receiver model in the company's latest Aventage range, a series longer than usual in the waiting, delayed by the pandemic.

This is Yamaha's 10th series of Aventage receivers, celebrating a decade of this premium range originally launched back in 2010, then being the result of rethinking every element from circuit layout to chassis, from component selection to grounding techniques. It was a grand reset for a new decade — 'AV entertainment for a new age': Aventage — and an instant success, followed each year by iterative improvements that have maintained the momentum through the addition of Yamaha's MusicCast streaming multiroom platform, Dolby Atmos height channels, and the endless other pieces and abilities that go to make the very model of a modern receiver. Their success can be gauged by an Aventage receiver having since won the top *Sound+Image Magazine* receiver award not every single year since, but every year that a new range-topping model has arrived.

Now we have a new decade, marked by a significant redesign in visual terms: big volume knob now central, input selector now a smaller knob on the right, joined by the valuable addition of four Scene buttons to instantly recall a preferred scenario — one for movies, one for music, others (as we'll see) perhaps for experimenting with different layouts and processing. There are in fact eight Scene memories, with the other four directly selectable using the remote control.

The first of the new 10th-anniversary Aventages to sit in my reference system was the entry point, the RX-A2A, with seven channels of amplification, each rated at 100W into eight ohms (when using reasonably hi-fi-level parameters, across 20–20kHz with 0.06% THD, two channels driven). So that channel count is good for either 7.1-channel surround, all on the floor, or for 5.1 on the floor and an additional two channels for height.

As fine value as the $1599 RX-A2A offers, the $6299 Aventage RX-A8A is clearly the boss breed of beast in the range. The A8A offers 11 channels of amplification, the first Yamaha model to do so since the famed RX-Z11 back in 2007, when the whole Aventage concept was still a twinkle in the eyes of its engineers.

With all 11 channels and two subwoofer feeds available via pre-out sockets as well as via 13 sets of speaker outputs, that's vast flexibility for the main system you choose to set up — including, for the audiophile-inclined — the option of running front left and right preouts through preferred stereo power amps or even pre-powers, to maintain a purist stereo performance. I ended up that way during a full AV review of this receiver (see *Sound+Image* Nov-Dec 2021, also *whathifi.com/au*), but for most of this surround listening I had the Yamaha's amps powering the full system in either 5.1.4 or 5.1.2. The additional height dimension allows full enjoyment of not only Dolby Atmos but also DTS:X, and even Auro:3D, though a lack of material prevented much listening with DTS:X, while a future firmware update is required to enjoy Auro:3D on the Aventage RX-A8A. I anticipate that arrival greatly, in order to enjoy the highest resolution mixes from the 2L discs (see panel).

MOVIE MOMENTS

I did, of course, spend plenty of time playing movies through this top-level Aventage — why wouldn't I! Whether swooping Nazgul over Osgiliath or the more delicate atmospherics of a star base in 'Star Trek: Beyond', the Yamaha's effects steering and dynamic power delivery proved impeccable, creating an immersive soundfield which effectively made the 5.1.4 speaker system invisible: those Nazgul swoops were a single sonic motion, not sounds from separate speakers. For maximum assured purity, I kept full-channel mixes in 'Straight' mode, or better still in 'Pure Direct', which shuts down every unneeded piece of electronics, including the front-panel display.

A CENTRAL CHOICE

But my focus here, unusually for a receiver review, is music. And particularly this relatively new world of mass-market Atmos music.

One of the Yamaha's abilities proved particularly useful for the best enjoyment of surround music, and that's the simplicity of switching between different speaker configurations. Doing this via the 'Scene' memories, you can easily recall all your preferred audio settings for a particular input, or for a particular type of material — stereo vs. surround, say, or movies vs. music.

Yamaha now allows you to create four entirely different speaker patterns to switch between. For stereo music, for example, you might set up a 2.1-channel pattern in addition to the default stereo playback, so that your speakers gain subwoofer support.

For Atmos music, I'd also recommend trying a 4.1.x speaker pattern, especially if you have a system where the centre speaker is not an exact acoustic match for your front left and right speakers. This is a very common situation. Even when the centre comes from the same manufacturer's range as the left and right speakers, the centre is often smaller, the driver count often lower. Or your screen position may dictate that the centre speaker, especially its tweeter, is not positioned on exactly the same plane as the left and right.

Or those with huge audiophile left-right speakers, purchased for music listening, may wish to use them also within their surround system, but will be very unlikely to go out and buy a third one, or would have a hard time working out how to position it if they did. Only those with speakers behind an acoustically-transparent projection screen can really hope to achieve a true three-in-a-row, and even then I can imagine audiophiles debating long into the night over the true acoustic transparency of screen materials.

With movie soundtracks, you can get away with a certain degree of imperfection in this regard. The centre is often dedicated to dialogue, so precise integration is less crucial. The most common betrayer of the problem will be an effect moving across the front — a car driving from left to right, say — which may tonally contract slightly as it passes the middle. But with a subwoofer keeping low

stuff solid, even this rarely breaks the spell.Move to multichannel music, however, and it very much does. Listen to a mix where some lunatic — and I'm looking at you, Flaming Lips — starts panning an instrument full circle around your floor speakers, and any tonal differentiation becomes excruciatingly clear. And it's very common that a lead vocal is allocated to the centre speaker, where any deficiency in size will then weaken an essential element of the mix.

In stereo, of course, we're used to the centre image being virtualised from the left-right speakers. Yamaha's variable speaker patterns allow you to do that for surround as well as stereo. Simply copy your normal Atmos layout from Speaker Pattern 1 to Speaker Pattern 2 and then remove the centre speaker.

Even though my own centre speaker is large and hi-fi in nature, I ended up using a 4.1.4 layout for most surround music listening, as it removed any trace of tonal difference across the front soundstage. I highly recommend at least trying this delivery of 4.1, or 4.1.2 or 4.1.4 for music — and don't forget to invoke 'Pure Direct' to keep things as pure as possible.

There's another issue with playing music in surround, and that's the size of your rears. In most surround systems designed for movies your subwoofer takes the strain below a crossover at around 80Hz, so that most speaker packages come with relatively small bookshelf-sized rear speakers, larger speakers in left and right front positions, and as noted, a centre speaker somewhere between. But with imaginatively mixed surround music, the best delivery comes from identical speakers all the way around. When the surround mix of The Who's 'Tommy' decides to put Keith Moon's drum kit entirely in one rear speaker, you don't want him shrunk down to standmount size.

I should perhaps note that if you're thinking 'hey my soundbar does 5.1.2 Atmos, I'll give it a go on that', well, please go ahead and play, but that is not the Atmos music experience I am recommending here. Soundbars are riddled with acoustic compromise and furphy processing. Big speakers everywhere: that's the thing we want.

ATMOS MUSIC

So to the Atmos music revolution. Apple has it under the banner of 'Spatial Audio'. Tidal just calls it Atmos, and indeed Tidal had it available before Apple, and it is similarly able to output in Atmos from its app on an AppleTV 4K. But you need Tidal's pricest 'HiFi Plus' tier at $23.99 a month to do that, whereas Apple delivers Atmos music at half the price. Tidal's free trials are, however, often more generous if you just want to give

NORWEGIAN PURE: 2L

Many *Audio Esoterica* readers will know Norway's 2L record label, founded in 2001 by sound engineer and music producer Morten Lindberg, and immediately thereafter garnering a reputation for audiophile-quality recordings, including a focus on high-resolution audio.

So dedicated is 2L to proselytising the joys of high-res, indeed, that it hosts one of the most useful selections of high-res test files in PCM and DSD, free to download from the 'Hi-res Test Bench' section of its website *www.2l.no* for playback on your system — in some cases to see whether your system can play them at all, and in others whether you can hear the difference between them.

2L has recorded in surround as well as high-res since near its beginnings, and more recently has been releasing recordings in not only high-resolution stereo, but also in DTS-HD 5.1 at 24-bit/192kHz, in 7.1.4 Dolby Atmos at 48kHz, and in 7.1.4 Auro-3D at 96kHz.

Mr Lindberg kindly sent me four of 2L's multichannel releases as two-disc Blu-ray/SACD sets (they can also be purchased as files for download). One was acoustic jazz by the Hoff Ensemble, called 'Polarity', the opening track of which is available in high-res and 5.1 for free on that Test Bench area of the 2L website. Second was a collection of hymns and lullabies by the Trio Mediaeval called 'Solacium', and the third, 'Lux', a wildly atmospheric and definitely height-enhanced recording of the Nidaros Cathedral Girls Choir at home in the Nidaros Cathedral of Trondheim.

My favourite, and the most recent release, is of concertos by Ståle Kleiberg, a modern Norwegian composer with whom I confess no previous experience, but whose style in places is not a million miles away from Arvo Pärt, though a heck of a lot busier. It's both accessible and emotive, while 2L's recordings of the three Kleiberg works, delivered from the Pure Audio Blu-ray Atmos track, are simultaneously atmospheric and visceral. *The DOPO for Violoncello and String Orchestra* is particularly so, with the tone of the solo cello enriched by the mid-distance miking, a huge presence at the front with hall reflections spreading to the rears and above, but then with the dynamic full orchestra sections wrapping right around, as if you're crouched listening right in that central mic position. Those used to stereo concert recordings will take a while to adjust! But once accustomed to the space it's mesmerising stuff, and you yearn for more. This is the quality that has earned Lindberg an astounding 18 Grammy awards for best surround or immersive recording since 2007 (along with another 18 for Lindberg and 2L in other categories).

One nice piece of geekery is that the sleeve notes (available in full online) and the website for each release include both a layout diagram for the orchestra, and photographs of the recording set-up (see above, and this article's opening image).

"If you enlarge the proportions of this microphone array, you have the exact configuration of speaker placements for Auro-3D," Mr Lindberg explained to me via email. "Each microphone capture goes discreet to its according speaker for release. Time of arrival and intensity is perfectly preserved. No mixing required."

I await the release of a firmware update for Yamaha's Aventage which will let me hear the Auro-3D mix, not that I have the full three-level speaker system to fully replay this higher-resolution version. But the Atmos was impressive enough.

"We simply use the Dolby Atmos codec as a carrier for our 7.1.4 channels," explained Mr Lindberg, "where the 7.1 is defined as the bed and the four heights as objects localised in its outer upper corners. I find that our recordings translate freely between Auro-3D and Dolby Atmos."