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AQUA TAKES THE COMPETITION TO THE CLEANERS!

# Aqua LinQ and La Scala MkII Optologic DAC

by Jason Kennedy

Every once in a while, the reviewing malarkey unveils a product that is so exciting that all you can do is sit back and play as much music as possible before the plus size lady sings, or in this case the editor demands copy. This pairing from Aqua in Italy turned out to be just such a product, OK it's two pieces but put them together and you have one hell of a digital streaming system.

The Aqua La Scala MkII is a DAC, an R2R ladder DAC that has been around for a few years but remains a very strong contender in a competitive field. I reviewed it for these pages in 2018 and got a very enjoyable result. The Aqua LinQ is its partnering streamer, it's not your usual UPnP device that's based on a common chipset but a modular design that can be fitted with renderers for different streaming protocols. This sample was supplied with something called HQPlayer, a software streaming engine that I've not seen embedded in a piece of audio hardware before but is rather the domain of the computer audio enthusiast with the inclination to go deeper.

Aqua (Acoustic Quality) offer a UPnP module for the LinQ and have a Squeezelite renderer option 'coming soon' but they have clearly taken a shining to HQPlayer and it's not hard to hear why. What is hard to understand is that no-one else appears to have done the same. Maybe it's not very well known; I hadn't heard of it until now, and maybe it's difficult to integrate into an app controlled streamer without the range of controls available on a PC. HQPlayer in software form is

enormously configurable, confusingly so for the non-geek. You can stream all the key formats including RAW, upsample to 32-bit/1.536MHz (and downsample), choose from nine levels of dither, use one of 12 delta/sigma modulators and playback in up to 7.1 channels and that's just skimming the surface. It makes JRiver look like child's play and runs counter to those of us born and raised on the ethos of 'less is more'. And yet in the hands of the engineers at Aqua's Milan base, HQPlayer turns out to be quite remarkably transparent.

To get back to La Scala MkII Optologic to give it its full name, this is the middle model in Aqua's three strong DAC range and is based on the company's proprietary FPGA based digital decoding engine. It uses galvanic and magnetic isolation between engine and converter, discreet R2R ladder DACs (rather than chips) and has a pair of triode valves in its output stage – these can be seen if you peer through the slot on the front panel. The power supply for the anode on these valves is a virtual battery type and both analogue and digital halves of La Scala have their own low noise power supplies. Inputs include both flavours of coaxial (BNC and RCA), AES/EBU balanced, USB for PCM sample rates above 384kHz and DSD over DSD128 and the option of AT&T fibre. Then there tis he Aqua's I<sup>2</sup>S connector for use with their CD transport and the LinQ, this uses a Neutrik ethercon RJ45 pro ethernet connector with an XLR style metal cover but can also be used with regular ethernet connections. A good quality AQLink cable is supplied with the streamer for obvious reasons and ▶



*“La Scala also proved to be very good at revealing the reverb on every voice and acoustic instrument played.”*

► was used for the review. I also employed the power cables found in both boxes, atypically for high end audio these are good quality examples which is a nice touch.

The LinQ is controlled by Roon so you need a Roon Core running on the network. The way you set it up in Roon is slightly different to usual but not complicated; just pull down one of the switches on the LinQ to reveal the IP address of the HQP Core, choose ‘Add HQPlayer’ and enter the IP and with luck you will be away. Because our sample had already seen some shelves, I had to go to the LinQ’s IP on my browser and hit factory reset to get it working and in the process discovered that this is where system updates can be done when required.

The LinQ has four module slots for alternative renderers, a galvanically isolated output stage with connections to dual and single AES outputs, coax and BNC SPDIF and the aforementioned AQLink plus a LAN connector for hook up to the network. There’s no Wi-Fi connection nor any option for wireless streaming over Bluetooth or Airplay to the LinQ; it is dedicated to the delivery of maximum fidelity as one might hope.

My research started with the La Scala DAC alone which was connected directly to a Melco N10 45th Anniversary server via USB. I generally use a streamer in my digital set ups but the Melco’s own output was outplaying my rather more affordable streamer. This configuration produced an articulate and revealing result that was very easy to enjoy, there was no sense of obvious valvey-ness in the tonal balance which

seemed very even handed and capable of delivering excellent bass lines. My notes do mention depth of tone early on however and that is often a result of thermionic devices being involved, and one reason why Beethoven’s String Quartets sounded so open, lyrical and fluent. Dynamics were excellent too, this was apparent with the quartet and a track by Jim O’Rourke [‘Friends with Benefits’, *Simple Songs*, Drag City] which was also really well articulated, every inflection of the bittersweet song was clear and fluent.

La Scala also proved to be very good at revealing the reverb on every voice and acoustic instrument played, even Radiohead’s largely electric/electronic ‘Desert Island Disk’ [*Moon Shaped Pool*, XL] has an acoustic guitar with apparently natural reverb that defines the space it was captured in. Even Thom Yorke’s muttered lyrics were easy to comprehend on ‘Ful Stop’ (sic), a song that offered up a genuinely rich pageant of sound. The Melco N10 is a very fine server (the best I’ve tried in a long while) but you need a decent DAC to get this much out of it, and I did wonder whether the LinQ would be able to bring much more to the party. It turns out that I underestimated its potential quite severely, so much so in fact that I regretted not adding it to the system earlier. OK, so using HQPlayer into a streamer requires a license (the desktop software costs £225) and apparently the Roon integration took a bit of work, but once again why is this not more popular? I can only think that implementation is, as ever, a significant part of the equation. ►



*“There was no emphasis on tonal balance; the focus was on the emotional honesty of the singer and the song.”*



Initially I put on Van Morrison's 'The Way Young Lovers Do' [*Astral Weeks*, Warner Bros], which isn't the slickest of recordings and generally sounds that way, here it had a coherence and lack of hash that was quite striking. It's almost as if the streamer is stripping away everything that isn't music and presenting the DAC with the signal alone in a precise yet fluent form that sounds so right it's uncanny. It's listening at a higher level, chakras fully aligned with the light of musical communication precisely focused yet natural in its pinpoint imaging and dynamic energy. All of which allows the listener to appreciate just how the composition was recorded and engineered without this analysis getting in the way of the musical beauty. On the next track from *Astral Weeks*, the sublime 'Madame George', for instance the voice still sounds a little 'hot' but the strings, the guitar and the bass are all clear and there appears to be none of the hash, the subtle graininess that old analogue recordings seem to gain when converted to digital. As the youth of today might say this is next level shit.

Roon picked Christian Scott ['Angola, LA & the 13th Amendment', *Yesterday You Said Tomorrow*, Concord Jazz] for me to listen to next, I do like the way it will find something vaguely similar in your library that may have been overlooked or forgotten, this had a dynamic energy that made the advantages of modern recording methods very clear. The drums having real power that reinforces the visceral quality that the LinQ is so good at revealing, the immediacy produced making the band sound so real. There is really no option to change tracks half way through when the sound is this good, even an unfamiliar piece like this really brings a lump to the

throat. Going back to 'Desert Island Disk' I started to hear the way that different sounds are faded in and out of the mix and give it a magical quality. It's also clear that the vocal has been softened a little to achieve a more homogenous blend with the backing. Going for something more stripped back I played 'All I Want' from *Blue* [Joni Mitchell's now 50 year old early masterpiece, on A&M], the digital version of this can often sound thin even though it's in high res but here there was no emphasis on tonal balance; the focus was on the emotional honesty of the singer and the song. That and the acoustic guitar from Stephen Stills and the fact that there's a mandolin in there that had never attracted my attention before. Roon picked out Stills' 'Blind Fiddler Medley' [*Stills Alone*, Vision/Gold Hill] as a follow up which sounds superb. I've used Roon with a few streamers over the years and often thought that simpler and far less user friendly control apps sounded better; in this application it clearly wasn't getting in the way but it's not doing so much of the heavy lifting either.

The Aqua pairing is very good at revealing differences in recording quality to the extent that those made in the digital era are generally more powerful and have stronger bass than their analogue predecessors. Both types of recording sound great however the distinction is stronger than with less revealing digital sources. A dramatic reduction in time smear is one of the many benefits of these units and the LinQ in particular, timing has long been the an area where analogue sources excel but here we find digital putting up a particularly strong fight and this makes all music sound better and live music often the best. Bugge Wesseltot, Dan Berglund and

*“It reduces the low-level grunge that undermines digital audio to a far greater extent than most.”*



► Magnus Ostrom's Rymden trio put out a live album last year [*Space Sailors Special Edition*, Jazzland] where the playing is clearly superior to the studio versions of the same tracks. This is because it's happening in real time in front of an audience, there is a pressure to perform well and that ups their game. The Aquas make this abundantly clear, the track 'Pitter Patter' for one is a stone cold killer thanks to the intensity of the drums and the steam coming off the Rhodes piano, steam you can almost feel with these components in line.

I played this system to a friend who chose Black Sabbath's audiophile favourite (not) 'Fairies Wear Boots' [*Paranoid*, Vertigo] and he couldn't believe how clean it sounded, putting his finger on what makes the LinQ so powerful in the process. It reduces the low-level grunge that undermines digital audio to a far greater extent than most streamers, this isn't something you are necessarily aware of until it's gone or you play a vinyl record on a great turntable. Here it seems to have totally disappeared.

By using a protocol that's designed for audio rather than one for connecting computer peripherals (UPnP/DLNA), Aqua has found a way to raise the streaming game to a new level. It would of course be intriguing to hear their UPnP module which would establish whether it's the software or its implementation that's doing the trick but if you buy the HQPlayer version of the LinQ and combine it with a La Scala MkII it seems very unlikely that you would want to try anything else, however it's nice to have the future proofing that this approach offers. In short, I want one! +

## TECHNICAL SPECIFICATIONS

### LinQ

**Type:** Solid-state network streamer with modular renderers

**Analogue Inputs:** none

**Digital Inputs:** LAN (via etherCON RJ45 connector).

**Supported Digital Formats:** AAC, AIFF, DFF, DSD, DSF, FLAC, WAV

**Music services/Wi-Fi inputs:** Tidal, Qobuz via Roon/N/A

**Analogue Outputs:** N/A

**Digital Outputs:** Two coaxial S/PDIF (via RCA and BNC jacks), one AES/EBU, dual AES, AQLink I2S

**Frequency Response:** Not specified

**Distortion (THD + Noise):** Not specified

**User Interface:** Roon

**Dimensions (HxWxD):** 100 x 450 x 370mm

**Weight:** 9kg

**Price:** £4,982

### La Scala MkII

**Type:** Hybrid high-resolution PCM and DSD-capable digital-to-analogue converter

**Digital Inputs:** One AES/EBU, two coaxial S/PDIF (via RCA and BNC jacks), one USB B, one AQLink (via RJ45 etherCON)

**Analogue Outputs:** One stereo single-ended (via RCA jacks), one balanced (via XLR connectors)

**DAC Resolution/Supported Digital Formats:** All PCM from 44.1kHz to 384kHz with word lengths up to 24-bit, DSD64 (2.8224MHz) and DSD128 (5.6448MHz). The following format restrictions apply: DSD128/384kHz and beyond are supported through AQLink & USB only

**Frequency Response:** 20Hz–22kHz, ± 0.5dB

**Distortion (THD + Noise):** <0.1%, 1kHz at -20dB

**Output Voltage:** 2.2Vrms

**User Interface:** front panel display

**Dimensions (HxWxD):** 100 x 450 x 370mm

**Weight:** 9kg

**Price:** £6,200

**Manufacturer:** AQ Technologies

**URL:** aquahifi.com

**UK Distributor:** Elite Audio

**Tel:** 0800 4647274 (UK only)

**URL:** eliteaudiouk.com