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DECEMBER 2015



Wadia Know



A new entry-level DAC/preamp from American high-end experts Wadia attracts Jon Myles's interest.

Mention the name Wadia and you probably think of high-end digital products with bomb-proof build and prices stretching into the many thousands of pounds.

The company was, after all, once synonymous with the more rarefied end of the American audio industry and one of the original exponents of cutting-edge digital decoding products.

Times change, though, and since its acquisition by the Italian-based Fine Sounds Group – also owners of McIntosh Laboratories, Sonus faber and Audio Research – Wadia has been releasing products that aim to combine more affordable price tags with its signature sound quality.

Hence the Wadia di122 – a standalone DAC/preamp/headphone amplifier costing £1598 that can be used direct into a power amplifier or slotted into an existing system as an upgrade. If you opt for the former, Wadia also offer a matching a102 power amp using a proprietary Class D circuit to provide a claimed 50 Watts per channel into 8 Ohms, for a

similar price of £1598.

And while those prices may be entry-level for the Wadia range, there's no obvious evidence of any cost-cutting when you unbox the di122. Weighing in at 3.2kg and measuring 254mm x 80mm x 356mm (W/H/D) the unit is constructed from aluminium with a clear glass top and the Wadia logo engraved into the fascia, giving it an undeniably classy look.

Inside the di122 is built around one of the increasingly popular and excellent ESS Sabre DAC chips, specifically the ES9016S that allows USB operation up to 24bit/384kHz as well as being able to process DSD and DXD.

Round the back are five digital inputs – two coaxial, two digital and a USB-B. Also, there are both standard RCA and balanced XLR analogue outputs.

The front panel features a small but legible display window that indicates the selected input, volume and incoming sample rate. Additionally, there is a 1/4-inch headphone socket. Two small buttons control standby/on, volume and input

functions, although the unit is best controlled by the supplied remote control.

SOUND QUALITY

If there's one characteristic that distinguishes the Wadia di122 from many of its competitors at this price it's the level of detail it manages to extract from digital files.

While some components employing Sabre ESS DAC sets have a warm, almost analogue quality about them (the Oppo BDP-105D disc player and Resonance Invicta Mirus DAC immediately spring to mind) the Wadia has a much more forensically focussed sound about it. What that means is it lets you hear every last facet of the music, taking you deep into performances.

Listen to Kraftwerk's 'Minimum-Maximum' live opus, I found every echo and shimmering synthesiser line was laid out before me. With this player it's easy to close your eyes and be transported to the seats of the concert hall.

Similarly, on The Smiths' 'How Soon Is Now' (24/96) the di122 brought out the layered studio effects



used to give Johnny Marr's guitar its distinctive deep tremolo rumble.

But, crucially, the Wadia doesn't do this in a mechanical or artificial way that robs music of emotion. Instead, it seems the di122 has been designed to dig out every single note, vocal inflection or drum beat for your enjoyment.

As such it's particularly satisfying with up-beat material, having a fast, exciting presentation that suits Rock and Dance music where it sounds both vivid and sure-footed.

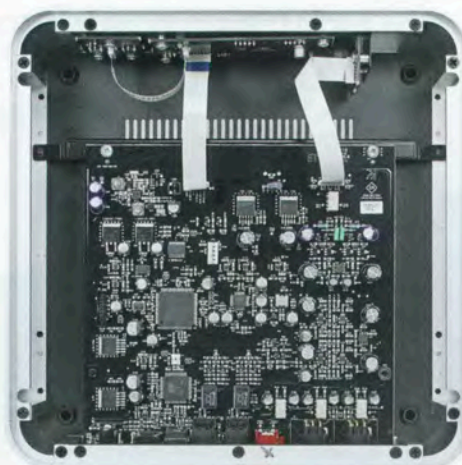
With Led Zeppelin's 'When The Levee Breaks' via a Creek 100A integrated amplifier and the excellent Quadral Rhodium 400 loudspeakers also featured in this issue, there was a visceral kick to John Bonham's pounding drums that could almost be felt as well as heard.

Switching to something a little more sedate in the form of John Rutter's 'O Praise The Lord Of Heaven' collection, there was great separation between the orchestra, choral voices and organ – each in its own distinct space with one never being allowed to overwhelm any of the others.

I've heard other DACs that can sometimes be overwhelmed by the musical forces at work here but the Wadia retains the power of the performances while letting you hear every nuance of the music.

Those same attributes were also present in the headphone stage, where again there was detail and drive aplenty. Listening to the Led Zeppelin track again via a pair of Oppo PM2s I heard great presence and punch. The Oppos can sound a bit soft for my liking at times, but the Wadia managed to extract the best from them. It also managed to go exceptionally loud without losing any sense of composure.

There are, however, one or two downsides that can't be ignored. Unfortunately, unlike some other companies who have utilised ESS Sabre DAC chips (Audiolab, Resonance etc), Wadia haven't opted to implement any form of user-selectable digital filter options. Not that this is a must, but it is a nice option to have. Also, the optical input can be a little temperamental, requiring precise plug alignment if it's to recognise 192kHz. Also, high-resolution files over 96kHz (176.4kHz and 192kHz) were down-sampled to 44.1kHz via the S/PDIF, dropping bandwidth to the equivalent of CD (see Measured Performance for full details).



Inside, the Wadia di122 is built around the well-regarded ESS Sabre DAC chipset with volume control handled in the digital domain.

While none of this is a deal-breaker, it's worth bearing in mind by potential purchasers.

Having said that, the Wadia di122 does have a distinctive and detailed sound that sets it apart from most other DACs in this price range. It is exciting in its sound, with an ability to dig deep into music. Some may prefer a little more warmth but for anyone who really likes to get to the heart of the sound it is well worth an audition.

CONCLUSION

A few niggles aside, the Wadia di122 is a genuinely accomplished and engaging DAC that offers something a little different.

MEASURED PERFORMANCE

Wadia's di122 DAC had massive dynamic range of 131dB from its balanced analogue XLR output. This is around +10dB better than the current best that measure around 121dB, ignoring the Resonance Mirus Invicta (September 14 issue) that used an ESS Sabre32 DAC per channel. Unfortunately, the Phono socket unbalanced output didn't maintain this performance, measuring 119dB – still up with the best, but no better.

Both outputs – Phono and XLR – deliver very high maximum output voltages, 3.6V and 7.2V respectively.

Distortion was also incredibly low – half that of the best DACs, measuring a minuscule 0.01% at -60dB (24bit) via XLR – the lowest value we have ever measured – and 0.02% via phono socket output, on par with the best.

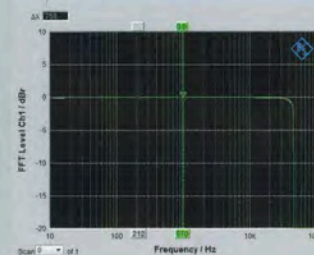
In contrast to these figures the Wadia acted peculiarly when measured for frequency response. Up to 96kHz sample rate all was normal, this rate giving smooth output to 45kHz our analysis shows. Higher sample rates via

S/PDIF, meaning 176.4kHz and 192kHz, were processed differently however, as bandwidth dropped to that of CD – 21kHz. USB behaved likewise until our Apple Mac Pro test mule was set to 384kHz sample rate output, whereupon the Wadia saw this rate and measured flat to 50kHz. The optical input worked to 176.4kHz reliably, but was a little intermittent with 192kHz, the input optical receiver being sensitive to plug alignment.

So the Wadia offers exception results up to 24/96 PCM. Past that however, analogue bandwidth becomes that of CD, although 24bit resolution is retained. The same problem occurred with USB, disappearing at 384kHz sample rate. **NK**

Frequency response (-1dB)	
CD	2Hz-45kHz
Distortion	24bit
0dB	0.009%
-60dB	0.01%
Separation (1kHz)	116dB
Noise (IEC A)	-128dB
Dynamic range (EIAJ)	131dB
Output (Phono/XLR)	3.6V / 7.2

FREQUENCY RESPONSE



DISTORTION



WADIA Di122 DAC £1598



EXCELLENT - extremely capable.

VERDICT
A classy-looking DAC/preamp/headphone amplifier that majors on detail with a lively and engaging presentation.

FOR
- forensically detailed
- excellent timing
- superbly built

AGAINST
- no digital filter options
- fiddly optical input
- some high-res files down-sampled

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