

# Audio Innovation



**Audiolab's new 8300CDQ combines a CD player with digital inputs plus a pre-amp facility. Impressive? Jon Myles thinks so.**

**H**ow the humble CD player has changed. It was once a device that span silver discs and delivered 'perfect' digital to your hi-fi. Times have moved on – and for the better. Example: the new 8300CDQ player from Audiolab. A CD player that is far more than just that.

What you get is a fully-fledged digital processor with volume control, MQA decoding via its USB input

and the ability to plug in external digital sources via two coaxial or two optical S/PDIF inputs. Also, there are three analogue inputs with a gain of 8dB to the outputs, useful for connecting an external silver disc player or phono stage perhaps. The volume control works here too, so the Audiolab can be used as a preamp driving a power amplifier.

The design is based around an ESS Sabre32 reference chip that has been implemented by digital

guru John Westlake. It has 512 DAC elements (256 per channel) each operating at 84.672MHz – so all digital audio sources, whatever their sample rate, are upsampled or oversampled to this frequency.

Also included are seven user-selectable digital filters for PCM audio (more of which later) and impressive build quality. The 8300CDQ is housed in a slim steel chassis measuring 80mm x 444mm x 317mm (H/W/D) which is tightly

constructed and weighs in at 6kg.

Inside there's a linear power supply with low-noise toroidal transformer, reservoir/smoothing capacitors and – surprisingly – discrete transistor analogue output stages instead of off-the-shelf op-amps favoured by most manufacturers.

On the outside, five small buttons on the right of the case give access to all functions while the

and decayed.

However, switching to Optimal Transient gave a broader and much more melodious feel to the whole track. This now sounded like a band playing live and totally in the groove. There was not so much detail on offer but a better fluidity.

Which was better? Well that depends upon your taste and what you are looking for from your music collection.

With the Bournemouth

creamy feel.

Using the Audiolab as a standalone DAC with an Astell&Kern digital audio player connected through QED Quartz glass optical cable I played Fleetwood Mac's classic 'Rumours' album in 24bit/96kHz resolution: the rim-shots from the drums all but shook the room! Impressive was the way individual instruments stood out - guitars, bass, drums and vocals all having their own space in the overall mix.



slot-loading CD mechanism is on the left with a well-lit blue display in the middle. There's also a supplied remote control.

In use I was impressed at just how quickly the Audiolab read a standard CD. Slotting a number of discs into the mechanism it took an average of 20 seconds to bring up the number of tracks – and a further five seconds to access each individual one.

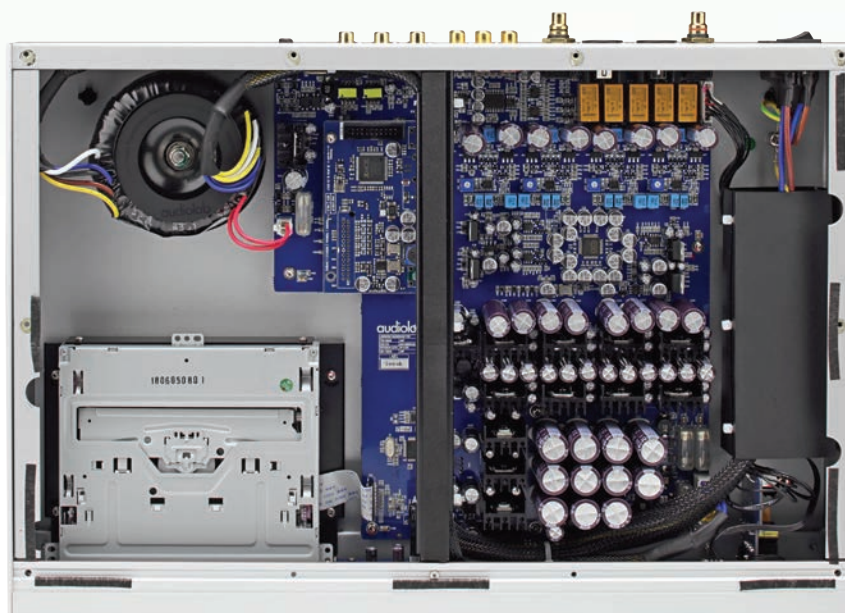
## SOUND QUALITY

One thing to bear in mind with the 8300CDQ is the extent to which its digital filters affect the sound. On many CD players/DACs the filter options make little difference – not so here.

Starting out with The Stone Roses' 'Fools Gold' via CD, Optimal Spectrum gave a smooth, assured sound with taut bass and good upper registers on the guitar. John Squires' fretwork had immense presence, his playing coming alive as notes rose

Symphony Orchestra's rendition of David Bowie's 'Heroes' the Optimal Spectrum setting sounded fine. However, switching in the Optimal Transient filter improved things even further, violins taking on a brilliantly

Stevie Nicks's vocals on 'Dreams' also came across splendidly. On both a bargain set of PSB Alpha 5 loudspeakers and the rather more refined Martin Logan ESL-X hybrid electrostatics we use as a reference, I could hear sharp intakes of breath between phrases. Even better was the way the Audiolab managed to sparkle with its



**The Audiolab uses a linear power supply with toroidal transformer (top left) plus a slot-loading CD drive (bottom left). Both these are isolated from the main circuit board to avoid interference. Note all the smoothing capacitors (bottom right).**



The rear has both phono-socket and XLR outputs (left). Digital inputs are co-axial and optical, plus USB (right). There are three analogue line inputs too (centre).

upper registers, perhaps due to its discrete transistor output stages.

Nicks' vocals – which are both delicate yet powerful in delivery – had a presence about them few other digital sources can match. Listening to this track through the Martin Logan loudspeakers with their well-damped bass and open-sounding panels gave a complete and natural aural experience.

Dynamically, the Audiolab has few rivals at its price. Spend a little bit more and you may derive an extra bit of detail from dedicated CD players – but you won't get the flexibility of both digital and analogue inputs and volume control.

Sticking with the Astell&Kern I played a high-resolution file ripped from an LP of The Jesus And Mary

Chain's debut 'Psychocandy' LP – starting with the track 'You Tripped Me Up'. This is a song dripping with feedback and a good test of any digital-to-analogue converter; the Audiolab took to the task wonderfully. Even through the small PSBs there was solid bass and a tight grip on the music. Also on offer was thrust and pace – bringing the best out of this fast piece – keeping my feet pumping. Little details such as the leading edge of the main guitar and the decay in the notes, were superbly revealed I found. Listening closely to the individual instruments I could make out every single one – but if I wanted the music to simply wash over me then that was there too.

Which, in essence, is the magic

in this latest offering from Audiolab. If you desire detail then it has it in spades, with the Optimal Spectrum filter. For those who prefer a big, fat and meaty sound then it can do that too with the Optimal Transient filter and its variants.

The 8300CDQ filters mean you can tweak the player to your personal preference. Who could ask for more?

**CONCLUSION**

The new Audiolab 8300CDQ player is a stellar performer. Along with an impressive CD player you also get a full range of digital inputs, allied to a selection of filters that allow fine-tuning of the sound. With analogue inputs also it can make the heart of a superb system – for just £1099.



**MEASURED PERFORMANCE**

Acting as a CD player Audiolab's 8300 CDQ can bring into play no fewer than seven digital filters of very obvious aural impact and sonic purpose (designed by John Westlake).

With CD Optimal Spectrum gives the broadest bandwidth figure of 4Hz-21kHz and this is what CD players offer as standard. Sharp Roll Off and Minimum Phase are alike and similar to Optimal Spectrum in bandwidth.

Optimal Transient (with CD) rolls off upper treble (above 10kHz) and improves time domain behaviour by lessening filter ringing – a softer but more assured sound. Optimal Transient XD and DD are subtle variations (improvements). Then there is the radical Slow Roll Off that with CD chops output above a low 7kHz, much like analogue filters of the past. This removes all upper treble and distortion harmonics from CD – and is not seen elsewhere.

With hi-res these filters scale up in frequency, having less aural impact, but Optimal Transient (plus XD & DD) and Slow still smooth the sound.

These results apply to S/PDIF and USB digital inputs, the optical input reaching 192kHz.

Maximum output from the balanced

XLR socket outputs measured a conventional 4V at 0dB volume setting, rising to a high 6V at +3dB. The unbalanced phono-socket outputs gave half – 2V and 3V respectively.

With a hi-res 24bit input EIAJ Dynamic Range measured a high 119dB from the balanced XLR outputs and distortion a low 0.02%. USB gave the same results as S/PDIF.

The analogue Aux1/2/3 inputs accepted up to 2.3V before overload so will accept the output of silver disc players. Gain was x2.6 (8dB) and frequency response flat from 3Hz to 100kHz. Noise was a low -112dB from both XLR and phono-socket outputs, distortion just 0.006%.

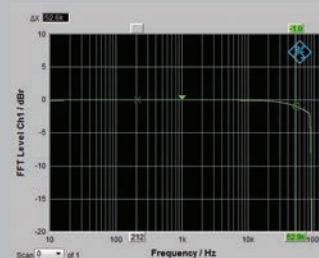
The 8300CDQ measured well in all areas. It is a sophisticated design, with advanced filters and top quality DAC performance. **NK**

**DIGITAL**  
**Frequency response** 4Hz-53kHz  
**Distortion (-60dB, 24bit)** 0.02%  
**Dynamic range** 119dB  
**Output (Phono/XLR)** 3V / 6V

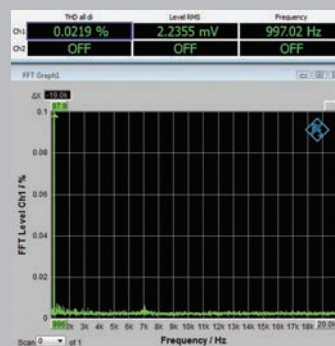
**PREAMP**  
**Gain** x2.6 (8dB)

<b>Frequency response</b>	<b>3Hz-100kHz</b>
<b>Distortion (1kHz, 1V out)</b>	<b>0.03%</b>
<b>Separation (1kHz)</b>	<b>90dB</b>
<b>Noise (IEC A)</b>	<b>-112dB</b>
<b>Overload (in/out)</b>	<b>2.3V / 6V</b>

**FREQUENCY RESPONSE**



**DISTORTION**



**AUDIOLAB 8300CDQ £1099**



**OUTSTANDING - amongst the best.**

**VALUE - keenly priced.**

**VERDICT**  
 Audiolab have excelled here. There's nothing to fault in terms of sound quality and operational performance.

**FOR**  
 - various digital filters  
 - overall sound quality  
 - price  
 - build quality

**AGAINST**  
 - nothing at the price

Audiolab  
 www.audiolab.co.uk