

Audiolab 9000CDT/9000A

Over 40 years have passed since the 8000A amp broke cover, but it's still recognisable in the flagship 9000A, despite LCD screen and DAC on board, and joined by a CD transport
 Review: Mark Craven Lab: Paul Miller

While some manufacturers' product lines can become confusing as models tackling various price points and functionality are launched, relaunched and discontinued, Audiolab has, by contrast, a laser-like focus. It caters very much to the wallet-conscious audiophile, across a clearly delineated stable of amps and players/streamers, which kicks off with its 6000 series and progresses through 7000 and 8300 to the newly launched, flagship 9000 series. This currently comprises two models, auditioned here, but will be joined later this year by another [see boxout p63].

Of the two units, it's the £1999 9000A that will probably get the most admiring looks, being an integrated amplifier with a wide-ranging specification. It's easy to imagine it being sold standalone, to be partnered with whatever analogue and digital sources the customer wishes. Should you be in the market for a silver disc spinner, however, Audiolab's £999 9000CDT is a CD transport that's a perfect aesthetic match. Both are full-width, but relatively slim, and sell in either a silver finish or the matt black pictured here.

FLEXIBLE FLAGSHIP

This duo follows recent CD/amp pairings from the likes of Rotel [HFN Aug '22] and Denon [HFN May '23], which might have you believing in the mooted 'CD revival'. If such a thing is taking hold, rather than it simply being optimistic marketing spiel, then Audiolab can lay claim to have always been a supporter – the 9000CDT trails in the wake of its affordable 6000CDT transport from 2018 and the fully-fledged 8300CD player from 2015.

But first: the amp. The basis for the 9000A lies, we're told, in Audiolab's 6000A integrated, again launched in 2018. This was designed to meet the

RIGHT: Supported by a reinforced alloy frame, the 9000CDT's transport mechanism spins at a high rate, reading ahead and buffering the CD data. A temperature-compensated clock [top right] services the optical and coaxial outputs

varied demands of the modern consumer, offering everything from Bluetooth to vinyl playback (network streaming was missing, but was incorporated in the follow up 6000A Play). Skip forward and designer Jan Ertner has been asked to replicate the flexibility of the 6000A in a chassis worthy of flagship status, with upgrades to connectivity, digital circuitry and amplification.

So the ES9018 DAC used in the 6000A has gone in favour of the current top-dog ES9038PRO DAC, married to 'proprietary circuitry to make the most of the chip's HyperStream II architecture and Time Domain Jitter Eliminator technology'. Meanwhile, the 9000A's rated output is a full 100W/8ohm – making it Audiolab's most potent integrated – delivered by a dual mono configuration with separate power supply feeds and quartets of output transistors for each channel [see PM's Lab Report, p67]. Look around the back of the amp and you'll find a rear panel packed with connections

[see p67], beginning with four analogue line inputs (one on balanced XLR), an MM phono input, and unbalanced RCA pre out.

MECH TECH

Digital options are also extensive, with pairs of coaxial and optical inputs, a USB-B port for a PC/network transport connection, plus Bluetooth with support for aptX HD and LDAC. Therefore, while not a network streamer, the 9000A is still accommodating of digital files, and boasts full MQA decoding and 'Roon Tested' status. Of course, this does mean there's no app control, which some users might hanker for.

By contrast, the rear of the 9000CDT looks positively minimalist, bare beyond its clock-controlled S/PDIF outputs, 12V triggers and a USB-A input that handles playback of WAV, WMA, AAC and MP3 – arguably of little use when partnered with the 9000A integrated amp, but better to have than not. Inside [see pic, below],

'The 9000A is a chassis worthy of its flagship status'



Audiolab has mounted a purpose-sourced disc mechanism which is well shielded by the surrounding casework.

If Audiolab's intention was to design its 9000 series to look both appealingly discreet and modern while calling to mind its models of yesteryear, then it has certainly succeeded, and there's a synthesis between the amp and CD transport that begs for them to be neatly stacked. After all, the power buttons and main rotaries are positioned in the same place, as are the units' 4.3in colour LCD windows. Naturally the integrated amplifier is a little busier, with additional knobs for source and 'mode' selection (the latter switching the 9000A's operation between integrated, preamp and power

amp), and a 6.35mm headphone output, but it avoids clutter in favour of quiet style with a just a hint of 'retro'.

ON THE MENU

The display panel on the 9000A is also rather charming. It can be switched off, but there's a choice of 'analogue' or 'digital' metering, an Audiolab logo screen, or the 'Home' option which corrals volume, source and other info in a clear, logical fashion. Flicking between these displays is covered by a button on the remote, and this handset also proves a better avenue to accessing the amp's menu settings (this is possible via the front panel rotaries, but

ABOVE: Seen here in matt black livery (silver is an option) there is symmetry in the 9000CDT's [top] and 9000A's [bottom] controls. Both feature animated 4.3in LC display windows

the process is not particularly intuitive). One quirk is that if you buy both units, you'll end up with two of Audiolab's system remote controls. Still, I suppose it's always useful to have a spare...

Menu tools include input gain adjustment to better match the level between sources; L/R balance; maximum and power on volume settings; and the ability to choose between different standby timers. The main highlight, however, is the choice of five DAC filters, plus a synchronous (352.8kHz or 384kHz) upsampling option. However, note that if upsampling is switched on, the DAC filters are not enabled despite still appearing as options on the configuration menu [see PM's Lab Report, p65].

CUT ABOVE

Audiolab's 9000A showcases a crowd-pleasing sound quality, well-balanced across the range as it segues seamlessly between energetic and contemplative when needed. The solid specification is essentially matched by its performance, and that's not damning with faint praise. While you might expect a mid/entry-level integrated to be 'jack of all trades, master of none', the 9000A is a clear cut above, as evidenced by its low-end extension, articulate midrange and considerable power. And when coupled with the matching transport, CDs are afforded the same clean, musical treatment. ➔

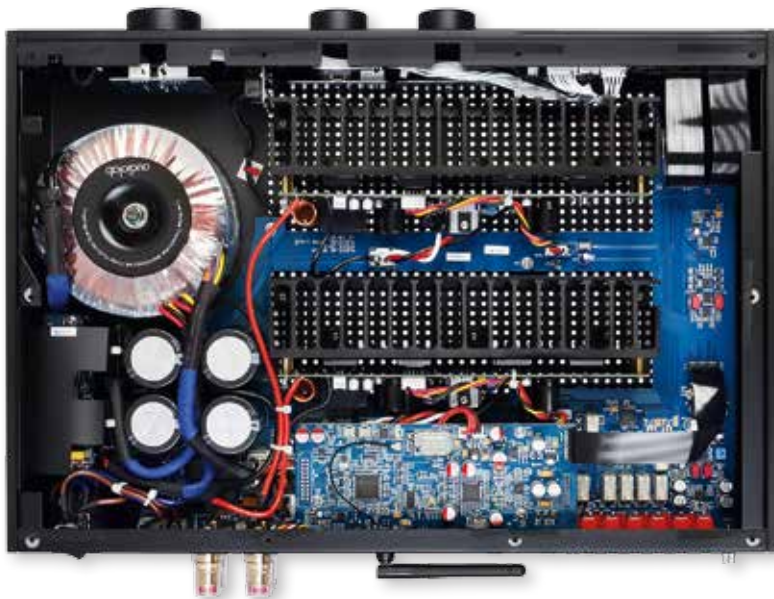
NETWORK PLAYER

Although Audiolab has both the 'just-add-speakers' Omnia model and the affordable 6000A Play in its stable, for its 9000 series it's keeping network streaming separate from its integrated amplifier. This, it says, is for both performance-related concerns and because 'not everyone requires network streaming' – the company's accountants are probably also in favour. Teased at Munich High End 2023 [see p26] and proposed for launch in Q3, priced around £2500, the 9000N [pictured above] is a network player (rather than a digital transport) with an ES9038PRO-based DAC stage, and features the same styling (including the LCD display) as the other 9000 series models.

Full details, including connection options, are still to be confirmed, but one thing that has been revealed is intriguing and points towards Audiolab's ambitions for its flagship streamer. Rather than adopt the same 'mass market' DTS Play-Fi platform found on its 6000 and 7000 Series, the 9000N will use a streaming solution developed by Hong Kong-based brand Lumin. Similarly, its operation will be supported via an 'Audiolab-skinned' version of Lumin's extremely well-designed app [as featured on the T3 network player, HFN Apr '23]. This will be the first time Lumin has licensed its technology to a third party, and the 9000N will also be the first streamer with Wi-Fi as well as Ethernet to use the Lumin platform. Meanwhile, Tidal Connect, Spotify Connect and Apple AirPlay 2 will deliver streaming outside of the control app. More details as we have them...



CD TRANSPORT/AMPLIFIER



ABOVE: The 9000A's big linear PSU [left] feeds two pairs of power transistors per channel [on heatsinks]. The digital board [bottom] includes a Feasycom BT audio module, XMOS USB receiver and tried-and-tested ESS ES9038PRO DAC

Via the amp's USB-B input, the well-recorded 'Done A Lot Of Wrong Things' from Paul Butterfield's Better Days' eponymous album [Rhino Records; 44.1kHz/16-bit] oozed tunelessly from my Perlisten R7t floorstanders [HFN Aug '22] with resonant honky tonk piano, distinct background percussion and an inviting depiction of the singer's bluesy vocals. Bass was surprisingly rich, as were low notes on the piano, and Butterfield's harmonica solo surprised with the reedy, gritty, forceful nature of its output. This was followed by gentle, vibrato strings.

In fact, the whole of this album seemed to be right up the 9000A's street, rapid tempo tracks such as 'New Walkin' Blues' benefitting from its lithe, punchy nature while slower pieces sounded weighty and languid. There was a decent feeling of stage width, and players standing clear of one another with plenty of breathing room. Across the set, the work of Amos Garret (acoustic bass) and Chris Parker (drums) benefited from the amp's low-end control. Best of all, though, was the way it nailed the wide variety of instrumental timbres.

'Dread And The Fugitive Mind' from Megadeth's hit-and-miss 2001 album *The World Needs A Hero* [BMG BMGCAT246CD] has guitar

harmonies, crunchy distorted riffs, a clean bass guitar sound and Dave Mustaine's snarling vocals – and not much in the way of originality.

HAMMERING HOME

Not to worry, for through the 9000CDT/9000A combo it sounded wonderfully sharp and compact, with separation to its many parts (including the vocals overlaid in the chorus) and drive in the guitar chords. When drummer Jimmy DeGrasso's feet hammer his kick-drum in double time before the obligatory solo, the amp was on pace, avoiding slurred indistinction. It's not quite the pedal-to-the-metal

presentation this song – and the thrash genre in general – demands, the 9000A coming across as well-mannered rather than riotous, but it was highly enjoyable nevertheless.

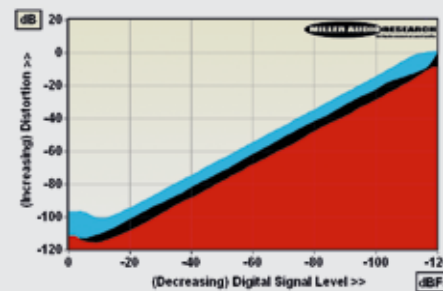
And don't mistake a lack of outright aggression for a lack of grunt. PM's Lab Report [p67] reveals the 9000A exceeds its 100W/8ohm rating and this came through in the way it cajoled my more compact B&W 705 Signature standmounts with a performance that doesn't mind being pushed. Indeed, it seems more communicative at higher levels, where its impressive bass handling is more apparent. ↪

'It was a different beast with the wick turned up'

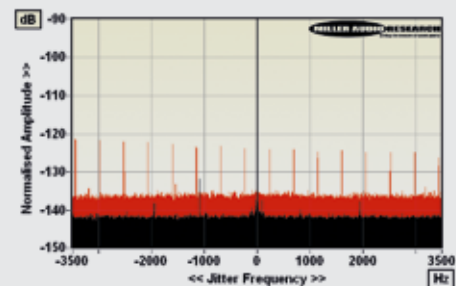
AUDIOLAB 9000CDT/9000A (DAC)

Tested via the 9000A's DAC/preamp output – a maximum 2.06V from a 116ohm source impedance – the partnering 9000CDT transport achieves a wide 109.1dB A-wtd S/N ratio via CD, a figure not bettered even with direct 24-bit inputs to the amplifier. The latter offers a choice of five digital filters although these are only enabled when the 'upsampling' option is switched off. With 'upsampling' on, the 9000A defaults to a gentle minimum phase filter offering a $-0.3\text{dB}/20\text{kHz}$, $-9.3\text{dB}/45\text{kHz}$ and $-4.5\text{dB}/90\text{kHz}$ roll-off with CD, 96kHz and 192kHz inputs, respectively. Jitter is fabulously low at $\sim 8\text{psec}$ with 24-bit inputs (and limited to 118psec by the 16-bit data pattern used with CD) regardless of whether 'upsampling' is engaged or not [see Graph 2, below]. The five digital filters include fast and slow roll-off linear and minimum phase types plus a hybrid option, these offering responses of -0.0dB , -3.4dB , $+0.0\text{dB}$, -5.0dB and -13dB (all re. 20kHz with CD inputs) traded against stopband rejections of 112dB, 16dB, 93dB, 21dB and 98dB, respectively.

Low-level resolution is true to $\pm 0.8\text{dB}$ and $\pm 0.1\text{dB}$ over a 100dBfs range with CD and 24-bit inputs, respectively, and while distortion settles out at 0.0003% at peak level (re. 1kHz) it falls to a lower 0.0001% at -10dBfs with 24-bit inputs [see Graph 1]. Incidentally, peak level digital inputs cause a digital clip of $\sim 0.5\%$ at 20kHz (falling back to 0.0008% -10dBfs) when 'upsampling' is engaged, though this is highly unlikely to occur with typical music data. Otherwise, the 9000A's post-DAC analogue stage offers a good 115-95dB stereo separation and 0.01dB channel balance (all re. 20Hz-20kHz). The ability to select pre/power/integrated outputs from the front panel is a real bonus. PM



ABOVE: Distortion versus digital level over a 120dB dynamic range with 16-bit CD (1kHz, black; 20kHz, blue) versus 24-bit LPCM (1kHz, red)



ABOVE: High resolution jitter spectra (CD, red, limited to 16-bit data pattern; 48kHz/24-bit, black)

HI-FI NEWS SPECIFICATIONS

Maximum output level / Impedance	2.06Vrms / 116ohm (Preamp)
A-wtd S/N ratio (CD / LPCM)	109.1dB / 109.1dB
Distortion (1kHz, 0dBfs/-30dBfs)	0.0003% / 0.0007%
Distortion & Noise (20kHz, 0dBfs/-30dBfs)	0.0019% / 0.0007%
Freq. resp. (20Hz-20kHz/45kHz/90kHz)	+0.0 to -0.3dB/-9.3dB/-4.5dB
Digital jitter (CD / 48kHz LPCM)	118psec / 8psec
Resolution (re. -90dBfs/-100dBfs)	$\pm 0.1\text{dB}$ / $\pm 0.1\text{dB}$
Power consumption	10W (1W standby)
Dimensions (WHD) / Weight (9000CDT)	444x89x342mm / 5.7kg

CD TRANSPORT/AMPLIFIER



ABOVE: CD transport [top] has opt/coax digital outs and a USB-A port for 44.1/48kHz media on an external drive. Amp [below] has MM, three line ins, a power amp in and pre out on RCAs plus 2x coax/opt digital inputs, a USB-B (768kHz/DSD512) input and main outputs on 4mm speaker binding posts

Mercury Rev's 'Holes' [*Deserter Songs*; V2 Music VVR1002772] was an amiable listen at background music levels, particularly the evocation of Jonathan Donahue's plaintive Neil Young-esque singing, but it was a different beast altogether with the wick turned up.

There's all sorts happening here, including strings, acoustic guitar, keyboards, trombone, drums and what sounds like a theremin, and the 9000A was capable enough to make it swell majestically, resolution intact despite the dense production.

UP TO SCALE

'Madness', by Muse [*The 2nd Law*; Warner Music 825646568802], ends in a similar fashion, only more electronica-influenced, and here the amplifier again delivered a performance of impressive scale and emotional impact.

At the start of this track, however, the sparse production includes deep bass and transient effects, which made for a good canvas to experiment with the 9000A's DAC filter options. The differences were subtle, to the

LEFT: Audiolab's system remote caters for the CDT's transport functions, the amp's input, volume and configuration menu while standing ready for the new network player [boxout, p63]



point I could only arrive at a vague preference for Linear Phase (Fast Roll-Off) over the remaining four, as this seemed to bring some extra body to the lowest frequencies. This became my go-to setting (with upsampling disengaged). Other filters might offer more noticeable sound seasoning with different tracks and file formats, so by all means experiment away.

Just when I thought Audiolab's modern-thinking amp and player were most suited to polished productions, on came Howling Wolf's 'Smokestack Lightning' [Geffen; 44.1kHz/16-bit], recorded in 1956. Although never diverting away from its one-chord base, there's more to it than meets the ear, from the swinging feel of Earl Phillips' drumming to the slippery guitar licks. And what I found particularly enjoyable via Audiolab's top integrated was the way this track's live, raw feel hadn't been tempered. It sounded fresh, immediate and thrilling! ☺

HI-FI NEWS VERDICT

The absence of onboard network streaming may limit its appeal to some shoppers, but as an all-round package Audiolab's 9000A integrated offers plenty, from its elegant design and very smart display through its easy operation and useful features. Audio performance is confident and beguiling, marked by detail, sweet tonality and a controlled demeanour, while the 9000CDT puts disc divas in safe hands.

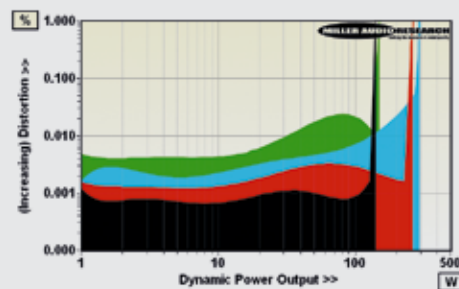
Sound Quality: 87%



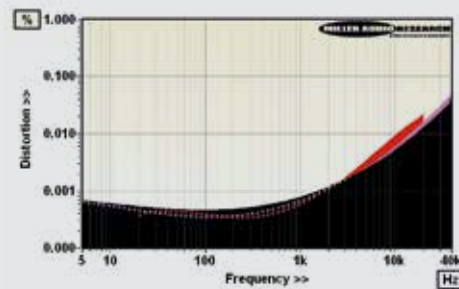
AUDIOLAB 9000A

The 9000A features an input trim that allows the overall gain to be adjusted from a default +23.1dB (via the balanced XLRs) down to +17.1dB (-6dB trim) and up to +29.1dB (+6dB trim). While +23dB is somewhat shy of the 'standard' +40dB gain typically offered, in practice it's perfectly judged for the 2V line output of contemporary sources – this yielding the 9000A's rated 100W/8ohm output. In practice the 9000A achieves slightly more, delivering 2x112W/8ohm and 2x185W/4ohm with sufficient headroom to accommodate peaks of 142W/8ohm and 265W/4ohm under dynamic conditions. Protection imposes a current limit of 12.3A so the dynamic output into lower 2 and 1ohm loads is 297W and 152W, respectively [see Graph 1, below], this being sufficient for most likely partnering loudspeakers of 88dB+ sensitivity and 6-8ohm nominal impedance. Talking of which, the 9000A's output impedance is a fairly flat ~0.03ohm from 20Hz-5kHz after which it picks up to 0.085ohm/20kHz and 0.67ohm/100kHz. So the response is a wide -0.17dB/20kHz and -1.8dB/100kHz into 8ohm but droops slightly to -0.4dB/20kHz and -3.6dB/100kHz into a lower 2ohm.

Distortion and noise are both very low, the former almost unaffected by power output (though it does increase with decreasing load impedance) from 0.0004-0.0006%/1kHz over a full 1-100W/8ohm range. The low noise helps maintain a very wide 92dB A-wtd S/N ratio (re. 0dBW) while distortion settles out at 0.00045-0.012% (re. 1-10W from 20Hz-20kHz), increasing only slightly to 0.023%/20kHz at a full 70W/8ohm [see Graph 2, below]. Capacitive coupling between channels is low and the stereo separation excellent at 83-100dB (20Hz-20kHz). PM



ABOVE: Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads. Max. current is 12.3A



ABOVE: Distortion versus frequency versus power output (1W/8ohm, black; 10W, pink; 70W, red)

HI-FI NEWS SPECIFICATIONS

Power output (<1% THD, 8/4ohm)	112W / 185W
Dynamic power (<1% THD, 8/4/2/1ohm)	142W / 265W / 297W / 152W
Output imp. (20Hz-20kHz/100kHz)	0.029-0.085ohm / 0.67ohm
Freq. resp. (20Hz-20kHz/100kHz)	+0.0dB to -0.17dB/-1.8dB
Input sensitivity (for 0dBW/100W)	197mV / 2000mV
A-wtd S/N ratio (re. 0dBW/100W)	91.9dB / 111.9dB
Distortion (20Hz-20kHz, 10W/8ohm)	0.00045-0.016%
Power consumption (Idle/Rated o/p)	29W / 325W (1W standby)
Dimensions (WHD) / Weight (9000A)	444x89x342mm / 9.4kg