



# Different class

*Breaking with convention, Cambridge Audio's new range-topping amp is truly in a class of its own*

**PRODUCT** Cambridge Audio Azur 840A

**TYPE** Integrated stereo amplifier

**PRICE** £750

**KEY FEATURES** Size (WxHxD): 43x11.5x38.5cm

• Weight: 15kg • Class XD operation • Inputs: one balanced XLR, seven single-ended line-level RCA-phono  
• Outputs: one tape, one preamp output • Two sets of speaker terminals • Rated power: 120W per channel (eight ohms) • Incognito multiroom connections

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Cambridge Audio can hardly be blamed for making the most of the success that its Azur range has enjoyed. We weren't entirely prepared, however, for the full extent to which the company has taken Azur upmarket. Make no mistake, the 840A integrated amp is a fancy and, allegedly, very high-flying bit of kit.

The amp is on the heavy side, even by the standards of recent high-power integrations. It

also possesses an unusual front panel made of thick, engraved, brushed aluminium with a large LCD panel. This shows not only volume setting – both in dB and on a 'rotary' graphic display – but also the appropriate names for each of the seven line inputs. By default they are simply 'Input 1' and so on, but they can be named to suit whatever you've connected. Nice touch!

Central to several features is the electronic volume control, which replaces the usual mechanical potentiometer control. The rotary volume knob controls relays, which connect an array of resistors in such a way as to give the required gain on each channel. Using relays in this way avoids integrated-circuit volume distortion, noise and limited headroom, but introduces another problem which we could frankly have done without – loud mechanical clicking noises from the amp as the volume is changed. The actual output is click-free, but the racket from within the amp, like some antique telephone exchange, is off-putting. The volume knob is a bit wobbly, too.

This volume control technique allows gain trim for each input, balance control 'for free' (with no added circuitry) and a civilised ramp-up in volume as the amp is turned on. The tone controls – defeatable individually or together – are more conventional.

At the rear of the unit are the sockets for seven regular inputs plus tape, with Input 1 offering a choice of balanced or unbalanced connection. Twin speaker outputs are individually switchable, and there's a preamp out, plus the usual remote control sockets and connections to Cambridge's new 'Incognito' multiroom technology.

Inside the amp, proceedings are dominated by a particularly large toroidal mains transformer, which helps support the claimed output of 120 watts per channel (comfortably met in our tests). It is surrounded by cunningly shaped heatsinks on which are mounted two pairs of large output transistors per channel, plus the 'current displacer' which makes 'Class XD' work (see box). With an additional small toroid

mounted on the rear panel, full dual-mono construction starting with separate mains transformer windings, and a host of ancillary and protection circuitry built in, the whole assembly is impressive.

Given Cambridge's claims for the technical performance of Class XD operation, we had to run some lab tests and indeed this is a very well-behaved amplifier. Distortion isn't truly eliminated as claimed, but we couldn't find any test results among amplifiers we've looked at recently that are as good. Can the extra few distortion-free dB make the crucial difference?

**SOUND QUALITY**

The 840A has to face the high standard set by its little brother, the 640A v2 (see HFC 279), which at £300 is a very classy 'budget' amp. But the 640A does lack a little authority compared to the best models a little higher up the price range, and we were keen to see if that attribute could be found in abundance in the 840A.

As listening wore on, we tended increasingly to the view that it does indeed offer a considerable degree of authority, handling a variety of loudspeakers with what can fairly be described as an iron grip. It puts out the power with invariably finely judged control and discretion. Above all, it seems pretty much completely unflappable.

Any amplifier with a few watts on hand will play loud. Really good amps – and we include the 840A in that group – will play loud and subtle. It often happens that loud sounds are combined with a variety of quieter ones in the background, which nevertheless contribute significantly to the whole. The ability to resolve those background sounds is something one cannot take for granted in audio kit, but this amp seems to have no trouble doing just that.

This ability was most marked in one of our orchestra test tracks, where a combination of loud brass and percussion instruments all too often essentially obliterates the woodwind. In this case, by contrast, not only could the woodwind be heard but it was still possible to locate oboes and flutes separately. Even better,



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we'd swear the cymbals sounded less harsh than we're used to. There's no sweetening going on, the sound seems amazingly clean.

Bass is very hard to fault by any standards, while treble is extended and open. Once or twice we thought we caught a hint of midrange coloration on voices (both male and female) but it's hard to be sure. If there is a weakness to the 840A, it's in the rhythm and timing department. This doesn't quite have the 'snap' of some amps, but we're inclined to suggest that this is a real either/or decision made on taste grounds: you can have superb clarity or snappy (perhaps slightly enhanced) timing, but not both.

We're very impressed with this amp. It handles simple and complex music with equal aplomb, loud and soft dynamics with equanimity. It is revealing, communicative and musically involving. It's not beyond a little tweaking – we'd love a version with quieter relays, a better damped casework and a more solid volume control. But for the price, its performance makes it a classic high-end bargain. **HFC**

*Richard Black*



**WHAT IS CLASS XD?**

The 840A's designer, Doug Self, has done more perhaps than anyone to investigate and document the performance limits of Class A, Class B and Class AB amplifier outputs. With Class XD (short for 'Crossover Displacement'), Self has come up with a cunning way of ensuring Class A-like performance with Class AB efficiency. The idea has surely crossed every designer's mind – keep standing current low, but prevent either output transistor turning off and causing crossover distortion. Class XD achieves essentially this and more. It is simple but clever and, as far as we can find out, truly novel. Indeed, distortion is about half that of the best Class AB amps we've seen. The 840A is an excellent introduction to a genuinely innovative amp design.

VERDICT	
<b>SOUND &gt;&gt; 90%</b> [Progress bar]	<b>PRO</b> With plenty of power on hand, this amp produces sound that's clear, open, inviting and generally very realistic from almost any loudspeaker, in any kind of music.
<b>FEATURES &gt;&gt; 90%</b> [Progress bar]	<b>CON</b> Relay-switching noises from within, and the volume knob's a little wobbly. Sonically, timing may be a little too laid back for some tastes.
<b>BUILD &gt;&gt; 85%</b> [Progress bar]	
<b>VALUE &gt;&gt; 93%</b> [Progress bar]	

**CONCLUSION**  
A very fine amplifier that's practical, smart, innovative and fully featured; it also sounds better than almost everything else at the price. If you're looking for an amp between £500 and £1,000, make sure you have a listen to this.

**HI-FI CHOICE**  
OVERALL SCORE >> **91%**