

EQUIPMENT REPORT



Cambridge Audio Azur 851C CD Player/DAC

The Apple Sometimes Falls Far From The Tree

Robert Harley

Cambridge Audio's Azur 840C CD player made quite a splash back in 2007. In my review of that device (Issue 174, September, 2007) I was shocked not only by the advanced technologies and build-quality of this \$1499 player, but more importantly by how good it sounded. The 840C, I concluded, was one of the great bargains in high-end audio despite several price increases that brought its final cost to \$1795.

After a five-year run—an eternity in digital audio—Cambridge Audio has finally replaced the 840C with the more capable and sophisticated 851C. This new \$1999 machine looks and operates much like the 840C and is based on a similar technology platform, but offers an upgraded feature-set to accommodate the needs of today's digital consumer, notably a USB input. The 851C has multiple digital inputs with source-switching along with variable analog output to drive a power amplifier directly, making the player a digital hub for a variety of digital sources. These sources now include an iPod/iPhone/iPad, although Apple connectivity requires a separate dock, Cambridge Audio's ID100. An Apple product connected via this dock can be controlled by the 851C's remote control. (If you have ever wondered why docks for Apple products are always small add-on devices rather than built into the products themselves, it's because Apple gets a percentage of the product's list price as a royalty. The royalty difference between a \$100 dock and a \$2000 CD player makes Cambridge's decision a no-brainer.)

The other digital inputs include AES/EBU as well as two additional inputs, each selectable between RCA coax and TosLink optical. Analog output is via a pair of RCA jacks or balanced XLR connectors. As I mentioned, you can set the 851C to fixed-level output mode when using a preamplifier, or forego

a preamplifier in your system by engaging the 851C's integral volume control. The digital inputs can be named by the user. Three digital outputs are also provided, one each on TosLink, coaxial, and XLR jacks. A well-thought-out remote control completes the package.

The USB input doesn't require a driver download for Windows machines, but is limited to 96kHz/24-bit data. A driver download from Cambridge, however, will increase this figure to 192kHz/24-bit. Mac users can simply select the 851C's "USB 2.0" setting and decode files up to 192kHz with no driver downloads. The owner's manual says that the 851C "should also work with the new USB 3.0 ports where the PC will simply treat the 851C as if it were a USB 2.0 or 1.1 device." The new USB 3.0 protocol is a significant revision of the current USB 2.0 standard, with higher transfer rate (5 gigabits per second) and two-way communication via dual unidirectional data paths. USB 3.0 is backward-compatible with USB 2.0 and USB 1.1, which means that USB 2.0 DACs won't become obsolete when USB 3.0 is implemented. It's likely that the dual unidirectional data paths of USB 3.0 will be utilized for separate clock and data lines, with the DAC clocking the source computer.

The 840C's core technologies—a custom digital filter and upsampler from Anagram Technologies, dual-differential DACs, and a custom transport—remain, but all implementations have been upgraded in the 851C with the latest Analog Devices AD1955 DACs, Anagram's new upsampling algorithm (to 384kHz/24-bit), and a revised custom transport. The Anagram Technologies digital filter runs on a 32-bit Blackfin DSP chip, and offers three different filter types (linear-phase, minimum-phase, steep) so that you can

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select the filter whose sound best complements your system. I liked the ability to select filters by remote control from the listening seat. Interestingly, the transport mechanism incorporates an upsampler right in the drive. The upsampled data are again upsampled in the Anagram Technologies chip.

Popping the hood revealed a design and layout that is considerably more efficient and streamlined than that of the 840C. Greater integration of circuits and smaller surface-mount parts have considerably reduced the circuit-board real estate. The 840C's interior, by contrast, looked like it had been designed by a tweeker on a mission; the chassis was packed with lots of local power-supply regulation, filtering, and other high-end techniques. The transport is a custom design with a more robust construction and sturdier disc-clamping mechanism than that found in Philips and Sony mechanisms. The chassis work is particularly nice for a player of this price, with extruded-aluminum side panels finished with a brushed surface. The acoustically damped chassis, available in black or silver, is well-finished, robust, and handsome. Overall, the 851C offers quite a bit of advanced technology, a great feature set, and a solid build for \$1999.

Listening

There's a natural tendency to assume that when a product is replaced, the successor's sonic character will be similar to the earlier model. This is especially true when the original product was a commercial hit and developed a following.

That was not the case with the 840C and 851C. Not only do the two players sound very different, but the 851C is almost a mirror-image of the 840C's strengths and shortcomings.

The 840C was so compelling because it brought a smoothness, refinement, and sophistication in the midrange and treble to an affordable price point (\$1499 at introduction). The treble hardness and synthetic character that often characterize digital playback at this price were simply gone. Moreover, the 840C had wonderful soundstage dimensionality, spaciousness, and bloom. Although not the last word in resolution, the 840C exhibited an ease that consistently drew me into the musical performance. The soundstage perspective was slightly distant and laid-back, contributing to the player's overall sense of ease. The tradeoff was a somewhat soft bass, reduced impact in the bottom octaves, and muted dynamic contrasts. The 840C was the CD-player equivalent of a classic tube amplifier—a good thing in a mid-priced digital source in my view. Overall, the 840's minor sonic shortcomings were well worth the ease and musicality the player brought to the table. In my review I called the 840C the best-sounding disc player under \$5000.

Given the 840C's great musical and commercial success, I was surprised that the 851C took a decidedly different sonic

turn. Where the 840C was laid-back, smooth, and relaxed, the 851C is forward, incisive, and vivid. This is a player that brings the soundstage forward and seems to "spotlight" instrumental images with a heightened sense of presence and immediacy. In addition, the treble balance favors resolution and detail over ease and smoothness. Cymbals are prominent in the mix, but with a far greater sense of air and openness compared with the 840C. Similarly, the 851C is considerably more transparent and resolving than the 840C. The newer machine brings a sense of clarity to instrumental images as well to the space in which they exist. There's a real feeling of hearing through the player to the recording venue. Moreover, the new player has tighter image focus, and more tangible space between and around those images. Count Basie's marvelously recorded piano that begins "The Blues Machine" from *88 Basie Street* [JVC XRC] was remarkable for the air around the piano and for the resolution

SPECS & PRICING

Analog outputs: Balanced on XLR jacks, unbalanced on RCA

Digital outputs: TosLink optical, SPDIF on RCA, AES/EBU

Digital inputs: Two TosLink optical, USB Type B (Audio Profile 1.0 or 2.0, user selectable), AES/EBU

Filters: Three selectable (linear phase, minimum phase, steep)

Output level: Variable; 2.2V at full scale unbalanced (4.4V balanced)

Control inputs/outputs: RS232, IR emitter in, control bus in and out

Dimensions: 16.9" x 4.5" x 14.7"

Weight: 22 lbs.

Price: \$1999

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ASSOCIATED COMPONENTS

Digital Sources: iMac and MacBook servers, Pure Music and Audivina software

Analog Source: Basis Inspiration turntable with

Basis Vector 4 tonearm, Air Tight PC-1 Supreme cartridge; Simaudio Moon 810LP phonostage

Preamplifiers: Rowland Corus, Constellation Perseus

Power Amplifiers: Jeff Rowland Design Group 725, Lamm ML2.2, Constellation Centaur monoblocks

AC Conditioning and Cords: Shunyata Triton and Talos, Audience aR6TS conditioners; Shunyata Zitron Anaconda and Audience Au24 AC cords

Cables: Shunyata Anaconda interconnects and loudspeaker cables; MIT MA-X2 and MA-C interconnects, MIT MA-X SHD loudspeaker cables; AudioQuest WEL Signature interconnects, Transparent XL Reference interconnects; AudioQuest Diamond USB digital cable, WireWorld Platinum Starlight USB
Equipment Racks: Stillpoints
Isolation: Stillpoints Ultra SS and Ultra5

Acoustics: ASC 16" Full-Round Tube Traps, 10" Tower Traps

Accessories: VPI 16.5 record-cleaning machine; Mobile Fidelity record brush, cleaning fluid, stylus cleaner

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of the piano's decays. In this regard, the 851C is more "modern" sounding; the trend in digital playback today is toward a cleaner, quieter, and more transparent rendering.

Transient detail was vividly portrayed, reinforcing the 851C's immediacy. Acoustic guitar, percussion, and other transient-rich instruments were brought to the fore with a lively quality. The downside, at least in my system and for my taste, is that the 851C's forward "Row A" perspective can sound a bit aggressive. Russ Barenberg's acoustic guitar on *Skip, Hop & Wobble* could get a little edgy on the transient leading edges.

The 851C's 180-degree reversal from the 840's sound extended to the bass and dynamics. Those areas were the earlier player's shortcomings; the bass wasn't that well defined or taut, and dynamics were slightly muted. But the 851C has deep extension and real power and impact on bass transients. The midbass is rich, warm, and fully fleshed out, but also highly articulate, resolved, and communicative. Coupled with the 851C's wide dynamics, the bass performance gave the player an upbeat propulsive drive that the 840C couldn't hope to match.

Turning to the 851C's performance when driven via its USB input from a tweaked-out MacBook Pro running Audivina software, I found that playing a CD in the 851C's integral transport sounded slightly better than playing rips from that CD via the MacBook. The MacBook is dedicated to music playback, and has been optimized for sound quality. The CD had a slightly more organic and natural rendering of instrumental

timbre, particularly strings. It wasn't a large difference; the sonic difference between USB cables was greater than the sonic difference between CD and USB. The 851C's USB input will serve computer-music listeners just fine.

Conclusion

The Cambridge 851C is a highly capable and versatile hub of a digitally-based audio system. In addition to playing CDs, the 851C has multiple digital inputs, source-switching, and a volume control, obviating the need for a preamp in systems with all-digital sources. It's also well built, nicely finished, and a pleasure to use.

The 851C's sonic character will suit some listeners and systems better than others. This player/DAC is extremely transparent, has good resolution, wide dynamics, and deep and powerful bass. The presentation is on the incisive and vivid side, with an immediacy through the midrange that brings the soundstage forward. Similarly, transients are vividly portrayed. If your system needs a bit more sparkle and life, the 851C is a good choice.

If you are a fan of Cambridge Audio's 840C, the 851C's sonic character may not fit your expectations. The 851C trades its predecessor's laid-back ease for greater transparency and resolution, as well as significantly improved bass performance. But if you are in the market for a player in this price range and are new to the Cambridge line, the 851C's extensive capabilities and lively, transparent, and dynamic qualities make it a must-audition product. **tas**

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