

## Home Audio Equipment Review



September 2007

### Bryston BCD-1 CD Player

by Philip Beaudette

*5.1 - 3.1 = stereo.* Bryston will use this slogan in print advertising this fall to announce the release of the new BCD-1 CD player. What makes the BCD-1 worthy of such sloganeering is that it's the first CD player Bryston has ever made, even though the company has been in business since the 1960s. Over the course of its existence, this company from Peterborough, Ontario, has established a name for itself by constructing nearly indestructible amplifiers and preamps that are all backed by an industry-leading 20-year warranty.

So why did Bryston wait until 2007 to introduce a CD player? Well, what I haven't told you is that the BCD-1 isn't Bryston's first venture into the digital world. Those familiar with the company will know that Bryston's current line of preamps and integrated amplifiers all come with the option of onboard digital-to-analog conversion. I guess after making D-to-A conversion an option for several years Bryston finally decided it was time to incorporate a transport and offer a standalone player.

Of course, when a company has been around as long as Bryston has, one tends to have certain expectations, even for a first CD player. Does the BCD-1 make good on its heritage? Let's see.



### Review Summary

**Sound** "Pure Bryston, which is to say that it sounds transparent, neutral and highly revealing. It would be impossible for me to pinpoint any characteristic in its sound that I heard across a range of discs. What you hear will depend less on the BCD-1 and more on the other components in your system and the CDs you own." "Strong in the bass, open and clear in the treble, and transparent to the point of eerie realism."

**Features** "Bryston selected a Philips L1210 CD drive for a transport. Bryston modifies it for use in the BCD-1, replacing the clock with their own hand-selected clock, which it synchronizes to the DAC." "The engineers at Bryston have chosen the same DAC for the BCD-1 that they already use in the company's preamps and integrated amps: the Crystal CS4398." "Around back you'll find connections for balanced XLR and unbalanced RCA analog stereo output as well as TosLink, S/PDIF and AES/EBU digital output. The analog output is fully differentially balanced."

**Use** "The remote is Bryston's classic CNC-honed aluminum block, which lights up nicely in the dark and does double duty as a doorstop or paperweight. (I never tire of seeing people's reaction the first time they lift it.)" "My biggest criticism in the actual use of the BCD-1 is the display. It's *tiny*."

**To upsample or not to upsample?**

The BCD-1 (\$2500 USD) is a Red Book-only player. It can read your CD-Rs, but don't put your hybrid SACDs into the BCD-1 and expect

to hear anything more than the PCM stereo layer. I contacted James Tanner, vice president at Bryston, and asked him about his company's decision to build a CD player with no provisions for high-resolution formats. He explained that when Bryston started offering onboard digital-to-analog conversion, the company was waiting to see what would happen in the high-rez format war. In time it became clear that neither SACD nor DVD-A was gaining widespread acceptance and therefore neither would replace Red Book CD as the digital storage medium of choice.

In developing the BCD-1 Bryston tried experimenting with SACD playback but found that the drives offering SACD capability were DVD drives that don't use multiples of CD's 44.1kHz sampling frequency. This posed a problem because the DAC Bryston planned to use both upsamples and oversamples the incoming signal. After testing various DVD drives, Bryston's engineers found they couldn't match the sound quality of a dedicated CD drive. As a result the company decided to forego high-resolution playback altogether and focus on the CDs most of us already own. In doing so, Bryston selected a Philips L1210 CD drive for a transport. Bryston modifies it for use in the BCD-1, replacing the clock with their own hand-selected clock, which it synchronizes to the DAC.

**Value** "There may be better disc spinners out there, but I guarantee that many that are competitive with the BCD-1 cost multiples of its price and more than likely offer a different sound rather than one that's obviously better."



Speaking of which, the engineers at Bryston have chosen the same DAC for the BCD-1 that they already use in the company's preamps and integrated amps: the Crystal CS4398. The chip first upsamples the incoming signal from 44.1kHz to 192kHz and then oversamples it 128 times to create a new sampling frequency before running it through an interpolation filter

to create a more analog-like waveform. Once the digital signal leaves the DAC it is buffered and amplified by discrete class-A op-amps. Bryston is a major proponent of using discrete devices because they allow design of a circuit that exactly meets the needs of the DAC. The signal that enters and leaves the DAC is very sensitive to noise from the digital and analog power supplies, so Bryston paid special attention to circuit-trace routing of these (both of which are closely regulated and filtered to reduce noise and distortion). By routing analog and digital traces away from each other, noise is eliminated.

Around back you'll find connections for balanced XLR and unbalanced RCA analog stereo output as well as TosLink, S/PDIF and AES/EBU digital output. The analog output is fully differentially balanced. A remote 12V trigger is also present as is an RS-232 port should software upgrades become available.

Weighing a touch over 18 pounds, the BCD-1 measures 17" or 19" wide (depending on the faceplate you choose), 11 1/4" deep and 3 1/8" high. The faceplate can be ordered in silver or black. The review sample was the 19" silver version, and although I really liked how the thick silver faceplate looked, I would choose the 17" version if I were buying a BCD-1, simply because it fits better in my equipment rack and matches the size of my other components. The BCD-1 looks sharp, but it didn't command the same attention as the Simaudio Moon CD5.3 I reviewed several months ago. The BCD-1 is just a no-nonsense CD player. If you like to look at your equipment more than you like to listen to it, don't buy the BCD-1.

The remote is Bryston's classic CNC-honed aluminum block, which lights up nicely in the dark and does double duty as a doorstop or paperweight. (I never tire of seeing people's reaction the first time they lift it.) Other than controlling all functions of the CD player, including the display brightness, it also has volume control for a Bryston preamp or integrated amplifier. When I reviewed the B100 SST last year, I said that its remote was easily the nicest I've used. The same goes for the BCD-1's remote.

My biggest criticism in the actual use of the BCD-1 is the display. It's *tiny*. Unless I was sitting close to the player -- closer than my usual eight-foot listening distance -- I couldn't read the track number or the elapsed time, which made backtracking to hear something again more difficult.

## Sound

The BCD-1 is pure Bryston, which is to say that it sounds transparent, neutral and highly revealing. It would be impossible for me to pinpoint any characteristic in its sound that I heard across a range of discs. What you hear will depend less on the BCD-1 and more on the other components in your system and the CDs you own. Paired with the B100DA SST integrated amplifier, the BCD-1 made it easy to determine the sound quality (or lack thereof) of any recording I own. It didn't homogenize my music collection the way equipment with a strong sonic signature can. The absence of any discernible "sound" in the BCD-1 was akin to looking at the world through reading glasses rather than sunglasses. Sure, sunglasses will keep you protected if it starts to get bright, but you can't see things as they are when you see them through colored glass. The BCD-1 offers a clear view of the music.

That's not to say that the BCD-1 doesn't have any sonic attributes. In keeping with the



Bryston house sound, it was strong in the bass, open and clear in the treble, and transparent to the point of eerie realism.

### Associated Equipment

**Loudspeakers** – PSB Platinum M2.

**Integrated amplifier** – Bryston B100DA SST.

**Digital** – NAD C542 CD player, Blue Circle SBD DAC.

**Digital Cable** – AMX Optimum AVC-31 coaxial cable.

**Interconnects** – Kimber Kable Tonic.

**Speaker cables** – AudioQuest Type 4.

Bryston has always been synonymous with good bass reproduction. This likely has something to do with the company's reputation for building powerful amplifiers that can function handily with difficult speakers. This aspect of the Bryston sound is fully present in the BCD-1 as well; it reproduced bass with solid impact, depth and lots of speed. If you listen to a bass-heavy track you'll be able to follow the notes as they plummet deeper, hearing and *feeling* them move through the room. "Angel," the opening track on Massive Attack's *Mezzanine* [Virgin Records 45599], is just one example of this. The bass line that opens the track gives the song a dark, brooding feel -- a sharp contrast to the subject

presented in the title. What impressed me most was the sure-handed control the BCD-1 had over the low end, making it easier to hear what was happening further up the frequency range. The bass went deep (within the limitations of my speakers), but it wasn't exaggerated the way it can be when there is too much roundness or bloom.

Using a pair of bookshelf speakers with limited bass extension had a major part to play in the control I heard, but I've noticed that even small speakers can produce large-as-life images if they're on the recording. One example of this can be found in Elliott Smith's "Going Nowhere" from *New Moon* [Kill Rock Stars KRS455]. The warmth of Smith's acoustic guitar blends beautifully with the sweet sound of his voice, but the size of his guitar seems cavernous, as the resonance of the wood gives it extraordinary fullness in the room. It meshes perfectly with his sound, and through the BCD-1 it was there in abundance. It's the proverbial chameleon in the way it relays just the information on the disc, adding little or nothing of its own. My guess is that the BCD-1 will find a long-term home in many systems precisely because it's nearly impossible to point the finger at anything it does *wrong*.

When I reviewed the B100 SST integrated, I was amazed by how transparent and clean it sounded. Ditto for the BCD-1. Its noise floor is so low you might be surprised by what's happening in the quietest passages of music you thought you knew well. The other day I was listening to the *Jackie Brown Soundtrack* [Maverick/A Band Apart CDW 46841] and Johnny Cash singing "Tennessee Stud." I usually zone in on Cash's voice as he tells the story of the horse that's "long and lean," but this time I found myself more intrigued by the people in the bar where the tune was recorded. You can hear the call-outs and hollers from the crowd on most systems, but with the BCD-1 the location of those voices and even the clinking of beer glasses (which I'd never noticed before) were impressively clear. This wasn't a case of too much detail, but rather an instance where I closed my eyes so I could absorb everything that was taking place in front of me.

Such a quiet backdrop against which music emerged helped to establish a greater emotional connection. On Gary Jules' cover of the Tears for Fears song "Mad World" off the *Donnie Darko Soundtrack* [Sanctuary SANDD320], the detail in the voice made it sound even more

fragile, its vulnerability a perfect complement to the theme explored in the lyrics. Small nuances such as subtle tonal inflections that are glossed over on less-transparent CD players were clearly revealed on the BCD-1. I found myself grabbing CDs I hadn't listened to in a while just to hear how they sounded through the Bryston BCD-1.

## Comparison

I did a round-robin comparison that incorporated my NAD C542 CD player (\$500), the DAC onboard the Bryston B100DA SST (a \$1000 option) and the Blue Circle SBD DAC (\$1895). In the case of the two DACs, I used the Bryston CD player as a transport in order to keep things as even as possible.

The BCD-1 was better across the board than the C542. It exhibited superior bass depth and impact, a lower noise floor, more extended highs that projected from the speakers with a greater sense of ease, and a better-focused and more spacious soundstage. Of course, at five times the price I expect improvements. Is the BCD-1 five times as good? I've never been a fan of attaching numbers to quantify the performance of subjective criteria, so I won't answer that. What I will say is that while the C542 is a very good CD player *at its price*, the BCD-1 is irrefutably better and is a very good CD player, period, no qualifying statement required. For someone wanting to improve the sound of his mid-priced system and move toward something that more closely approaches the best digital playback available, the BCD-1 is a good place to start.

The quality gap between the BCD-1 and the DAC onboard the B100DA SST was far smaller and more difficult to discern, which makes sense. As I noted, the BCD-1 uses the same DAC as the B100DA SST. Given that the two also use the same gain stages it's not much of a surprise that they sound very similar. In fact, I wouldn't bet any money on my ability to distinguish between them in a blind listening test. There were times with certain recordings when I thought I heard a difference here or there, but when I would listen to the same track over again I wasn't always sure. Bryston takes time to explain in marketing literature why eliminating jitter is the biggest advantage of a standalone CD player. This may be true, but if there were differences resulting from jitter between the BCD-1 and the B100DA SST's internal DAC, I wasn't hearing them. To Bryston's credit, the B100DA SST's DAC re-clocks the incoming signal to reduce jitter, and my guess is that it does a pretty good job of this, which is why I thought the products sounded virtually identical.

The sound of Blue Circle's SBD differs enough from that of the BCD-1 that people will likely prefer one or the other. In terms of bass reproduction I'd give the upper hand to the BCD-1. While the SBD could produce excellent lows with good detail and clarity, the Bryston CD player managed both of these feats but with a bit more weight and fullness. In general, I found that the BCD-1 produced a bigger, fuller soundstage than the SBD, but the difference wasn't enormous. Higher up the frequency spectrum, the SBD tended to place a touch more space around instruments and voices and had a bit more ease in its presentation, but the BCD-1 was close. As I wrote in my review of the SBD, when I compared it to the DAC onboard the B100DA SST, I found I was pretty happy listening to whatever was playing at the time, and that holds true here as well.

## Conclusion

With the BCD-1, Bryston has succeeded in building a CD player worthy of the company name. I haven't heard flagship players from other companies, but the BCD-1 is the best

digital component I *have* heard. There may be better disc spinners out there, but I guarantee that many that are competitive with the BCD-1 cost multiples of its price and more than likely offer a different sound rather than one that's obviously better.

As we all know, CD sales continue to decline, and that means music downloads may soon spell the death of the format altogether. It might therefore seem strange to an audio outsider -- the average iPod owner -- that anyone would want to spend \$2500 to play a format that might be going the way of the dodo. I don't see a problem. Although music downloads will inevitably continue to cut into CD sales, I'd be surprised if CD production stopped anytime soon. The majority of the music most of us own is stored on CDs, so it makes good sense to have something that can take full advantage of the medium.

Therefore, the simple, no-nonsense Bryston BCD-1 could be the last CD player you will ever buy. As for me, there's only one thing I want to know: When can I expect the first Bryston turntable?

...*Philip Beaudette*

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**Bryston BCD-1 CD Player**

**Price:** \$2500 USD.

**Warranty:** Three years parts and labor.

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