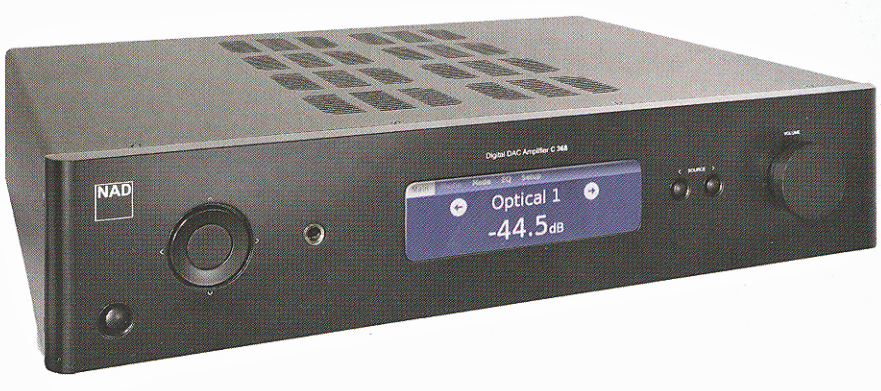

NAD C 368 Hybrid Digital DAC/Amplifier

Classic Sound, 21st Century Capabilities

Vade Forrester

Anytime I hear a gripe about how expensive high-end audio has become, I reply with a single word: "NAD." Well, maybe that's not really a word, but it's an effective rebuttal to claims that the hi-fi hobby has become too expensive. Ever since its establishment, NAD Electronics has been focused on providing good-sounding components at *very* reasonable prices. The new $899 C 368 amplifier/DAC reviewed here continues that tradition. However, the company has competition (I like that) from Rotel's $1299 A14 DAC/amplifier and Yamaha's $899 A-S801 DAC/amplifier, to cite a couple I've reviewed. And although $899 is hardly a bargain-basement price for many, it buys you a lot of capability.

So what's a "Hybrid Digital DAC/Amplifier?" In NAD parlance, it's an integrated amplifier with analog and digital inputs and outputs that is also equipped with an internal 192kHz/24-bit DAC. An increasing number of integrated amps in today's market sport built-in DACs. Like the Rotel A14 amplifier, the C 368 is rated at 80Wpc and has a Bluetooth aptX digital input in addition to a moving-magnet phono input, unbalanced analog inputs, and a built-in headphone amp. Its digital inputs, however, are SPDIF only, two on coaxial jacks and two on optical (TosLink) jacks. There is no standard USB input, which tells us that the stock C 368 won't let you use your computer as a source, and will not play the highest-resolution digital files. The Yamaha and Rotel amplifiers play DXD files and high-speed DSD files, but neither plays MQA files; that's understandable, since MQA is rather new. Initially inclined to sneer at NAD's "yesterday" DAC, I quickly realized the company had chosen to focus on other features. Given the speed at which DAC technology is advancing, that might be a very wise choice; adding an external player (a DAC/streamer like the Oppo Digital Sonica or the Auralic Aries Mini) plus a storage drive for your music files gives you advanced digital playback capability. In other words, you won't have to replace a perfectly good amplifier to upgrade digital technology.

NAD amplifiers are often marketed with modest RMS power ratings but are capable of higher peak output, which makes them sound more robust than their specs suggest. That's how it is with the Class D C 368; rated at 80Wpc RMS into four and eight ohms, it produces 240 watts IHF dynamic power into four ohms and 145 watts into eight ohms. The faceplate is built around a central window with a multicolor display that's legible from across my listening room. A flexible remote lets you control not only the C 368 but also other NAD equipment such as FM tuners (still in NAD's lineup) and CD players (ditto), so your coffee table won't collapse under the weight of multiple remotes. The C 368 comes in a medium-sized black enclosure, with the aforementioned display window in the center of the front panel, and a single large volume knob to the right. A numeric display shows the volume setting in half-dB steps. The default setting is minus 20dB, which was suitable for my speakers' normal listening level. Between the volume knob and the window are two buttons that enable you to scroll through the digital and analog inputs. It's easier to use the remote to select the input, as it has individual buttons for each. To the left of the window is a ¼" unbalanced headphone jack, and left of that are controls that remind me of the jog dials on early iPods.

On the rear panel is the typical rear-panel stuff: inputs, both digital and analog, along with a preamplifier-out in the center, a grounding terminal for turntable ground, two sets of speaker output jacks, and an IEC power input jack and on/off switch. On the left end of the rear panel are two slots, covered by protective covers labeled MDC, or Modular Design Construction, which allows certain expansion modules to be inserted. Available MDC modules include the $299 DD HDM-1 HDMI module and the $399 MDC BluOS module. The DD HDM-1 module adapts the C 368 for use in a small TV system; it provides three HDMI inputs and one HDMI output. I imagine there are lots of integrated amplifiers being used to play music and to augment televisions in apartments or small houses where there's no room for a full theater system. The MDC BluOS module lets you use the C 368 with a wireless BluOS speaker, which can be placed anywhere in the house. The last module was provided with the review unit, along with a wireless Bluesound Pulse 2 speaker. Can you think of any other integrated amplifier that's designed to be this easy to use in a TV system, or with a wireless speaker? I can't.

Specs & Pricing

NAD C 368 Hybrid Digital DAC Amplifier
Type: Integrated amplifier with internal DAC
Power output: 80Wpc
Analog inputs: Two on RCA jacks
Digital inputs: Four SPDIF; two on coaxial, two on TosLink
Additional inputs on MDC DD HDM-1 module: Three HDMI
Additional inputs on MDC BluOS module: RJ45, two USB
Input impedance: 22k ohms
Output impedance: Four and eight ohms
Headphone output power: 700mW into 32 ohms
Dimensions: 17" x 3 15/16" x 15 3/8"
Weight: 18.9 lbs.
Price: $899; optional MDC BluOS module, $399; optional DD HDM-1 HDMI module, $299

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Associated Equipment
Speakers: KEF Q700 speakers
Amplifier: Yamaha A-S801 integrated amplifier
Digital sources: Dell Latitude E6330 laptop computer running 64-bit Windows 10 Professional and Roon Server software; QNAP TS-251 NAS; Audiolab 8000CD CD player; Oppo Digital Sonica DAC/player
Speaker cables: Audience Au24 SX
Digital: Audience Au24 SE S/PDIF cable
Power cords: Stock cords provided with equipment
Power conditioners and distribution: Isotek Sirius

Setting Up and Using the C 368

NAD told me the C 368's low operating temperature made it unnecessary to break it in; however, I had just obtained new KEF Q700 speakers to use for reviews of budget gear, and they most definitely needed break-in, so I used the C 368. The KEFs are set up in a room that doubles as my office, and form the nucleus of the small system that will be used in many future reviews. They have a 6½" version of KEF's Uni-Q concentric midrange/tweeter, together with a 6½" woofer and two 6½" auxiliary bass radiators.

Since my primary music source these days is streaming high-resolution music files, my small stereo also includes a digital playback system to handle those media. Currently comprising an Oppo Digital Sonica DAC and streaming file player, being fed from my NAS, this setup will play up to 192/24 and DSD64 files. The Oppo comes with its own remote-control app, and was reviewed in Issue 278. To assess the C 368's SPDIF input, I used my Audiolab 8000CD CD player as a transport, feeding its digital output directly into the C 368's SPDIF port.

To use the MDC BluOS module, I downloaded the BluOS app to my iPhone and iPad. Like many such apps, it will work on a smartphone, but a tablet lets you see a lot more information, and the control buttons are spaced more comfortably.

Sound

Driving the KEF speakers, the C 368 sounded smooth and relatively refined—no peaky, etched sound here. If anything, the tonal quality leaned towards sweetness. The soundstage was expansive and solid, if perhaps lacking in the precise definition I sometimes hear with much more expensive gear. When I played an AIFF rip of a Delos CD [DE 3137] of Gerard Schwarz leading the Seattle Symphony in Alan Hovhaness' Symphony No. 22 (*City of Light*), I was pleasantly surprised at the C 368's weight and solidity, as well as the harmonic density of its orchestral reproduction. Fortunately, it was solidity without stolidity—the orchestra brimmed with energy. On several pieces I auditioned, I noted the C 368 had a special way with strings, imparting a glowing sheen to their reproduction. Accurate? Maybe. Beautiful? Definitely.

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Switching to the CD player, I put on *Folia: Rodrigo Martinez 1490* by Jordi Savall and his band on AliaVox 9805. Although the bass extension of the KEF speakers didn't match that of my larger system with its two subwoofers, little else was missing. The C 368 captured the continuously changing dynamic level with noteworthy precision, delivering the spirited percussion part with abundant transient detail. There was a dynamic exuberance typical of NAD equipment, which usually has tons of dynamic reserve.

A vocal fave is Shelby Lynne's "Just a Little Lovin'" in a DSD64 version from Acoustic Sounds. Beautifully recorded at a very low level, it requires the volume control be set higher than any other piece in my collection. The C 368 needed a fairly high volume setting of minus 4.0dB to reach my accustomed listening level. But when it was set at that point, I was quite surprised to hear the prodigious bass output it produced. The album has a strong, growling bass underpinning, and the C 368 coaxed most of it from the modest KEF speakers. Even better, it captured the midbass frequencies without a "baffle-step" drop in level. Lynne's voice had a texture that was quite expressive and realistic. The percussion part exhibited fast transients with no appreciable overhang. Spacious, rich, and enjoyable. As the C 368's internal DAC doesn't do DSD, I played this cut on the Oppo Sonica.

A friend dropped by with a copy of the CD *Lincolnshire Posy,* a collection of works for military band by Percy Grainger, played by the Dallas Wind Symphony under the direction of Jerry Junkin on a Reference Recordings CD [RR-117]. Reference Recordings' reproduction of bass drum is almost as legendary as Telarc's was (old-timers will know what that means) and on several cuts, the impact of the bass drum was surprisingly strong—nearly subwoofer level. Having played in concert bands in my young days, I was quite taken with the C 368's purity of tone and harmonic accuracy, as well as its dynamic power—I never heard a climax that sounded strained, even with the level cranked up. The soundstage was solid and deep, perhaps absent the precision placement I hear on my many-times-more-expensive large system, but still a decent reproduction of a soundstage. The C 368's SPDIF input definitely passed muster—and so did the Audiolab CD player's digital output, which I used for the first time.

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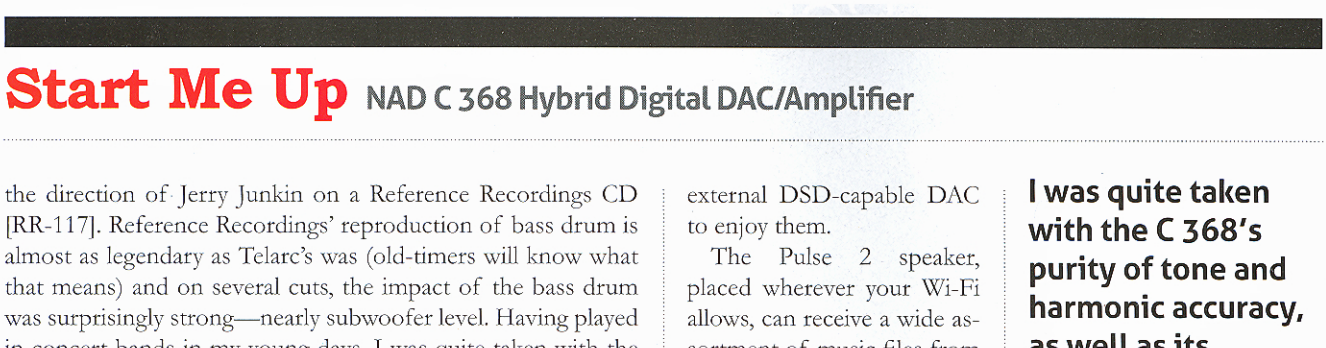
NAD describes the DD-BluOS MDC module as follows: "An undeniably integral component of some of our most innovative products, the DD-BluOS module unleashes all the music you could ever imagine. Whether you wish to explore various streaming services or reconnect with old favorites from your personal collection, our BluOS technology lets you get closer to the tracks you love. Controlled by a user-friendly app, BluOS is one of the most advanced music management systems on the planet. Through the power of BluOS, users can easily connect to other BluOS-enabled devices throughout the home, resulting in an incredible music listening experience. Highly advanced and wondrously fluid, our BluOS technology turns listening to music into an experience unlike any other."

More simply put, the BluOS module turns the C 368 into an almost complete digital playback device, adding a streaming music player to the DAC, and giving the DAC the ability to play MQA files, at least up to 192kHz sampling rate. The BluOS app for the iPad and iPhone lets you select your music for playback through the C 368—or through a speaker like the supplied Pulse 2, which, since it also uses the BluOS operating system, will also play MQA. As I type this, the Pulse 2 is playing the MQA music file "Snilla Patea" (352.8/24 MQA.FLAC, from the 2L recording company) from the music library on my NAS with the C 368 turned off. If you're wondering how the Pulse 2 handled a 352.8kHz original file, remember that MQA will unfold a file commensurate with the ability of the playback device. So in this case, it unfolded the file to 176.4kHz, within the limits of the BluOS MDC module. For reasons I won't attempt to explain, NAD has chosen to ignore DSD file playback, so if you, like me, enjoy files encoded in that format, you'll need an external DSD-capable DAC to enjoy them.

The Pulse 2 speaker, placed wherever your Wi-Fi allows, can receive a wide assortment of music files from the C 368—or independently of the C 368. If you pair it with the C 368, it can play any source hooked up to the C 368—like LPs—wirelessly, as in no speaker cables or interconnects. Pretty cool, and I suspect, just what many users want in a lifestyle product. And you can plug it into a wired network if you want to extend the range. I found the BluOS app's layout a bit quirky, but was able to adjust to it with some practice. With more practice, I'd probably have gotten completely used to it.

If you're a headphone fancier, you'll probably have a dedicated headphone amp, but it seemed appropriate to try the C 368's headphone jack with NAD's own Viso HP50 headphones. To my delight, they sounded not ok, not good, but very good—more bass on *Folia: Rodrigo Martinez 1490* along with more pronounced dynamic swings.

I asked about the headphone section, and Greg Stidsen, Director, Technology and Product Planning, Lenbrook International, told me the headphone section is capable of producing "high current output using 4 op-amps in parallel for each channel." The very low distortion op-amps are CLC2059s, capable of driving 700mW into 32-ohm headphones. No wonder they sounded so good. Some dedicated headphone amps can produce more power, but not many integrated amplifiers can.



Yamaha, but that's possibly due in part to the difference in speakers (I used the LS50 speakers for the Yamaha review). Although both KEF speakers use versions of the Uni-Q drivers, the LS50's driver is more refined, and a bit more detailed. But the Q700 adds a separate woofer and twin passive radiators, which produce deeper, more powerful bass than the LS50 driver can. The extra bass could give the impression of reduced high frequencies.

Both amplifiers sounded pretty sweet, with no unpleasant solid-state glare. Due to their size, the LS50 speakers lacked any deep bass; but the Q700s, despite their much better bass delivery on "Just a Little Lovin'" and *Lincolnshire Posy*, only hinted at the deep bass on *Folia: Rodrigo Martinez 1490*. Why? I'm guessing because the bass on the recording goes deeper, down to the middle-20Hz range. The Yamaha captured Shelby Lynne's vocal inflections quite well, allowing me to hear a bit more of a hoarseness which she used to accentuate parts of the lyrics—but that could also be because the LS50 driver is more refined than the Q700's.

Bottom line: Both amps were excellent bargains with tons of features. The Yamaha has a bit more power and a more complete DAC, and its controls are mostly old-style knobs rather than menu choices, which are more straightforward to use. On the other hand, the availability of the MDC expansion modules gives the C 368 significantly more flexibility, e.g., MQA playback and HDMI connectivity. The Yamaha is a bit larger, if that matters; neither is huge. Sonically, I'd rate them both as quite good, and excellent bargains to boot. I'd choose one or the other based on features—what's important to you? If you don't want a separate DAC to play the highest resolution digital files, the Yamaha may appeal (although it won't play MQA files); if the flexibility of the NAD's MDC modules appeals to you, the C 368 would be a better choice.

All those features would be moot if the C 368 sounded lousy, but it sounds delightful.

Comparison

The Yamaha A-S801 costs the same as the C 368 and uses a conventional Class AB amplifier rated at 100Wpc. Its internal DAC plays music files out to DXD and DSD128, and a $50 accessory YBA-11 Bluetooth adapter adds Bluetooth connectivity. Unlike several modern integrated amps, its controls are mostly physical knobs rather than menu settings, which will appeal to the older generation (like me). It's got a moving-magnet phono section and a headphone amp. Most importantly, it sounds quite nice.

Generally, the C 368 was a smidgen darker than the

Bottom Line

I began this review expecting to bash the C 368 for having a limited DAC, but I quickly realized rather than building another "me-too" integrated amp NAD had deliberately focused on other areas of performance—useful areas that most integrated amplifiers ignore. That's smart. DAC technology is advancing rapidly, so buying an external DAC avoids locking you in at a particular level that will probably be outdated this time next year. Heck, most DACs can't play MQA files, so they are already obsolete. Probably the next feature we'll see appearing in DACs will be MQA decoding capability, as DAC manufacturers begrudgingly provide the new features their customers want. Makes sense to me. If I had invested in an expensive Tidal subscription, I'd surely want to be able to play music at the best-sounding resolution. The C 368, with its MDC BluOS expansion card, already does that.

All those features would be moot if the C 368 sounded lousy, but it sounds delightful—lots of power, deep, punchy bass, smooth midrange and highs. It showed none of the solid-state anomalies that have historically made transistors in general and Class D in particular sound unpleasant. Easy to set up, easy to use, extremely flexible when used with Bluesound gear, this could be the last hi-fi purchase you'll need to make. I was impressed, which seldom happens. Strongly recommended. **tas**