



NAD's new classic?

NAD C 338 integrated amplifier

With NAD's classic 3020 name now applied to a strange little box, is this modern take on the integrated amp the true rightwise successor to the 3020's throne?

SUMMARY

NAD C 338
integrated amplifier
Price: \$999

- + A great mid-level amplifier for our time
- + Solid HybridDigital power
- + Good range of inputs, plus Chromecast
- No USB-B for computer input
- No Ethernet networking
- No 'record out'

When it comes to reasonably-priced amplifiers, few companies have a higher profile than NAD. The company's 3020 has been a classic of the genre in updated variations since the original in 1978, and most recently in a very different compact form factor enabled by the use of Class-D amplification, rather than the more traditional Class-AB used previously. Indeed NAD has made quite the specialty of Class-D amplification in recent years, collaborating since 2005 with UK semiconductor company Zetex to develop its own unique breed as 'Direct Digital', resulting in the company's ongoing high-end Masters series.

Then came the challenge to bring similar results at more affordable prices. Another collaboration, this time with Dutch company Hypex, allowed NAD to combine Direct Digital concepts with the innovative Hypex UcD "analogue Class-D" technology. The result is NAD's 'HybridDigital' amplification, as used in that compact D 3020, and now in this C 338.

Equipment

The C 338 emphasises the emergence of a new breed of component. Amplifiers have been evolving in recent years, first gaining digital inputs (and therefore internal digital-to-analogue converters), and from there it was a short hop to include Bluetooth and network connectivity, and thereby access to internet music services.

The C 338 doesn't do networking in the usual way (the next model up the range, the C 368, can be fully network-enabled with an optional BluOS

module which also makes it part of the Bluesound multiroom ecosystem). But this C 338 does have Bluetooth, and it also has Google's Chromecast built in, which connects to your home network via Wi-Fi, and thereby streams from Cast-enabled apps and programs on phones and computers. (Indeed NAD claims this as the first ever amplifier with Chromecast, which would seem to be true if you exclude Sony AV receivers.)

There is not one antenna socket on the rear but three, with three stick antennas provided in the box. Each is different, rather than working in combination — one is for Bluetooth, one for 2.4GHz Wi-Fi and one for 5GHz Wi-Fi. There is no Ethernet socket here, so if you're going to Cast, you must use Wi-Fi, and so make sure the amp is situated in a reasonable reception area. More on the Chromecasting side of things below and in the panel.

The more conventional inputs include a generous four digital inputs (two optical, two coaxial) and three analogue, which includes a phono stage for a turntable, hoorah! The obvious omission here is USB, with neither an A slot (for plugging in media for playback or for charging a smart device as it plays), nor a USB-B input for direct replay from a computer.

There is a mono subwoofer output but no stereo line-level output — no 'record out', which we miss, though there's no denying it's become redundant for most users.

As for power, several ratings are quoted, the unique power circuits making these a guide at best, but the headline figure is 2 × 50W into eight ohms with THD at just 0.03%, very much a hi-fi specification, as against some digital amplifiers quoted at 1% or even 10% THD.

A small remote control is provided, with basic transport controls as well as input selection, volume control, and a button for 6dB of bass boost.



“The C 338 doesn’t do networking in the usual way... but it does have Bluetooth, and Chromecast built in, which connects to your home network via Wi-Fi...”

Performance

The amp seems compact — the usual 43cm wide but just 65mm high on its feet, and 25cm deep — yet it feels pleasingly heavy, and we soon had it in position, one of its analogue inputs connected to the DAC from our computer, the phono inputs and grounding post to our turntable, and the speaker binding posts filled with the banana plugs of our speaker cable; we ran the C 338 into first our big JBL 4429s, and later into a pair of high-quality but slightly less power-friendly German standmounts.

From the first blast we were impressed by the delivery, a sharp-edged punch of sound that spoke to tight timing and an ability to deliver dynamic changes rapidly, indicating power reserves able to react without delay. The clarity was equally evident, the amp simply getting out of the way of whatever source material was played. The rasping tones of Bob Dylan’s voice on the new ‘Triplicate’ collection of American standards hung in the central space between instruments, the NAD making clear the difference between the light reverb used on most of the album’s basic band tracks but the excessive decay evident on the more energetic brass-laden arrangements, rather muddying singer and band on *Day In, Day Out* (and revealing an electrical buzz on the track’s fade).

It richly portrayed recordings that were made that way, but it didn’t fill out lighter recordings. Dion’s *I Read It (in the Rolling*

Stone) is a strangely pinched and peaky recording, and that’s exactly how the NAD delivered it. But bring out Holly Cole doing Tom Waits’ (*Looking For*) *The Heart of Saturday Night* and all is delight — feel how the first acoustic bass notes are hard plucked and present before Cole’s smooth vocal gets a perfect presentation, while piano left, guitars right and a wide spread of drums all form a whole without getting in each others’ way.

This led us to the Diana Krall/Michael Buble (sorry, he was snuck onto her ‘Wallflower’ album) version of *Alone Again, Naturally* — a divine recording by David Foster, and a delight here both for vocal quality and the depth of imaging on strings.

Those low distortion figures seemed confirmed by the quick advancing of level to a comfortable -24dB on the NAD’s usefully dimmable display, and we were alarmed at how little we missed in the way of power from our significantly pricier reference pre-power amps as we moved onto more complex material. Bonham’s entry into Led Zeppelin’s *Gallows Pole* was held effectively in its own little acoustic without eating into the surrounding rising wave of guitars and mandolin, the whole perhaps sounding just a little thin, but again, the digital remaster at 24-bit/96kHz does indeed sound just a little thin. So we pulled out the vinyl from the remasters box-set instead — noting the phono input on the C 338 to be rather quieter than the line level (we turned the

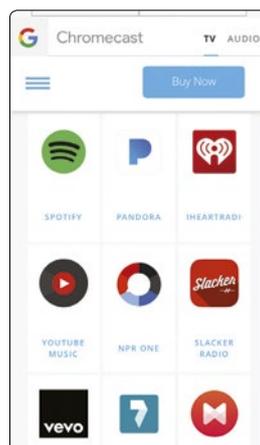
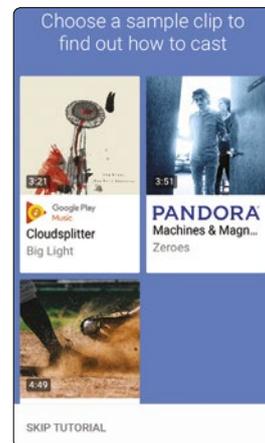
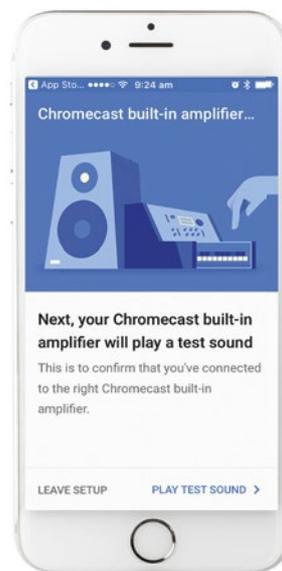
Chromecast built in

Those antennas rising from the rear of the C 338 (overleaf) indicate the Bluetooth and Wi-Fi included here, though the NAD doesn’t offer full networking — there’s no DLNA, no built-in internet radio (and, we note, no Ethernet socket for wired networking).

Instead, it has Google’s Chromecast platform inside — and it works, essentially, just like a Chromecast Audio unit. You download the Google Home app (a pointer to our future!) and follow the prompts. For us the NAD was found and activated easily, though an alarming message warned that “This Chromecast built-in amplifier was manufactured for a different country and may not be compatible with your Wi-Fi network”.

But it worked fine for us (and if it doesn’t, check your router isn’t using a Wi-Fi channel above 11 — these aren’t used in the US, so often can’t be seen by US-centric equipment).

The app walks you through casting with some sample clips, and then lists all the apps you can download which have casting buttons — you can also cast from a Chrome browser on any networked computer. From Spotify to Tidal to Tuneln radio, there’s a big world of music thus available, and we found (see main text) a way to get DLNA network streaming even from an iOS device. On the whole, we thought Chromecasting to work very well.



test

integrated amplifier



Inputs

Turntable plus two line-level inputs (one confusingly called 'streaming'), and four digital inputs, two each of optical and coaxial. Plus built-in Bluetooth and Chromecast.

Speaker terminals

On our review unit the negative terminals are bright blue, not black, with stern warnings about them not being true grounds so never to allow a common connection for the two, as might happen if, say, running speaker level connections through to a subwoofer.

Ready to receive

There are three connections for antenna – two for 2.4 and 5GHz Wi-Fi, and a third for Bluetooth.

volume knob up to -6dB on the display to get the same level' as before — still plenty of headroom, though, as the NAD doesn't stop at zero, but goes up to +12dB). The vinyl Zeppelin delivery proved far preferable, the thinness replaced by a deliciously realistic delivery, JPJ's bass driving in from the second verse, and Bonham's entry more the lift of full driving rhythm it should be. It's hard to believe the high-res and vinyl mixes share the same source, such was the greater energy and depth from the LP over the 24-96 digital file.

We stuck with vinyl for a while, finding no fault in the quality of phono stage in the C 338, though do note it is moving magnet only.

When switching inputs we did notice how difficult it is to see your selection — beyond a metre away you'll need an eagle handy to tell you what it says on the front panel, though once acclimatised you learn to look for the position of the input legends on the front panel, rather than what they say. The naming of one of the analogue inputs as 'Streaming' is also a bit confusing, given that Bluetooth and Chromecast streaming both share a different input labelled 'BT/Wi-Fi'.

Yes, both of those on one 'BT/Wi-Fi' input, so how does the NAD distinguish between the two? To investigate, we played Pandora on our iPhone and connected via Bluetooth, shuffling our many Pandora artist stations (the trick for hearing more of your faves, fewer suggestions) to receive Neil Finn's excellent *Rest of the Day Off*. From Pandora we then selected the Cast button, chose the NAD, and the Chromecasting soon took over from Bluetooth. The quality between the two seemed indistinguishable, but then the lower-res Pandora delivery was rather two-dimensional anyway, not the best source with which to try to hear a difference! When Pandora moved on to Joni Mitchell's original *Both Sides Now*, we quickly called it up on computer and did an A-B of Pandora's

delivery against the CD-quality file — an embarrassing comparison for the grainy if not quite grungy Pandora delivery against the shiny clarity of the higher frequencies from CD. This A-Bing was a little short-term because as soon as we switched to the computer, the Casting stopped, and though it would reconnect quickly enough when we switched back, Pandora then jumped to the next random track! Still, this was, by a handy coincidence another Zep III track, *Tangerine*, sounding really all over the place from Pandora, not only lower resolution but shaky in imaging terms. We again chased it on computer at 24/96, where it was properly clean; then we put the LP back on, and again, the vinyl trounced both digital sources.

We noted also that when we turned the Casting off, the iPhone had dropped the Bluetooth connection and required re-pairing. Volume control with our iPhone buttons could be coarse, though variable — Pandora seemed to allow 2dB steps, but with Google's test tracks, it had steps of 6dB. Good luck finding the perfect level with that! Keep the little remote handy for finer steps of 0.5dB per press.

What about music stored on your network somewhere — there's no built-in way to play networked music from a share or NAS drive. So you're left experimenting with apps that can read via DLNA or UPnP then cast songs onwards. For iOS we found LocalCast, an ad-supported freebie app, and this proved able to send the NAD networked files in AAC, MP3 and FLAC/WAV up to 24-bit/192kHz, though it didn't handle AIFF, Apple Lossless or, unusually, WMA files. There's also no indication anywhere of what's actually getting through in resolution terms, though fans of high-res music might like to note that the quoted response of the amplifier tops out at 20kHz, so anything above that will be curtailed anyway.

The headphone output proved clean and powerful, with its half-ohm output impedance good for a range of home and mobile-optimised headgear. And we were most impressed that NAD has included auto-standby (because EU regulations demand it) but includes an easy way to defeat it for those who prefer their amp always on, warm and ready to play. The C 338 pops itself out of standby when it senses an input, but it takes a second so you miss the start of the first track.

Conclusion

Seamlessly combining traditional and modern, NAD's C 338 looks to be more the true successor to the 3020 heritage than does the compact D 3020 design. This amplifier is versatile and powerful for its price, with a solid dose of HybridDigital power and plenty of inputs, both digital and analogue, including phono for a turntable. Indeed if your phone, tablet or laptop is your primary music source these days, you may need to add nothing but speakers. How modern is that? — Jez Ford

SPECS

NAD C 338

\$999

Quoted power: 2 x 50W (20Hz-20kHz, both channels, THD 0.03%)

Inputs: phono (turntable), 2 x RCA analogue, Bluetooth, Chromecast built in, 2 x optical digital, 2 x coaxial digital (digital inputs to 24-bit/192kHz)

Outputs: Subwoofer out, headphone out, loudspeakers out

Dimensions: 435 x 70 x 285mm (including feet, terminals etc.)

Weight: 4.5kg

Contact: Convoy International

Telephone: 02 9774 9900

Web: www.convoy.com.au