



# Northern lights

**Chris Ward** discovers if Hegel's latest amplifier/DAC from Norway can brighten up those long winter nights

**S**candinavia is rightly celebrated for its broody TV detective shows, natty knitwear, unforgiving weather and gorgeous design aesthetic, but is also becoming known for hi-fi excellence. Norwegian manufacturer Hegel is part of a wave of Nordic names grabbing our attention, and this is its latest integrated amplifier, the H160.

Back in issue 391 we reviewed the manufacturer's H80 integrated amp and DAC and were left suitably impressed. Now it's the turn of the H80's bigger brother, which promises to improve upon the fine work of its sibling. The H160 is a little bit deeper and taller and considerably heavier,

hinting at some greater muscularity. The H160 looks and feels that little bit more beefy and appetising.

The same understated design ethos as its sibling remains, with a blue-lit LED display flanked by twin rotary controls that smoothly change source input and volume. It gains a headphone output stage and boasts a slightly different mix of input options. It only has one dedicated analogue RCA input alongside another fixed-level RCA input designed for home theatre applications (which can be reconfigured to be a regular RCA input if required). It also retains the H80's quality balanced analogue XLR input for those with balanced analogue sources.

## DETAILS

**PRODUCT**  
Hegel H160  
**ORIGIN**  
Norway  
**TYPE**  
Integrated amplifier with DAC  
**WEIGHT**  
19kg  
**DIMENSIONS (WxHxD)**  
430 x 120 x 410mm  
**FEATURES**  
• Claimed power output: 2x 150W into 8ohms  
• Digital inputs: coaxial; 3x optical; USB; Ethernet  
• Analogue inputs: 2x RCAs (1x labelled fixed level for home theatre); balanced XLR  
• AKM4396 24-bit/192kHz DAC  
**DISTRIBUTOR**  
Hegel Music Systems  
**TELEPHONE**  
0047 22605660  
**WEBSITE**  
www.hegel.com

On the digital front it boasts three optical inputs, one digital coaxial, a single USB input and an Ethernet port to hook it up to your home network to access stored music files and enable control via AirPlay.

Seen like this, the H160 is unashamedly a product of the 21st Century, inviting prospective owners to it as a digital hub that will enable you to just plug-and-play a host of digital sources alongside an analogue source or two. Digital processing maxes out at 24-bit/192kHz for optical and coaxial inputs with the 'non-asynchronous' USB input topping out at 24-bit/96kHz. AirPlay is currently limited to CD quality – 16-bit/44.1kHz.

Hegel has selected the AKM4396 chipset for DAC duties in the H160. This bodes well as it's a technical choice I have appreciated before. Control can be via AirPlay or the purposeful metal remote. As handsets go, this fully metal affair is as sturdy as they come and it still retains a deep coldness from Norway even after weeks of use!

## Sound quality

Connecting up a quality HDCD transport, MacBook Pro, external DAC and home router, I set about warming the H160 through with Aphex Twin's *Syro* on CD. Even before being fully run in the sound quality is

already promising. Playing the catchily titled *Minipops 67 – Source Field Mix*, the H160's representation of the razor-edged percussion, haunting synths and brooding bass lines instantly grab your attention. The sound is highly transparent with many layers of subtle, free flowing detail. The H160 has a similar house sound to its baby brother, but it feels more grown up, more self confident of its abilities. Bass is forceful, but lean and the amplifier's claimed high damping factor exerts a grip on my reference Cadence speakers that firmly shows them who's boss. But it exerts this control without ever creating a sterile, engineered sound

**This flexible integrated amplifier has a modest design**

quality that some muscly transistor designs can. After a lengthy run in, I spin London Grammar's *Strong* on CD and hear a really assured performance. Bass has felt out a little and the midband feels more relaxed and fluid. There is something about Hegel's patented SoundEngine signal processing that feels like your music gets a gentle dry clean, taking out a tiny amount of digital haze in an almost analogue or valve-like way. Hannah Reid's voice is delivered with a silky yet highly present quality and is gently brought forward out of the plane of the main soundstage.

Where I felt that the H80's DAC might have occasionally aimed for detail as an end in itself, here the H160 probably strikes a more confident balance between explicit detail, depth of image and natural timing/rhythmic abilities. And it achieves this balance effortlessly in a totally unflustered way.

Swapping inputs, I feed the H160 a HDCD of Doug Macleod's *Black Nights* via the coaxial input. This is one of the best-recorded albums of recent years and the H160 lays out a transparent, wide and compelling soundstage. Doug's time-keeping foot stomps and percussive guitar licks underline the amp's fast, tight bass abilities. This is in excellent contrast to the H160's supreme lightness of touch around the shimmering drum brushing and his rich, expressive vocals. Even though the H160 packs a claimed 150W, I've heard fuller, more weighty renditions of this track from rival equipment, but there is something about the topology of Hegel's sound processing circuits and amplification that gets right to the heart of expressing the emotion of an artist's performance. Imagine all your favourite tracks had the smallest amount of reverb removed and this is something like the Hegel house

sound. And given this isn't happening, it seems to confirm the H160 is addressing distortion in different ways from the received wisdom.

Accessing a rip of Jim James' *State Of The Art* using the Ethernet network connection, I control the system via AirPlay from an iPhone. The track starts very quietly with understated piano and Jim's mournful voice, and the H160 renders this stripped-out delivery beautifully in the church-like, reverential acoustic. The H160 even

**I'm impressed by its ability to deliver a highly coherent, quality soundscape**

teases out the slightly clunky piano pedals adding to the music's mysterious vibe. As the track progressively builds, it shifts up through the gears, effortlessly expressing the hypnotic and propulsive heart of the song. In full flow and at some volume, the H160 does a sterling job of layering what becomes a highly intense piece of music. Crystal clear triangles ring through deep, funky bass riffs and deliberately overloaded vocals press forward and away from a distant drum kit. This is a track that can trip up weaker DACs, but not the H160.

The DAC feels extremely well integrated with the amplifier sections, getting that tricky balance between portraying vital low-level micro details and getting the broad brushstrokes of pace, rhythm and timing just right. The addition of AirPlay and extra digital inputs all in a single understated black box underlines that this is a modern product that is aiming to balance quality and convenience. Indeed, Hegel prides itself on working with modest audio files and sources and

## CONNECTIONS



- 1 Fixed and variable line-level outputs
- 2 Loudspeaker binding posts
- 3 Non-asynchronous digital input
- 4 Optical and coaxial digital inputs
- 5 Balanced XLR inputs
- 6 Analogue RCA inputs

## Q&A

**Anders Ertzeid**

Sales manager,  
Hegel Music Systems



**CW: What are the main differences between the H80 and H160?**

**AE:** Apart from the increase in power and using a superior DAC, we wanted to see how we could improve the preamplifier even further. We ended up with significant improvement in both local power supplies and how the transformer was connected. This has resulted in the H160 being more gutsy with even less noise.

**Why does Hegel advocate using non-asynchronous USB?**

The H160's USB receiver is the same 'adaptive' technology as the H80. We actually prefer this approach to the more usual asynchronous USB technologies, which we believe create more jitter. And greater jitter would require far more re-clocking to address this problem.

**The DAC seems well integrated to the amp. Is this harder than it looks?**

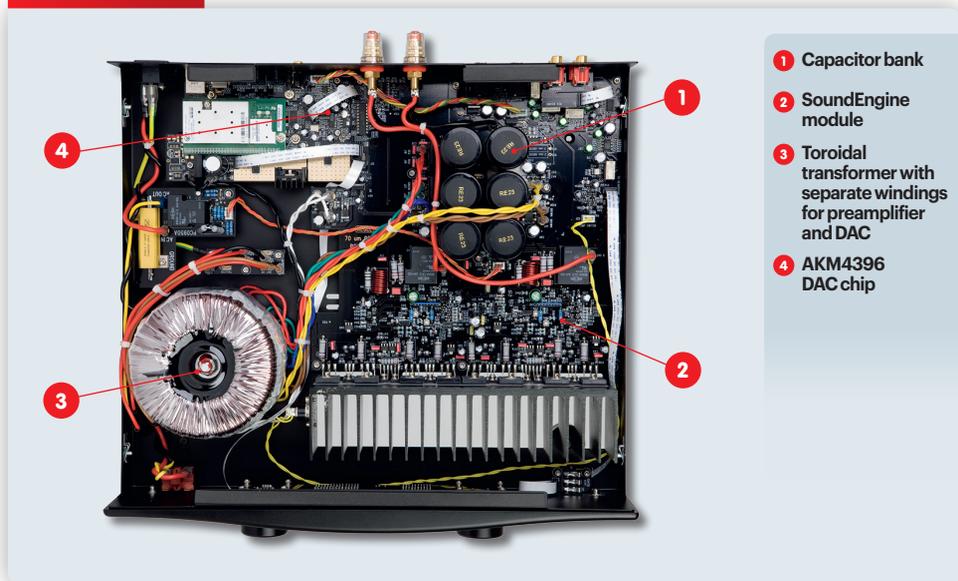
Yes, very! And noise is the big issue here. Noise pollution comes from outside components like computers and Ethernet components, but noise can also radiate from large power supplies used for the power amp. The layout of the amp is critical here.

**Why does Hegel spend such a lot of time and energy reducing distortion and noise in their designs?**

Basically, distortion and noise are the only two ways to colour recorded sound. Distortion is the addition of extra sounds that can change the appearance of a performance. At best, it can make it difficult to recognise a particular artist's technique and at worst it can sound like someone is playing the guitar with gloves on. Add high-frequency distortion and your music will sound harsh or brittle.

Noise on the other hand covers up small details so you cannot hear anything with lower amplitude than the noise itself. Noise reduces the sense of space, and air in music and removes the 'black' between the singers. Worst of all, noise can also cover up distortion, making for a warm and fluffy sound that has little to do with the actual performance.

## IN SIGHT



- 1 Capacitor bank
- 2 SoundEngine module
- 3 Toroidal transformer with separate windings for preamplifier and DAC
- 4 AKM4396 DAC chip

getting them to sound as good as possible. Even playing rudimentary MP3 files via iTunes I'm really impressed by the H160's ability to consistently deliver a highly coherent, quality soundscape.

## Conclusion

The H160 is a proposition that smartly has a foot in two camps. Firstly, it is clearly aiming to be a high-quality audiophile component that achieves superior audio results by seamlessly integrating and optimising preamp, DAC, headphone amp and power amp duties in a single box, with some network and AirPlay functions added to help usability. But it also appeals to a new audience that doesn't want the clutter and complexity of too many ugly, separate components, but does want a quality output across music and AV sources and all at the swipe of an iPad. And it straddles these two audiences well.

With DAC technology moving at such a pace and high-resolution music sources still finding their feet, it is easy to view any in-built DAC as a legacy waiting to happen. But a well-integrated DAC is something that Hegel seems to do well.

I would still like to see the inclusion of some digital filter options to tweak the sound for different music genres, and the DAC only displays the bare minimum of info about your digital sources. Many audiophiles will probably not be swayed from buying a separate DAC and integrated amplifier with this budget to spend, but I would urge discerning listeners to compare and contrast this impressive single-box solution. It should be a decent contender.

If you're seeking a quality hi-fi experience and have limited space, or are under extreme partner pressure to create a minimalist living room yet still retain quality music playing, this is the kind of product you should be turning to. This amplifier belongs to a new breed that could be as confident with AV duties as music. Place this amplifier/DAC combo in a modern, understated living room under a slick 4K screen, plumb in a home network with hidden NAS drive, Blu-ray and games consoles and flank it with some capable stereo speakers, and you will have an elegant setup that will just work brilliantly.

In this respect the H160 could be described as a bridge product between pure audiophile needs and more of a minimalist lifestyle product. Each time I sample a Hegel product it appears the next one raises its game, with ever-greater assurance. I have few doubts that the next release that comes along will be even stronger, but this one will successfully deal with almost any challenge ●



**HOW IT COMPARES**

Peachtree's Nova 220SE sets out a similar audio proposition to optimise DAC, integrated amp and some streaming duties in a sleek box with an intriguing blend of valve and Class D amplification. Both the Cyrus Lyric 05 and Cyrus 8 DAC-Qx Mk2 strike a similar balance between style, usability and performance around this price as well as bringing together a wealth of technical capabilities within a single understated box. Each one of these competitors probably offers more functionality, but the Hegel should edge it when it comes to the strongest musical abilities. Also, given you may be buying a product like this with your eyes as well as your ears, your choice could be even more personal.

## Hi-Fi Choice

### OUR VERDICT

**SOUND QUALITY**



**LIKE:** Impressive transparency and grip; extensive digital connectivity

**VALUE FOR MONEY**



**DISLIKE:** Lack of digital filters and display info

**BUILD QUALITY**



**WE SAY:** Self-assured integrated amp that handles everything you throw at it with aplomb

**FEATURES**



**OVERALL**

