

Hegel H160 integrated amplifier

by Alan Sircom



On its website, Hegel says of its new H160 integrated amplifier, “Connect whatever you want and make it sound as good as it can”. I think Hegel might not have had any idea just how true that was, until they played a last prototype of the amp to an assembled group of European journalists in Oslo in late summer last year.

We crowded round an office desk, which was rigged up with two Hegel amplifiers in perhaps one of those ultimate fighting above its weight tests, because they were connected to what most of us would happily call a ‘gnarly’ speaker load. The H160 was the new pretender, going toe-to-toe with the company’s big bruiser, the 250W H300 behemoth integrated. OK, so at 150W per channel, the H160 is no slouch, but no one really expected the outcome, least of all Anders Ertzeid, Hegel’s VP of Marketing and Sales. The H160 creamed the H300; not quite to embarrassing levels, but certainly to the point where it was obvious the newer, smaller amplifier was very clearly the better performer. Anders later confided in us that he’d played this same H160 tacked onto a pair of big Magicos (creating in the process an über-mullet system where the loudspeakers cost almost 15x the price of the amplifier) and it just sang sweetly. Maybe Anders knew all along.

Hegel pulled out all the stops on the H160, especially on the digital side. The amp is exceptionally richly configured for digital audio, with a coaxial, three optical, one USB, and an Ethernet input, the latter fully UPnP and DLNA-chummy. And, if you connect the Ethernet port to your wireless router, it can be used as an AirPlay device. OK, so it’s more a DAC/dumb terminal than a media player, server, or renderer (in that it can only be used to play tracks sent to it, rather than actively search or access them). However, I feel this is a refreshing change from DACs that try, and mostly fail, to be a kind of network streaming device. All this being said, some kind of on-board wireless connection would be useful. It’s probably a good plan to think of the built-in converter as basically Hegel’s HD11, with an Ethernet link. It’s the same 32-bit AKM DAC-chip architecture, capable of 24/192 precision on all bar the USB, and 24/96 on that input. It’s not an asynchronous USB input, because Hegel prefers adaptive. Hegel also prefers a linear phase output, and deploys its patented LineDriver high current, low impedance circuit block to limit the ingress of high-frequency digital noise elsewhere in the circuit.

The amplifier section itself is a 2x 150W into eight ohm design which near doubles to 250W into four ohms. Hegel, however, doesn’t just make off-the-peg circuits that ape ▶



▶ those of hundreds of other amp manufacturers; this is more back to the drawing board. Hegel, as in all its amps, keeps the current and voltage gain stages completely separate through the amplifier circuit (even to the point of feeding these stages from different power supplies) in an attempt to deliver higher dynamic range and lower distortion. Also, although the amplifier is notionally a Class AB design, its ‘SoundEngine’ local, adaptive feed-forward circuit gives the amplifier effective error cancellation instead of error correction, and sonically combines the ‘purity’ of Class A with the high damping factor of Class AB, which once again aims to lower distortion while raising dynamic range. Both of these characteristics took a good couple of hundred hours to come to light, with the amp sounding a little rough-edged and uninspiring before that.

Once suitably conditioned, this is one of the least ‘sounding’ amplifiers I’ve heard in a long time. The Hegel does this not in a colourless, bloodless manner, but rather with the kind of intrinsic ‘rightness’ that should be inherent to all amplifiers in theory, but usually fails to appear in the real world. Describing the H160’s performance in terms of musical presentations is a little pointless, because you might as well read a review of the recording itself, the amp adds and subtracts so little from the mix.

Hegel’s design is such that it can be perfectly comfortable making a good sound with no tweaking or messing around, or you can throw extreme amounts of special treatment at the project and it will show you how much better things can get. For experiment, I used this with lots of Nordost Valhalla V2 cable, connecting the H160 to a pair of Wilson Duette Series 2, with an Audiocom-modded Oppo BDP-105 and a maxed out 2014-spec Mac Book Pro running Audirvana Plus, with all its music files on a Thunderbird hard drive. In other words, almost every component in the system cost

at least as much as the H160, even the power cords. And it both highlighted and gained from every single, extremely expensive, performance enhancement. Such treatment is not mandatory; at best consider it a birthday present to you, your music, or your system. But it does show how much scope the H160 has.

I was beginning to get a handle on just how important that Hegel tag line was. The H160 is capable of helping create a good sound from either a small system, or an elaborate high-end audio extravaganza.

The great news here was the H160’s office performance wasn’t a one-off. It’s uniformly good at making a pair of

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► loudspeakers sound good. Really good, in fact. Not a euphonic, swamped-in-even-order-harmonic-distortion 'good', just good at showing what the loudspeakers can do. Sorry to labour the point, but the H160 just does so little to flavour the sound as it passes through its circuits that you just get to hear the capabilities of the loudspeaker.

Despite my misgivings, musical snippets are demanded. The best one to use is perhaps one of the most thunderous; the last movement of Mahler's Eighth Symphony, conducted by Georg Solti and a cast of thousands [Decca]. This is musical *Ben Hur*, a dynamic challenge for even the biggest amp and loudspeaker, and the H160 brushed off the challenge like it wasn't there. It took any music in its stride, from heads-down, bone-crunching metal to polite dinner jazz, and at each turn, the H160 simply got out of the way.

Some of the H160's authority comes down to a claimed damping factor of 1,000 or more, because when listening to the Hegel, it's easy to hear it grip hold of those bass units like an angry bull terrier. It doesn't matter how many miles the listener has on their personal audio odometer, they will easily be able to hear this amp ordering the loudspeakers about, and the loudspeakers will love the H160 for being so bossy. This isn't just a dub thing, it doesn't need a bass line to show it off, and just playing Fiona Apple's 'Every Single Night' from *The Idler Wheel...* [Epic] is enough. Her voice is more authoritative and precisely placed front and centre stage. It's not about boom and bass; rather, that power is about constraining that boom so it doesn't affect the bass, the 'deeper than you might expect' bass.

Big speakers, big rooms, power hungry situations the likes of which should never be a safe haven for an integrated amplifier like the H160... the H160 takes all in its stride, but there are limits. 150W per channel is not a kilowatt, and the H160 might be surprisingly meaty, but it doesn't have the kind of power supply needed to play super low impedance loads at high levels. That's where its bigger brother comes to the fore. Or even bigger amps. The old cliché of 'punching above its weight' fits well here, but we are discussing putting Floyd Mayweather Jr. up against Wladimir Klitschko here. And in the real world, that's not what the H160 is about, and not how it is going to end up.

In the real world, the Hegel H160 is going to control the bass drivers of good Sonus faber Olympica, ProAc Response, PMC Twentys and Facts, Focal Electras, and other products in that kind of £3,000-£8,000 per pair region. And it's going to do a sublime job, combining that bass control with a smooth and engaging midrange and an upper end that is accurate, and never hard unless the music

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demands it. The fact it could go a lot higher and be used with loudspeaker systems that you would never expect to see being driven by a £2,350 amplifier probably means you won't see them driven by the H160. This is more to do with the 'order of things' than it is to do with performance, and this is a shame, because I'd love more super high-end people to hear what is possible from such a system today.

Showing a clean pair of loudspeaker terminals is lovely, but it's not completely 21st Century in outlook. For an amplifier to really hit the high notes today, it needs to be a good headphone amplifier, too. The H160 hits this one for six ('knocks it out of the park' for those unfortunate, cricket-free parts of the world). This is a properly designed, full-blown headphone amp in its own right, capable of playing mean loads including the HiFiMAN HE-6 and now the Obravo HAMP-1, and making a damn good job of it, too. OK, so a really top-banana dedicated headphone amp will edge past the performance of the H160 in the ultimate control and last scintilla of detail stakes, but you are talking about a headphone amplifier that may conceivably cost as much the H160 in its own right.

There's one *Hi-Fi+* Issue 119-specific coupling that is more than worthy of note – the H160 with the little Russell K Red 100 loudspeakers. In fairness, I probably went a little more crazy over the Red 100 than I might have done because they walked into the system as the H160 was walking out, and the time they spent together was wonderful. The H160 ►

► gripped those little loudspeakers perfectly, letting them have the kind of bass depth and control they so richly deserve and so brilliantly exploit. There are some combinations that cost £4,000 and sound like they should cost more, less, or £4,000. With this one you didn't think about money, you just listened to music. I've heard systems costing 10x, perhaps even 100x as much as this that didn't tick that fundamental box as well as this one. If I had to press the audio career ejector seat right now, and this combination was the one I'd take with me, I'd be perfectly happy and seldom feel the need for anything bigger (although I'd want some vinyl along for the ride, too).

There are tiny gaps in the Hegel armour, but they all feel like nit-picking. The biggest ones are the absence of a balance control, and the limited number of analogue audio inputs. I suspect the latter is unlikely to be a big deal, in that the intended client for a H160 probably musically migrated to an all-computer platform many years ago, and analogue inputs are very much a legacy for that kind of listener.

In some systems, that grip over the bass could be too much of a good thing. The Hegel H160 is adept at controlling loudspeakers with good bass, but those with not much bass to begin with can be almost overdamped under the Hegel's power delivery, and a smaller amp might fare better.

If our little audio world wasn't quite so set in its ways, the Hegel H160 should be a Shot Heard Round the World, like the Devialet. If there were any justice, this £2,350 integrated amplifier shouldn't just be driving £3,000 loudspeakers; it could be powering £30,000 loudspeakers and replacing big fat power amps with something just as good, for a fraction of the price, the size, and the electricity bill of what went before. A great amplifier with an excellent headphone amplifier and an extremely fine DAC all rolled into one awesome giant-killing package – where did it all go so wrong! +

TECHNICAL SPECIFICATIONS

Analog inputs: 1x pair balanced (XLR), 1x pair single-ended (RCA), 1x pair home theatre (RCA)

Analog outputs: 1x pair fixed line level (RCA), 1x pair variable line level (RCA)

Digital inputs: 1x coaxial, 3x optical, 1x USB, 1x ethernet (RJ45)

Headphone output: 1x 6.3 mm Jack (front)

Power output: 150 w/pc into 8 Ohms, 250 w/pc into 4 Ohms

Frequency response: 5Hz-100kHz

Signal-to-noise ratio: Better than 100dB

Crosstalk: Less than -100dB

Distortion: 0.005% @ 50W 8 Ohms 1kHz

Intermodulation: Less than 0.01% (19kHz + 20kHz)

Damping factor: More than 1000 (main power output stage)

Dimensions (HxWxD): 120x430x410cm

Weight: 19kg

Price: £2,350

Manufactured by: Hegel Music Systems AS

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