

Hegel V10

For a brand that once suggested it was never going to produce a phono stage, the vinyl revival has proved an irresistible force. So is Hegel's V10 firing on all cylinders?

Review: Adam Smith Lab: Paul Miller

It's always welcome when individuals or companies offer up their future plans. If not, we'd never have known that Sean Connery was to abandon James Bond after 1971's *Diamonds Are Forever*, that Ferrari would not be launching an SUV and that Norwegian hi-fi manufacturer Hegel had no intention of ever making a phono stage. Of course, Connery *did* return to his role of suave super-spy in 1983's *Never Say Never Again*, Ferrari's Purosangue SUV is due later this year, and here I am writing about Hegel's £1350 V10 phono stage.

I cannot speak for Connery or Ferrari, but I *can* tell you that Hegel's about-turn was due to a combination of factors. Firstly, several projects were in full swing at the company's Oslo HQ, but all were digital in nature so the 'analogue guys' were a little light on work and looking for a project. Secondly, there's that small matter of the vinyl revival putting more than a little pep back into the LP-spinning market.

TAKING A DIP

The V10 has its roots in a simple phono amplifier company founder Bent Holter designed for his own use some 15 years ago. This has now evolved into a well-specified unit able to cater for both MM and MC cartridges and which offers unbalanced inputs plus unbalanced RCA and balanced XLR outputs.

Power is provided by an external PSU, slightly bulkier than the average 'wall wart' and custom-designed for the V10 to sport two separate 18V feeds. This includes a Y-shaped lead with dual plugs that connect into a pair of recessed sockets located in a void underneath the chassis of the V10 itself [see pic, p65]. This void also acts as a physical barrier between the PSU regulation inside the front of the amplifier and the audio/RIAA circuitry, which is located to the rear [see pic, opposite].

RIGHT: PSU regulation [left] is separated from the J-FET based +20dB MC gain stage [right, centre] and MM/MC RIAA eq stage [right, top and bottom]. The latter employs a mix of discrete transistors and IC op-amps

Setting-up the V10 to best match the gain and loading requirements of your pick-up is achieved via two rows of DIP switches [see detail, p65]. Yes, these are fiddly things at the best of times, but the approach is not uncommon in phono preamps and it's an efficient – read least costly – route to offering a comprehensive range of options. In this instance Hegel is using ten DIP switches per channel.

Of these, the first two toggle a subsonic filter that operates below 20Hz, while the third and fourth bring added boosts of +5, +10 or +12dB to the standard MM and MC gains. The latter are specified as +34dB and +54dB, respectively, through the unbalanced outputs, while the balanced outputs increase this to +40dB and +60dB [see PM's Lab Report, p65].

The fifth, sixth and seventh switches select load capacitances of 100, 147, 200, 220, 247, 320, 420 or 467pF for the MM

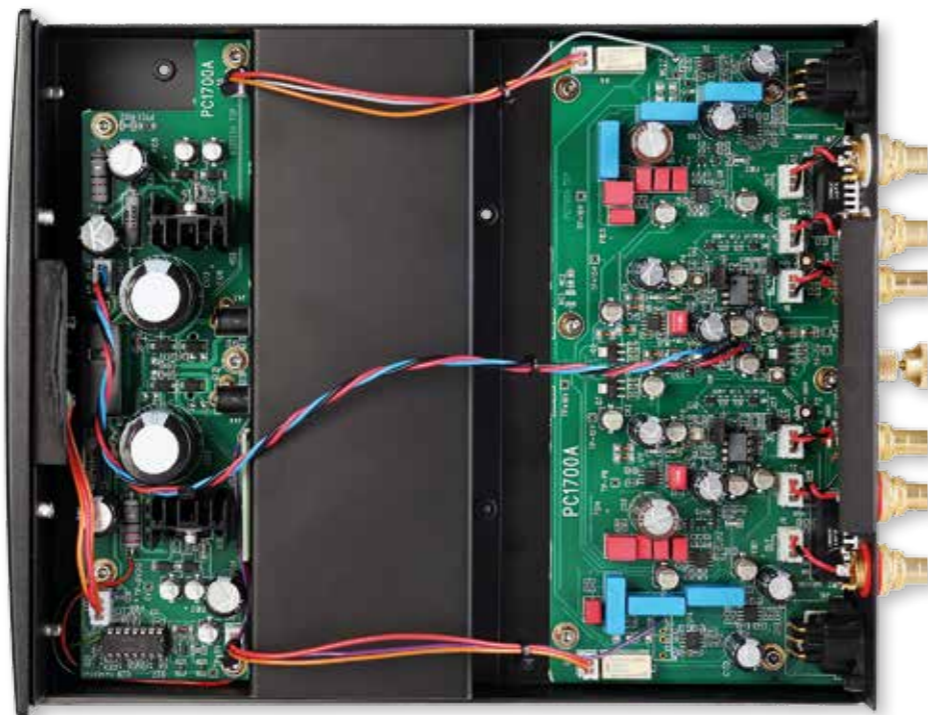
input, while the eighth and ninth select a 100 or 300ohm input impedance for the MC section. Finally, the last switch toggles between the MM and MC phono inputs.

SWITCH TRIALS

These settings are supplemented by internal controls and links that can add a further +6dB gain to both MM and MC sections and extend the MC loading options from 50 to 500ohm. Hegel says these adjustments are best left to a dealer, however.

While the flexibility is certainly commendable, the configuration of these DIP switches, and the MM/MC inputs, is not without its foibles. For example, while there are separate MM and MC inputs, and switches to select them, the MC headamp connects directly into the MM section so it's not possible to have connections made to both sockets simultaneously.

'CMFT' is a riot of guitars, shouty vocals and expletives'



RIGHT: Functional but elegant Norwegian styling belies the complexity of the rear panel [p65]. The V10 is powered via an outboard 2x18V/5VA AC supply that connects under the chassis



Then there's the complexity of the DIP switch permutations – illustrated by Hegel's screen printing on the underside of the box [see p65]. Puzzlingly, a pair of switches rather than a single one is employed to select the subsonic filter – this leaves two permutations (both DIP switches in the 'On' or 'Off' positions) that are disallowed and clearly labelled 'Do Not Use'. I refrained from finding out what would happen if I selected either non-state, but surely it would be simpler if just one switch were fitted, where 'on is on' and 'off is off'?

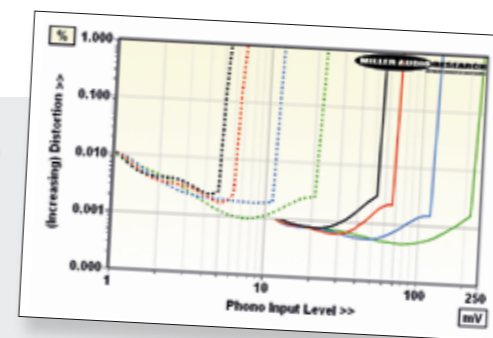
Similarly, the pair of MC impedance switches also has a 'Do Not Use' state. Given that it's all too easy to accidentally flick the small switch adjacent to the one you intended, this isn't an ideal arrangement. Furthermore, the left and right banks of DIP switches are mirror-imaged so the MM/MC toggle is number 10 on the right channel but number 1 on the left. Frankly, you'll need a lot of patience, a slim flat-blade screwdriver and a good

pair of reading glasses to successfully get to grips with the V10's 'user interface'. If you do find your blood pressure rising then turn to Hegel's beautifully presented user manual where the striking pictures of, I presume, the Norwegian countryside should have a suitably calming effect!

SMOOTH TALK

The moment my Clearaudio MC Essence cartridge [HFN Aug '17] nestled into the groove it was clear Hegel has yet another winner on its hands, the V10 joining a long list of fine-sounding separates from this brand [see HFN Oct '18, Aug '19, Oct '20]. The unit itself is very quiet, with background noise and hum all but absent, just as vinyl roar and surface noise are subtly suppressed, allowing fine detail to shine through without confusion.

Nevertheless, while the V10's overall balance is certainly on the smooth side,



MAKING HEADROOM

The evergreen 2M Red from Ortofon [HFN Oct '08], one of the highest output MMs available, produces a very healthy 6.7mV (re. 1kHz/5cm/sec). Furthermore, with extreme LP groove excursions (up to +18dB), it'll go on to deliver peak outputs of some 50mV into the V10 and other phono preamps. Now, any phono stage with insufficient input headroom will clip and send a burst of distortion that's boosted through your system from these mere millivolts to the tens of watts – or more – feeding your loudspeakers.

The higher the phono stage's gain setting, the lower the input headroom – in the V10's case its maximum +73dB MC gain represents a boost of x4467, so even with its massive 24V (balanced) output it only requires an input of 5.4mV to clip the output stage. This is why it's important to carefully select the optimum gain for your choice of cartridge. Fortunately the V10 has more than enough headroom for every type of pick-up – the inset Graph shows the point at which it clips when set at the default +40dB MM gain [green trace], plus the additional +5dB [blue], +10dB [red] and +12dB [black] settings, offering 238mV, 123mV, 71mV and 56mV of input headroom, respectively. MC pick-ups are treated to similarly generous margins: the default +60dB MC gain [dotted green], +5dB [dotted blue], +10dB [dotted red] and +12dB [dotted black] options representing maximum MC levels of 22mV, 12.5mV, 6.8mV and 5.4mV, respectively. PM

it's not short on transparency. So while cymbals and percussion never stray towards hardness or sibilance – sounding slightly softer than I might have expected – they still sound both clean and distinct. In fact, I'd be hard pushed to name another phono stage at this price that manages to sound so smooth in its presentation and yet so insightful at the same time.

I was also impressed by the sense of space and ambience the V10 revealed in ostensibly familiar recordings. Front-to-back image depth was very good and, no matter whether the material was live or studio-based, each instrument and backing vocalist was well defined within the soundstage and easy to focus on if desired.

That said, I would have preferred a little more solidity centre stage as one or two particularly potent vocalists sounded less edgy, perhaps slightly more diffuse, than usual. 'Raising Venus' from Malia and Boris Blank's *Convergence* LP [Universal 374 593-2] usually has Malia standing in front of my loudspeakers with unnerving precision. With the V10 as a moderating influence, she was pushed a little further back and I found myself adjusting the location of my listening seat by small amounts in order to restore her immediacy.

NAILED IT

Bass freaks, on the other hand, will love the Hegel V10's deep and tuneful lower registers. The backing synth bass to Ava Max's 'Who's Laughing Now' from her *Heaven And Hell* LP [Atlantic 0075678645921] bounded along with appropriate pace and impact, each note clearly separated from the next. Although this is a seemingly simple pop track, I have heard more than one set-up make a muddle of it. Not so the V10 – it nailed it!

Meanwhile, the bass guitar on 'Haunted Love' from Tal Wilkenfeld's *Love Remains* LP [BMG 538450142] was rendered with an appealing ease and fluidity that underpinned the vocals masterfully. This particular track can sound a little too stark and uninvolved when heard on some systems, but the V10 knitted the two →

HEGEL V10

When Hegel's chief designer, Bent Holter, set about maximising the versatility of the V10 design there was an acceptance that this came at a cost: users would need to negotiate fiddly little DIP switches to select between the various options. The +20dB extra gain that separates MM and MC inputs, and their respective 0dB, +5dB, +10dB and +12dB 'fine gain' settings are all selected via DIP toggles, as are the subsonic filter and the various impedance (MC) and capacitance (MM) loads on offer. Hegel claims +40dB, +45dB, +50dB and +52dB gain for its MM input and +60dB, +65dB, +70dB and +72dB for MC, values that are closely matched on test at +40.3dB, +45.8dB, +50.8dB and +52.8dB for MM and +60.6dB, +66.1dB, +71.1dB and +73.0dB, respectively, for MC (all RCA single-ended in/XLR balanced out).

In practice, the lowest MM gain setting offers a 9.69mV sensitivity but the +5dB option with its 5.16mV sensitivity and very healthy 123mV input headroom [see boxout, p63] will be the best 'default' for high output MMs. Similarly, the 'MC +5dB' setting – a sensitivity of 494µV with an input overload limit of 12.5mV – is ideal for the vast majority of 'coils. Moreover, this excellent range of sensitivities, coupled with at least 27dB of headroom at each step, is complemented by useful A-wtd S/N ratios of 79dB (all MM gain settings) and 78dB (all MC settings).

RIAA equalisation is also very flat and extended out to 100kHz within ±0.25dB, its steep subsonic filter amounting to -3.5dB/20Hz and -13dB/12Hz [see Graph 1]. If you have big, reflex-loaded speakers then this sub filter should be engaged. The RIAA-eq'd distortion [Graph 2] is slightly higher at bass frequencies, although 0.005% is still 100-1000x lower than any vinyl front-end! The minimum of 0.00028%/5kHz is spectacularly low. PM



ABOVE: Separate RCAs are provided for MM/MC inputs, selected via a DIP switch, alongside other toggles for gain, loading and subsonic filtering – see detail [inset]. RIAA eq'd outputs are offered on RCAs and balanced XLRs

and detail. It's just that occasionally it would be nice to hear this phono stage let its hair down and party.

This demeanour is broadly consistent across both MC and MM inputs, the latter tested in earnest with an Ortofon 2M Black cartridge [HFN Mar '11]. Of course, bearing in mind that Hegel's MC headamp feeds directly into the MM/RIAA stage, this continuity might be expected, even if it doesn't always happen that way. In my book this is a real strength, the Hegel V10 having a predictable see-through smoothness that you can rely on to reveal the qualities of both MM and MC cartridge types.

In this case, I heard the superlative top-end clarity of the 2M Black's Shibata stylus, but was also aware of the extra depth and imagining ability of the Clearaudio MC. So, if you have a 'starter phono stage' and are looking for a new MM/MC preamp that reveals more of the positive qualities of your vinyl-spinning front-end, the V10 makes for a very tempting upgrade. ☺

aspects of the performance together immaculately, and in doing so made for a captivating listen.

REAL STRENGTH

Switching to more complex and raucous material proved to have its ups and downs. 'CMFT Must Be Stopped' from Corey Taylor's *CMFT* album [Roadrunner Records 075678647598] is a riot of guitars, shouty vocals and expletives. While the V10 had no issue in separating all the elements here, the overall effect was a little polite – not an adjective I would usually use to describe the lead singer of Slipknot! However, similar material showed that the V10 is rarely caught out and really is a master of separation

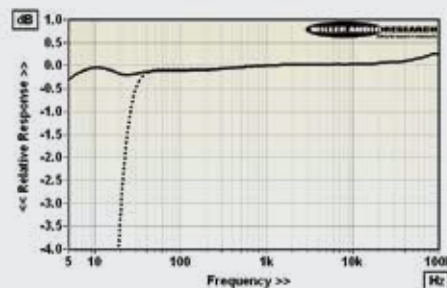


ABOVE: The DIP switch permutations for input, loading, gain and subsonic filtering are illustrated under the case, beneath a void for the dual PSU inputs

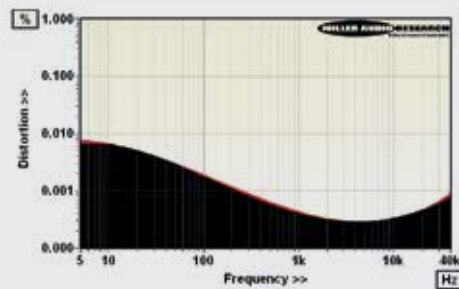
HI-FI NEWS VERDICT

Hegel may have chosen to bide its time but the company's first phono stage has been well worth the wait. Yes, the DIP switches used to set gain and loading are fiddly and less than intuitive, but the breadth of options offered is very generous, extending the V10's reach across a very wide range of MMs and MCs. Its sound, too, is both smooth and gloriously insightful, and clearly 'voiced' to partner Hegel's other electronics.

Sound Quality: 85%



ABOVE: RIAA-corrected frequency response (subsonic filter, dashed) from 5Hz-100kHz at 0dBV via MM



ABOVE: Distortion extended frequency via MM input re. 0dBV (5Hz-40kHz, black, left; red, right)

HI-FI NEWS SPECIFICATIONS

Input loading (MM/MC)	47kohm / 33-550ohm
Input sensitivity (re. 0dBV)	9.7/5.2/2.9/2.3/0.9/0.5/0.28/0.23mV
Input overload (re. 1% THD)	238/123/71/56/22/13/6.8/5.4mV
Max. output (re. 1% THD) / Imp.	23.9V / 96.5ohm (20Hz-20kHz)
A-wtd S/N ratio (re. 0dBV)	79.4dB / 76.9dB (MM/MC)
Freq. resp. (20Hz-20kHz/100kHz)	-0.19dB to +0.05dB / +0.29dB
Distortion (20Hz-20kHz, re. 0dBV)	0.00024-0.0049% (MM)
Power consumption	5W (1W standby)
Dimensions (WHD) / Weight	210x60x280mm / 2.2kg