

VPI HW-40 Anniversary Turntable

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Marking the company's 40th birthday, the turntable mavens of VPI are right on song with an updated, deluxe version of their Classic direct-drive, the HW-40 Anniversary

Way back when, especially during the 1980s, direct-drive turntables were unloved by purists. How things change – just witness the high prices that vintage decks from Denon, Onkyo, Pioneer and especially Technics now change hands for. And with the latter's revived line of direct-drives turning out to be as hot as anything the high-end can offer circa 2019, the arrival of VPI's HW-40 Anniversary Edition direct-drive deck is doubly timely.



For £15,000, you also get the 12in JMW Fatboy arm, with Nordost wiring and adjustable VTA, a record puck, dust cover and circumferential ring to hold down the LP. The review sample was supplied without cables, but the back of the deck has a pair of RCA sockets and an earthing post, a blatant incitement to experiment with cables. I used YTER and completed the front-end with the EAT Jo No5 MC cartridge [HFN Dec '18]. I was making music in ten minutes.

New Blood

As VPI explains it, the Anniversary edition is a 'chassis-up redesign' that draws from company founder Harry Weisfeld's award-winning Classic series of tables. Price-wise, considering that VPI can sell you the Titan at £40,000, this model is roughly mid-level for the brand. It's worth noting that VPI, like Wilson Audio, is a second-generation-helmed firm. Harry has retired though he still consults, while his son Mat runs things.

New blood decrees that the motivation for this deck is to demonstrate the advances of the last 40 years, especially in materials, and VPI specifically cites the goal of exercising the gains since 1978. Of course things have moved on in 40 years, but many of us are enamoured of vintage gear, and there are components that ignore the passage of time.



The deck is spun-up via a new direct-drive motor, and a brief chat with editor **PM** elicited numerous reasons why, on a technical level, he prefers direct-drive to belt-drive. I didn't need convincing because I was one of the few who enjoyed direct-drives, running a Trio KD-500 and an L-07D. Considering that VPI makes both types, I loved its blurb about the HW-40 providing 'unflappable speed stability. Wow and flutter are a thing of the past'. Makes me wish I had perfect pitch.

For this lavish version of the turntable, the chassis, front and rear are formed from a solid, machined, $\frac{3}{4}$ in-thick aluminium slab with constrained-layer damping also deployed. The deck – with its imposing 559x425mm footprint – is finished in black, with walnut side panels. It employs an inverted platter bearing with a stainless steel shaft, on a 60 Rockwell chrome hardened ball, 'spinning in a phosphor bronze bushing, and all sitting on a PEEK thrust disc', says VPI.

Motor Skills

This deck really is a no-brainer to use. At the back can be found a main on/off rocker switch, while the plinth sports three illuminated buttons to select 33 or 45rpm and Stop. The arm is a delight, and obsessives will revel in the VTA adjuster. The deck rests on four large feet which address isolation through integral elastomer pads, as there's no springy suspension like most belt-drives. Even the supplied acrylic dust-cover is cited as 'low resonance'.

With direct-drives, it's all about the motor – not least because the name tells you there is no physical separation of motor-to-platter as with a belt-drive method. For the HW-40, the brushless DC motor uses coils that are constructed of solid copper, the square cross-

section wire embedded in a composite material for increased damping, all of which sounds like the recipe for a high-end transformer. It offers torque a'plenty and the deck gets up to speed in a shade over a second.

VPI further highlights its use of an ironless coil assembly, avoiding the use of magnetic materials in its construction. 'When the latter feature is combined with [our] overlapping V-shaped coil construction, the motor eliminates the cogging that accompanies traditional direct-drive motors, resulting in unprecedented rotational smoothness and a virtually unmeasurable wow-and-flutter figure'.

The motor drives a removable 11.3kg platter that matches its ascent to full speed by coming to a full stop in around one second. Meanwhile, the motor assembly is milled from a solid billet of aluminium and is secured with a five-point mounting to the top panel of the housing. As for the combined weight of the HW-40's platter and motorised 'sub-platter', this comes in at a little over 13kg.



Sounds Of Silence

It's been a few years since I had a massive direct-drive in my system, so I had forgotten just how silent they can be, and how precise. But I could feel a cliché begging to burst forth: 'Direct-drive is to belt what solid-state is to valves'. Well, not exactly, but the analogy wasn't far off. It was all about heightened detail, crispness, silences and a slight sacrifice of warmth and texture. Sound familiar?

It remained so when I moved from the Jo No5 via the EAT E-Glo Petit phono stage [*HFN* Feb '19] to the same through the Copland CTA408 integrated amplifier's phono input and a change of cartridge to my Koetsu Urushi. With the mixed artist tracks on *The Best Of '66 Volume Two* [CBS ABS1], sharing in common the label and the easy listening appellation, this virtue of direct drive somehow made the spatial concerns – scale, airiness – more authentic.

I don't know how one describes something that 'is not there' in the same sense as bass extension, attack, midband textures or other things you hear in a discernible manner, but this abstract, that of the silent spaces between and around the notes, benefited the presentation audibly. It showcased voices in particular, as if creating a separate soundstage for Barbra Streisand and her lush version of 'The Shadow Of Your Smile'. It gave her more shape, more form.

So, too, were the other voices complemented by this almost hygienic portrayal, in some ways reminiscent of the silences of the DS Audio optical system [*HFN* Jan '19], but with the character of each of the MC cartridges used. These are voices of distinction, with Tony Bennett's on 'A Taste Of Honey' better able to convey the emotion of the lyrics. To feel even more from his delivery was a blessing.

Though he's not as highly-regarded – a scandal, in my opinion – Andy Williams showed delicious playfulness on 'Michelle', while another underrated singer, Jerry Vale, delivered a convincing 'Sunrise Sunset'. But it wasn't just the spaces that made their performances so vivid and 'present', because the orchestration of CBS recordings of the era is both opulent and enveloping, positively over-endowed with grandeur.

Massed brass or strings, whispers of woodwinds... the sound was slightly sharper than the best belt-drives, and some might adjudge this sharpness as exactly what isn't wanted from an analogue source. Again, I was reminded of the tubes-vs-trannies analogy, and I am not going to apologise for saying that this is down to personal preference, as well as system synergy.



This is something which did not escape my own set-up. The Wilson Yvette loudspeakers [HFN Feb '17] are so crisply etched at the top, with truly admirable levels of precision and detail, that the combination could, at times, skate perilously close to sounding aggressive.

Brim With Respect

From the same year, but a different studio and genre, is Peter And Gordon Sing And Play The Hits Of Nashville, Tennessee [Capitol ST2340]. Here the dominant pedal steel and redneck bass – performed by the ace musicians of the city named in the LP's title, though credits are sparse – recall the best of Buck Owens and other practitioners of 'the Bakersfield sound'. There was no shortage of snap in the low end, while the fluidity of the pedal steel guitar was near-perfect.

Better still, particularly as the midband always trumps the frequency extremes in my little world, the contrasting vocals blended beautifully, Peter's higher registers and Gordon's deeper counterpoint. As with the CBS compilation, the stereo spread was wide and precise, if not quite as deep as I have heard from various belt-drives. What the drive

topology has to do with these qualities I am at a loss to explain. I can only describe what I heard. And what made me brim with respect, admiration and a lot of love for the HW-40 Anniversary was its masterful reproduction of the majestic title track from Jackie De Shannon's Put A Little Love In Your Heart [Liberty LP12442].

As with many of the artists on the Best Of '66... compilation, De Shannon is criminally undervalued. Gorgeous voice, sublime song-writing skills – she composed 'When You Walk In The Room' and 'Bette Davis' Eyes' among others. Anyway, the title track is one of those jaw-dropping, everything-including-the-kitchen-sink productions which would stop people dead in their tracks if it were played at hi-fi shows.

Take the redneck bass of the Peter and Gordon set, add orchestration as per the CBS set, with sweeping strings and blaaaaating brass, throw in a gospel chorus, a drummer with the control of a metronome, some punchy trumpet accents and it's an opportunity for a system to shine. The VPI HP-40 Anniversary turntable rose to the occasion.

Hi-Fi News Verdict

This deck is simply magnificent, and a delight in so many ways. It's easy to set up, painless to use, a joy to listen to and with a physical presence to savour. If perceived value is going to save the high-end, then VPI has nailed both the sound and the presentation. Match it carefully with your system to avoid an over-etched sound, and you'll have a deck for life. Or in this case, at least for the next 40 years!

Sidebar: 3D Vision

Arguably, the biggest leaps in tonearm performance have been associated with improved materials and manufacturing – specifically the introduction of SME's one-piece diecast magnesium Series V tonearm along with Rega's rather more affordable RB300 in 1983 [see Audio Milestones, *HFN* Nov '12]. It took two years to develop the diecasting for Rega's silicon alloy tube and bearing housing, but in 2013 VPI's Mat Weisfeld was able to prototype and produce a variant on the 'jointless' tonearm with far greater ease using a 3D printer. 'Using 3D printing techniques seemed the best approach since it could all be one piece and well damped,' said Mat.

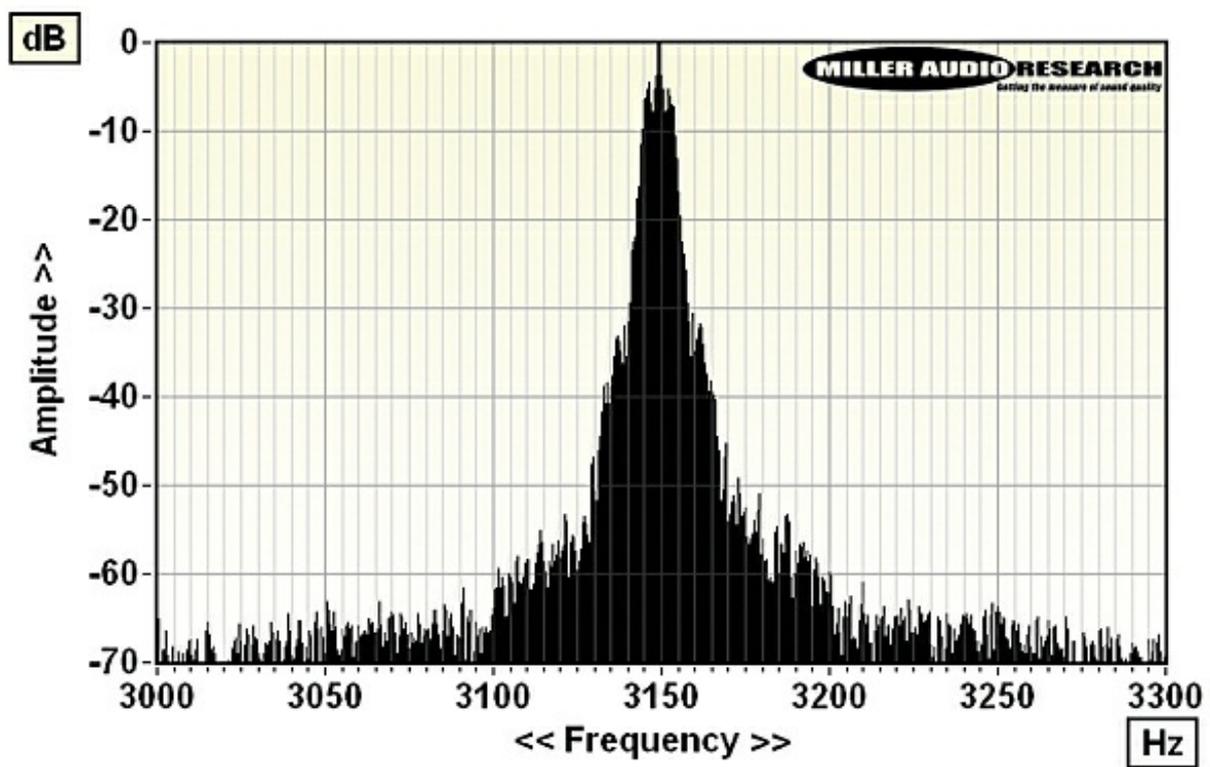


Because 3D printing extrudes the material outwardly – here using a high-temperature laser to build 0.001in layers of non-crystalline epoxy resin – the headshell, tonearm tube and counterweight extension can be created as a single arm wand. VPI's uni-pivot arms also include the fingerlift and pivot housing in the 3D printing but the 12in 'Fatboy' tube is supported within a Japanese-sourced gimbal bearing and has a detachable fingerlift.

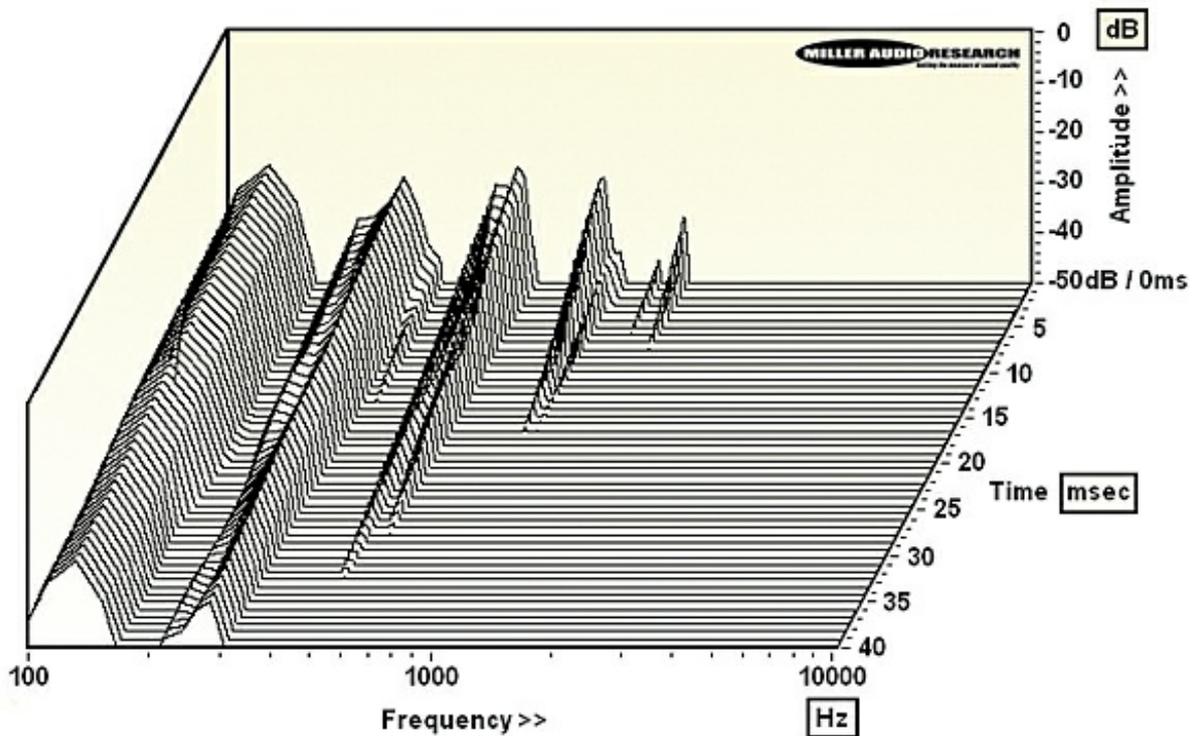
PM

Lab Report

Thanks largely to the efforts of Technics, direct-drive turntables are once again in the limelight and while VPI's updated motor (a non-ferrous design with a claimed 2.68Nm/sec torque) brings the HW-40's 11.3kg alloy platter up to speed in a fraction over one second, it's not quite as silent as its Japanese rival [*HFN* Jun '18]. Nevertheless, VPI's rumble is lagging just 1-2dB behind the world's best with its HW-40 achieving -73.1dB through-groove (slightly poorer at -72.5dB with the LP weight in place) and -73.5dB via the motor/bearing itself. Absolute speed is bang-on with a mere -0.03% error and, assisted by the flywheel effect of the platter's peripheral alloy ring, speed stability is very good with peak wow a mere 0.02% and flutter 0.04% [see Graph 1].



Wow and flutter re. 3150Hz tone at 5cm/sec (plotted ± 150 Hz, 5Hz per minor division)



Cumulative tonearm resonant decay spectrum, illustrating various bearing, pillar and 'tube' vibration modes spanning 100Hz-10kHz over 40msec

The partnering 12in JMW Fatboy tonearm features a '3D printed' armtube and integral headshell mounted into a robust gimbal bearing assembly featuring 'Japanese ABEC 9 bearings'. Friction is very low at <10mg in both planes and there was zero detectable play in our sample. These are very fine bearings indeed! Furthermore, despite its length, the lightweight tube material contributes to a moderate 14g effective mass for the arm as a whole, while its variable cross-section (a chamfered square at the bearing to a rounded triangle at the headshell) pushes the first bending mode up to 130Hz. There are harmonic and possible twisting modes at 225Hz and 280Hz with higher Q, but more rapidly dissipated, modes at 470Hz, 550Hz and 890Hz [see Graph 2, above]. The frequency range of these sharp resonances is not dissimilar to that we've observed from various 'carbon fibre' armtubes, but they do look generally better damped by VPI's polymer/resin tube. **PM**

Turntable speed error at 33.33rpm	33.32rpm (-0.03%)
Time to audible stabilisation	1.5 seconds
Peak Wow/Flutter	0.02% / 0.04%
Rumble (silent groove, DIN B wtd)	-73.1dB (-72.5dB with weight)

Rumble (through bearing, DIN B wtd)	-73.5dB
Hum & Noise (unwtd, rel. to 5cm/sec)	-62.0dB
Power Consumption	4-45W (4W standby)
Dimensions (WHD) / Weight	559x432x254mm / 15kg
Price (including arm)	£15,000
