HW-40 Anniversary Turntable From VPI

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By Paul Rigby

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A limited-edition direct drive turntable design, Paul Rigby reviews the HW-40 in its 'Anniversary' configuration

This is a big turntable. The plinth is large and imposing. You could throw two jumpers on one end of this thing for goalposts, climb on top and play football on it, for goodness sake.

I wasn't sure if this was a turntable or a writing desk.

Some of you might recognise it because there was an earlier incarnation of this design from 2012 called the Classic Direct Drive Signature turntable. It was much more expensive but not as sophisticated. When I say that, I'm looking at the motor. Don't confuse that older model with this freshly baked variant.

To business and let's look at that plinth size on a practical level. This turntable will reach the end limits of standard-sized hi-fi shelving so be prepared when installing that you have the room and make sure there's space around it too in case your room is a bit on

the cramped side.

Hunky VPI CEO, Matt Weisfeld effectively shows the relatively large size of the HW-40 Anniversary turntable

If you think the deck might hit the corners of your shelf then be aware if you have a shelf that features bobbly/knobbly fastenings on each corner to tie the rack system together. Not all top shelf hi-fi racks are clear and obstruction free. In this case, you might be best to rest the entire deck on tall isolation feet to lift the VPI up and away from those troublesome corners.

Suggested models might be the Alto Extremo Lyd II feet and the Orea Indigo Isolation feet from Isoacoustics

When the HW-40 Anniversary does sit finally on the shelf though it imposes and dominates your hi-fi and the room, come to that. But it does so with elegance and style (and an underlying tone of brute strength).

The technical reason for the size of the plinth is because it holds the electronics and motor. To confirm then, unlike other turntables out there, the HW-40 Anniversary is an enclosed system. There is no external and separate motor pod or power supply.

MASS DAMPING

Now, a little warning light might have just lit inside your head which asks the question, “If all of this resonating hardware is sitting inside the plinth, surely it will transfer a host of harmful noise to the rest of the system?” Which is why VPI has produced a massy and heavy plinth structure to damp the entire thing. The large plinth needs to support around 14kg of platter and ring clamp (see below). More mass damping. You don’t want that heavy weight sitting on a light plinth. That situation won’t end well. The size of the plinth also allows VPI to design an isolated system within to reduce noise. There’s one more reason for the size of the turntable, to accommodate the 12" tonearm (see below).

This turntable design is intriguing and also rare. Rare because only 400 VPI HW-40 Anniversary turntables will be produced and intriguing because the design is based upon direct drive technology.

VPI takes a wholly different pathway when approaching the direct drive direction. Most turntable fans will appreciate that direct drive traditionally involves a high torque platter action. One that boosts bass and enhances timing with on-the-nail transient

performance. The issue with the popular Technics system, for example, is that this high torque approach can be a recipe to store energy in the platter itself which can produce noise, picked up by the cartridge.

The VPI also offers a high torque motor to drive the very heavy aluminium platter (at 12.25kg) but it avoids platter energy storage by moving the platter using 2,500 tiny pulses per revolution (at 33⅓rpm). It also does this without any threat of cogging (a direct drive disease that used to be a feature of ye olde Technics turntables). This means that you never have a single, massive push of energy infusing the platter area. It's like a million ants each giving the thing a tiny heave. On their own, they're useless, get them all together and they can move mountains.

KEEP YOUR BEARINGS

The motor is controlled using a servo amplifier to monitor the speed of the platter. You'll find that the platter hits the required speed very quickly. Once the heavy platter is up to speed, the energy is reduced and the servo is left to maintain the speed with a much reduced energy output. The entire operation is, it has to be said, very quiet indeed.

The platter features an inverted bearing with the thrust bowl sitting on top of the bearing spindle that then sits on a thrust pad made from PEEK (Polyetheretherketone). It's inverted because, according to VPI, "...the point of contact between the thrust pad and the ball bearing is at the same level as the tracking stylus. This means there is minimal movement and mechanical resonance. If the bearing is down in the well of the plinth, the structure is swaying on top if it. The issue with an inverted bearing is that you need a tall platter to accommodate them." And that's what we have here.

There's a phosphor bronze insert/lining, while the spindle and ball bearing are stainless steel.

Speaking of the platter, the outer lip features a small cut out. This is positioned to allow the record to lie perfectly flat on the platter. You'll also see in the image above a removable "peripheral ring clamp" which surrounds the platter and covers the end of the record. That is, you place the record on the platter and the ring clamp on the record. It includes felt pads to prevent damage. The ring doesn't touch the platter.

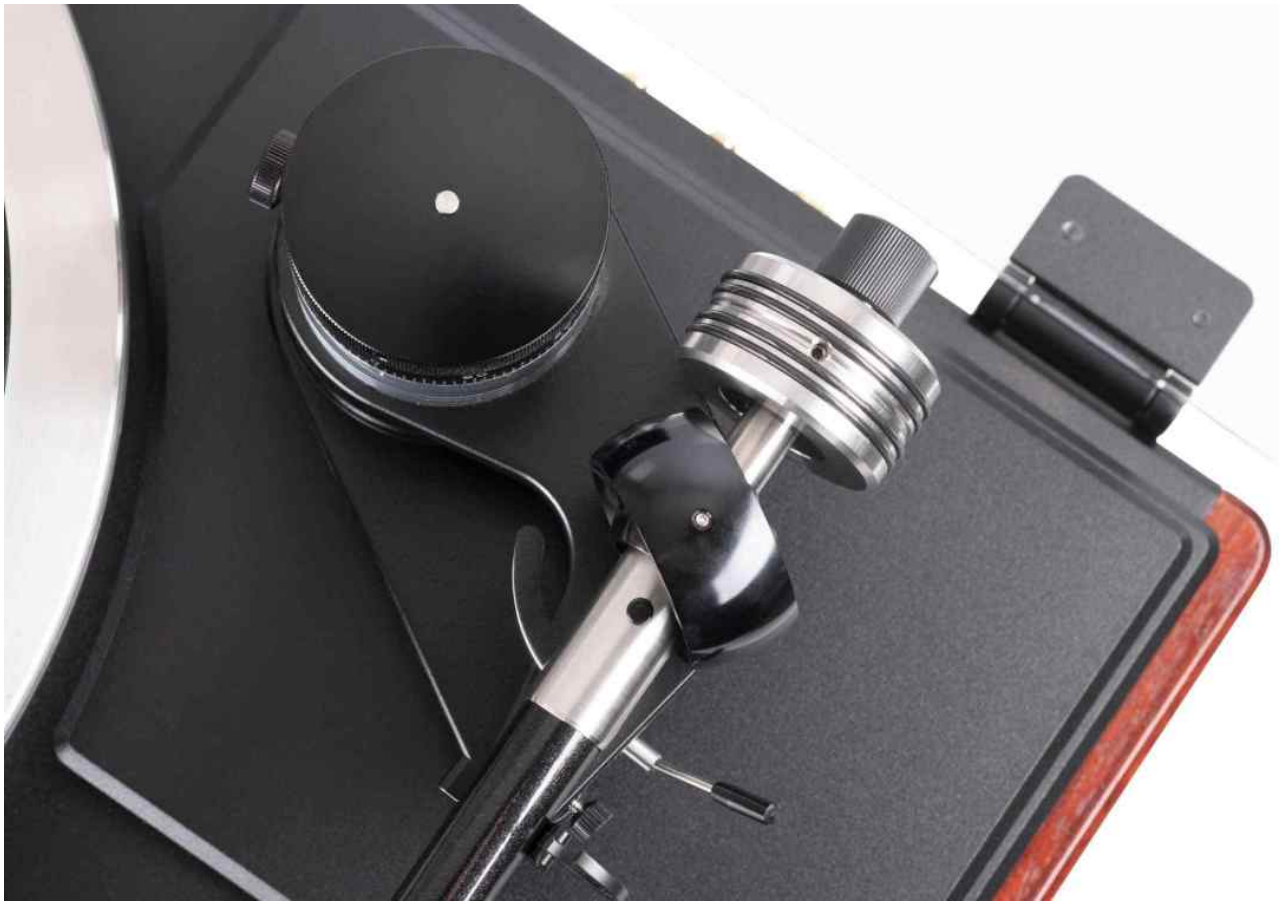
All of this means that your 180gm vinyl record pressing has been transformed into a 12.25kg record pressing. The ring clamp also acts as a flywheel to turn your 12" record into a 14" record.

The final addition to the turntable is the stabiliser accessory, which sits loosely over the centre spindle.

ARM IN ARM

The 12" JMW-12 Fatboy tonearm was selected because of the classic low tracking angle error aspect of the design. One of my reference turntables features a 12" arm and I can vouch for this benefit. It also meant that the headshell angle could be reduced.

There's a related issue here though and one that VPI had to tackle promptly. The longer the arm tube, the greater the inherent design resonances. It's a bit like twanging a ruler on the edge of a desk – the longer the ruler, the more twang you get. This is how I spent most of my time at school, so I know what I'm talking about here. This is also why most manufacturers use a 9" tonearm. To reduce those resonances.



To counter the downsides of a longer arm tube, you need to almost over-engineer the tube. VPI likes its unipivots but this is a gimbal bearing design so a different build approach was required.

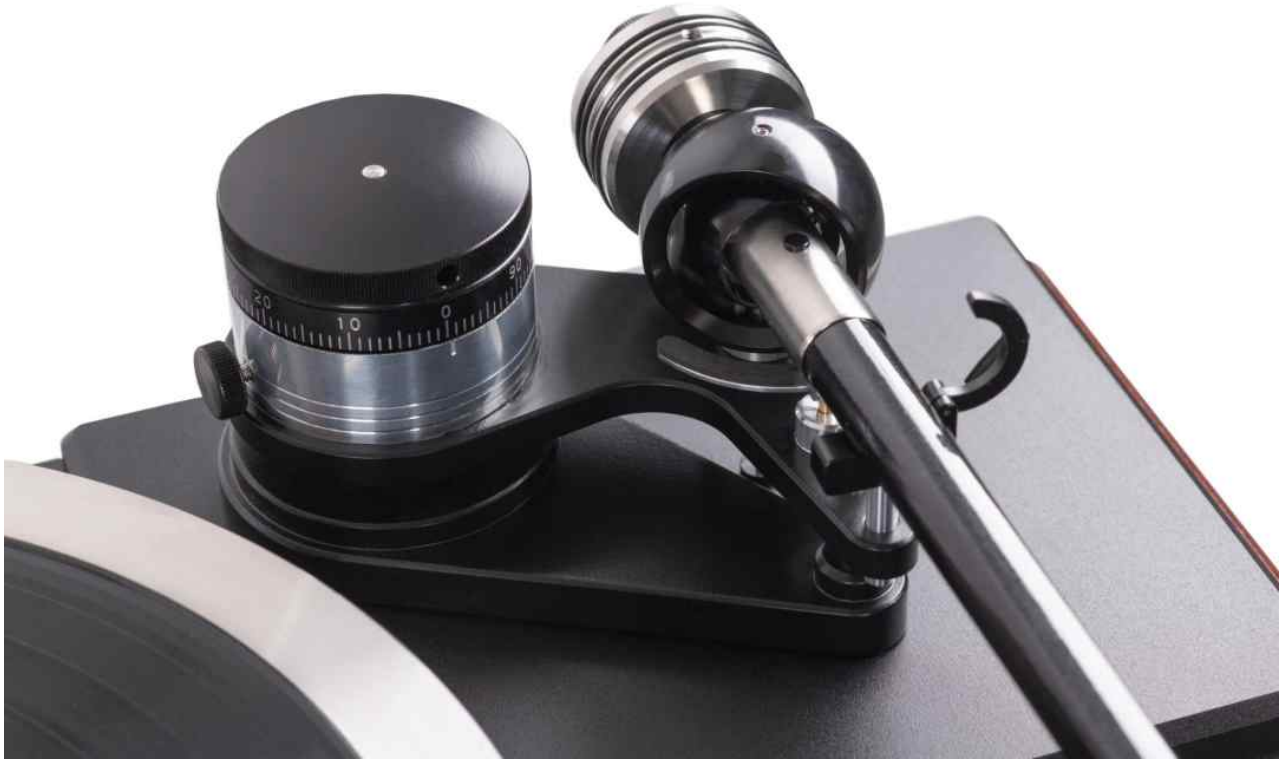
The tube itself and headshell is a single piece, there are no mechanical interfaces here. This section of the tonearm is 3D printed. It begins flat in shape and tapers to a cylinder the further back it flows. According to VPI, this is to reduce standing and resonance waves. One thing to note here, 3D printing allows you to shape the inside of the tube as well as the outside. I've never heard anyone talk about this before but VPI made a point of noting it and, to be honest, it's a great point. When a metal tube is utilised, for example, you're really stuck with the starting former and then you shape it from there, "The inside of most production tonearm wands, varies," confirmed VPI. "No-one can rework the inside of it whereas, with 3D, you have full control of that."

VPI has produced fully 3D-printed tonearms before which is fine for a unipivot. A gimbal arm needs great strength in and around it though, hence the use of metal at the rear of the arm construction. Stainless steel is used for the core of the tonearm. Nordost wire is used within, "They give us ultra-low capacitance cables," said VPI. "If there was an appreciative capacitance here then you would have to adjust that in the phono stage and there are precious few phono stages out there that will allow you to make that required capacitance adjustment." The bearing is a Japanese-sourced ABEC-9, a known and well-liked bearing grade.

VTA

The counterweight is added to the rear of the arm and locked into place. From there, it is moved by a threaded adjustment at the rear. A free stylus tracking force gauge is included.

To the left of the arm is a large VTA (Vertical Tracking Angle) adjustment wheel. I just loved this. I played around with it for ages during the review because it was so easy to use. It allowed me to not only tweak the VTA very easily for different cartridges but also for different vinyl thicknesses. Takes a few seconds to adjust too. Tweakers will absolutely adore it.



That column on the left adjusts the VTA. Just rotate the movable top bit to tweak

You can also adjust the azimuth on the arm. The headshell features a small slot which holds a supplied removable metal bar to allow you a visual indication for the measurement. There are a couple of grub screws on the silver collar of the arm to facilitate movement.

VPI asks you to supply your own phono cables and power cables. I'm happy with this because it forces you to consider this area instead of defaulting to the execrable kettle lead that's normally supplied in most turntable boxes. Don't forget, you're spending £15,000 – that's fifteen thousand pounds, do I need to translate this into French and German? I emphasise this point to ask this question: do you really want to connect this important and expensive piece of technology with a 5p mains cable and bell wire costing somewhere in the region of 0.0001p? Use high-end cabling *only* for this area. The best you can afford. In fact, save up for better. So allow for that in your budget.

A dustcover is supplied as are the rather lovely wooden cheeks to the left and right of the plinth.

The adjustable, isolating feet below also move to cater for slightly uneven surfaces.

SOUND QUALITY

I grabbed the vinyl version of Nancy Wilson's You've Got Your Troubles from the original Capitol/EMI pressing of *A Touch of Today* (1966). And yes, she sure does have problems because this master is almost – but not quite – strident. It's on the verge of plain old bright. The cut is a useful test track though because you immediately present the hi-fi component with imminent catastrophe and then you see how it copes. Anything forward of neutral will cause brightness. Anything much less will dull the mids.

So how did the HW-40 Anniversary react?

If I said, "Wow!" right now, could we all go home so that you could all just leave me alone to listen to my record collection on this thing?

No, I had a feeling you might say that.

Where to start? Well, "Wow!" is actually a logical beginning because we all tend to react to the whole sound when we first listen to any hi-fi component. It's only after that initial impression do we begin to investigate the ingredients of the sound output.

So what of that "Wow!" then? Why "Wow!"? My first impression was based upon a number of seemingly conflicting and contrasting emotions combined with a large spreadsheet full of information.

The emotional side of me said this, “This is nice. No, no, it’s very nice and we should just sit here and bathe in this stuff. Really, do it now. Don’t make any notes, just listen.” That came from the sense of initial neutrality combined with an insight that produced a Tsunami of fine detail. Hence, instead of making lots of notes, I was compelled (or was it stunned) to listen only and then the details started to spring forth. New elements that surprised me from this familiar track.

I say new elements, I don’t mean that new instruments emerged from the mix but rather that the sounds presented themselves with a level of sonic maturity that both excited and took the breath away.

The sound presented a balanced output on a broad level. That meant the HW-40 Anniversary was behaving itself. Bass, midrange and treble did their jobs, didn't try to dominate any aspect of the soundstage, performed to spec and never faltered. No bass bloom, no treble pinch and zero smearing in the mids. To achieve this level of frequency competence is hard for any hi-fi component but it is absolutely critical if you want your sound to impress. Frequency discipline is your base line. You have to get this right. Cock up this part of the sound and you just can't fix things down the line. This is why you sometimes get turntables which sound really impressive in terms of bass but feature recessed mids or the treble is exquisite but the bass is absent without leave. Get your basics right and you can build upon that to, who knows, great things.

The group of control buttons for power and two available speeds

So I listened further and patiently waited. I didn't have to wait for long. After a few seconds, on the right channel, the drummer hit his cymbal (and probably held it with his other hand to reduce reverb) and then he released his hand and hit it once more for a cymbal splash, hence 'tap, tap, tap, tap, tap, splash'.

When he got to that 'splash' it took me aback. "Whoa, hang on, hang on. What was that you just did?" So I ran to the turntable, grabbed the arm (in a delicate way of course) and backed up a bit, "tap, tap, tap, tap, tap, splash'. Well. There it was again. That cymbal, my friends, seemed to have grown in radius by a foot and half because there was such a rich and deep response to this stick hitting an upturned saucer of metal. The abundance of shimmer over-flowed with a full-bodied and lush metallic swish sound. It sounded so good, I put the arm back to hear it once more.

Then Wilson's vocal, always on that bright edge, changed. Her voice sat right on the stereo image, as you might expect. The HW-40 Anniversary allowed her voice to broaden left and right and, when it did that, more detail emanated from it. More shades, greater levels of gradation and a sense of refinement transformed her performance.

Then there was bass guitar (I'll stop soon, I could right a book about this one track). The bass guitar did offer something truly new. Have you ever seen a bass guitarist in full flow? You may have seen him just quickly bring his hand back up or down the neck of the guitar. It's a sudden thing that twists the notes that sometimes react like a caged animal in that the sound almost growls at you. Have you ever heard that effect? I hadn't on this track until it was played by the HW-40. This is down partly to the direct drive mechanism, partly the heavy plinth and the solid wooden structure of the same. What I truly loved about this effect and why it had my waving my arms about in delight in a rather Italian manner was that it was done with just enough growl. It was subtle yet it grabbed your attention. I know some turntables that would have over-egged that particular pudding. They would have laid it on thick and screamed, "Look at me!" Not the HW-40 Anniversary. It just said, "Hey buddy, get this," Then raised an eyebrow and inclined its head slightly. No more than that. Doing it that way was far more effective. Devastating, in fact. It added a sense of strength and driving guts to the whole track. It also added style to the presentation. Real style.

Ok, look let me change the record here. Otherwise I'm able to ramble on all night. Let's rock out a bit with T2 and *It'll All Work Out in Boomland* and the track, Morning. This is a direct drive turntable, right? So what was I looking for with a rock track? I'll tell you what I didn't want to hear. I didn't want too much dynamism here and I didn't want the HW-40 Anniversary to go overboard. I wanted restraint but lots of threat. I didn't want obvious.

I didn't get obvious. What I heard was a rainbow of subtle and tiny tonal variations that, when placed together, sounded like a fine dining Christmas hamper of delicate tastes and subtle flavours. The percussion offered variance in each drum sound while the acoustic guitar strums where rich in effort and pressure variations.

And yet. And yet. I wondered if I could improve matters further. Why? Because I had undertaken the sound tests without adding the supplied VPI stabiliser. When I picked up the VPI stabiliser to place over the spindle, a tiny grey cloud obscured the sunshine. That was because I had encountered this little tinker before when I reviewed the VPI Prime Scout. In that review, I described the turntable's audio response with the stabiliser in place, "Adding the clamp increased frequency discipline and focus but it also reduced air and space in the mids and sounded a tad dry."

That's what I found here too. Really, why VPI insist on adding this stabiliser, which pays lip-service to the notion of a stabiliser but does no more, to a quality product like the HW-40 Anniversary is beyond me. It's there as an after-thought. I recommend removing it from your listening room, using it as a paper weight and keeping it as far away from the HW-40 Anniversary as possible.

Instead I tried a quality stabiliser from HRS, the ADL which is the lighter stabiliser offering from the company and includes sound absorption technology. Using this variant, the HW-40 Anniversary provided even more focus and precision during treble-based cymbal taps while drum strikes now had greater character with added force behind that actual strike itself. In terms of pace, the entire song lifted its tempo and sped along at a fair clip while noise reduced further, removing a slight – almost imperceptible – coolness within the upper mids.

CONCLUSION

I've heard several direct drive turntables but the HW-40 Anniversary surpasses them all. It's simply glorious. It's the best direct drive design that I've ever encountered. It's also quite possibly the best turntable I've ever heard. Firstly, because it offers authority with a light hand. It's not a bully. It offers maturity and restraint. There is no sense of wanting to dominate the music here. This turntable is not 'flash', in terms of showing off or exhibiting itself. It never tries to impress.

Because of that one factor, I know that the VPI HW-40 Anniversary is a piece of true high-end hi-fi equipment. Only quality high-end hi-fi refuses to *try*. It wants you to come to it. To examine the music in detail and to rediscover the wonders within each song. If you don't want to listen, really listen, then the HW-40 Anniversary doesn't mind and won't bother you. But if you pay attention and allow yourself to be drawn into this VPI design then it will reward you with an abundance of sonic treasures. The HW-40 Anniversary is an instant classic. In my eyes it has already attained legendary status.

Because of that, I have the honour of awarding it the ultra-rare Golden Groovy award. My goodness it deserves it.

HW-40 ANNIVERSARY TURNTABLE

Price: £15,000

Tel: 0131 555 3922

Website: www.vpiindustries.com

GOOD: clarity, transparency, refined mids, rich treble, bass character, build quality, easy to install, aesthetics

BAD: the stabiliser