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VINYL VICTORY

Exclusive Mark Levinson N°515
– long-awaited debut deck!

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Mark Levinson N°515

When Mark Levinson wanted a turntable to partner its vinyl-friendly N°523 and N°526 preamplifiers it turned to fellow US brand VPI for help with the mechanical design
 Review: **Ken Kessler** Lab: **Paul Miller**

Precedents are not hard to find for collaborations such as this alliance between Mark Levinson and VPI. You can go all the way back to the Tandberg-badged Thorens TD-150s of 50 years ago, or look to current efforts such as the Clearaudio-made McIntosh turntables or the plethora of machines Pro-Ject produces for others. The bottom line is that – like Mac’s decks – the £10,000 Mark Levinson N°515 is not a case of badge-engineering: it’s an all-new model that happens to be made for them by VPI.

MEETING THE CHALLENGE

Visit the Levinson website, and you find out just how closely the two manufacturers worked, the ML crew admitting that their specialty is electronics, while VPI was eager to rise to the challenge not just of making a record deck for another brand, but one worthy of that brand’s particular ethos. VPI already showed it could do it with last year’s Shinola Runwell Turntable, and for that venture, the trick was making one that respected the design language of a company that makes bicycles and wrist watches rather than hi-fi equipment.

For the Levinson turntable, VPI had to emulate the standards of a no-compromise electronics brand, known for its superior metalwork and aesthetics as well as sonic performance. VPI already has its own catalogue of high-end decks, but Mark Levinson was not interested in simply putting its logo on a VPI, so a new look and stance was created in keeping with the electronics with which the turntable is likely to be paired – the phono-equipped N°523 and N°526 preamps [*HFN* Dec ’16].

For those familiar with the VPI range, the N°515’s family tree would show roots in the VPI Prime [*HFN* Jun ’15] and Prime Signature [*HFN* Mar ’17]. Shared elements include the massive alloy platter, the sandwich plinth construction, but made

larger for the N°515, and a 3D-printed arm tube and headshell. To show how far the transformation goes, the company re-engineered its unipivot arm to house, instead, a gimbal bearing and custom counterweight. Fine – I have a love/hate relationship with unipivots, as most are a pain to set up properly.

Says Todd Eichenbaum, Director of Product Engineering for Mark Levinson, ‘The arm tube and headshell are a single 3D-printed component directly derived from VPI’s 3D-printed unipivot arm. The stainless steel gimbal assembly and counterweight, although designed by VPI, are not used on any VPI-branded decks. When we first began working with VPI, we were shown a prototype tonearm that used this same gimbal assembly with a metal arm tube and headshell, and I was really taken with the sound of it. It offered very precise and well-controlled imaging and soundstaging with a rock solid bass.’

For the N°515, they used what Eichenbaum feels are ‘the best of both

worlds – the 3D-printed section mated to the gimbal’. Instead of the four-pin Lemo connector from tonearm to plinth, the tonearm wires run directly to the RCA sockets at the rear of the deck. This arrangement also allows users to experiment with cables from deck to phono stage, accepting any RCA phono-to-phono signal leads, plus an earth wire.

PLATTER AND PLINTH

For the plinth – a combination of features and materials from several VPI models – the designers settled on top and bottom layers of 12.5mm-thick MDF wrapped with a tough, heat-applied vinyl sheet with additional damping to the MDF panels. The layers, besides being attached to each other with adhesive, are also clamped together at the four corners with large, threaded Delrin and stainless steel posts. The centre section is a single billet of machined 12.5mm-thick aluminium.

Resting on Delrin foot pillars with concealed rubber shock mounts, the N°515



RIGHT: The 10in 3D-printed arm tube is culled from VPI’s JMW 10 3D tonearm but the latter’s unipivot is replaced here by a custom gimbal bearing and decoupled counterweight



also sports the same machined aluminium feet and rubber pads that are used on the N°534, N°536 [HFN Sept '16] and N°585 [HFN Apr '15] amplifiers. These should improve damping and isolation of the plinth from external vibrations, and also allow for small height adjustments.

Identical to those in VPI models are the inverted bearing and the platter. Says Eichenbaum, 'They both do their jobs admirably, and there was simply no compelling reason to make changes.' The 8.5kg platter is machined from a single aluminium billet with a large disc of MDF attached to its underside to provide damping. A nice touch is the personalised felt mat, with the Mark Levinson legend across its surface.

Reminiscent of TechDAS's Air Force models, the N°515 uses an outboard motor assembly that sits in a niche to the left of the main chassis. The housing uses the

same sandwich construction as the plinth, its AC motor mounted directly to the thick aluminium plate in the sandwich. The rest of the motor housing is made from folded, welded 2.3mm aluminium.

Eichenbaum points out that 'The aluminium is very rigid and well-damped, and, unlike steel, it does not vibrate in response to any stray magnetic fields from the enclosed motor and transformers.' The control electronics comprise two oscillators, one each for 33.3rpm and 45rpm, and a Class AB power amplifier. Two press-buttons operating in push-push fashion start the deck.



TIGHT TRANSIENTS

Arriving with a nice Ortofon Cadenza Bronze cartridge pre-fitted – a circa-£1499 MC on top of the £10,000

'The bass was a foundation for utterly devastating guitarwork'

LEVINSON'S LEVERAGE

Todd Eichenbaum, Director of Product Engineering for Mark Levinson, detailed specific differences between the VPI and ML decks. Beyond the cosmetics, he says, 'The electronics are similar to VPI's analogue drive system, but are optimised for the N°515's motor. Having them built into the same housing is convenient from a system perspective: it minimises the amount of wiring, which mitigates radiated noise and provides a very direct connection to the motor itself.'

'We use three belts to provide a somewhat tighter connection between the motor and platter, reducing drag and offering a slightly more extended and accurate bass sound than a single belt. Having the motor housing and turntable plinth physically separated reduces noise and vibration transfer from the motor, as you would expect.' The armboard and VTA base are almost the same as VPI uses, but the VTA base on the N°515 is smaller. 'No RCA jacks or Lemo connector, and the anti-skating mechanism is mounted directly to the rear of the VTA pillar.'



ABOVE: The 48mm-thick, 8.5kg machined aluminium platter and composite/alloy sandwich plinth are both inspired by VPI's Prime Signature, but the motor and feet are ML's own

price – the N°515 was fed into my EAT E-Glo phono stage, Audio Research REF6 preamp [HFN May '16], McIntosh MC2102 power amplifier and a fresh pair of Sonus faber Amatis [see p28]. As I had just been feeding that system with the vinyl remastering of The Beatles' *Sgt Pepper* [Apple 4553420602557], it was as good a place to start as any.

Wow! The nature of the bass was so different that I had to do the sane thing and level the playing field by fitting my Air Tight PC-1 Supreme MC to separate the deck from the cartridge. While the Cadenza Bronze is a fine performer, the PC-1 Supreme – at many times the cost – demonstrates greater refinement and a more lively top end. And a £10,000 deck like this should be (and was) able to handle any cartridge you'd care to fit. It quickly

showed the Cadenza is something of a bargain, and that the bass heard was a feature of the N°515 itself.

It reminded me of the SME Model 30: so controlled and precise, yet somehow warm that it managed to do what CD doesn't, down below. You get slam and tight transients, but without any artifice.

What benefited most from this lower octave behaviour was Ringo's drumming, especially in the manic reprise just before 'A Day In The Life'. The word that springs to mind is 'visceral', and the sensation it imparts is one of utter authenticity.

It's all about pretending the musicians are in the room with you. The N°515 is deliciously uncoloured in the manner ↻

MARK LEVINSON N°515

Comparisons between this new N°515 and VPI's Prime [HFN Jun '15] and Prime Signature [HFN Mar '17] decks are useful, not least because they share a very similar, if not identical, 8.5kg platter and inverted bearing with hardened stainless shaft, chrome ball/PEEK thrust pad and phosphor bronze bushing. The N°515 utilises a beefier AC synchronous motor and power supply [see inset picture, p39], benefiting start/stop times, but the triple belt drive also has the potential to transmit more noise into the platter. In practice, through-bearing noise is slightly higher in the N°515 at -69.5dB (DIN-B wtd) versus -70.6dB for the Prime and -73.6dB for the Prime Signature which translates into a similar increase in through-groove noise. Peak wow and flutter is comparable at 0.06% but our sample of the N°515 was running about 0.5% fast [see Graph 1, below]. This will not be detectable by most listeners and, as I often mention, motors typically slow with age anyway.

The 10in 3D-printed polymer/resin arm tube is necessarily less rigid than a carbon or titanium-tubed design and so the first bending mode occurs at a low 96Hz with a series of higher frequency harmonic/torsional modes at 240Hz, 310Hz and 365Hz [see Graph 2, below]. The headshell bending mode appears at 670Hz but all are reasonably well damped, in part courtesy of the tube's foam infill and the cleverly decoupled counterweight. The VTA adjustment pillar offers quick and easy 'tweaking' of arm height with no obvious compromise to the integrity of the arm structure. Similarly, the gimbal bearing is of exceptional quality, with friction less than 10mg in both planes while suffering no detectable play. It's a precision partner for a precision deck. PM



ABOVE: ML's triple-belt drive system is clear to see as is a variant of VPI's JMW tonearm base with its adjustable VTA tower. RCA sockets allow your choice of cabling

of the company's electronics, and was clearly voiced to match them, but the vocals throughout weren't merely showcases of hyper-detail. They enjoyed warmth and expression, adding poignancy to 'She's Leaving Home', which has always hit me with its almost cruel resolve, and elevating the charm of 'When I'm Sixty-Four'.

POWERHOUSE PERCUSSION

Ultimately, that LP challenges the listener with its long fade-out, before the rather irritating lead-out groove loop. The crescendo is delivered by Levinson's N°515 with faultless power and decay, which is as it should be. The Ortofon Cadenza managed this with total competence, but the deck and arm proved their mettle with the Air Tight PC-1 Supreme. The fade leaves you drained, only to be shocked back to the present with the lead-out groove nonsense.

Looking for something with less polish, more energy and a boat-load of angst, I turned to the most underappreciated, underrated band of all time: Big Star. From the debut LP, #1 Record [Big Beat WIK53] I listened to the raging, pre-punk power of 'Don't Lie To Me'. Raunchy, twangy guitar, McCartney-esque bass, tortured vocals and any fears I might have had that the Levinson N°515 was too nice, too polite to deal with frenzy, eliminated the instant the drums kicked in (0.7sec).

With a positively mental lead-break worthy of the early Kinks, punchy percussion and a surfeit of attitude, the song presaged every powerhouse band ever to bear comparison with The Clash.

This turntable made an occasion of it, continually thrilling with the way it spread the drums across the room, and let the bass roll with it, a foundation beneath utterly devastating guitarwork. Left drained from that, I moved to the sequel,

Radio City [Big Beat WIK 54] and my all-time fave Big Star classic: 'September Gurls'. The odd spelling tells you that this is a song like no other, part-Byrds, part-Beatles, part-Left Banke. Its chiming sound, punctuated by McGuinn-like guitar and heart-breaking vocals were conveyed with exactly the mix of power and delicacy required.

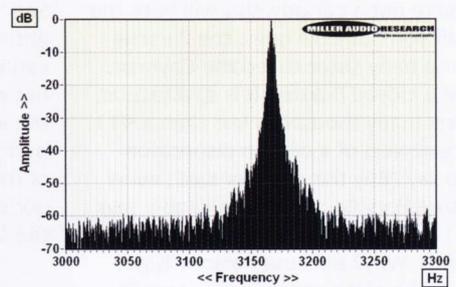
Moving on to something gritty and funky, I dug out a brace of mono Lee Dorsey LPs, *Ride Your Pony/Get Out Of My Life Woman* [Amy 8010] and *The New Lee Dorsey - Working In The Coal Mine/Holy Cow* [Amy 8011]. Exemplars of the New Orleans sound that dates back to the mid-'50s, when funk and rock began to temper the blues and jazz, these Allen Toussaint productions mixed punchy brass, barrelhouse piano, sharp guitar and those rich vocals, with a lazy, swamp feel that says 'Deep South' without equivocation.

'Ride Your Pony' was all I needed. The snap of the bass, the crisp snare, the super-cool backing vocals and the yackety sax coalesced into a gumbo of pure funk. The Levinson N°515 did not impose any restraint, nor did it lose any detail or atmosphere. This turntable is a testimonial for analogue. ☺

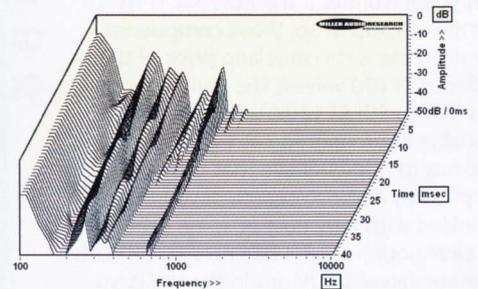
HI-FI NEWS VERDICT

There was never any doubt that the N°515 would be exceptional. With the pedigree of Mark Levinson and VPI, how could it be otherwise? While there are gains to be made in terms of the ultimate perception of mass or grandeur in the sound, the next steps up the scale mean doubling the spend. If £10k is your budget, and refinement with the option to rock hard define your tastes, add this to your list of candidates.

Sound Quality: 88%



ABOVE: Wow and flutter re. 3150Hz tone at 5cm/sec (plotted ±150Hz, 5Hz per minor division). Wow is very low but absolute pitch was +0.5% in our sample



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

HI-FI NEWS SPECIFICATIONS

Turntable speed error at 33.33rpm	33.50rpm (+0.51%)
Time to audible stabilisation	5sec
Peak Wow/Flutter	0.02% / 0.04%
Rumble (silent groove, DIN B wtd)	-67.9dB (-68.0dB with clamp)
Rumble (through bearing, DIN B wtd)	-69.5dB
Hum & Noise (unwtd, rel. to 5cm/sec)	-55.1dB
Power Consumption	10-23W
Dimensions (WHD) / Weight	533x200x404mm / 26kg