

hardware review



The world of turntables is one of the most inventive in the gamut of audio creation, the challenge of getting a small diamond to track the microscopic variations in a vinyl groove inspires a remarkably diverse range of ideas. But the Rigid Float tonearm from Viv Laboratory in Japan is up there with the most radical among them. What differentiates it from the majority is a unique approach to cartridge alignment, put simply it shuns conventional thinking and dispenses with offset angle.

Offset angle is the relative angle of a headshell to the tonearm, in S shaped arms this is achieved by bending the arm tube, but offsetting the headshell alone tends to make for a more rigid structure and is the standard approach. The Rigid Float has a slim bar where you would normally expect a headshell but it is effectively just like any other, the 'Nelson Hold' fixing arrangement notwithstanding. What's plain weird is that it is in line with the straight arm tube and you cannot rotate the cartridge. This is totally at odds with almost all thinking on cartridge alignment and theoretically should not work, but nonetheless it does, a state of affairs that has analogue gurus scratching their heads in bafflement, me included.

The guys at Viv Lab believe that “offset angle and overhang setting seriously affect sound quality because of fluctuations in side force that can never be cancelled by anti-skating mechanisms”. In other words they consider that combatting the natural inward pull of offset cartridges with anti-skate systems is likely to cause more distortion than errors in tracking angle. Viv Lab has proved this by making the Rigid Float with a seven inch arm as well as nine and 13 inch versions. As you can hopefully see a seven inch arm is quite a

peculiar thing, it really shouldn't work with anything other than a spherical stylus, yet both the cartridges I tried in it have line contact styli and neither sounded like it was mistracking. In fact both sounded pretty damn entertaining, but more on that later.

Free range

The Rigid Float name relates to the fact that the arm bearing is Viv Labs' "original oil floated pivot" which appears to be an oil damped unipivot that has restricted twist, put another way the arm moves up and down and side to side but won't twist on its axis like standard unipivots. This is unusual but less radical than the fact that the arm base is not designed to be fixed down, instead it sits on rubber or metal feet and you move the base to align the cartridge. It has height adjustment with a lock nut and RCA phono output connections in the base and, in the case of the seven inch example, sits "about 20mm" from the edge of the platter. Essentially the arm pivot needs to be 215mm from the centre spindle.



The armtube itself is fairly small in diameter and appears to be aluminium, it has a collet for the detachable headshell and two 'O' rings along it presumably for damping purposes. The headshell is rather unusual too albeit not dissimilar to one created by the Funk Firm a few years back, it consists of an aluminium protrusion with three holes in it and a separate

cross bar with holes for the cartridge bolts. In the centre of the cross bar is a short bolt with a knurled head that Viv Labs suggest you tighten through one of the three holes in the headshell to brace the cartridge in what the company calls the 'Nelson Hold', derived from the full Nelson wrestling move. You can turn the centre bolt in so that it protrudes and makes a gap between headshell and cartridge top, which means that azimuth can be adjusted. Or you can do the cartridge bolts up and turn the knurled bolt until it presses against the cartridge and thus braces it to a small extent. The effect this will have depends on how tight you make it and what the cartridge body is made of, either way it's an opportunity for tuning resonances in the cartridge body.

Set up is simplified by the absence of a fixed armboard and the presence of a very basic protractor, one that's so slight you can miss it in the packaging. Essentially this is an L shaped piece of plastic with a hole for the turntable spindle and another for the stylus, once both points are in place you just move the arm base until the arm aligns with the protractor. With the seven inch arm this results in the stylus following an arc that's well short of the centre spindle, it doesn't overhang it underhangs by between 5 and 20mm. And this is true of all the Rigid Float arms, even the 13 incher. The only complication with set up is that you need a area on the turntable that is big enough for the 90mm diameter base and a plinth that can take its circa two kilo weight.

Counterweights come in various sizes and thread onto a stub, you can use one or several to find the best mass for a given cartridge. Usually that mass is the one that sits closest to the bearing, the further away it is from that point the more rotational inertia it has and the harder it is for the cartridge to accurately 'read' the groove.

Authority

The remarkable SME Model 20/3 turntable has enough space for the Rigid Float if you remove the existing arm, it also has adjusters for level so that the weight can be accommodated. I started out with a Rega Apheta cartridge in the Rigid Float and a Trichord Delphini phono stage at the other end of some Townshend Fractal interconnects. A combination that proved highly entertaining thanks to the tremendous immediacy it brings to what can sometimes seem a slightly over polite turntable. It was lovely to combine this superb pace with the SME's authority in the bass, it makes images rock solid and puts instruments right in the here and now in the listening room thanks to high resolution of instrument timbre and the acoustic of the recording venue (who needs DSD256 when we've got vinyl?). This makes for a truly palpable sense of presence largely thanks to the sheer amount of detail and the coherence with which it's presented. It's an

extremely clean but not stark listening experience that allows full immersion in the musical moment being recreated. Remember that neither the cartridge nor the phono stage here are particularly exotic examples. Nonetheless they are capable of resolving fine detail remarkably well with the Rigid Float.

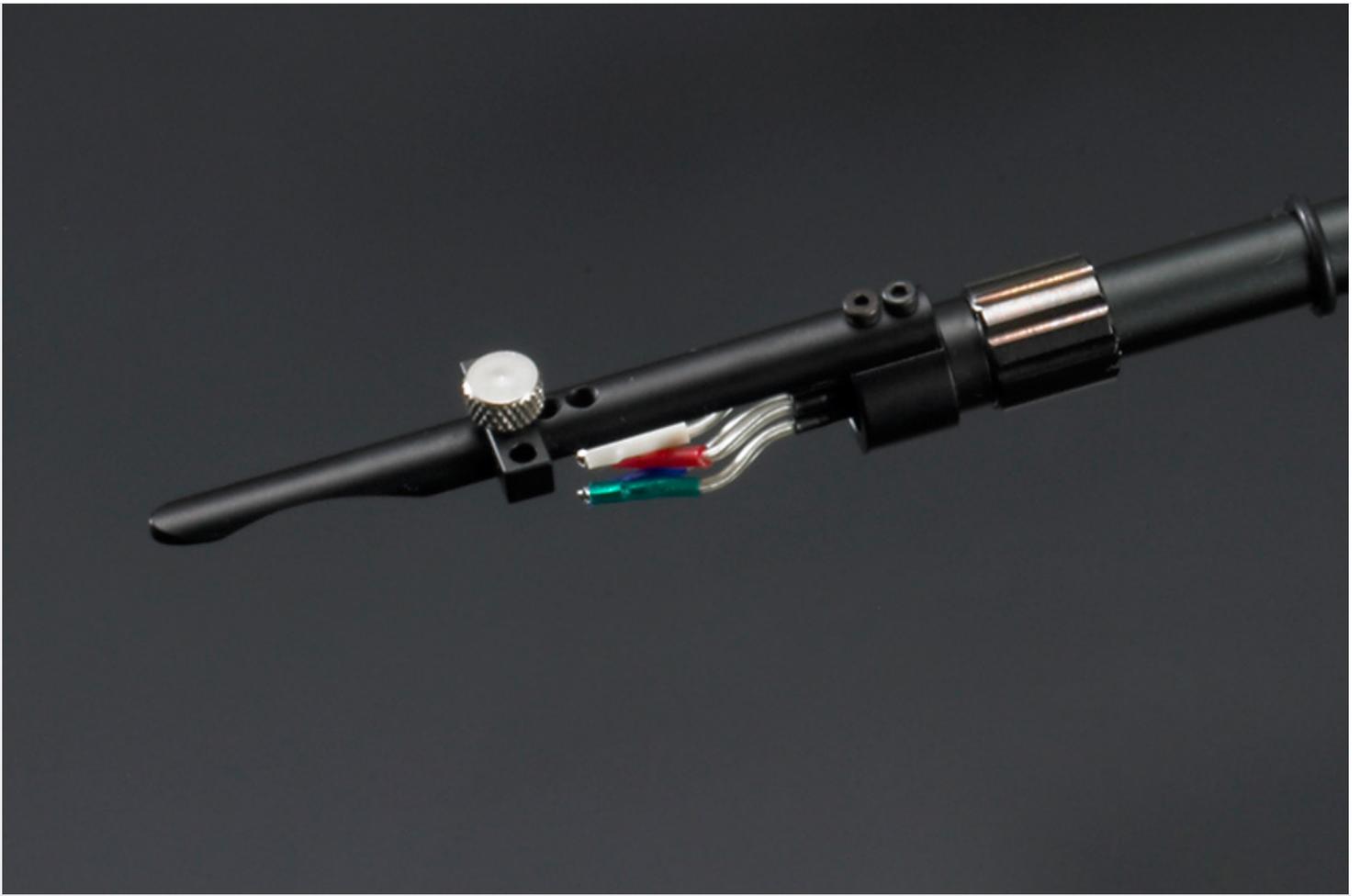


It's not as stately and calm as an SME V but neither does it lack low end gravitas nor give any sense of imprecision in the highs. It delivers a refined sound in a direct and engaging fashion that seems to work with a range of music types. The first notes of ZZ Top's 'I'm Bad, I'm Nationwide' (*Deguello*, Warner Bros) say it all, Gibbons' Strat is scorching, the phasey effects on the voice are precise and the solo is plain smokin'. It's extremely nimble, the lack of overhang means no time smear and that means more detail gets to the phono stage. When and how each note stops and starts is precisely defined and this makes for a very thrilling experience with pacey music and a clean and clear one with more refined material. Time smear is the enemy of musical enjoyment, it's subtle and commonplace but when you reduce it the playing take on a realism that is extremely engaging.

The same goes for voices, Patricia Barber sounds incredible on 'A Touch Of Trash' (*Modern Cool*, Premonition), a track I have hammered a bit too much in recent months and thus thought I knew through and through. But the physicality of the image and the

degree to which it sounds alive was a surprise. It made me think that you need a pretty calm and collected turntable to cope with the energy levels, any extraneous vibration would undermine results and shortcomings in the turntable exposed by this degree of resolution. But in this set up one is distracted not by the mechanics of the process but the musicianship of the artists, Tom Waits' 'Trouble's Braids' (*Swordfishtrombones*, Island) being a great example. Waits may do his best to sound like a hobo but he knows how to pick a band, signing up the likes of Victor Feldman to play percussion like a man possessed. The degree of skill with which he did this is plain to hear but so is the quality of Waits' voice, the lack of smear means that both can be appreciated in a cohesive whole that has plenty of space for the characteristics of each.

On another classic, Steely Dan's 'Show Biz Kids' (*Countdown to Ecstasy*, ABC), the way that the layers are built up by the repetitive backing vocals is particularly well revealed, which means that the song's intrinsically modal nature is obvious. As is the vintage of the recording itself, which is exposed by analogue style of compression produced by the tape recorders and mixing desks of the early seventies. This doesn't undermine detail but tonal depth is limited, none of which stops it sounding totally great. An album of similar vintage, Little Feat's *Waiting For Columbus* (Warner Bros) is notable not only for the quality of live performance it has locked in its grooves but for the quietness of the Mofi vinyl of this particular pressing.



With an alternative cartridge, a Van den Hul Condor Gold XCM and its matching Grail SB phono stage the sound was more muscular and weighty if not as quiet in surface noise terms. With this cartridge in the Rigid Float dynamics proved to be the strongest point, the drums on the aforementioned *Modern Cool* were extremely powerful and solid, and the trumpet outro on 'Company' worked beautifully right through the fade out. Leo Kottke's *Great Big Boy* (Private Music) was positively effervescent with energy, steel strings and cymbals underpinned by a gloriously colourful fretless bass line. Out of interest I tried the metal feet, three M3 pointed studs that take an awful lot of tweaking to get the arm level according to its onboard spirit level. The effect was to make the sound tonally drier, a leaner balance produced stronger leading edges for an even tauter sound that worked well with electric guitars but was less appealing with saxophone. With the SME I preferred the rubber feet.

Being the adventurous type I also tried the Rigid Float with a Rega RP10, it wouldn't sit on what passes for a plinth on this skeletal turntable so I put it on a Delrin puck sitting on the glass topped Townshend equipment support. This slightly Heath Robinson arrangement produced a delightfully nimble sound that combined delicacy, dynamics and great timing, which made for a lot of musical enjoyment. Neither was it short on power or space, in fact this unlikely pairing worked extremely well, revealing similar strengths to those evinced on

the SME but with a bit more agility and lower coloration.

The Rigid Float is a rather unconventional arm and one that ignores traditional approaches to cartridge alignment, but like another idiosyncratic design, the Well Tempered, it produces superb results. It's one of those analogue audio products that makes you realise that the conventions followed by the majority are not necessarily the only options. There is clearly room for thinking outside the box and the Viv Labs engineers are to be applauded for their inventiveness.