

hardware review



Brinkmann Balance 2-Arm
turntable, arms & cartridges

Monday, October 21, 2013
Jason Kennedy

Brinkmann turntables embody the remarkable standard of German engineering better than many of their competitors, the pictures give you some idea of the build quality on offer but in the flesh this brute of a record player is a truly remarkable state of affairs. Everything is superbly finished, even the bits you can't see – the drive pulley is not on show for instance but hides under an acrylic cover with the belt entering via a slot in the side of the housing, that's a very nice touch and not one I've seen before. It was also supplied with a raft of hex drivers including a 6mm one with a ball on the end that initially puzzled me, then I realized that it was designed to do up the substantial bolts at the bottom of each arm base. Attention to detail is very high. It is of course massive in all respects, it arrived in five boxes only one of which being for the extra tonearm. This meant that there was another wing on the plinth itself that increases the overall width to 50cm and meant that I could only just squeeze it onto the top of my rack. Set up was a slow process, partly because of the extra arm and two power supplies, one for the motor and another for the bearing, but mainly because there are only limited instructions. For all its scale however, this is not a complicated turntable; there's no suspension to set up and both arms arrived with their cartridges in situ, which took a lot of the pressure off. The 12.1 and 10.0 arms (the name indicating the length in decidedly unGerman imperial units) came ready installed in large stainless steel and aluminium bases. These slot into round holes in the plinth and if you have a Brinkmann (or Clearaudio) alignment gauge set-up is just a matter of rotating the base until the stylus sits correctly on the gauge.

To arms

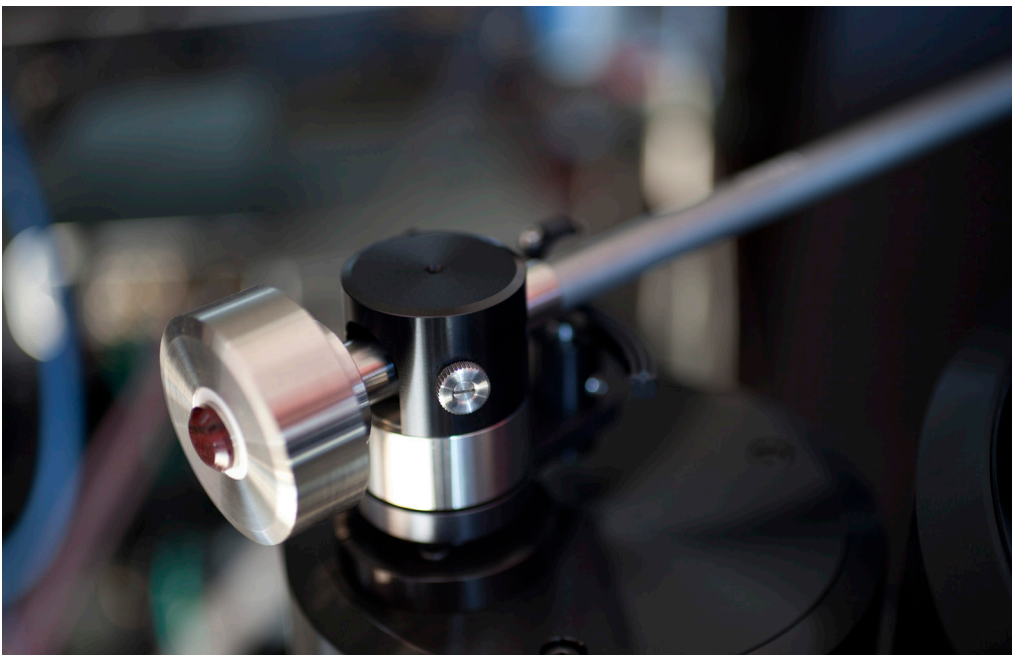
The 12.1, which is the longer of the two arms, has an extended base so that the turntable itself remains a (relatively) sensible size, on some designs this might look a little unbalanced but the substantial build of the Balance and the fact that the arm-base sits behind the platter gives it more than sufficient integrity.

Brinkmann arms don't come with external leads but in this instance were connected to RCA sockets in the base which also has a small hole for the supplied earth lead. This approach means that there's an additional junction between cartridge and amplifier which is not a good thing, but on the plus side you can switch cables with ease which is quite appealing. I put the most transparent cable at my disposal, Townshend Fractal Wire, between arm-base and a

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Trilogy 907 phono stage. The aforementioned multiple power supplies consist of a solid state block which keeps the bearing oil at a stable temperature and a valve powered supply for the motor itself. Neither are exactly conventional devices, even in the world high end record players. The Sinus motor itself is a variation on the one that Brinkmann developed for the Bardo and Oasis direct drive turntables and thus a highly refined piece of electronic and mechanical engineering. The image gives you some idea of the extent to which it deviates from the norm, even the fact that Brinkmann designed the motor is a deviation for that matter. This is not an off the shelf device but a four phase motor with a 500 gram (1lb) flywheel. The RÖNT II is a single ended, class A tube power supply for the Sinus motor which employs a pair of PL36 pentodes and a 5AR4 full wave rectifier, it comes with its own granite plinth. The turntable is usually to be found on a slab of rock too but I rashly said that I'd put it on a Townshend Seismic stand of the



pneumatically isolating variety; rash because it turned out to be a shade too small and tricky to balance with so much mass onboard. The twin arm Balance weighs 35kg, that's including the 18kg platter but not the arms and power supplies.

Once set up you are encouraged to let the platter spin for three hours prior to checking speed, after that time I used the supplied strobe disc, a screwdriver and a suitable light to tweak the RPM and found it slightly adrift after it's journey from Achberg, Germany. I am happy to report that, once set correctly, it remained that way for the several weeks that I had to enjoy its remarkable capabilities.

The Balance came with both of Brinkmann's cartridges, the EMT-ti on the 12.1 arm and a Pi on the 10.0, both these moving coils have a similar output and load requirement which made swapping from one to the other easy. What got in the way of a comparison were the differing arms. The 10.0 differs from Brinkmann's Breuer inspired arms by virtue of having a hybrid of roller and unipivot bearings, vertical movement is covered by the former and lateral swing by a spike sitting in a ring of tiny ball bearings. There is a second larger ring bearing lower down on the spike's shaft which stops the assembly tilting, these having enough play to have minimal influence on movement.

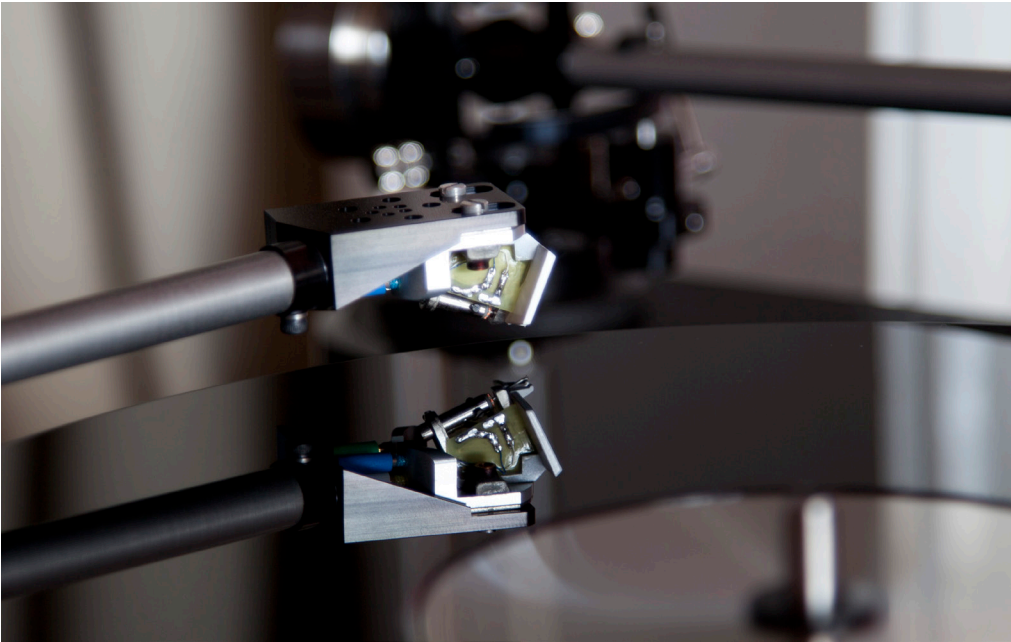
High roller

I have had high mass turntables in the past and I've also enjoyed some with 12inch arms but none have had such a stately bearing as the Balance, you can hear the engineering in turntables and this one sounds like a Rolls Royce. It is totally confident yet understated, it makes music that's as powerful or dynamic as it needs to be and does nothing to emphasise or elaborate on what's in the signal. This is the hardest thing for a turntable to do, their mechanical nature means that it's far easier to impart a character on the sound than not and this is why you get such big differences compared to other sources.

Brinkmann Balance 2-Arm



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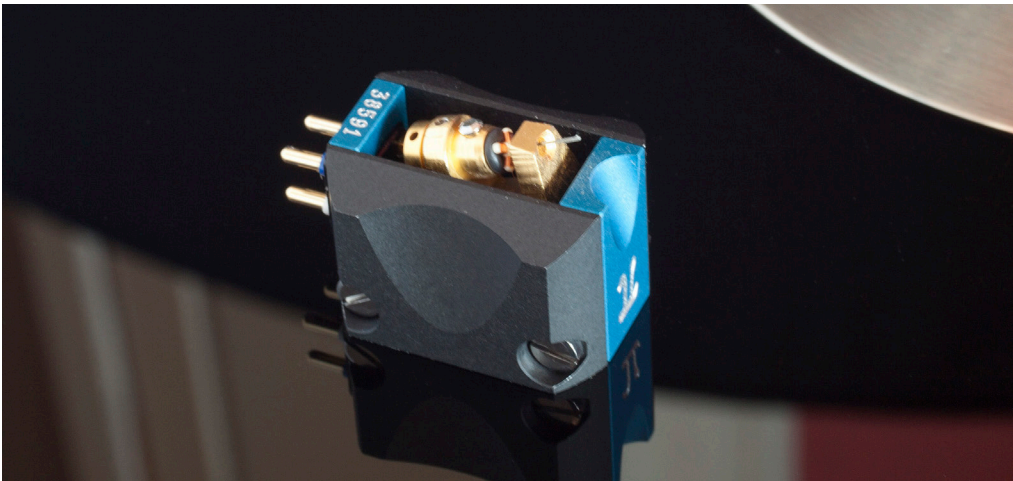
Using the Balance is easier than many high mass designs because you can remove and replace vinyl, and clamp for that matter, without stopping the platter. With this much inertia the thing takes a while to slow down and with practice I was able to switch discs quite quickly, a state of affairs which accelerated when I came to the conclusion that the clamp does not necessarily improve the sound, but more on that later.

Starting with the Pi in the 10.0 arm I was struck by how low the noise floor is, it's almost unnatural and means that the music has the element of surprise when the run-in groove gets to the signal. I learned to be careful with the volume control! Leo Kottke's guitar playing is strong and definite under the Balance's auspices. It has all of the energy and zing that new strings deliver but this is accompanied by a very distinct sense of presence. Dynamic range is massive which gives you the quiet run-in followed by the high level music, it also adds to the realism and life force of the music. All this being topped by an effortless high resolution of the sort that digital systems are rarely capable of delivering.

A more audiophile recording, Patricia Barber's *Café Blue*, lets the Brinkmann show off its imaging skills with results that are positively holographic. The noise floor is non-existent and the voice and instruments are manifestly real. The acoustic instruments are the most convincing because they haven't undergone so much treatment in the studio, Barber's voice is less natural but no less in the room. When *Mourning Grace* comes on the drum sound is immense, the piano and guitar keep the groove locked down and the voice really soars. It's quite a visceral experience with a turntable like this.

The bass is inevitably a strong point on the Brinkmann Balance, both in its extension, speed





and control. Totally unflappable about covers it and this means that the OTT synth bass on Wonder's *Superstition* doesn't take over the room as is generally the case but remains fulsome and tuneful. It's not the most propulsive turntable I've encountered but it's certainly one of the most stable and revealing. This goes for the worn out grooves of older records as well as the incredible sounds therein, however, by keeping noise to a minimum, wear is a lot less obtrusive than it can be. It would help if the record industry go its act together and re-released some of the real classics on vinyl of course .

Moving waves

I mentioned that not using the clamp delivered a rather appealing result with this turntable but that's not the whole story. It started with a quick comparison between with and without clamp that resulted in clear increase in treble detail, cymbals and flutes started appearing in the soundstage that hadn't been there. The I realized that the grommet that sits under the vinyl so that the clamp isn't just compressing the record centre was still in place, meaning that the vinyl was far from flat on the glass surface of the platter. So I removed the widget and listened but preferred the former 'flapping' vinyl option. That couldn't be right but several comparisons gave the same result, so in the end I looked around for another means of supporting the vinyl and landed on that old favourite a felt mat. This had pros and cons, the treble remained clear and open but the resolution suffered, the sound getting muddled and messy. I tried to emulate the very thin nature of the grommet with three bits of card but that didn't do it either. Eventually it occurred to me that I had reviewed quite a good cork and rubber mat a while back and that it was somewhere in the vaults, after much sifting I found a Blue Horizon Promat which has two parts. By using the piece that has a label size hole in the middle I got a result that gave most of the detail of the grommet but with a more solid bottom end and very high coherence and separation. The Balance is a superb turntable in standard form but in my system at least this tweak raised its game still further.

One small point; among the parts supplied with this turntable was a black leather disc, about three inches across, I wondered if it might be a patch for the elbow of my tweed jacket! But no, I was told that it's a coaster for the record clamp. Helmut and Andrea Brinkmann do appear to have thought of everything.

The 12.1 arm with the EMT-ti cartridge delivers a more relaxed and refined result than the more affordable 10.0/Pi combination. It's not quite as tight in the bass but has beautiful tone across the range and a totally effortless ability to extract masses of information from the groove. It makes for easier to follow musical lines and greater lyrical intelligibility. It has the same ability to keep you pinned to the chair as its shorter brother but you can play a little louder and hear more. Trumpet sounds superb whether it's played by Olu Dara or Lester Bowie, and wherever you get a variety of instruments being played simultaneously it's easier to tell them apart. This ability to separate similar sounds is a particular skill of the Balance, whichever arm and cartridge is in use. It comes about because the turntable is so calm, distortion levels are way below those usually encountered with turntables, so it's able to resolve fine details to a higher degree, a far higher degree to be frank. With a Tralfamadore 300B push-pull amp in the system the tone jumped into another league, Billy Gibbons' guitar could not sound any more low down and dirty – he has to have been using a tube amp on the inimitable groove of *Cheap Sunglasses* (ZZ Top - *Degüello*), pure filth seems the only apt description. Then you get Dusty Hill's bass outro, no more chunky, chewy and downright badass bass guitar sound has been cut into vinyl.

I eventually got round to trying the EMT-ti in the 10.0 arm, a slightly disconcerting transfer because of the extremely fine nature of the wires to the cartridge tags, but it seems that they are more robust than they look because they survived. The result revealed the EMT-ti to be the superior cartridge as the price would suggest, it has greater bandwidth and a more solid bottom end, it also extracts more life and vitality from the groove. Tom Waits' *Swordfishtrombones* sounded significantly more vibrant with mucho energy coming from the drums on *Troubles*

Braids – that being Victor Feldman – a man who not only played with Steely Dan but Miles Davis, Cannonball Adderley and The Doobie Brothers to name a few. Waits was canny to employ his talents. This was just one of a stack of vinyl I enjoyed with the Brinkmann's shorter arm, it lacks the refinement of the 12.1 but has a greater sense of immediacy that is very engaging indeed.

Top notch

I hope you get the picture, this is an incredibly revealing record player that can easily turn an audio signal into a source of top flight entertainment. It's not only able to deliver detail, separation and precision but it combines all of the elements to deliver an addictive sound that lets you get the most out of your vinyl. By building a Balance with two arm bases Brinkmann has produced a real luxury for those who want to use different cartridges and arms on a regular basis but don't want to compromise results. The engineering on offer is exemplary, as is the finish and design. Anyone in the market for a top notch twin-arm turntable should put it at the top of their list.

I asked Helmut Brinkmann a couple of questions about the Balance 2-arm:

Why heat the oil in the main bearing?

This is done because of the temperature dependent aluminium housing, when the temperature is too low the bearing gap of 1½ hundredths of a millimetre becomes too small. The heater is not necessary when you have a steady room temperature around 25°C (77°F), but that's not always the situation. The heater raises the internal temperature to about 30°C and a small electronic board keeps it there independently of the ambient temperature. I don't imagine that anyone will listen to records above this temperature, so that should be enough. When the heater is off and the room temperature is low, there will be no damage to the bearing, it's just that the oil gap is not the optimal and friction increases. This may cause deviations in the speed and can lead to reduced performance.

What advantage do tubes have in a motor power supply?

The idea of a tubed power supply came by chance. I worked on tube power supplies for amplifiers when one day I had the thought that they should work with a motor too. When designing the regular supply I realized that all parts of a (transistor) power supply are clearly audible. Additionally I worked on the tube supply, impressed by the tube sound the whole system produced with this. It took me a long time to optimize this tube supply for the motor as a turntable needs different characteristics compared to one for an amplifier. Of course it should not just give a "tube" coloration, it should increase the performance, especially as it is an expensive option.

For me the basic idea of a turntable is something like an "energy chain" of different forces that lead to the rotation of the platter. The mechanical force that moves the stylus comes from the rotating platter, the record just "modulates" this force. The platter is driven by the motor, which





transforms electrical energy to mechanical power. And the motor is driven by the power supply, which transforms the electrical AC power of the mains to DC energy for the motor. Looked at like this it is not so difficult to understand that we can hear the kind of the power supply. In a world where some customers listen to the sound of a tiny fuse, all parts of this “energy chain” will give their imprint to the performance of the whole.

Price

Balance 2 arm	£17,495
10.0 tonearm	£2,495
12.1 tonearm	£4,195
Pi moving coil	£1,695
EMT-ti moving coil	£2,495
RÖNT II power supply	£2,895

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