

## **"The 100% perfect turntable"**

I have listened to the Primary Control Kinea turntable playing at many events, and I'm glad that it finally made it into my system, where it played out of the box as if it had never done anything else. More than four years ago, I wrote about Primary Control's Arrow tonearm for the book "Szene" in *hifi tunes* and I gladly refer to this article, which contains a lot of background information about the company owner and developer Bernd Hemmen who sees himself first and foremost as a tonearm manufacturer. He called his first model "Reference" - a reference product from which Hemmen embarked on his professional journey. A more appropriate name might have been "Custom" as virtually every aspect of the arm is customisable, right down to the configurations of a specific cartridge. Over the years, Hemmen expanded his line by adding three more tonearm models, namely "Arrow", "Gravity" and "FCL".

The "Reference" tonearm Bernd provided for this report was a custom-made model with chrome-plated fittings and an arm tube, manufactured from one single piece of snakewood including the head shell. Depending on the type of wood, grenadilla (African Blackwood) and ebony are also on offer, the tube is either impregnated with three to four layers of oil or coated with six layers of thin varnish. Hemmen inserts a small aluminium tube with an inner diameter of just 2 mm into the 4-mm-thin borehole of his wooden tubes. The damping consists of an intermediate layer the material of which remains a trade secret. It supposedly contributes, greatly to the final sound. The copper inner cable is manufactured in Germany according to his precise specifications. It has a low internal resistance and is flexibly sheathed. Hemmen used to wire his arms through to the RCA connectors but nowadays he uses a 5-pin DIN plug on the arm base so that the overall sound can be finely controlled using different external cables.

The 'Reference' is a uni-pivot arm employing a sapphire bearing and a metal bearing tip, which the company produces. The arm is supported laterally – a technology I have seen recently more often. The reason for this is that the much-vaunted sonic airiness of the classic, (commonly undamped) "uni-pivot" was frequently built at the cost of instability.

This could lead to a lack of control and loss of bass. In the case of the Reference, whose bearing point is located at the height of the platter, lack of control or loss of bass is not an issue. The azimuth can be adjusted at the height of the support bearing, and the tonearm height can be adjusted ultra-smoothly during operation, which makes perfect adjustments by ear possible. Antiskating is adjustable through a non-contact magnetic device, which exhibits a non-linear characteristic over the radius of the platter. The arm is very easy to operate, and every system change is a pleasure.

For a long time, Bernd Hemmen entertained the idea of building a turntable, not least to create a good platform for his tonearms. To this end, he extensively studied both the history and the market. In this process, Hemmen was not aiming to invent something completely new, as he prioritised finding proven technologies that could be adapted to his own style. If this or that innovation was excluded in the process - that was fine too. When Hemmen described his process of the mental conception of the Kinea to me, it reminded me of a documentary about the famous 3 Michelin star chef Dieter Müller. In which Müller said that when he creates a menu, he can cook it without much trial and error and serve it directly to a guest - in his 3-star restaurant. Role models for the Kinea existed, the famous Australian Commonwealth 12D broadcast idler wheel turntable being one of them. Yet, instead of the idler wheel drive used by the Commonwealth, Hemmen favoured a direct drive with direct power transmission. Since he did not aim to build a DJ drive, he was able to use a "weak" motor that produced less vibration and virtually no cogging - the main complaint of many famous '70s direct drives. He then selected three motors from a variety of current models, which he assembled in a 40-mm-thick experimental frame made of 'panzerholz'. After a month of intensive testing with many fellow listeners, including some musicians, one motor remained. Hemmen would like to keep the manufacturer of the motor secret but he still modifies the motor to make it fit for his own purpose. The motor comparisons additionally revealed an interesting aspect in terms of sound: depending on the strength of the drive current (torque), the sound changed - the difference between "low" and "high" is a good 50 percent. Hemmen adopted some of these values for his power supply unit: Low - Mid - High.

His platter, weighing only 3.2 kg, is, with a diameter of 36 cm, lighter and larger than usual, giving the platter an increased flywheel mass by a factor of 1.4.

Since Hemmen, à la Dieter Müller, already had the design of his frame in mind, its implementation required no witchcraft and his concept of different, resonance-controlling materials worked out perfectly. However, as with his arms, the real challenges were encountered when trying to find high quality suppliers. At the beginning of his manufacturing career, Hemmen produced every part of the tonearms himself, which, due to increasing professionalisation, was no longer an economically feasible option. The Kinea frame, so homogeneous and great in its design, is elaborately constructed and refined in the detail. Its outer appearance is characterised by a solid maple frame. For the bottom, Hemmen uses a 15 mm thick aluminium plate, which is screwed to the maple frame and accommodates the adjustable feet. There is an intermediate layer, as well as the 40 mm thick 'Panzerholz' panel, which is smaller than the maple frame and contains a specially milled contour. The remaining cavity is encased by a casting compound made up of various materials. Another layer of insulation is placed on top of this and finally an 8 mm thick printed glass plate to top it all off. Finding a competent supplier for the glass plate, which is primarily for visual purposes, took a long time (also costing a substantial amount of money when ordered in small quantities).

The result is the Kinea - a turntable of extreme elegance, which weighs in at a whopping 35 kilograms. As a high mass turntable, it stands on specially manufactured, height-adjustable feet that dampen any vibrations both horizontally and vertically. The upper part of the feet are made of aluminium, the lower part POM and sandwiched in between, is an elastic, vibration-dissipating plastic. At this point, the two-piece tonearm board made of aluminium should also be mentioned. The large oval part rests on an insulating layer and has contact with the 'Panzerholz' plate via two screws. The smaller round arm-board holds the arm and is then screwed into the main oval board. The motor axis of the Kinea is used to centre a sub-platter made of POM.

The upper end of the bearing axle is generally used to hold the record spindle. Hemmen decided not to do this as especially with direct drives, vibrations from the motor can easily be transmitted via the axle to the sensitive record-pickup interface. So, using a specific choice of material and design of the sub-platter, with its own platter spindle, extensive decoupling from the bearing is achieved. The comparatively thin bearing axle has a rounded tip with a small radius and rotates in a sintered bearing sleeve on a bearing mirror made of "PAI", a high-tech plastic. The small diameter of the bearing axle helps it to attain virtually perfect permanent lubrication. Hemmen developed the control system for the Kinea himself. It is a discrete design and is precisely tailored to the motor. The platter is set in motion by means of a microprocessor-controlled, five-second start routine using the "high" torque setting, after which it automatically resets to the last set value (Low - Mid - High).

But now it is time for some music, with all his technological expertise, Bernd Hemmen's approach to his products is clearly defined from listening to music. He wrote to me: "In a way, we, as the music producer, recording engineer, equipment manufacturer and customer have individual set-up's and this influences the final result to achieve our own perception of music. " After mounting the MUTECH Hayabusa to the Reference on the Kinea, I turned it on, and ... nothing happened. Wait, yes ... the platter was spinning. Had I chosen the wrong input? No, because suddenly there it is, the first sound, as if it had been waiting for just this moment to penetrate my consciousness from the infinite sea of possibilities. Then the sound, and the next and so it goes on and on: unobtrusive, discreet and yet completely present. I am unfamiliar with this absolute calmness without any artifacts and this novelty disorientates me. *Django* by the Modern Jazz Quartet (Prestige SMJ-6502 (M) / PTG-6002, RE Japan 1975, LP) is a collection of recordings from 1953-1955. At that time, Kenny Clarke was still on the drums, before Connie Kay replaced him. I close my eyes and find myself again in Stuttgart's Liederhalle, where in the mid-1980s, I had the fortune to see the MJQ. There was a power outage during the concert, but no one was the least bit bothered by it. Certainly not Milt Jackson, who was in the middle of his solo and just kept playing.

Percy Heath's downstroke of his bass strings after Jackson's solo on "Django" goes down seemingly endlessly and the theme finally dissolves delicately with Clarke's subtle cymbal work. "One Bass Hit," a genuine hit that Dizzy Gillespie helped compose and which rhythm section was ultimately the nucleus of the MJQ, sounds clear, pure, confident, yet in a way that never obscures the dynamic attacks. Yet, in the foreground remains a form of refined materiality that I would describe as "cashmere and silk".

The music of Robert Wyatt is different, yet also characterised by a great deal of sensitivity. During "The River" on *Different Every Time Vol. 2 - Benign Dictatorships* (Domino WIGLP-347-2, EU 2014, 2-LP) tears tumble down my face; so beautiful is this piece. It seems like music from a kind of in-between world, reproduced so well with the blackest background from a turntable that I have ever heard, by far. There is a silence in the grooves and it seems that the only thing that is audible is what was cut into the vinyl. Fine dynamics, tonal colours, rhythm and structure are now at an extremely high level.

Incidentally, Hemmen's external tonearm cable sounds very homogeneous, round and smooth. In comparison, the Lyra PhonoPipe, especially with Lyra cartridges, is, in a way, the equivalent of the turntable with its quiet, noble and finely resolved sound signature. For this reason, I mounted my Lyra Delos. This may seem like a somewhat too moderate choice for a turntable/tonearm combination of over €20k but let me surprise you. I put on the exceptional album *Untitled (Black is)* by Sault (Forever Living Originals FL00005LP, UK 2020, 2-LP) and experienced an attack, which really leaves nothing to desire: a groove, tight bass, shimmering voices - it pulls me completely into the music. This time around, I chose the "High" torque setting on the power supply, which sounds tighter compared to "Low". If I want to get into a kind of bubbling swirl of sound, I choose "Mid"; for jazz, I prefer "Low." To all jazz lovers out there, I can do nothing but recommend John Lewis & Sacha Distel's unique collaboration *Afternoon In Paris* (Sam Records SR12/1, Re France 2021, LP). Did you know that Distel was an excellent jazz guitarist before his singing career? Do you know the work of John Lewis besides the Modern Jazz Quartet? "Voilà".

The real sensation of the album however, is the very young Barney Wilen. The dynamic spectrum he elicits from his tenor saxophone on "Willow Weep for Me" from whisper-quiet to brutally loud, truly blows me away. Especially with the Delos attached, it shows what the Delos is really capable of, and how far you can get with such a combination of turntable, arm and cartridge.

I will not go so far as to say that the qualities that the Kinea evoked/displayed/elicited was over one day but with a brand-new Lyra Atlas Lambda - which Thomas Fast from Stuttgart supplied me - there was an amazing improvement in sound, even when compared to the already very harmonious combination with the MUTECH Hayabusa or with the Lyra Delos. Thomas Fast not only manages the Lyra distribution for Germany but he is also Bernd Hemmen's representative in Germany - he couldn't find a better one. It is thanks to people like him that the analogue passion burns so brightly.

-----  
Coupled with the Atlas Lambda, what began to surface was a graceful, yet uncompromising musical revelation which was completely irresistible to my ears. I was already enthralled by the Delos with its elegant ferocity. However, what the Atlas, with its outstanding, resolving power can do in such a set-up is difficult to describe but simply must be heard. The problems that some may have with Lyra cartridges, result in my view entirely from combining the system with unsuitable, i.e., poorly built tonearms. Is it really a coincidence that the best analogue products by Bernd Hemmen, Frank Schröder or Martina Schöner are partly developed and often demonstrated with (the help of) Lyra cartridges?

I was so enthusiastic about this combination that I almost forgot to take notes. Nonetheless, I did document a few things in the end. On Dexter Gordon's *Clubhouse* (Blue Note LT 989/B0029356-01, USA 2019, LP) Freddie Hubbard sounds like I remember him live. His horn shines brightly at a realistic size and exhibits that unique brass tonal character that Lyra cartridges in particular, are unique at reproducing. Gordon himself displays the full range of his instrument on "I'm a fool to want you": finest treble illumination combined with a most sonorous bass.

On *Introducing Kenny Burrell* (Blue Note BN 1523/B0029974-01, USA 2019, LP), the ballad "Weaver of dreams" touches me deeply. As Burrell's precious notes delicately flow from the speakers, they settle on my ears like a delicious balm: such a natural and relaxed presence. Then on "Delilah," the congas slam into the room with an energy that just makes me grin: That's the Atlas, the rhythm king as I know it. Yes, you have to be able to lead an Atlas and yes, the Reference can do that. This extremely precise representation of musical structures with absolute calmness, without effect or superficial dynamics but with irresistible emphasis is truly outstanding. Kinea, Reference and Atlas can teach one what dynamics really mean because only from calmness comes real power. Did I mention the bass on *Kind of Blue* as I have never heard it before or talk about the tremendous force that Velvet Underground develops throughout *White Light/White Heat*? I could go on like this forever, but I must come to an end.

Describing the capabilities and sound of music playback devices is not always easy. It is even more difficult to write about a kind of perfection that at first, seems to defy categorisation. Perfection can quickly become boring and neutralise emotions, which are so important when listening to music. For everyone has his or her preferences, as Haruki Murakami so beautifully describes in his short story "On Seeing the 100% Perfect Girl One Beautiful April Morning": "... I know from fifty yards away: She's the 100% perfect girl for me. The moment I see her, there's a rumbling in my chest and my mouth is as dry as a desert. Maybe you have your own particular favourite type of girl - one with slim ankles say, or big eyes ... or you're drawn for no good reason to girls who take their time with every meal. This is the feeling I mean ... But no one can insist that his 100% perfect girl corresponds to some preconceived type..."

Following in the footsteps of Murakami, I would like to refer to the Kinea as the one hundred percent turntable. If you prioritise blackness - above effects that make other turntables seem superficially attractive, if you appreciate this ideally balanced equilibrium between calmness and liveliness, then you will understand me. Bernd Hemmen has dared a seeming simplification, behind which is hidden everything you will ever need to play records at the highest level.