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High End Test: Turntable Bergmann Audio Sindre

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## **Cosmic Ether**

An “airy” approach to turntable design, which is arriving from the cool European north. Air is playing such an important role in the Sindre operation, that even if we call Mr. Johnnie Bergmann “ether master,” he would not get upset.

The situation is as follows: the ideal vinyl playback system, turntable, is mandated to be free from any friction or resonance. Ideally then, our turntables would have to be suspended in the air and their mechanical parts not to have any contact between them. The only contact point should have been the cartridge needle to the vinyl groove. Correct? Perfect... Now let’s change sides and land in the noisy, resonance full and friction reality. Remember the effort that is placed by turntable manufacturers worldwide to control “the elements of nature” which when left alone, can demolish easily the vision of anyone for true vinyl reproduction and great sound. I dare say that the multitude of approaches we have seen applied for the pursuit of perfection in turntable design, is comparable to the number of material choices used over the years in the manufacturing of speaker units. Unipivoted tonearms, gyroscopic, magnetic, parallel from copper, spring suspensions, and multiple, some with excess originality, mass implementations. All with a single purpose: to minimize resonance and friction.

However, the polite and pleasant Mr. Johnnie Bergmann, I met him in Munich during this year’s High End Show, decided to follow another trail that few dare walk. Instead of wasting his time experimenting with materials, he decided that the ideal operation of the platter and tonearm is provided by ... air. Let’s take a closer look what he did.

### **Air Bearing**

Firstly, we should say that the tested Sindre is one of two models being produced by Bergmann at this time and is the entry level, as the Sleipner comprises his reference. Sindre has a clean look, mainly attributed to its excellent handcrafted chassis. Further, it has a chassis with a curved area on its four sides, while the solid black color makes a beautiful contrast with the acrylic platter and its visible metallic elements.

The Sindre is a “mass” implementation that is based on a carefully and rigidly constructed chassis. It is made from multiple layers of MDF, forming a solid piece of 10cm thick. The turntable is based on 3 metallic feet that are adjusted with accuracy to ensure that the turntable is leveled. Actually, the manufacturer ships a small aligning tool for that purpose.

The turntable tested applies the well established method of chassis/sub-chassis, according to which the movement is transmitted to sub-chassis via an elastic belt and on to the platter. The sub-chassis weighs 3.2 kg and is made of solid aluminum. On its bottom side it has a steel rod that fits into a well. In turn, the belt is applied in the perimeter of the sub-chassis and starts from the motor, which is hidden in an appropriately made location within the chassis. The motor is a DC type, something not generally found on belt driven turntables, as the AC motors have smoother start and do not abuse the belts. The process of connecting the belt is a bit annoying. The motor is not accessible and the room between the chassis and platter is tiny, thus you may require 3-4 efforts to get the belt working. With patience or the help from a second pair of hands, quickly you will get over this hurdle. Please note that this is the only time that you will be challenged, as for all the rest Sindre proved easy going.

On top of the “sandwich” sits an acrylic 4 kg platter and, as you may have understood, all these heavy components are raised and operated by the use of air that arrives at a point below the sub-chassis to create an “ethereal pillow.” The rod helps in proper axis rotation as it fits snugly in the well, which is made of a polymer five times harder than copper. The air arrives to the turntable via a clear tube that connects in the rear. The other end is connected to the pump, a medium size black box that can be placed even far from the turntable in a location that is convenient, as the length of the tube provided is quite long. I am sure all are wondering the obvious: how much noise is produced by the pump? Answer: None. The manufacturer has made every possible effort to suppress every noise and was successful. I managed to open the top of the pump box and what I saw was a pleasant surprise. The actual pump was tightly closed in a cylindrical shell and extensive use of a foamy material was fixed by the internal walls to reduce even further any possible sound. Also, it is equipped with a filter that prevents dust and other particles to enter the air passageway and there is a small removable flask that collects condensation.

The air that makes it to the turntable is used to elevate both the platter and the tonearm, which is like a jewel. As you can see moves in parallel, which means it operates in the groove in a similar manner as the vinyl was cut and eliminates our concerns for tracking errors and anti-skating. The basic structure for the tone-arm is aluminum and the actual tone-arm tube is combination aluminum and fiber glass. The moving part is a tube that has the arm-tube installed vertically. This tube operates in the same axis from the second that is fixed and has tiny holes in its surface. From those tiny holes, the air is released, which moves the moving part and the arm-tube. In this setup, the two cylinders, the fixed and the moving, do not come in contact during the operation of the turntable as the air keeps them apart. As a result, the only contact of the tone-arm with the turntable and the record is the needle in the record groove. Excellent approach!

The whole system is completed with a third component that comprises the power supply for the motor. The power supply has the on-off button and the speed selection of the platter. This little component is manufactured by top quality materials as well.

## **We Are on the Air!**

The Sindre came with the outstanding Transfiguration Orpheus installed. A low output MC (0,3mV) and 9 grams weight that is considered ideal for this tone arm. It drove the Sutherland Ph3D, set at 100 Ohm and 62db gain, and from there to the rest of our reference system.

The audition started from the Opus 3 30<sup>th</sup> Anniversary Celebration Album and Sweet Georgie Fame from Lars Erstrand. In this track, the first row instruments are the xylophone and saxophone, both reach in tone. The xylophone proved the ideal instrument for Sindre to demonstrate its acute analytical character and premier capabilities in the reproduction of harmonics. If the system was hidden behind a curtain, it would have been difficult to distinguish that what I am listening is a recording and not the real live venue in my room. The sweet notes of the instrument were reproduced with 100% accuracy as was the saxophone with full body to the absolute satisfaction of my hearing. As far as the piano accompanying this track, the reproduction was one more recital of harmonics and transparency that was delivered from this Danish turntable. The feeling of the firm staging arrived in the introduction of Eric Bidd's In my father's house, where the introductory guitar notes were positioned with accuracy of millimeters within this holographic stereo scene and allowed for further extension to enable the singer's deep voice to rise from behind, surrounded by the chorus. At this point of the song, the rhythm section, enabled Sindre to show its supremacy in transients and its precision in the dynamics, which were reproduced accurately. The micro-dynamics were reproduced flawlessly mainly attributed to the quiet and unblemished operation. Whatever I threw from this record, the turntable managed to "slap" me with its analysis, perfect articulation and rhythmic accuracy, until ... I was knocked out (in the positive sense). It is true that is flirting, if not touching the reference level. As the last proof of that statement the reproduction of complex classical recordings that were presented in their full magnitude, with no sweat. You have to imagine how vividly a large orchestra sounds when reproduced by the Sindre and how rich and outlined the string and wind instruments, due to limitless harmonics rendering. Of course you do not have to imagine it, as the Sindre is here live, awaiting the demanding listeners to (re)discover what leading vinyl reproduction is. One is certain: they will rediscover their vinyl collection. Can't wait for Sleipner.