

Turntable + cartridge

BERGMANN AUDIO SINDRE + AIR TIGHT PC-1

Manufacturer's website **BERGMANN** <http://www.bergmannaudio.com/>

Danish company **Bergmann Audio** <http://www.bergmannaudio.com/> is kind of shared discovery of its first Polish Distributor **SoundClub** www.soundclub.pl and myself. Maybe not really shared, rather parallel. When I contacted Johnny Bergmann Rasmussen, the founder and owner of the company, he gladly agreed for a review but asked for two months time for his turntable to come back from its review tour in USA. When he finally contacted me he informed me that he already had made a deal with one of the Polish distributors and Sindre would be presented during this year's Audioshow. The Distributor he meant was ... SoundClub. Maybe it's just me but I have an impression that this company acts like a vacuum cleaner „sucking in” all the most interesting and often the best products of their class on the market. This still quite a new to the market firm has in its portfolio products, that reviewers dream about, counting the money in their bank account... That's what happened to me – I was hopelessly dreaming of AirTight's PC-1 cartridge that I must possess one day and ... I got it together with Bergmann's turntable for a review – the dream came through.

Anyway the review concerns mostly Sindre. This turntable's form and shape is beautiful in its simplicity like the best devices designed in Scandinavia. Maybe because it's where it comes from... It reminds me by its line purity and simplicity of solutions used by **Nordic Concept** http://swedishstatement.com/6_prod_nc.htm , company that is a part of **Swedish Statement** <http://www.swedishstatement.com/> - group of exclusive equipment manufacturers. But Bergmann looks even better. It is quite big but lack of any fancy elements make it look very orderly. First thing you notice is lack of motor. Of course it is there because it's a classic belt-driven not a direct-driven device as you might have expected. The motor is placed under the top plinth panel and it drives not directly the acrylic platter but the heavy main subplatter underneath. The latter doesn't sit directly on the bearing - it floats on a thin air film centered by a spindle.

Tonearm is also called Sindre and it is a linear tracking airbearing tonearm, which means it moves parallel to the records axis. If a common, pivotal arm is used, only in two instances there is zero tracking error and the tracking error results in distortion. You can try to bypass that problem by using longer tonearms (e.g. 12”), but those have their own problems. During the cutting process the cutter diamond makes an angle of 90 degrees at all instances from the beginning of the groove to its end. So linear tracking tonearm offers, at least theoretically, significant advantages – it's lighter and avoids pivoted tonearms problems. It turns out that building a high-class linear tonearm is quite an achievement – we can find those mostly in expensive models of Clearaudio, Kuzma and already mentioned Nordic Concept.

The problem with linear tracking tonearms is always how they are mounted. To ensure smooth slide manufacturers often use an airbearing. So how it works? A tonearm is mounted on a pipe that moves along smaller pipe placed „inside,” this bigger one. The distance between them is calculated in such a way that the bigger pipe can slide along the smaller one. Several vents are drilled in the smaller „inside” pipe and the air is pumped into them under quite some pressure. The outside pipe is so close to the inside one that kind of air film is created at the surface of the inside pipe. This allows tonearm mounted on the outside pipe to slide along without actually touching the inside pipe – no friction. That's the theory. There are always some problems though when you put this theory to practice. In my opinion the main problem with Sindre is not how it slides along air pipe but about tonearm lifting system. A black o-ring connects that arm tube to a knurled knob that when turned, lifts the arm. The leverage appears to be a 1:1 ratio and there is no hydraulic mechanism to temper the motion so you need to be very careful each time. It is neither handy for the user nor very safe for his cartridge.

The second remark concerns VTA adjustment. It is possible but again not so user-friendly. You have to loosen a screw to adjust VTA and then tight it back. There is no possibility to do that „on-the-fly”, neither there is any scale that would allow you to repeat exactly the same setting again for same record. I know, I know – this would be a reason for price increase but Sindre costs already quite a lot so this small addition wouldn't change the value significantly but it would surely become much more user-friendly.

I mentioned before that I was testing Bergmann Sindre turntable with Sindre tonearm and Air Tight PC-1 cartridge. It is important as this makes a great set. But during that time I had also **Dynavector** www.dynavector.co.jp/ DRT XV-1s and **Lyra** <http://www.lyraaudio.com/> Titan and although those both cartridges are excellent the bit sweeter sounding PC-1 fitted better to this set. For comparison I used Transrotor Argos. I also had to my disposal three phonostages – Manley **Steelhead** <http://www.highfidelity.pl/artykuly/0702/manley1.html> , Air Tight ATE-2005 with ATH-2A step-up and outstanding one - **RCM Audio Sensor Prelude IC** <http://www.highfidelity.pl/artykuly/0711/rcm1.html> .

SOUND

Discs used for listening sessions:

- Clifford Brown&Max Roach, *Study in Brown**, EmArcy/Universal Music Japan, UCJU-9072, 180 g LP.
- Depeche Mode, *Some Great Reward**, Mute Records, DMLP4, 180 g LP.
- Depeche Mode, *Ultra**, Mute Records, DMLP9, 180 g LP.
- Depeche Mode, *Violator**, Mute Records, DMLP7, 180 g LP.
- Depeche Mode, *Wrong**, Mute Records, 12BONG40, maxi-SP.
- e.s.t., *Retrospective**, ACT Music+Vision, ACT 9021-1, 2 x 180 g LP.
- Electric Light Orchestra, *Out of The Blue**, Jet Records, UAR 100, 2 x LP.
- Frank Sinatra, *Sinatra&Strings**, Warner Music/Mobile Fidelity, MFSL 1-313, No. 199, 180 g LP.
- Freddie Hubbard, *Open Sesame**, Blue Note/Classic Records, 4040, 200 g LP.
- Jean Michel Jarre, *Oxygene**, Disques Motors, 2933207, LP.
- John Coltrane, *Giant Steps**, Atlantic/Rhino, R1 512581, 2 x 45 rpm LP.
- Kraftwerk, *Tour The France**, EMI, 591 708 1, 2 x 180 g LP.
- Nat "King" Cole, *Just One Of Those Things**, Capitol/S&P Records, S&P-508, 180 g LP.
- Pearl Jam, *Ten**, Epic/Legacy/Sony Music, 88697413021, 2 180 g LP.
- Sinatra&Sextet, *Live in Paris**, Warner Music/Mobile Fidelity, MFSL 1-312, No. 238, 2 x 180 g LP.
- Tori Amos, *Abnormally Attracted To Sin**, Universal Republic Records, B0012906-01, 2 x 180 g LP.
- vijay iyer trio, *Historicity**, ACT Music+Vision, ACT 9489-1, 2 x 180 g LP.
- Yamamoto Tsuyoshi Trio, *Midnight Sugar**, TBM/Cisco, TBM-23-45, 45 rpm, 2 x 180 g LP.

I am going to say something obvious - Johnny Bergmann Rasmussen's turntable sounds as it looks. Cliche, right? But it's true! Sindre's sound is extremely exact, precise, „noble” and very real. It is also big but in a different way than say Transrotor Argos or **Avid Acutus** <http://www.highfidelity.pl/@main-15> - I will come back to that later. The key elements are extremely precise attack and outstanding clarity. The latter influences strongly general perception of the sound and in both positive but also negative way.

I would like to begin with the statement that this was the first turntable I listened to at home that presented high frequencies in such a beautiful way. „Beautiful” is far from a precise description but once you have a chance to listen to it you will know what I meant. When listening to older recordings like *Out Of The Blue** by Electric Light Orchestra from the first pressing or newer ones „contaminated” with digital mastering like *Violator* Depeche Mode, I found out that the sound of cymbals is sweeter, more resonant than I thought before. It's not about turntable making sound „sweeter”. For a second I thought that the problem lays with my preamplifier – just received Ayon Polaris II with new power supply AC Regenerator (I own the first one in the world!). The device was assembled for me by Gerhard Hirt the owner of the company himself. It sounds now even more liquid, smoother than with standard power supply, but it wasn't the preamp that changed the sound of cymbals. Playing same records with Transrotor Argos proved that it was possible to present cymbals in even „deeper” way, that they could have even more „own weight” so to speak, but on the other hand it also proved that Sindre had shown exactly what was in the recording and the other turntables slightly simplify this range. I had similar experience only once before with Caliburn turntable **Continuum Audio Labs** <http://www.continuumaudiolabs.com/>, and it was used with the same cartridge Air Tight PC-1 and also **Steelhead Manley** <http://www.highfidelity.pl/artykuly/0702/manley.html> phonostage – same that I used during this review. The top end is very fast, with immediate strike, but it is also more saturated than from other turntables, all the sub-ranges are more saturated. It still remains absolutely clear though.

And it goes not only for the upper top end, although it is this range that makes you astounded that you get this kind of sound from a piece of vinyl material! When you play some well recorded, well pressed piece you will get even more – great ambiance, room's acoustics and phenomenal midrange. Listen to a Tsuyoshi Yamamoto's piano from *Midnight Sugar* (45 rpm version) – what a ride! It has a strike of a huge bell, but still you don't lose track even when it seems that the artist strikes directly the diaphragms of your drivers. Dynamics is simply perfect. There was the same effect from *Giant Steps** by John Coltrane, also new 45 rpm issue. Percussion cymbals, played by Art Taylor were incredibly „anchored” in that specific reality, and the Coltrane's saxophone whizzed, trembled, stroke – did anything John meant it to do.

Sindre clearly shows the differences in the quality of recordings and pressings. Avid's, **VPI's** <http://www.vpiindustries.com/>, and **Linn's** <http://linn.co.uk/> turntables, although very good ones, they unify the sound a little. Even the 600 000 pln Transrotor Argos presents sound in more unified way. Please don't get me wrong – it does not mean that Sindre follows or expresses all flaws of recordings. What we get is a lot of music but we get what there is in the recording – if there are flaws they will be shown.

I mentioned already that we get a very clear sound at the edge between top-end and midrange. It means that the vocals are amazingly vibrant. This clarity I am talking about, precise showing of everything that is there in the recording has also a small disadvantage. Sound seems bit „lighter” than from the other turntables. Avid's Acutus or 30A SME's <http://www.sme.ltd.uk/> sound more profound, have heavier bass. The latter is with Sindre more precise with better timbre differentiation (maybe SME's presentation is bit similar), but because we get such an enormous amount of information in the upper midrange we might perceive it as something is lacking in the bass range. It is not true – if you try an objective approach you will find out that it is not the turntable to blame – it is the room, the recording or the whole system. But sometimes it is easier to accept a little bump in some frequency, or bit less details just to have a better „perception” of the music. Still – if you hear this sound once you will try to find it also in the other devices because those will sound a little dull after Sindre. An example – last recording of Tori Amos *Abnormally Attracted To Sin*. Double 180g issue is surprisingly well recorded and pressed. But it still has its own problems – kind of „mechanical” midrange. Sindre, unfortunately, couldn't miss that and „squeezed” slightly lower midrange with upper bass which effected in vocalist's voice coming more from a throat and less from diaphragm so the voice seemed bit higher than it really is. But even though a piece called *Curtain Call* gave me some thrills – there was a beautiful, strong, compact bass, amazing warmth etc., so everything that should have been missing. After I cooled down I realized the flaws but now I gained another perspective.

Similar experience came from *Just One Of Those Things* by Nat „King” Cole and Frank Sinatra's *Sinatra&Strings*. I wondered how would male voices sound like. And they sounded very professional – they were big, but focused and they gave me the same impressions as Tori Amos before – they sounded coherent, strong and rich.

Electronic music is a different story. Different story because this kind of music sounded better than it ever did before in my listening room. I played Kraftwerk's *Tour The France* when writing a review of Argos, and after I did I couldn't write anymore – I was compelled to move to the „sweet spot” on my couch. It was a real feast of emotions, unexpected discoveries and pure pleasure coming from the fact that something worked as well as it was supposed to. I wasn't thinking clearly obviously because *Ultra* by Depeche Mode followed and ... I had to stay on the couch instead of getting back to work. It doesn't mean that all recordings will sound that great. If the recording is not very good like e.g. *Some Great Reward* by DM you will miss something – usually it will be a problem with timbre. Similar story goes for rock music. ELO's record sounded amazingly but I still had some problems with correct perception of it or also with reissue of Pearl Jam's *Ten*. The first recording lacked a bit of extension of the bass, the second one lacked some dynamics. Sindre made me like the classic mix more than this new one. Furthermore I must admit that I liked even more the original issue – the one with dark red cover. The new one sounds „lighter”, maybe they managed to clear tracks a bit from unwanted noise, but they cleared them also from emotions mostly through some decrease in dynamics. Many turntables I used so far to listen to this record didn't show the difference in dynamics so intensely and thus new issue of Pearl Jam sounded better, more detailed. When using Bergmann's I definitely preferred bit warmer, more organic sound of the original version. I can't firmly say which version is better – I don't know how it really sounded when recorded. Each issue has advantages and disadvantages – which one is better – I can't tell.

I had absolutely no doubts at all when listening to The Doors from the box including whole discography of the band plus mono version of their debut recording. This is definitely the best pressing, the best version of this music I know. Sindre showed guitars simply present in my room, there was no curtain between me and them that usually was there when playing recordings from any medium. For the first time I heard it with Argos but Danish turntable gave me similar fabulous impression.

Before I get to the summary I need to mention one more aspect of Bergmann's sound that makes it different from any other turntable – presentation of the space. Sindre's placement of the instruments on the stage in the space is just ... perfect – you couldn't wish for more. It is its ability to show all instruments one next to the other but in such a way that not only sounds don't blend together, but you can also clearly „see” contours of each instrument, and you have an impression of the instruments pushing each other away like two magnets with opposite poles. That creates an impression of some hyper-space. The regular sound is kind of soft but here you can feel the tension between instruments. And it doesn't mean that the soundstage is artificially boosted. You have to hear that yourself to get the point right, but anyway I will try to describe it in the best way I can. A soundstage is wide or narrow depending on particular recording. Each instrument or the group of associated instruments takes less space than it normally would. That is why most of what is happening on the soundstage is happening in front of the listener. It is easily audible when listening to the recordings that were taken with couple of microphones to multitrack equipment. Such recordings are in fact multi-mono ones, and all the spacial effects are artificially created. Sindre will show the difference between such recordings and those with „real” space recorded very clearly. So you will find some records less spacious than usually. Maybe this is the true sound and maybe other turntables add some space to the recording, but on the other hand you might find such true presentation less involving. I can't tell you which is better – you have to listen and judge for yourself.

Bergmann turntable's build is of extreme quality with beautiful design and simply great concept for the whole device. Its sound is incredibly precise and revealing. That is also a reason why not all of your recordings will sound great. Of course you can try another cartridge but in my opinion PC-1 was able to show all the most important attributes of Sindre. I would still check it out with one of the top models from Koetsu – it might also be a good match. There are few details that if improved would make this device much more user-friendly. But already as it is it's a wonderful turntable that could be topped only by something that goods as SME 30A. But you have to pay twice as much for it. This review is Bergmann's debut in Poland and in „High Fidelity” - absolutely fabulous debut I must say. Also PC-1 cartridge is an outstanding device and I know I must have it or the top model Supreme one day.

DESCRIPTION

Sindre

Bergmann Audio is a Danish company offering up to now one turntable and one tonearm – both are the subjects to this review. New reference set called Sleipner should be available soon – you can already see some pictures on a manufacturer's [website <http://www.bergmannaudio.com/site/6295.htm>](http://www.bergmannaudio.com/site/6295.htm). Company believes in simple but well-thought-out solutions. That is why the deck and tonearm were designed in such a way that they use as few but top quality elements as possible. Deck is quite large and heavy. It is a belt-driven device with the platter floating on air film. Sindre is built around a 88 mm massive block, in a 3 layer fibre board. If you take a look from the top all you see will be thick, acrylic platter and linear tracking tonearm. This platter sits on the aluminum subplatter that floats on a thin air film centered by a spindle. It means the the only contact point between subplatter and the rest of the turntable is the belt. To ensure the least interaction between plinth, platter and the motor, the last one is quite small with not to much power. This is one of the key points that differs many turntable constructors. Some of them – like **Tim de Paravicini** <http://www.ear-yoshino.com/> - believes that you need very powerful motors for maximum control of the platter. The other say that it provokes much bigger transmission of vibrations to the platter. Obviously Johnnie Bergmann Rasmussen prefers to avoid vibrations transmission. The torque is transmitted to the subplatter with rubber belt that is hidden inside the plinth so you can't see it. Bergmann has chosen DC motor because, as he says, it ensures the best speed stability. The platter air bearing consists of two aluminum discs between which the air supply creates a thin frictionless air film. The upper platter – well subplatter in fact as the main, acrylic 4 kg platter is placed upon it, weights 3,2 kg. The spindle is centered in a bearing housing made of a very long-wearing and frictionless technical polymeric. The plinth is placed on three adjustable spikes. The back panel of the plinth contains fantastic, most expensive RCA connectors from WBT, air supply entrance and a very good LEMO plug outlet. Sindre can be upgraded to battery power. There is also air flow adjustment separately for the tonearm and the platter. Set also includes a clamp that is screwed on the taps thread. The turntable weights 23 kg and its dimensions are: 475 x 500 x 210 mm (D x W x H).

The power supply is an external device with a selector between 33 1/3 rpm and 45 rpm in the front panel. At both sides there are two small screws to control the speed. To be honest the switch is quite ordinary and it doesn't compose well with the sublime design of the whole device. Small power of the motor is responsible for quite a slow start of the platter – you might want to help a bit by pushing it at the beginning. The air-pump is a separate device. Fortunately it works so quietly that you can place it in your listening room.

Sindre tonearm is of a linear tracking, airbearing type. Made with the utmost precision. It is very easy to set up. But still some protractor from Bergmann would be a nice addition and it would made a set up even simpler. If you just use the aluminum template included and set square you will also get a great result in short time. The arm tube is mounted on this sliding pipe. The tonearm is made in a very hard aluminum alloy to secure the best stability possible. The arm tube is made of carbon fibre. You can't change azimuth but you can change overhang. The weight in form of a cylinder sector is clamped to the arm with a rubber lining that grips the arm tightly and it can move both ways on the tonearm. The tonearm wires are very tiny so you need to be extremely careful when attaching clips to the cartridge! Wires go inside plinth somewhere between RCA connectors and are soldered directly to them.

PC-1

PC-1 is a Moving Coil cartridge manufactured by Japanese Air Tight. There is only one model up the range PC-1 Supreme. The output voltage is quite high 0,6 mV and internal impedance very low – 2,5 Ω , so cartridge should work very well with most phonestages. Its magnet is a neodymium #50. It offers very impressive frequency response – 10-50 000 Hz. Cantilever is made of single crystal of boron. Stylus tip is a 3 μ m x 30 μ m semi-line contact. Recommended tracking force range is 2-2,2 g but I suggest the upper limit as the best option. Pins are made of copper rhodium-plated polished.

