

# Airy

No, Bergmann Audio is not a new manufacturer from Ruhr, trying to revolutionise the turntable with the help of heavy machinery engineering and montane technology.

The exquisite turntable "Sindre" actually comes from our northern neighbour and mesmerises through a truly airy performance.



Let's be honest. With such a stunning appearance, it almost doesn't matter how the thing sounds. With its harmonious proportions, clear design and effortless elegance, the Bergmann Sindre demands attestation beyond all questions of taste-as a natural champion independent of what comes out at the other end. Pieces of such beauty usually have a price, and this is no exception: The Sindre with tonearm expects to be honoured with 14.000 Euros. The fact that Sindre was originally a dwarf within Nordic Mythology, who became known for forging Thor's Hammer, provides little consolation in this respect. The creation Johnnie Bergmann has sculpted from the mythological name looks the exact opposite of rough hammering- and represents precise Scandinavian design of the finest order. Exquisite, yes, but that is not enough to justify the premium price. For this we expect a technical highlight or two. And indeed it boasts such features- from the field of compressed air applications.

The source of this is a compressor which is part of the turntable offer; a transparent plastic tube delivers the air to the turntable, where the invisible and almost inaudible gas achieves decisive effects: In particular, it establishes a virtually perfect bearing for the platter and tonearm.

The platter bearing is a key component of any record player; the quality thereof co-determines the audial capacity of the player, which is why

all ambitious manufacturers invest a fair amount of effort into this specific component. At the end of the day, it all boils down to the interplay between a spindle and a socket, which are designed to absorb the horizontal forces while causing as little friction as possible -usually with the help of lubricants: Friction causes surface irregularities and noise- both of which are unwelcome.

These components are usually accompanied by a ball, which runs against a platter bearing and absorbs the vertically active forces; in other words: it carries the platter weight. There is an infinite amount of different designs for this feature, but in the end, all operate according to the same principle. A non-contact and therefore frictionless bearing is the dream of every turntable designer; one of the very few possible ways of achieving this is to let the platter float on an air bearing. similar to the technology behind hovercrafts.

Players of this design have appeared in regular intervals over years- and have achieved various levels of performance success, at this point in time, there is only a handful of

players which honour this principle. If I am not entirely mistaken, the Sindre is in fact by far the cheapest of these player models.

## Associated Equipment

### Cartridge

- Benz LP-S
- Clearaudio Gold?nger
- Jan Allaerts MC1B
- MFSL C3.5
- Denon DL103R

### Phonostage

- Pass XP-15
- Leema Agena
- MaValve preamp three phono

### Pre amplifier

- MaValve preamp three line
- Vacuumstate RTP3

### Power amplifier

- Pass XA30.5
- SymAsym
- Audio Research VS60

### Loudspeaker

- Lumen White Artisan
- K+T Prototyp

### Turntable/Tonearm

- Transrotor Fat Bob / Graham Phantom
- Clearaudio Innovation / Universal
- Acoustic Solid Machine / SME M2-12

*The entire Bergmann construction: The motor control to the left, the compressor to the right, -and in between- the turntable with tangential arm*





## Played

Cowboy Junkies  
**The Trinity Session**

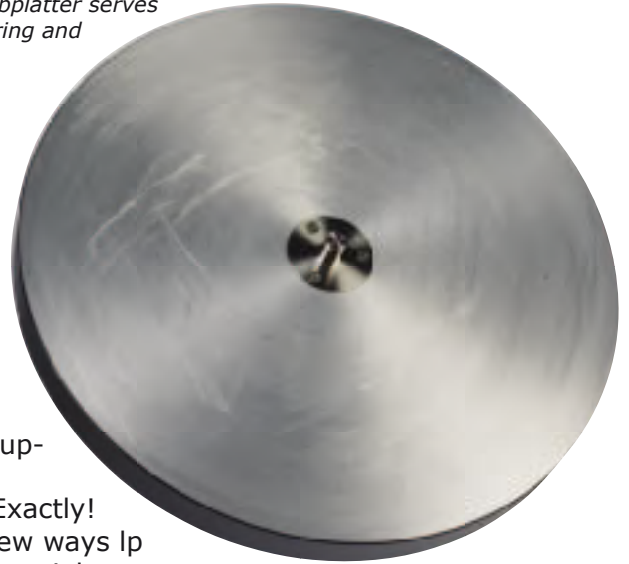
Guiseppe Verdi  
**Aida, Wiener Philharmoniker,  
Karajan, Tebaldi, McNeil**

Marc Cohn  
**Marc Cohn**

Dead Can Dance  
**Toward The Within**

Rickie Lee Jones  
**Rickie Lee Jones**

*The underside of the subplatter serves as a "lid" for the airbearing and carries the snub axis of the horizontal guide*



What connects this solution to several of its kindred players is the result of logical reasoning: If you have to produce compressed air for the platter bearing in any case, then why not supply the tonearm with the compressed air as well: Exactly! Airbearing is one of the few ways I generate a "passive" tangential arm which runs smoothly enough to actually work very well. Johnnie Bergmann implemented this design strategy as well- and the result is part of the turntable offer. The Sindre is comprised of three devices: the turntable itself, the compressor for air supply to the tonearm and platter bearing and the feeder for the motor. I find the compressor the most astonishing of the three: In contrast to all the other representatives of this design type which I have encountered over the years, it operates virtually soundlessly. What this means: Even though sufficient tube length is supplied, the compressor need not

be banished to an adjacent room, it can actually be left with the turntable. During the test it was placed on the floor under the turntable rack and did not cause any trouble there. The most bothersome feature is the fact that the power switch is on the back of the device (which IMHO desperately needs to be changed). The solid metal housing of the air processor is quite bulky (width 21cm, height 22cm, depth 42cm) and mainly contains features for sound insulation. The astonishingly compact pump is located in a massive cylinders act as "Elcos for air", i.e.: buffer stores, which "smooth out" the intermittent airflow from the compressor. There is also a water separator, which withdraws condense water from the compressed air- as this would harm the airbearings- and another good helping of soundproofing material in the housing cover.

The design strategy has paid off- the unit is whisper quit. The turntable base is comprised of a thick MDF sandwich. Circumferential milling conveys a certain optical lightness to the block, the impeccably executed black matt finish is the perfect laminate for this raw material. It stands on three height-adjustable spikes, which are adjustable by means of counter nuts. Nothing off the peg, self-manufactured components with a hand-smooth rubber vibration pad on the adjusting ring.



*Luxurious conditions:  
All of these elements are  
designed to optimally supply  
the speed-regulated DC motor  
with electricity*

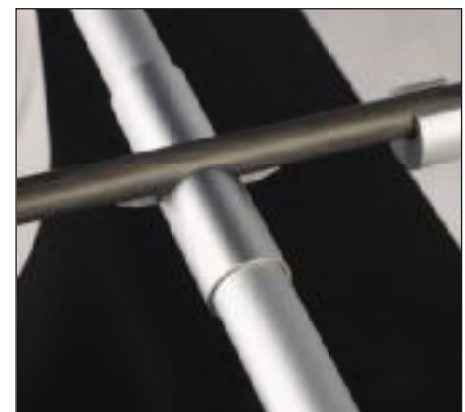
The platter is a relatively normal 60" acryl platter- at least at the first glance. In actual fact, this element forms the tip of the iceberg so to speak; when removed a "subplatter" of the same diameter in the form of a 3,2kg aluminium disc appears. This platter flush with the upper platter edge and must remains optically in visible. The belt runs along the border of the subplatter (flat rubber belt) and is understandably quite difficult to assemble. The motor- a relatively high speed regulated DC motor- does its magic out of sight, which is why some pratice is required to successfully attach the belt: a second pair of hands is immensely helpful. I cannot say much about the motor; it is so well integrated that I hardly felt like disassembling the turntable until it became accessible. The aluminium platter carries the spindle on its underside- or to be more precise- what is left of the spindle: The Sindre possesses an airbearing, however, the platter requires an additional guide in the horizontal plane. This is provided by a "spindle stub"- which is hardly a centimeter in length and runs along a plastic sleeve. In the light of so few frictional surfaces, there is hardly reason to worry about bumps caused by the system. Those who prefer an airbearing in which the horizontal plane is also uncoupled through an air pillow, should consider the larger "Sleipner" turntable model.

The airbearing is located beneath the subplatter- and like all very good solutions- has a very simple mode of operation: A round aluminium plate of (sub)-platter diameter is rotated internally, which creates a "basin-like" structure. A several centimetre wide bridge remains on the outer ridge. There is a drill hole through the base of the basin, which is the entry point for the compressed air. The subplatter lies on the aforementioned bridge until the air pressure rises to the point where it lifts the platter. The air determines the breadth of the air gap: The more pressure the broader the

*The setting board is aligned parallel to the arm- and the needle must then land precisely on the line*



gap. Air flow can be adjusted by means of an adjustment screw on the back of the unit, however, there is usually no need to adjust the setting. The system works exceptionally well- despite its simplicity- and it is astonishingly quite as well. If one goes through the hassle of putting one`s ear close to the operating unit, one can hear a slight hissing noise, but virtually nothing can be heard at normal hearing distance. The bearing performs its job, which is to provide the platter with a close to frictionless base, perfectly: I spun the platter with the belt removed to test how long it took to stop rotating. The experiment yielded no results as I grew tired of waiting and ended it.



*The sleeve with the arm floats frictionless on the air cushion*

*A sound proofing marvel: The compressor is located in the large block, the other two act as filter capacitors for the compressed air*





*The motor is integrated and covered, which clearly adds the simple elegance of the unit's appearance*



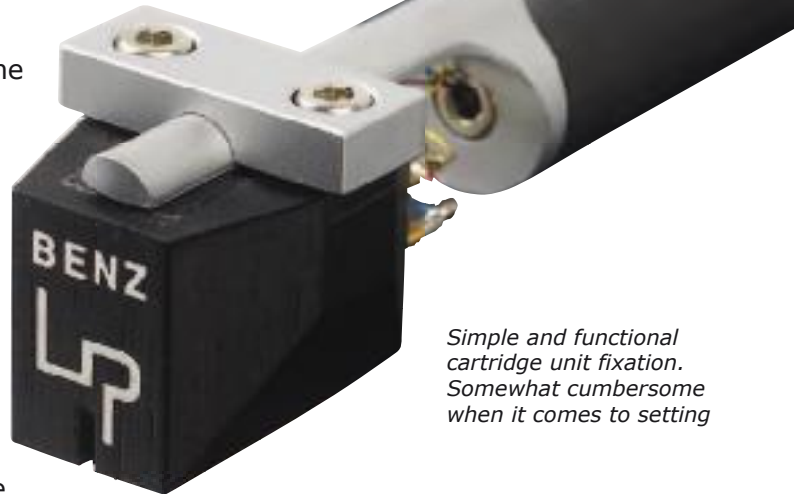
*There is a water separator on the back of the compressor; Moisture would not be conducive for the unit's functionality*

Let's have a look at the beautifully simplified tonearm. It has a tangential design of course, which means that it reads the record the way it was cut- precisely and on a straight line towards the platter axis, without tracking angle error. Pivot bearings do not come in every possible variation, which is why the

positioning of such an arm is a highly complex task: The only impulse mechanism for the entire tonearm is nothing more than the force that the groove sidewall exerts on the diamond needle stylus. This sounds worse than it is- provided one manages to position the arm in a close to frictionless manner. Johnnie Bergmann solves this problem by horizontally attaching a round metal tube to the turntable and furnishing it with numerous small holes. A sleeve of appropriate internal diameter is pushed over the tube and the actual tonearm is affixed to this sleeve.

When air flows through the aforementioned holes an air pillow forms between tube and sleeve- and voilà, the sleeve and thus the arm hover. As the tube and sleeve are both round, the construct can be rotated as required, which means there is no need for a bearing for the vertical plane. The elegant tonearm itself is a sandwich construction made of carbon fibre and aluminium; The arm has a small peg on the front for cartridge unit fixation. The cartridge is pegged to the arm using a suitable shaped clamp. This is a simple and elegant solution- but also somewhat finicky;

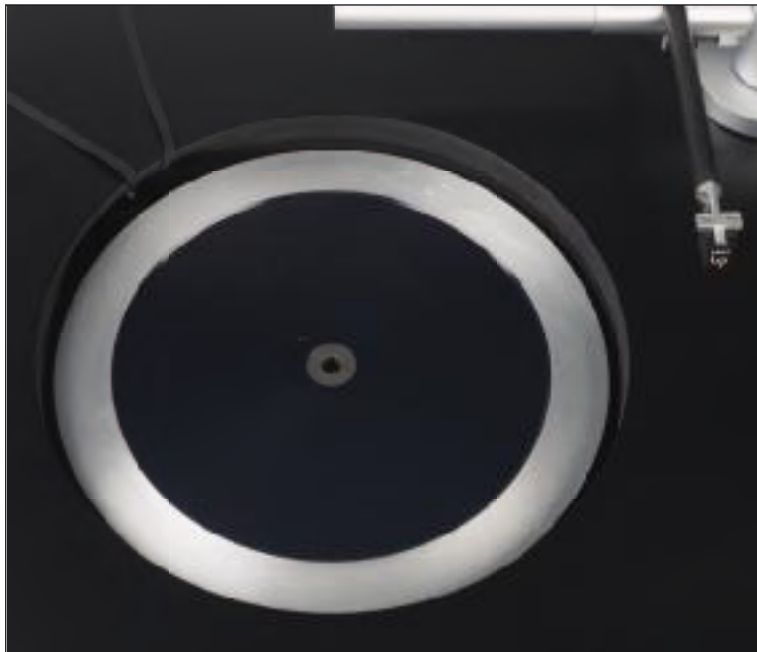
It takes a few deep breaths before one manages to set the pieces at the right distance and achieve perpendicular needle placement (the two adjustment screws only allow for limited adjustment). The adjustment of the bearing strength is somewhat tricky as the



*Simple and functional cartridge unit fixation. Somewhat cumbersome when it comes to setting*

system is not very sensitive. It is set by sliding the counterweight which is uncoupled with integrated rubber. The excentrically drilled component is also rotatable, which is more of a nuisance than an advantage in this case; In any case, one should always try to position it vertically. Apart from such largely unimportant trivia, the ensemble works excellently. Neither the arm nor the turntable showed any problems during the test period. All in all the unit constitutes a very mature piece of engineering- my compliments to the designer. It would be good if he has a few more in stock because the Sindre not only looks good and works smoothly, it plays records absolutely brilliantly; I for one certainly count it among a handful of the best turntables that I have hitherto encountered. It quickly becomes apparent that the elaborate platter bearing is worth extra effort: I have never heard a turntable with so little static noise.

A lot of what i hitherto taken for groove noise seems to actually have come from the bearing. The lower the recorded level on the platter, the more impressive the result. The new 200-g-by the fantastic Cowboy Junkies album "The Trinity Session" is a point in case: Nuances, which would otherwise remain unnoticed, reveal themselves; The thus achieved spatial audio-representation adds an entirely new dimension to the church acoustics. The Sindre is a master of differentiation in its dynamics; a superficial view of the



*Central piece:  
The air cushion forms  
between the ring  
plateau and the  
subplatter underside*

bass may lead one to think it is too weak- which is not true: It merely renders very precisely, is light-footed without undue reinforcement. It does not achieve the bench-vice-like power of my Transrotor Fat Bob, but then again, there is no need for it to do so. The wonderfully extended and free-breathing high range area creates a perfectly harmonious whole, which can be regulated to an extent through cartridge selection. I recommend that those who prefer the base to be more robust have a look at the Jan Allaerts MC1B, and that those who prefer their units somewhat more neutrality out the new Benz LP-S. The Clearaudio Goldfinger phono cartridge is unfortunately too heavy for the tonearm, a Denon DL-103R audibly underchallenges this fantastic unit. It is amazing what can be achieved with a little bit of compressed air and sound engineering. The Sindre is, without a doubt, a true highlight from the turntable craft.

*Holger Barske*



## Bergmann Audio Sindre

- Price
- Distribution
- Telephone
- Internet [www.bergmannaudio.com](http://www.bergmannaudio.com)
- Guarantee
- Turntable B x H x T 500 x 210 x 475 mm

### **The bottom line...**



Exelent optical design, harmonious concept, brilliantly implemented: From now on, Denmark has something to say when it comes to high-class turntables.