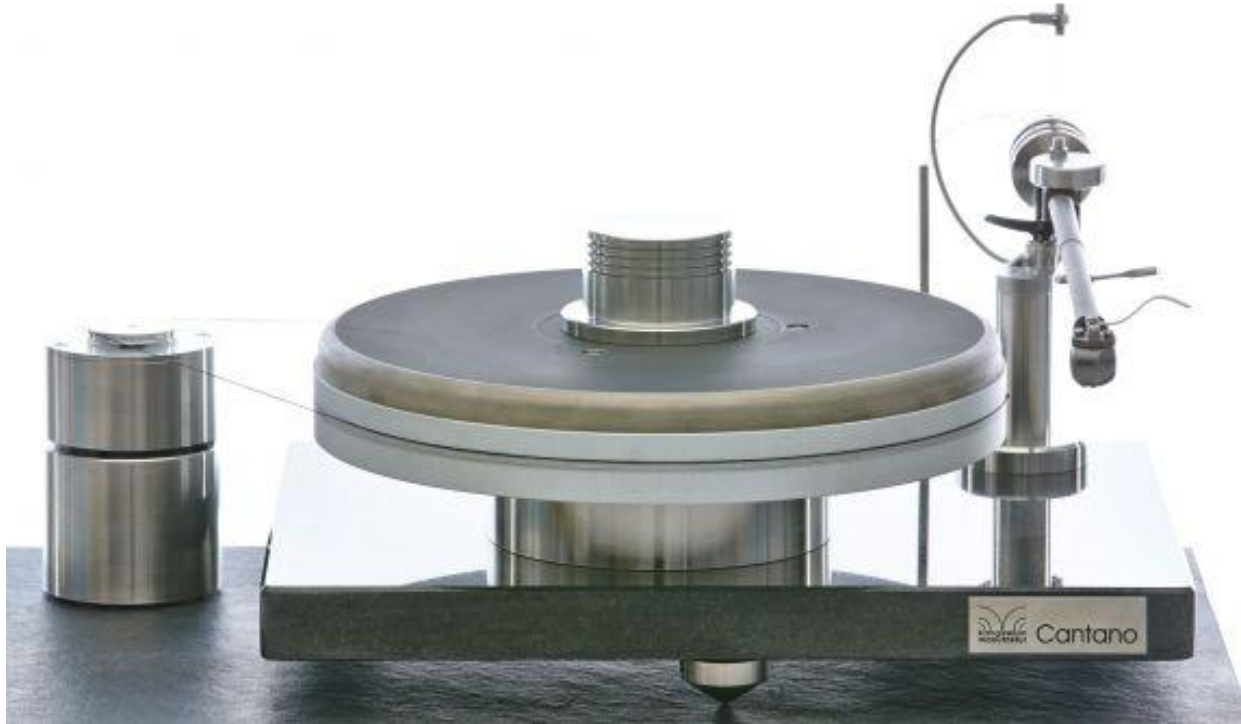


## **SoundWaves Cantano Turntable/Tonearm (KlangwellenManufaktur)**

KlangwellenManufaktur is not easily understandable as a concept, but only because they want to make it easy on the music lover. Not only the turntable, but also the matching 12-inch tonearm is being manufactured under the name Cantano. The classification of this rather unusual pair is more simple: Pure high-end at a reasonable price.

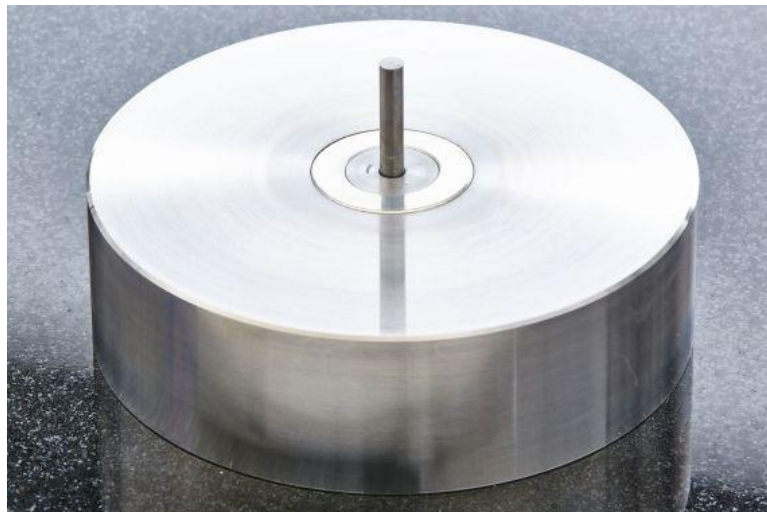


*Thanks to the tonearm base projecting out beyond the Cantano, it takes up only a relatively small footprint, despite the 12-inch tonearm.  
The decorative slate top is not included in the basic price.*

Oliver von Zedlitz, owner of the company KlangwellenManufaktur and the developer of the two available components wants to appeal to music lovers with his creations and not primarily to people who like to just play around with hifi equipment. They are more for the hifi fans interested in a good piece of equipment. Therefore, he doesn't have any conspicuous scales or calibration gadgets, but relies only upon an equally restrained and elegant design. His ideal client is one who sets up the turntable, tonearm and cartridge one time - or allows this task to be done by the manufacturer or dealer - and then doesn't waste any more thoughts on technology, but just enjoys his records. What is true for the potential buyer of the Cantano - or perhaps the Cantanos - is also truly crucial to its developer: He namely intensively analyzed the technology and put the turntable on the market after eight years of construction and maturation time, even though KlangwellenManufaktur officially mutated from a hobby project to a company only in December 2011.

From an early age, Oliver von Zedlitz was always inspired by good music reproduction, but then the hobby was put on the back burner for a little while due to family and professional reasons. Then one day, one of the two developers of the Stereokonzept speaker company for which the von Zedlitz CNC metal parts manufacturing company produced parts, aroused the interest of the business owner. He definitely wanted to listen to one of their small, very fine loudspeakers. The first listening test then promptly led to an order for the emerging loudspeaker designer - not at all surprising to the author, who had the pleasure of introducing the current top model from Stereokonzept, the 3.0 on his [www.hifistatement.net](http://www.hifistatement.net) website. It became quickly evident that the rest of the components in his hifi system were not really adequate playing partners for the new Stereokonzept speakers made by Oliver von Zedlitz. This led to further investments. The run-of-the-mill turntable didn't keep the re-excited hifi fan from purchasing new cables and cartridges to achieve an even higher tonal holy-ground. Thanks to his own mechanical production operation, it was not out of the question to produce higher quality turntable platters and conduct listening tests - until coming to the understanding that it would be better, just to develop a turntable from scratch according to his own ideas.

If you are a mechanical engineer and head of a CNC machining company with 15 employees, "from scratch" can mean: Experimenting with different materials and layer thicknesses alone accounting for nearly one hundred platter variations that, of course, all need to be listened to. First, Oliver von Zedlitz listened to platters made from only one material including: glass, laminates, various stone, metals of many kinds and graphite. After that, various sandwiches of different materials found their way onto the prototype's bearing. Ultimately, the experimental developer then decided to use a combination of graphite and aluminum, which can be missing a little liveliness by themselves, but "homogenizes" with the sound of the graphite. Whoever is afraid of graphite dust getting into the record grooves can be reassured: The graphite layer of the five kilo platter is coated so that no abrasion is possible.

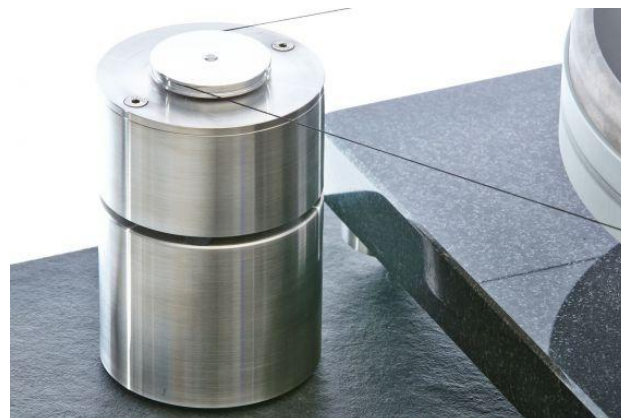


*The Cantano bearing: The stationary spindle consists of hard metal. A magnetic ring together with the proper counterpart in the platter relieves the ball bearing.*

The Cantano's platter sits on a slide-bearing bushing made of high-alloy bronze, surrounding the fixed spindle made of hard metal. The bushing is lapped by hand, and the bearing should be only have two micrometers of play. A sapphire ball is glued in the top of the bushing. Oliver von Zedlitz claims that the centering accuracy is to a hundredth of a millimeter. A slope in the bushing delivers oil to the bearing point. The sapphire ball is not burdened by the full weight of the platter: Repelling ring magnets in the platter and a stainless steel bearing from which the spindle towers, reduce the pressure on the bearing point by about a factor of five. The ball therefore only "sees" a platter weighing about one kilogram. Oliver von Zedlitz sized the bearing so that the influence of the under section is minimized as much as possible. The selected mass of the stainless steel depended upon the material, from which the base was made. It was finally not only due to aesthetic reasons that granite was the material of choice. On the top shelf of the Pagoda rack - whether with or without the visually appealing slate top - the Cantano was equally unaffected by any footfall sound as my LaGrange. As with the latter, light tapping on the shelf is transferred to the platter of the Cantano - an air bearing platter and tonearm like in the Bergman Audio Sleipner is required to immunize the turntable against such shenanigans.



*The large and heavy stainless steel puck takes care of a perfect contact and stabilization between the record and the graphite layer of the platter.*



*The motor purchased from Klein Technik sits on a solid stainless steel column reaching the required height. It starts by running a bit too fast, but then the yarn needs a little time to slip into place and bring the platter to the rated speed.*

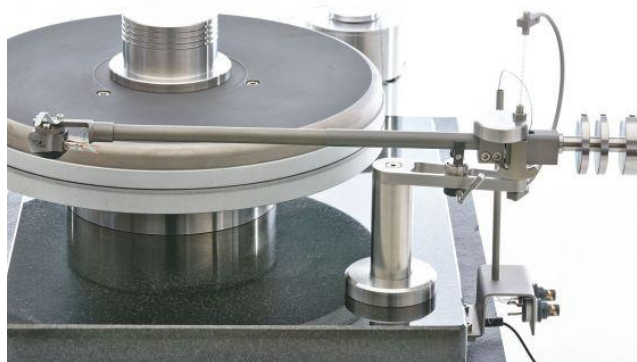
The platter of the Cantano is driven by a motor along with a matching feed piece purchased by KlangwellenManufaktur from Klein Technik. The power transmission between the stainless steel pulley on the motor shaft and the platter is assumed by a thread made of strong yarn. This is employed because it does not cause any synchronization problems and also assures long-term stability: Oliver von Zedlitz could report that the yarn used in early prototypes has now been fulfilling its task for over five years without any problems.

But not only in terms of durability and maintenance-free operation, Oliver von Zedlitz makes it easy for the Cantano owner: He offers a matching tonearm for the turntable - as he refers to it, "a plug and play" solution for music. The tonearm and turntable were designed as one unit, and so far there is only a price for both of them together. The strong demand for just the tonearm alone during the High End Show in Munich has caused the developer to ponder: Of course it is possible to purchase the turntable and tonearm individually. As far as using bases for other tonearms on the Cantano turntable, in principle everything is feasible. By the way, the Cantano tonearm base is made of stainless steel.

Even though the tonearm – apart from the space consuming anti-skating device- appears similarly unspectacular and elegant like the turntable, it is really something very special: It is in fact made of titanium - a material that has an extremely high strength in relation to its weight, however, it is a hard material to work with. Oliver von Zedlitz also mentions titanium's very low level of natural resonance as another reason for his choice of material. And that plays a greater role with a twelve-inch tonearm than with a shorter representative of its species. But the negligible azimuth as well as a very low bearing friction was in the technical specifications. Oliver von Zedlitz therefore opted for a one-point "unipivot" tonearm, whereby two anchors mounted on both sides of the tonearm ensure that any wobbling be excluded: They are in contact with a silicone ring going around the tonearm bearing. To ensure the least possible friction at this point, the contact surfaces of the anchor are finely polished. Up until now, KlangwellenManufaktur exclusively used silver cable by van den Hul for the wiring of the tonearm. After extensive listening tests with different high quality hifi equipment, pure copper cables are now also available upon request.



*The speed can be adjusted on the "Klein Sinus" precision motor control unit – fine adjustment is also possible.*



*The tonearm and the connecting terminals protrude out from the base. The arc with the spring is used to generate and adjust the anti-skating force.*

Oliver von Zedlitz visited me with his turntable several months ago. At that time he had a small Lyra cartridge in his bag, but then mounted the AirTight PC-1 Supreme out of my inventory. The setup of the turntable and tonearm – we only had to remove a spacer between the bearing and platter - and mounting the AirTight was done in a jiffy since Oliver von Zedlitz delivered the tonearm and turntable almost ready to play in a large wooden box. Besides mounting the cartridge, the Cantano fulfilled one of its design goals: Plug and play. And that left the developer and me with enough time to listen to a few of the relevant test records together - which was full of very positive surprises for both parties: Oliver von Zedlitz experienced with the AirTight Supreme probably for the first time, what kind of potential was slumbering in his turntable and I was totally blown away by the unexpected musical performance demonstrated by the Cantano. Regarding tonal colors, detailing, openness and spatial illusion, the Cantano-duo played together with the AirTight as inspiring as the Brinkmann LaGrange with the Thales Symplicity and Lyra Olympos. That is truly an amazing feat for a turntable including an in-house manufactured tonearm at a comparatively low price. Only in direct comparison, I could happily discover only small advantages in terms of dynamics and deepest bass with some enormously demanding test records for the system with Brinkmann and Co.. The Cantano really has the makings of a Giant Killer!

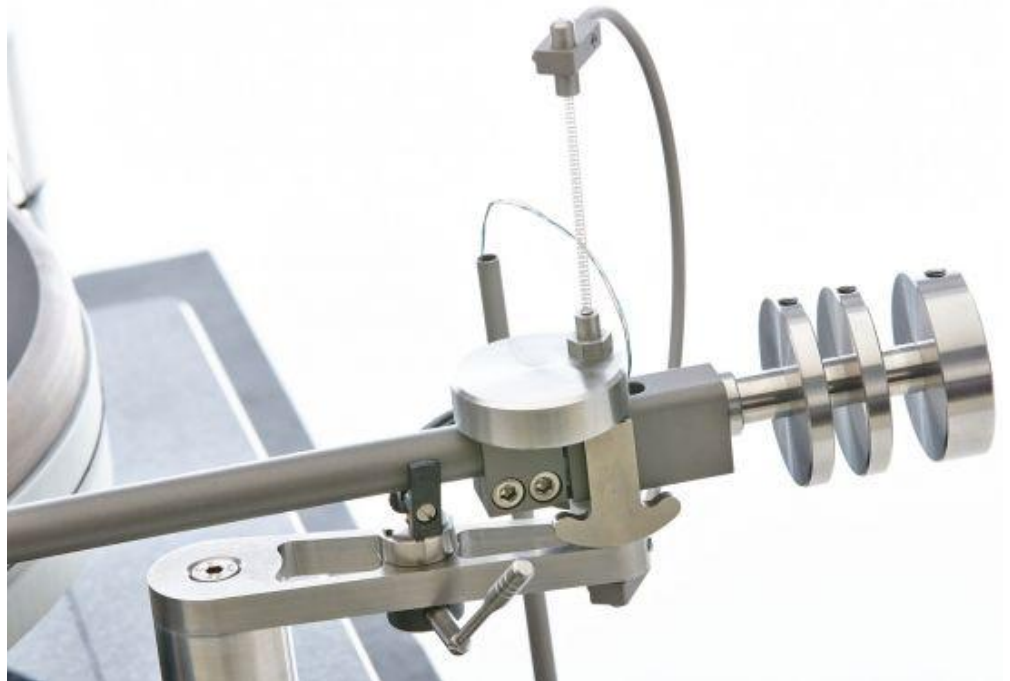
This was only 100% true in relation to the sound a few months ago. Visually, there was a little room for improvement in two areas and also the execution of one or two details left anything to be desired. With the otherwise incredible workmanship - and especially the sonic results - it just would not have been appropriate to present the Cantano to you in that way. That is the reason why Oliver von Zedlitz decided to make one last cosmetic final touch to benefit his creation – to add a cartridge worthy of this high level.

When the Cantano arrived in the listening room for the second time right before the High End Show in Munich, Oliver von Zedlitz had an Ortofon Anna mounted to the headshell of the tonearm. And that was superbly harmonious with the now visually one hundred percent coherent Cantano: I've enjoyed listening to my records for quite a while now with excitement and relaxation using the KlangwellenManufaktur-Duo together with the Anna rather than on the Brinkmann and Co.. Even an admittedly spoiled analog freak would not miss a thing. But you don't want to only hear how much fun you can have with the Cantano with an adequate cartridge and some very nice recordings, but rightly expect a slightly more detailed description of its strengths and weaknesses. And this is only possible in comparison with the components I am familiar with: Regarding resolution, transparency and soundstage imaging, neither the Brinkmann team nor the Cantano with the Ortofon showed even the slightest weakness. The former, however, has minimally more to offer in terms of rhythmic accentuation of songs and also generates a little more pressure in the deep bass area. But both are - as indicated - almost negligible without any direct comparison.

While LaGrange and Co. and the KlangwellenManufaktur trio in terms of depth of soundstage are equal, with some records the latter lets the imaginary soundstage seem a bit wider. The Cantanos play very open and light-footed - and therefore I miss that on some of the songs where Brinkmann and colleagues confided a somewhat richer foundation. But overall, these are just quibbles at an extremely high level. The KlangwellenManufaktur is a newcomer to the analog scene, but have already proved themselves with their first two products tonally as heavyweight contenders. And all that at a thoroughly customer-friendly price point: A discovery!

## STATEMENT:

Not many other turntables and tonearms provide so much analog euphony as the two Cantanos - and if so, usually at a much higher price. The duo from KlangwellenManufaktur is visually elegant, comes very well pre-calibrated, ready for operation without demanding anything from its owner at all. Nice that sonic excellence is not only available to banished analog specialists.



## Technical Specifications:

### Turntable

Speed: 33 $\frac{1}{3}$  and 45 rpm  
 Special feature: Bearing relieved using magnets  
 Dimensions: 395/270/300mm (W/H/D)  
 Weight: 26 kg

### Tonearm

Mounting distance - pivot to spindle: 295mm  
 Overhang: 9.5mm  
 Offset angle: 15 degrees  
 Effective Length: 304mm  
 Effective Mass: 10g

## Listened with:

Turntable : Brinkmann LaGrange with tube power supply  
 Tonearm : AMG Viella 12", Thales Simplicity  
 Cartridge : Brinkmann EMT ti, Lyra Olympos SL, Lyra Titan I, Ortofon Anna  
 Phono stage : Einstein The Turntable's Choice (sym)  
 Preamplifier : Brinkmann Marconi  
 Power amplifier: Ayon Epsilon  
 Speakers : LumenWhite DiamondLight Monitors  
 Cables : Precision Interface Technology, Audioquest Wild Blue Yonder and Wild Wood, HMS Gran Finale Jubilee, Audioplan  
 Accessories : PS Audio Power Plant P5, Clearaudio Matrix, Sun Leiste, Audioplan Powerstar, HMS power strip, Acapella bases, Acoustic System feet and resonators, Finite Elemente Pagode Master Reference Heavy Duty and Cerabase, Harmonix Real Focus, Audio Exklusiv d.C.d Base, feet and Silentplugs  
 AHP fuses