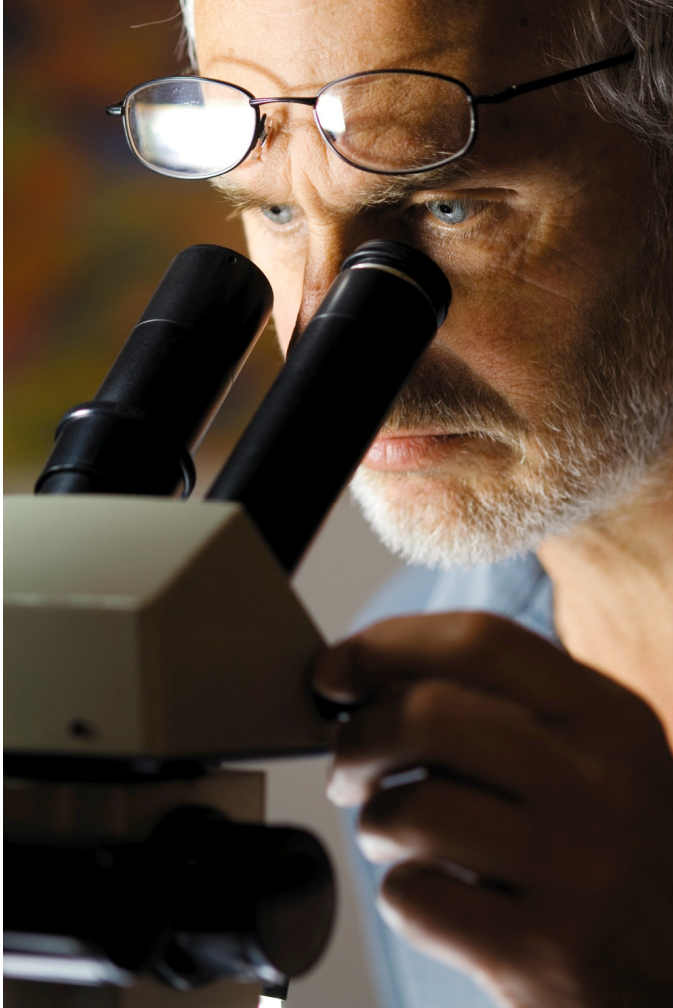




brinkmann

Real High Fidelity.

“Perfect Music Playback is an Illusion”



- *Brinkmann Audio, started in 1984, is Helmut Brinkmann’s never-ending search for the “perfect illusion”*
- *Designs are not “cost-optimized,” they are made with meticulous precision for the best possible performance*
- *Because every part influences the sound, even the tiniest screws are scrutinized and only the best-sounding parts are selected and matched*

Digital Advances, but Vinyl Rules



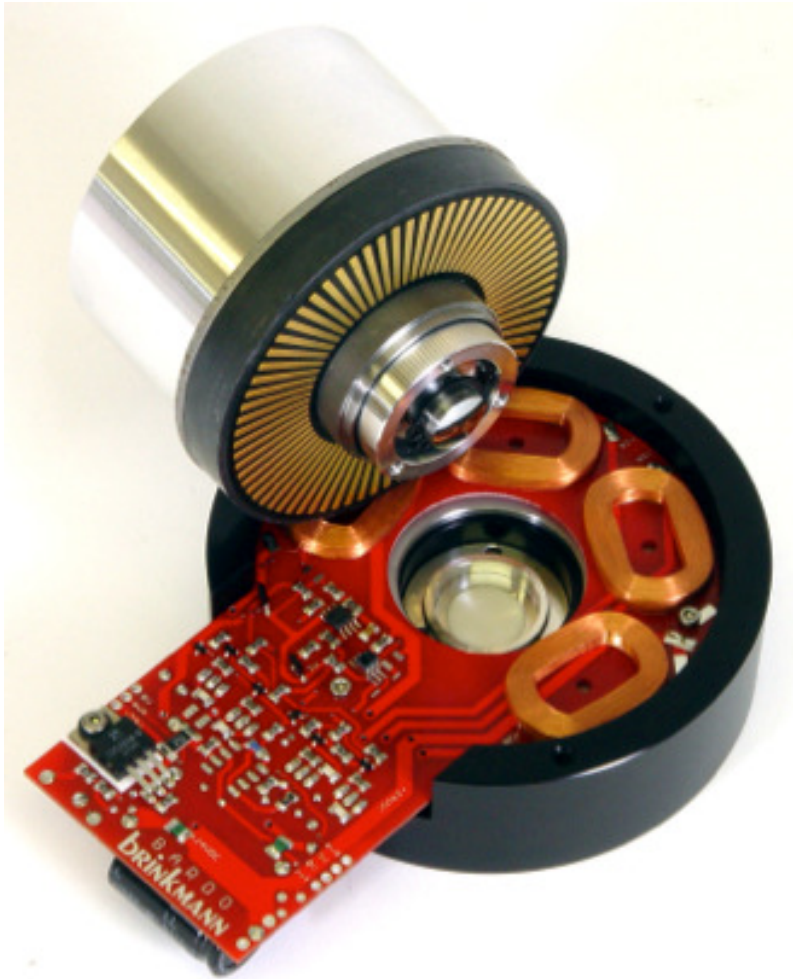
- *Vinyl is resurgent because it remains the most emotionally involving high-resolution playback medium*
- *Brinkmann offers a complete line of four turntables, three tonearms, three power supplies and two phono cartridges*
- *Brinkmann turntables can be [pre-drilled to accommodate virtually any standard tonearm model*

Turntable Design Challenges



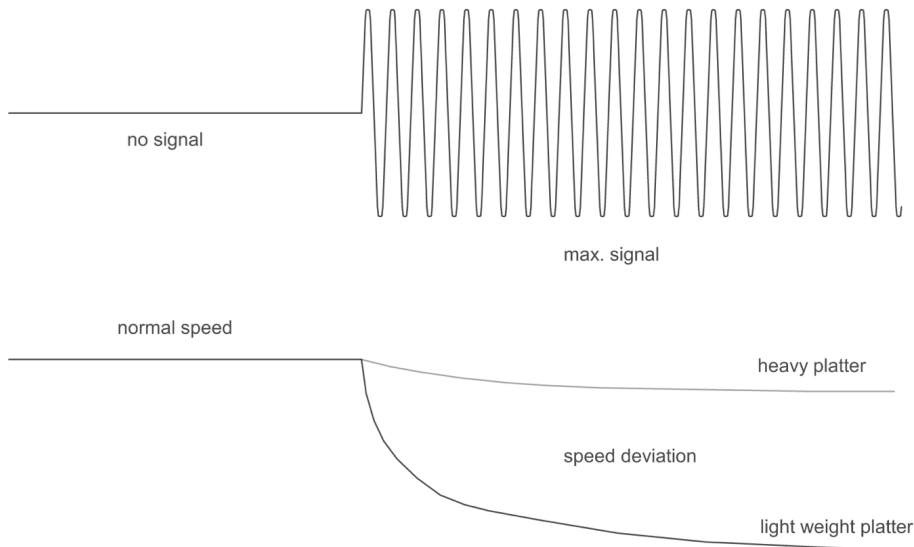
- *Challenge is to track the groove and extract maximum information while minimizing unwanted resonances- musical instruments are designed for the body to “sing along,” but turntables are not*
- *Choice of turntable/tonearm construction materials and carefully matching them is crucial*
- *Resonances are inevitable, must be absorbed, broken up or effectively channeled and discharged quickly*

Direct-Drive Design Challenges



- *Commonly used in radio stations, Direct-Drive motors require very short start-up times and accurate speed regulation*
- *Strong motors and light platters force stable speed by readjusting at every step of the motor*
- *Although wow and flutter measurements look good, this constant motor regulation is clearly audible as discordant, jagged sound*
- *Motor needs strong power to get up to speed and then only minimal power and tight control to stay on speed*

Belt-Drive Design Challenges



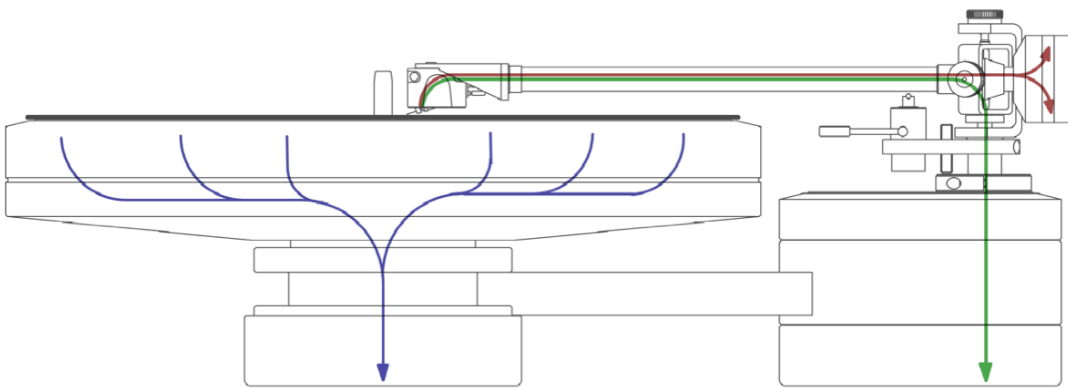
- *Tracking musically complex (highly modulated) passages of music causes a “braking torque” which slows the platter and affects dynamics by affecting the speed stability*
- *“Stepping” movement of motor causes cogging, which consists of alternating acceleration and braking forces*
- *Lack of tight coupling between motor and platter softens dynamics*
- *Both motor and main bearings must be sufficiently quiet to reduce noise*

Brinkmann's Construction & Materials



- *Crucial components, including Direct-Drive mechanism, motors and bearings exclusive designs built in-house by Brinkmann*
- *Brinkmann turntables and tonearms constructed mainly from anodized aluminum with other carefully chosen materials with careful attention to strategic locations*
- *Anodized aluminum provides the unique combination of a hard surface for protection and fast transmission of resonances with even absorption within in the raw aluminum core*

Brinkmann Resonance Control



- *Tonearm and platter resonance discharge paths must remain separate and not allow a return path to the stylus*
- *Tonearm resonances are discharged through a steel spike in Balance's plinth and a single aluminum foot in Bardo/Oasis*
- *Higher mass in platters and plinths slow platter resonances, the remainder is discharged via steel/copper spikes in Balance and feet with resonance-optimized plastic inserts in Bardo/Oasis*

Brinkmann's Platter/Mat Materials



- *Platter materials must neither damp signal tracking/dynamics nor sing along by enhancing unwanted resonances*
- *Brinkmann's tables use aluminum-alloy platters with crystal-glass platter mats*
- *Crystal-glass platter mat spreads resonances evenly through whole mat before transfer to platter, rather than absorbing only at tracking area*
- *Aluminum platter prevents resonances from swinging back and forth internally, channeling them to bearing and plinth for quick discharge*

Brinkmann's Hydrostatic Bearing



- *Exclusive Brinkmann design, built in-house*
- *Hydrostatic, oil-filled bearing on all three turntables, preheated to ensure stable temperature*
- *Sinus motor features the same bearing concept*
- *Sealed and maintenance free- bearing oil does not need to be changed or added over the years*

Magnetic Direct-Drive: Bardo, Oasis

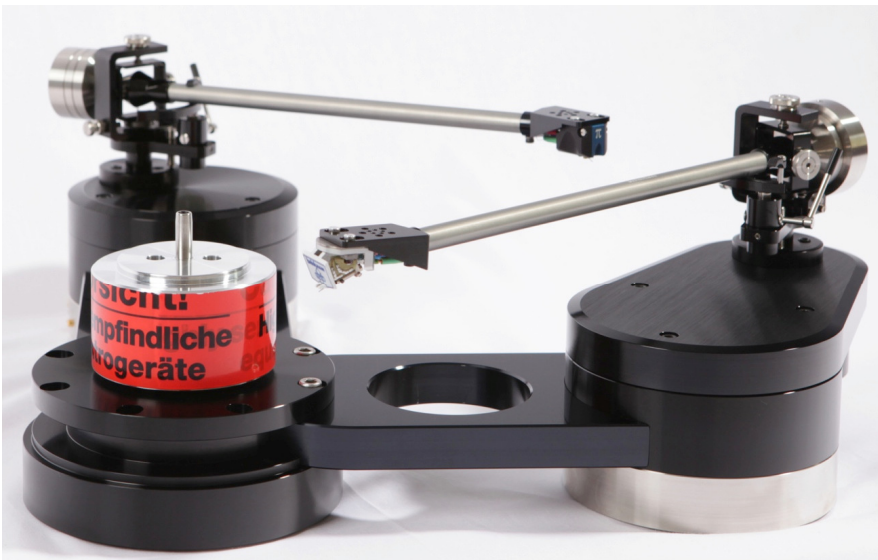


- *Single hydrostatic bearing for motor and platter (fully coupled), close to the ideal quiet drive mechanism that “simply turns by itself”*
- *Analog speed regulation, AC motor with 4-Phase (4 x 90°)/12-pole frequency generator for “softer regulation”*
- *22 lb. platter mass and soft but accurate analog speed regulation results in superb sound that accentuates rhythmic drive and speed stability advantages while avoiding tradition DD pitfalls*
- *Optional larger solid-state power supply or RÖNt tubed power supply*

Belt-Drive: Spyder



- *Totally unique design accommodates up to four 9" - 12" tonearms*
- *22-lb. platter ensures speed stability and wide dynamics*
- *Hydrostatic bearing for both motor and platter bearings*
- *Employs Sinus Motor from flagship Balance belt-drive turntable*

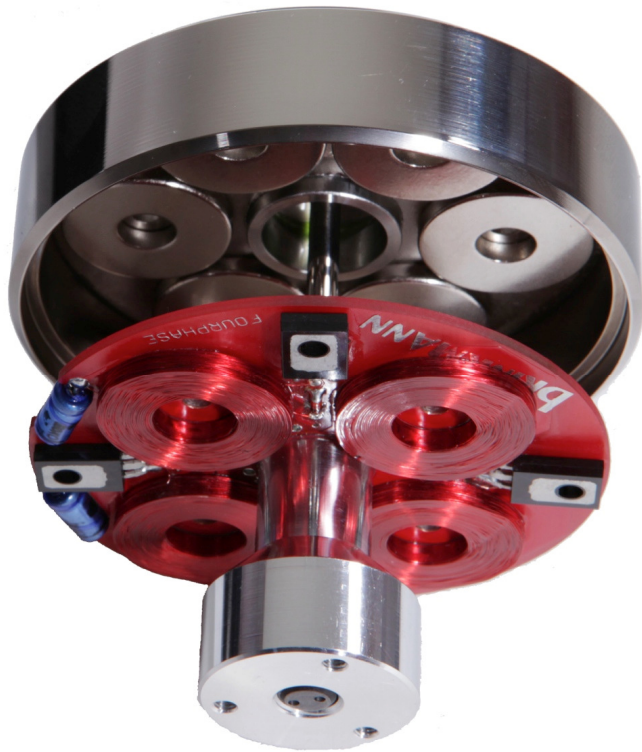


Belt-Drive: Balance



- *Massive 44-lb. platter creates “flywheel effect” and ensures speed stability and wide dynamics*
- *Hydrostatic bearing for both motor and platter bearings*
- *Main bearing oil preheated, temperature stability results in optimal performance/adherence to bearing specs*
- *2-arm option, “plug n’ play” arm bases support virtually any 9” – 12” tonearm*

Sinus Motor



- *Current standard for Balance, Spyder*
- *Essentially a smaller direct-drive motor*
- *Same superior-performance hydrostatic bearing*
- *4-Phase (4 x 90°)/12-pole frequency generator*
- *Smaller motor “steps” ensure smoother, more stable rotation & speed regulation*

RöNt II Vacuum Tube Power Supply



- *High-impact upgrade for all Brinkmann turntables*
- *Vacuum tubes behave like power-line conditioner, filtering out noise from incoming AC power*
- *Increased sense of musical flow for sound more “tube like” yet more incisive and detailed*

10.0 Tonearm



- *Unique unipivot + gimbaled bearing hybrid design*
- *Horizontal two-bearing system- one “play-free” on top, one looser on bottom- stabilizes movement to greater degree than typical unipivots*
- *Anodized ceramic arm tube*
- *Vertical movement provided by two “play-free” Swiss gimbaled bearings*
- *Magnetic zero-contact anti-skate*
- *Headshell machined from single piece of aluminum, allows fast, simple azimuth adjustments*

10.5 and 12.1 Tonearms



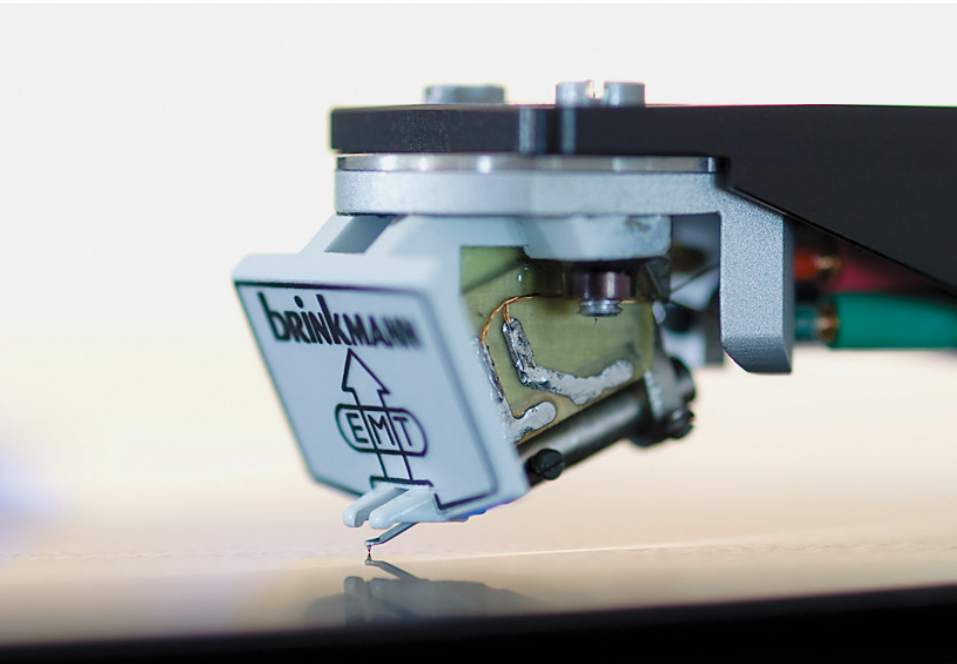
- *Double-gimbaled suspension system with “play-free” Swiss precision bearings*
- *Anodized ceramic arm tube, surface is nearly as hard as diamond for high-speed resonance discharge with the internal damping effect of the raw aluminum on the inside*
- *Adjustable headshell for fast, simple azimuth adjustments*
- *Magnetic zero-contact anti-skate*
- *Longer effective length allows superior tracking with 12.1 due to reduction of HTA error*

π Cartridge



- *Relatively high-output (1mV/5cm) moving-coil cartridge*
- *Brinkmann-designed 3-piece body comprised of three distinct aluminum materials*
- *Titanium screws at strategic locations optimize resonance discharge to tonearm channel*
- *Boron cantilever, microridge diamond stylus*

EMT-ti Cartridge



- *Relatively high-output (1mV/5cm) moving-coil cartridge*
- *Brinkmann-designed resonance-optimized body comprised of aluminum, titanium, magnesium and 6N-purity copper*
- *Copper nuts, titanium washers and aluminum screws allow optimal coupling to headshell, maximizing resonance discharge to tonearm channel*
- *Aluminum cantilever, Van Den Hul stylus, Alnico magnet*

Awards and Reviews



- *Bardo and Balance Stereophile Class A Recommended Components*
- *Bardo winner of inaugural Gruvy Award from Michael Fremer's Analog Planet*
- *"I had never experienced such fundamentally correct, deep tight, articulate, yet delicate bottom-end performance from any turntable ... The Brinkmann Balance remains one of a handful of the finest turntables being made today."*

–Michael Fremer, Stereophile



- *"... (Bardo) should be auditioned by anyone looking for a turntable costing \$15,000, or even more. It sounds that good and its fit n' finish are worthy of tables costing far more."*

-Michael Fremer, Stereophile

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Awards and Reviews



➤ *“The Balance 2 (Arm) is a fitting flagship for the Brinkmann range, and a true high-end product, offering intelligent engineering and superb sound.”*

-Adam Smith, Hi-fi News

➤ *“ ... this (Balance) is an incredibly revealing record player that can easily turn an audio signal into a source of top flight entertainment. It’s not only able to deliver detail separation and precision but it combines all of elements to deliver an addictive sound ... “*

-Jason Kennedy, the-ear.net

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THANK YOU!