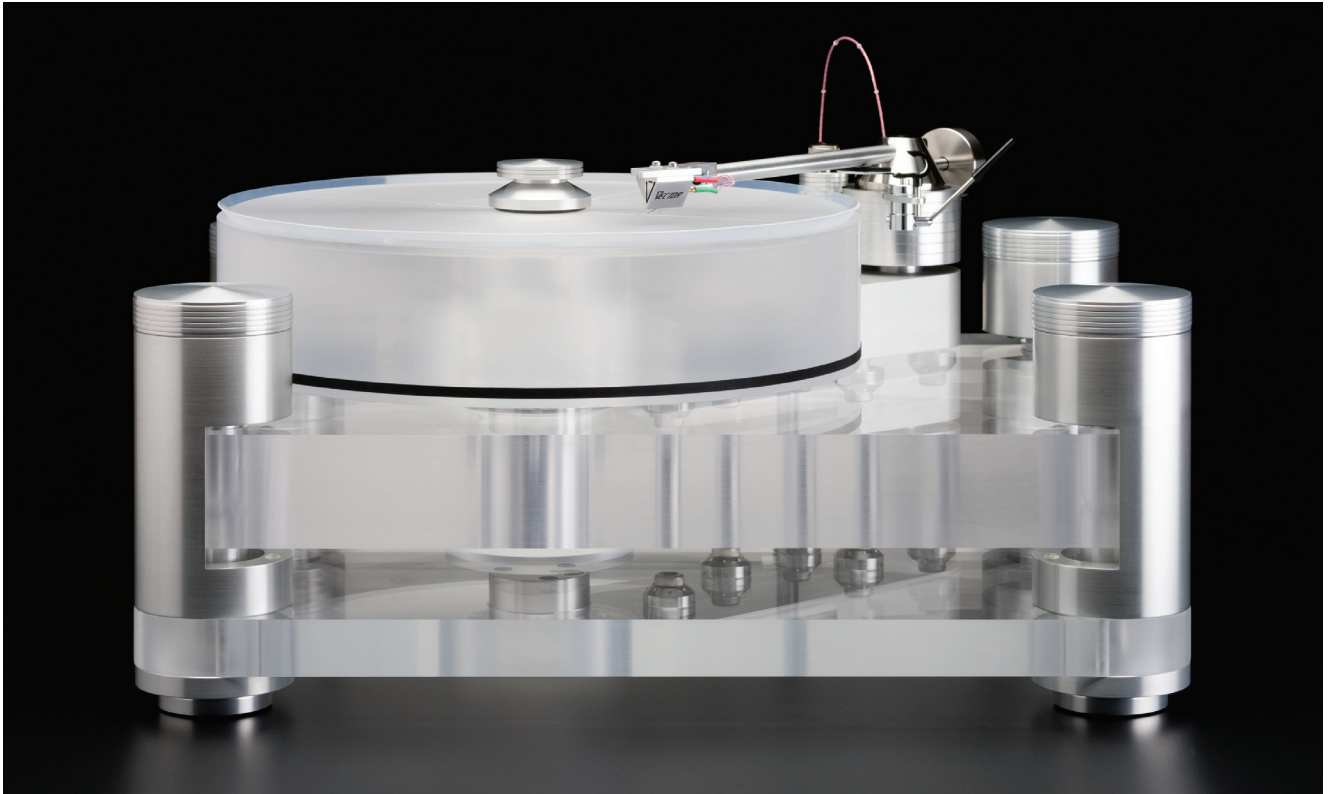


Absolute ANALOG



Basis Inspiration Turntable and Vector 4 Tonearm

Inspired Performance

Robert Harley

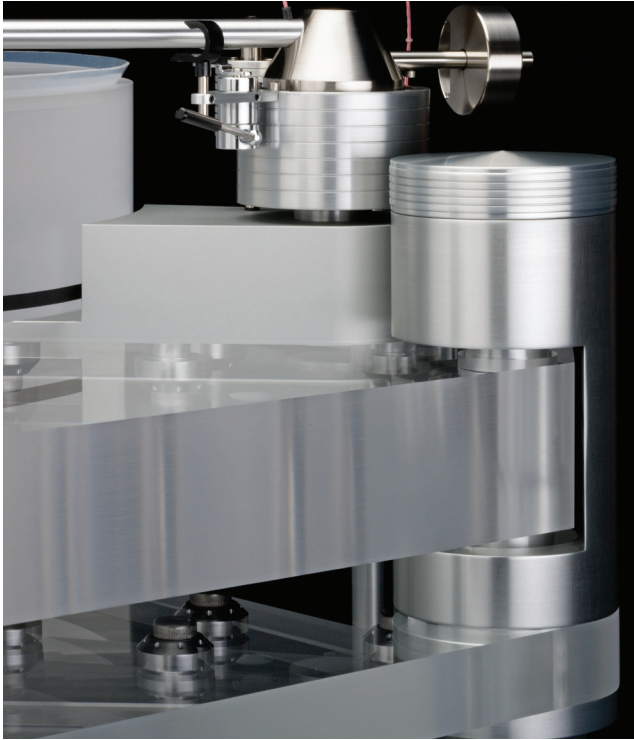
Like the concept of a designer creating a cost-no-object realization of his highest aspirations, and then later trying to bring as much of that product's performance to a more practical and affordable product. The consumer often gets much of the reference product's performance for significantly less money. Although these trickle-down products aren't inexpensive, they nonetheless often offer high value compared to the product designed with absolutely no cost or practicality constraints.

Such is the case with the Inspiration turntable from Basis Audio. This table's name comes from designer A.J. Conti's "inspiration" to bring as much of his \$170,000 Work of Art turntable's performance to a significantly lower-priced and more commercially viable product. It might seem odd to call the \$54,000 Inspiration "lower-priced," but it's less than one-third the cost of the Work of Art.

I've long admired and enjoyed Basis turntables. They are passionately designed and meticulously built, and epitomize insightful engineering in the pursuit of sound quality. I lived with the 2800 Signature for several years (see my review in Issue 172) and found it superb. Could the Inspiration be that much better, never mind approaching the performance of a mega-buck turntable?

The Inspiration is a five-component affair, comprising the turntable itself (including the integral Basis Vector 4 tonearm), a freestanding motor that sits on the turntable's lower platform, the Synchro-Wave power supply, a vacuum control-unit, and the vacuum pump. The turntable is a massive acrylic structure that will look familiar to anyone who has seen a Basis turntable. Although designed to the same principles as all Basis tables, the Inspiration boasts several cosmetic and engineering departures.

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One of these is in the acrylic platter and subchassis, which are made from the special acrylic formulation selected for the Work of Art. This new acrylic is designed for maximum energy transfer between the record and platter so that the platter acts as a sink for record vibration. Keep in mind that any relative motion between the record and stylus that isn't created by groove modulation is noise and distortion. That motion is converted into an electrical signal and amplified. Even the tiniest vibration ends up coloring the music. How well an interface of two dissimilar materials (in this case, the record and platter) transfers mechanical energy is determined purely by the mechanical impedance match of the two materials. The more similar the product of stiffness times density, the greater match in mechanical impedance and the greater the energy transfer. The new acrylic's stiffness and density are more like that of an LP, resulting in less spurious vibration of the record. It's also slightly lower in hardness and has better self-damping properties.

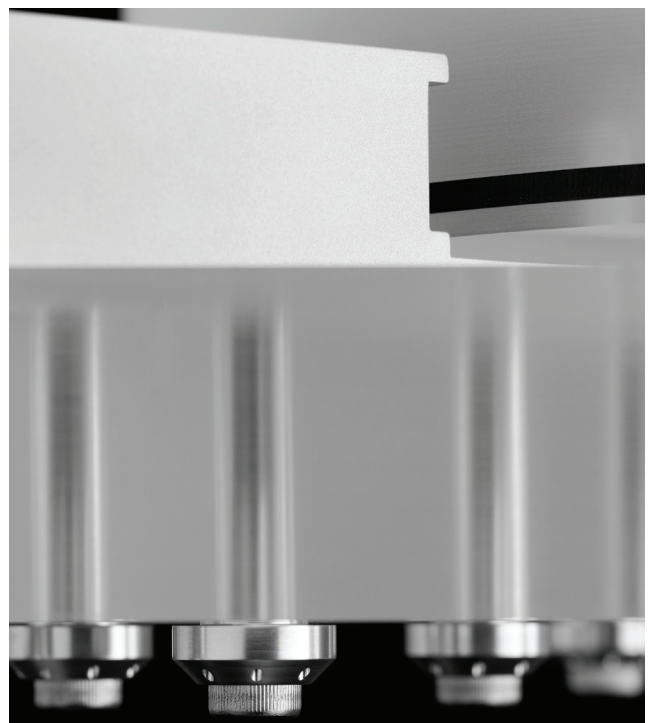
This superior self-damping makes it a better choice for the subchassis as well. The difficulty in polishing this softer acrylic to a transparent finish resulted in a bit of serendipity. Basis experimented with other finish techniques, and hit on a frosted-edge look that is a departure from previous Basis 'tables. The edges, grained in-house to impart the frosted appearance, tend to hide what's behind the turntable, as well as to look more elegant. The frosted edges complement the metal parts' matte finish to give the Inspiration a unified appearance.

The 2"-thick rectangular subchassis is suspended at each of its four corners with fluid-damped "Resonance Annihilators." These devices employ a series of internal springs and dampers that isolate the subchassis from external vibration. The Resonance Annihilators are contained within the cornerposts, which themselves are mounted on a platform below the subchassis. This vibration-isolation and damping system is so effective that

if you apply a stethoscope to the subchassis and pound on the equipment rack you will hear no sound through the stethoscope. The platter spins on the same cost-no-object bearing developed for the Work of Art.

The vacuum hold-down is identical to that of the 2800 Signature, but the small control unit now sports a much finer finish. The control unit allows you to finely adjust the amount of vacuum, indicated by a precision dial. An ideal setting is a gentle 0.5 PSI of negative pressure, which is just enough to create intimate contact between the record and platter but not enough to embed any dust on the LP or the platter in the record's underside. This intimate contact between platter and record reduces spurious vibration in the LP, resulting in better sound. You can hear for yourself the effect of vacuum hold-down simply by comparing the sound of a record with the vacuum turned on and off. The vacuum pump itself is so quiet that I positioned it on the floor next to the turntable and never heard it in operation.

As with all Basis 'tables, the Inspiration benefits from the Revolution drive belt, a belt so thin it is translucent. Conti discovered that uniform drive-belt thickness was a crucial factor in speed stability, and when he couldn't get his vendors to make a belt to his standards, he designed and had a machinist build belt-grinding machinery and began producing them in-house. The Revolution belt's thickness variations (along its length) is just +/- 0.1 microns, about one one-thousandth (1/1000) the diameter of a human hair. (Incidentally, the CD specification for track pitch is 1.6 microns, +/-0.1 microns.) When I had the Basis 2800 I compared the sound of that 'table with Basis' original drive belt and the Revolution belt, and found the super-thin high-precision belt to have greater image stability, a larger and better defined soundstage, and greater resolution of low-level detail. Conti personally measures the thickness, the thickness variation, width variation, and surface finish (at 4x magnification) of each side of



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each belt before it is packed with a turntable.

The Synchro-Wave power supply drives the AC synchronous motor with dual sinewaves 90 degrees apart, one for each motor coil. Operation is so smooth that while holding the motor in your hand, you can't tell if it's running. Selection between 33-1/3 and 45 rpm is done via a switch on the Synchro-Wave's front panel. Just as the vacuum controller's front panel has been refined, the Synchro-Wave benefits from upgraded cosmetics and metalwork to match the finish quality of the turntable's metal parts.

The same goes for the motor itself. Once housed in a black box, it is now encased in lavish metalwork. A.J. Conti personally sands and blends the ridges, all corners, and every surface in the motor assembly after machining. To assure the finish quality, Conti accompanies the metal parts to the anodizing shop and stands behind the technician as the parts are anodized, inspecting each one as it comes out of the bath. This attention to detail shows in the finished product; the metal parts have an elegant matte finish that is beyond reproach. Looking at the Inspiration as a whole, it exudes a sense of refinement and quality. This feeling is amplified as you look more closely at individual parts. Some high-end products that appear well-made from a distance don't hold up under close scrutiny. But with the Inspiration, the closer I looked the more impressed I was.

The integral Vector 4 dual-bearing tonearm features a novel technical solution to a fundamental problem of LP playback that occurs in unipivot arms: dynamic azimuth error, or the tendency of the arm to rotate around the armtube's axis when the stylus encounters record warp. This phenomenon causes the azimuth (the perpendicularity between the stylus and record) to constantly change from the ideal 90 degrees. The solution in the Vector 4 is to asymmetrically weight the tonearm (via a cutout in the counterweight) so that it "leans" onto a second "stabilizer" bearing. The main bearing is similar to a conventional unipivot, and bears virtually all the arm's weight. The secondary bearing simply stabilizes the arm to prevent the arm from "rolling" in response to record warp, and also to eliminate bearing chatter. This design reportedly also reduces tracking error, a claim that I can verify; in nearly five years of listening to a Vector I've never heard it mistrack. Moreover, most tonearms produce a "chattering" sound when playing as they vibrate in response to stylus movement, but the Vector is completely silent. Adding the stabilizer bearing sounds like a simple and obvious solution, but before the Vector, no one had thought of it.

The Inspiration incorporates Basis' cable-support system, a small block of acrylic mounted to the base behind the tonearm that isolates the turntable and tonearm from vibration entering through the cables. The heroic measures to isolate the turntable from vibration could be compromised by this vibration path, but the cable-support system effectively maintains isolation.

Basis makes a dedicated stand for the Inspiration that holds the turntable, Synchro-Wave Power Supply, vacuum controller, and vacuum pump. The \$18,000 stand is made from acrylic to visually match the turntable. It doesn't employ any isolation technology, but is rigid and non-resonant.

The Inspiration is a beautiful piece of mechanical engineering that represents the culmination of A.J. Conti's more than 27 years of turntable-design experience. The way it feels in daily operation,

the sense of precision and perfection, and the stunning finish quality make it a joy to use.

Listening

The Inspiration builds on the manifold sonic virtues of the 2800 Signature to a degree that results in a qualitative change rather than just a quantitative one. That is, the differences aren't just matters of degree or distinction in a few sonic criteria; rather the Inspiration so exceeds the 2800's performance that it transforms the listening experience.

The traditional Basis qualities—a dead-quiet background, flawless pitch stability, wide dynamics, crisp transients—are in abundance. This new table delivers a highly precise-sounding presentation, with great clarity, high resolution, lack of added warmth, great transient speed with no overhang, and a seemingly

SPECS & PRICING

Inspiration Turntable

Type: Belt-drive turntable with vacuum hold-down
Dimensions: 17.7" x 12" x 16.75"
System weight: 100 lbs.

Vacuum Hold-Down Control Unit and Pump

Dimensions: 6" x 3" x 10.5" (control unit)
Dimensions: 8" x 5" x 8" (pump)
Weight: 6 lbs. (control unit)
Weight: 15 lbs. (pump)

Basis Vector 4 Tonearm

Effective mass: 11-15 grams

Synchro-Wave Power Supply

Speeds: 33 1/3, 45
Dimensions: 13" x 3" x 10.5"
Weight: 12 lbs.
Warranty: Ten years parts and labor
System price: \$54,000

BASIS AUDIO

25 Clinton Drive, #116
Hollis, NH 03049
(603) 889-4776
basisaudio.com

ASSOCIATED EQUIPMENT

BAIabo BC-1 Mk-II
preamplifier and BP-1 Mk-II

amplifier, Constellation Altair preamplifier and Hercules power amplifiers, Mark Levinson No.53 amplifiers; Vandersteen Model 7, Rockport Altair, B&W 800 Diamond, Sonus faber "The Sonus faber", TAD Reference One, and Focal Stella Utopia EM loudspeakers; Meridian 808.3 and Meridian Sooloos system (Ethernet connected), dCS Puccini/U-Clock, and Berkeley Audio Design Alpha DAC, custom fanless and driveless PC server with Lynx AES16 card; iMac server with Berkeley Alpha USB interface; Air Tight PC-1 Supreme cartridge; Aesthetix Rhea Signature phono stage; Shunyata V-Ray V2, Audience aR6tS, Shunyata Talos and Triton power conditioners; Shunyata CX-series and Audience Au24 AC cords; Transparent XL Reference interconnects; Transparent XL Reference loudspeaker cables; WEL Signature interconnects; AudioQuest WBY cables; Shunyata Anaconda interconnects and loudspeaker cable





colorless rendering of timbre. Some electronics, sources, and loudspeakers that fit this description can sound impressive sonically, yet fail to connect musically. These products sound highly “technical” and precise in the same way that legal documents are technical and precise. In legal documents everything is spelled out flawlessly in a technical sense, but that precision of language impedes the communication of meaning—not to mention that the prose is utterly joyless. Similarly, highly analytical components overlay the music with a cold, mechanical patina that erects a barrier between listener and music. The resolution is exaggerated artifice, not reality. It’s the antithesis of a warm and forgiving classic tubed amplifier, or a loudspeaker that renders a soft focus in the name of musical beauty.

The Inspiration’s great triumph is that it nails every single technical aspect of reproduced sound by any sonic criteria, but does so in a musically communicative and engaging way. The Inspiration doesn’t detract from musical expression with its high-precision rendering; in fact, that precision is exactly why the Inspiration is the most musically rewarding source component I’ve had in my home in more than 22 years of reviewing. The Inspiration’s clarity, transparency, resolution, vividness, and life are not artifacts but rather characteristics of the music. With the Inspiration there’s no hint of hype or etch to transient detail, and no thinning of tone color that causes timbres to become “skeletal” in the pursuit of “resolution.” Yet the Inspiration isn’t warm, forgiving, relaxed, or easygoing. It doesn’t soften transient leading edges, adds no richness to timbres, and never warms up the upper bass and lower midrange with a bit of overhang. What it does do is act as a transparent window on the LP, faithfully conveying exactly what’s in the grooves with no editorial interpretation. The Inspiration can be vivid, immediate, and lively, yet simultaneously rich, full, warm, and full-bodied because music can have all those qualities simultaneously. The Inspiration’s defining quality is that it doesn’t walk the fine line between analytical sterility and romantic warmth; it simply rejects the dichotomy by being so colorless and transparent to the source.

Moving to the specific performance attributes, the Inspiration’s rock-solid pitch stability pays musical dividends in many areas. As I learned when comparing belts of varying precision and thickness for my review of the 2800 Signature, pitch stability is a fundamental performance criterion. This quality confers many sonic rewards, some of which you wouldn’t naturally associate with micro-speed variations. The first of these is the sense of timbral realism. The Inspiration renders instrumental timbre with a lifelike immediacy, vividness, and palpability that are simply sensational. Turntables without this precision seem to dilute the sense of life, making LPs sound a bit more like CD’s “flatter” rendering. (I don’t mean “flatter” spatially, but lacking the depth

and complexity of tone color, and the resolution of the very finest components of an instrument’s timbre and microdynamics that infuse the sound with a sense of life.) Timbres are simply believable, and with that believability comes the sense of a human being playing the instrument. The Inspiration is stunning in its ability to bring instrumental images to life, courtesy of this vividness of timbre and richness of tone colors. This quality, I believe, is the primary reason the Inspiration transcends the experience of hearing reproduced sound and instead fosters a feeling of being in the presence of contemporaneous music-making.

This ultra-precise pitch stability is key to the soundstage solidity and stability. The Inspiration’s spatial presentation is phenomenal in every respect, but particularly in the clarity of image outlines and the sense of each instrument occupying a specific location separate from other instruments. “Crisp” is a word that comes to mind in describing the soundstage. The stage is richly portrayed, exhibiting palpable immediacy on instruments toward the front of the stage, with layer upon layer of depth in fine gradations all the way to the back of the hall. The Inspiration is particularly adept at precisely conveying the distance between the musician and microphones, a performance characteristic that allows a dense and richly textured musical panorama to unfold before you.

A fundamental quality of Basis ’tables has been a lack of noise, a characteristic that is extended in the Inspiration. It isn’t just that the Inspiration lacks low-frequency rumble or has an utterly silent, jet-black background, but it also seems to make LP surfaces quieter. When listening to good pressings—try the spectacular new Reference Recordings releases *From the Age of Swing* and Stravinsky’s *Firebird* and *Song of the Nightingale*—there is no indication you are listening to LPs. The residual background you often hear from LP playback is simply nonexistent. *The Firebird* has long passages of extremely low signal levels, but the combination of the fabulous pressing quality and the Inspiration’s vanishingly low noise produce an eerie quiet that you don’t normally associate with LPs. At the other end of the dynamic scale, the Inspiration is immune to congestion or hardening of timbre on orchestral climaxes even at high levels through large loudspeakers with prodigious bass output—no doubt because of its heroic vibration-isolation design and execution.

Transient reproduction and dynamic rendering are simply phenomenal. Through the Inspiration transients start very quickly with steep leading edges and no overhang. I had the impression that none of the transients’ energy were smeared on the leading edge, or stored and released later on the trailing edges. Consequently, percussion practically leaps from the soundstage with stunning vividness. The entire presentation has a dynamic agility that powerfully conveys music’s rhythmic power. This is true whether the dynamics are small in scale, as with low-level percussion, or massive, as with orchestral climaxes. Moreover, the Inspiration beautifully conveys the sense of swing, and of intricate rhythmic nuance, in great acoustic bass-playing on jazz LPs.

The Inspiration is unique in my experience in the way it resolves very fine detail, particularly instrumental decays. We’ve recently started using the term “self-noise” to describe a phenomenon in loudspeakers in which very fine detail is smeared or obscured

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by cabinet vibration. Self-noise is most easily heard, at least by me, on the decay of piano transients. I can hear the harmonic structure change as the note decays, just as it does in life, but then, below some threshold, the decay is corrupted by micro-vibrations in the loudspeaker cabinet. This phenomenon dilutes the sense of realism, even if you're not aware of the specific mechanism causing the dilution. Heroic cabinet construction in loudspeakers is required to reduce self-noise to inaudible levels. Similarly, the Inspiration seems to have no self-noise; it beautifully resolves instrumental and reverberation decays smoothly down to inaudibility with no reduction in resolution or change in timbre. This quality also contributes to the Inspiration's jaw-dropping impression of instruments hanging in space. I know of no better example than Shelly Manne's ride cymbal on Sonny Rollins' *Way Out West* (the Analogue Productions reissue). When played on the Inspiration, the cymbal is right there, vivid, alive, present, and "now," not merely an acoustic representation of a mechanical representation of a magnetic representation of an acoustic waveform produced 54 years ago. That's the essential magic of high-performance hi-fi—the ability to erase time and space and make you feel like you're experiencing the music spontaneously as it's being created. This magic is the cumulative result of a product's specific performance attributes. A non-audiophile will experience the magic without a clue as to why the music sounds so lifelike. But in the Inspiration's case, I can clearly identify why it produces such magic—the utter lack of noise, stunning transient fidelity, richly textured tone colors, massive resolution without the slightest bit of analytical etch, spectacular three-dimensional soundstaging, and the unprecedented ability to resolve decays to below audibility.

Finally, I'd like to comment on a common thread among reader letters regarding LP playback. Many letter writers suggest that some of us at *The Absolute Sound* suffer from a "knee-jerk" prejudice that LPs are superior to digital. These readers are convinced of digital's superiority purely on theoretical grounds—how can the archaic technology of dragging a tiny chunk of polished diamond through wiggles in a piece of plastic produce better sound than the mathematical precision

of today's digital perfection? My analog-loving colleagues and I don't base our belief in the superiority of analog on assumptions or prejudice, but on extensive first-hand listening to the finest examples of both media. When visiting listeners, from non-audiophile friends to some of the world's most experienced industry veterans, hear the Inspiration after first having heard CD, the reaction is universal, predictable, and almost comical—shock and amazement that such a huge jump in sound quality is possible from a system that already sounds terrific. I can also tell you that once visitors hear music played on the Inspiration, the rest of the listening session is via LPs.

Conclusion

The Basis Inspiration elevates LP playback to an entirely new level of musical expressiveness and listener involvement in my experience. The Inspiration seems to cross a threshold that is not just "better" on a sonic checklist (although it is phenomenal by every specific audiophile criteria), but that fosters a transformative musical connection that instantly makes me forget that checklist. It manages to produce a sound with tremendous clarity, resolution, and vividness, yet it never suggests even a hint of mechanical sterility. This ability to convey a massive amount of musical information in a totally unforced, natural, and relaxed way is the Inspiration's core achievement.

In addition to this remarkable sound quality, the Inspiration is the result of meticulous, dedicated, and even obsessive design. Some of this perfectionism, such as the extreme mechanical precision, you can't see. But much of it you can appreciate just by looking at the execution. Every aspect of the design performs a technical function. The Inspiration is all it needs to be—and no more. There is no superfluous gesture, no added bling. This 'table's beauty emerges from its core values; it is not a garnish. It's also backed by a 27-year-old American company that can repair or update any turntable it has ever made.

How close does the Inspiration's sound quality come to that of the cost-no-object Work of Art, the \$170,000 turntable that "inspired" the Inspiration? I have no way of knowing, but when enjoying music through the Inspiration, it never occurred to me that I could possibly be missing anything more. **tas**