

## ABYSS AB-1266 PLANAR MAGNETIC HEADPHONES

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by [Chris Martens\(/articles/?authors=34\)](#) | Feb 27, 2014

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Several years ago Joe Skubinski, the founder of the high-end audio cable company JPS Labs, took a momentous decision. Specifically, he decided to spin off a sub-division of JPS Labs for the specific purpose of developing and marketing the finest high performance headphone in the world. Skubinski did not equivocate by saying he hoped to build “one of the finest” headphones, but rather made the unequivocal claim that his would be “the finest headphone” yet produced. Accordingly, Joe Skubinski and his son Eric worked assiduously for over two years to bring their dream to fruition. The result is the Abyss AB-1266 planar magnetic headphone (£4,254), which entered full production earlier this year. Does the Abyss live up to its designers’ ambitions? I would say it does for reasons I will explain in this review. But, before moving on to talk about the sound of the Abyss, let me first provide some background on the AB-1266 design.

As the Skubinskis began design work on the AB-1266, they were mindful that the Stax SR-009 electrostatic headphone was widely regarded as the reigning ‘king of the hill’ amongst high-end headphones. The Stax, quite frankly, is one of those landmark high-end audio components that can (and often does) change listeners’ perceptions of what is possible in the art and science of music reproduction, forcing us to reconsider what words like ‘resolution’, ‘detail’ or ‘nuance’ really mean—or ought to mean—in an audio context. In short, the Stax SR-009 routinely unearths subtle aspects of the music that most competing headphone and/or loudspeaker-based audio systems tend to miss or to gloss over. To meet the goal of offering the finest headphone in the world, Abyss recognised the AB-1266 would need to equal or surpass the iconic Stax headphone in terms of resolution, focus, dynamics, frequency extension, and all around ease of use. With these ends in view, Abyss implemented a number of innovative design strategies in the AB-1266, with extraordinary results.

First, the AB-1266 is a planar magnetic design featuring what Abyss describes as a “proprietary very thin, very low mass diaphragm”, which speaks to the related issues of low-level detail retrieval and transient speed. Second, the Abyss motor assemblies use “custom made high power neodymium magnets with (an) optimised slot pattern”, which in part addresses the issue of dynamics. Moreover, the driver frames use a “low-carbon steel front baffle with integrated resonance control” said to yield “minimal added (frame-induced) colouration.” Yet another noteworthy construction detail is the fact that the driver assemblies use “no rear magnet structure”—an uncommon design feature said to eliminate “annoying reflections from behind (the driver diaphragm) allowing for a completely open sound.” Finally, Abyss’ precision-matched drivers are put through extremely rigorous performance tests and quality

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‘resolution’, ‘detail’ or ‘nuance’ really mean—or ought to mean—in an audio context. In short, the Stax SR-009 routinely unearths subtle aspects of the music that most competing headphone and/or loudspeaker-based audio systems tend to miss or to gloss over. To meet the goal of offering the finest headphone in the world, Abyss recognised the AB-1266 would need to equal or surpass the iconic Stax headphone in terms of resolution, focus, dynamics, frequency extension, and all around ease of use. With these ends in view, Abyss implemented a number of innovative design strategies in the AB-1266, with extraordinary results.

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Perhaps the most striking aspect of the AB-1266’s design has to do with the extensive steps taken in order to provide a stiff, stable, and resonance free mounting platform for the AB-1266 drivers. Where most designers offer headphone frames that have springy, flexible frames that offer provisions for allowing the earcups to tilt and swivel, the AB-1266 does none of these things. Instead, the Skubinskis have given the AB-1266 a stiff, thick metal frame that is shaped like an inverted ‘U’, with beefy milled aluminium driver/ear cup housings firmly bolted to the downward-facing legs of the ‘U’. The resulting frame is a seriously stout piece of kit, making most competing headphone frames seem rickety by comparison. Given the unusual stiffness and rigidity of the Abyss frame, the fact is that the AB-1266 is somewhat heavier than many competing headphones and also appears, at first glance, as if it might not be very comfortable.

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However, Abyss addresses issues of comfort and fit in several creative ways. First, at the centre of the upward bow of the headphone's U-shaped frame, Abyss provides a milled aluminium, friction-fit, slip-joint that allows users to adjust the side-to-side spacing of the headphone's ear cups. By design the friction-fitted joint requires significant effort to adjust and once the desired spacing is achieved the frame resolutely remains in the position the user has chosen. Second, to allow for correct vertical positioning of the AB-1266 ear cups, Abyss provides an elliptically-shaped leather headband pad that is suspended by beefy elastic bands from the side-arms of the U-shaped frame. Abyss spent considerable time working out the exact composition of the leather pad and bands, settling upon a design where the pad nicely conforms to the curvature of one's head and where the support bands provide a just-right amount of tension to hold the 'phones at whatever height the wearer might choose. While the AB-1266 is a relatively heavy headphone, I found the support bands served to mask the weight of the 'phone fairly effectively, provided the listener remains seated in a more-or-less upright position (if you tilt your head far forward, backward, or to one side, however, the weight of the headphone becomes more apparent).

Finally, Abyss has come up with a clever means of achieving a comfortable and acoustically

correct fit between the AB-1266 ear cups and one's ears. Abyss, like a handful of other top tier headphone manufacturers (e.g., Audeze) equips its headphones with flexible, lambskin-covered ear pads that, by design, are thicker on one side than the other (viewed from the side, the ear pads appear wedge-shaped). The clever part, however, is that the Abyss pads are magnetically attached and held in position by locating pins on the driver frames, meaning users are free to remove and reposition the pads so that the thickest parts of the pads best fit the contours of their heads. With the Abyss system, the drivers do not tilt or swivel; instead, the pads move in order to achieve a firm but surprisingly comfortable, personalised fit. Does all this emphasis on providing a rigid, low-resonance driver platform really make a difference you can hear? I think it definitely does, judging by the extraordinary resolution.

Everything about the AB-1266's packaging is top-shelf. Thus, the headphones arrive in a beautiful felt-lined wooden presentation case whose lid is stained a deep aquamarine blue and is silk-screened with a silver Abyss logo. Inside, one finds the headphone, a set of JPS Labs signal cables (separate left and right cables are provided), plus two Y-shape connection yokes—one terminated with a high-quality four-pin XLR-type balanced connector and the other terminated with a 1/4-inch TRS plug for use with single-ended amplifiers. Completing the package is an Abyss-labelled aluminium headphone stand and a thick leather carry pouch (or 'man bag') embossed with the Abyss logo. While this is undeniably an expensive headphone, one cannot help but sense the careful attention that has gone into even its smallest details. But does the headphone's sound quality justify its stratospheric price? The simple answer is that it does, and in spades.



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Unlike some top-tier ‘phones, which can require a good amount of run-in time before sounding their best, the AB-1266 sounded terrific straight out of the box (it might get even better over time, but it’s so good from the outset that I think most listeners will immediately be pleased and impressed). For my listening tests, I drove the AB-1266s primarily with two headphone amplifiers: the excellent AURALiC TAURUS MkII (reviewed in *Hi-Fi Plus* 105) and the spectacular new Cavalli Audio Liquid Gold (*Hi-Fi Plus* review pending). I used both my reference Rega Isis CD player/DAC and an AURALiC VEGA digital audio processor (DAC) as primary source components.

From the start it was apparent that the Abyss AB-1266, much like the Stax SR-009, is an exceedingly revealing transducer that is highly transparent to associated source components. However, unlike the Stax, which in my experience can be finicky about amplifier choices, the AB-1266 seems willing to make the most of whatever (high-quality) amplifier you have on hand. True, the AB-1266 will quickly show you why super headphone amps such as Cavalli’s Liquid Gold are worth the price of admission, but at the same time the AB-1266 will give a good account of itself when driven by lesser amps. I don’t mean to suggest the AB-1266 is in any way soft-sounding or ‘forgiving’ because, in

truth, it's not; it's just that the Abyss appears to be a moderately low-sensitivity but otherwise straightforward (non-reactive) load to drive. This amp-friendly quality is one area where I think the AB-1266 is clearly superior to Stax' SR-009

Can the AB-1266 equal or surpass the resolving power of the mighty SR-009? That question is almost too close to call and I must admit that when I first heard the Abyss my thought was that the Stax might still enjoy a very narrow edge in terms of absolute transparency. Over time, however, my opinion has shifted in that the Abyss effectively sheds light on what may be a very, very subtle colouration in the Stax (specifically, a tendency for the Stax to exhibit an extremely slight touch of midrange forwardness, roughly in the 4kHz region). While this characteristic makes the Stax sound consistently exciting and 'transparent,' it may nevertheless be a colouration (albeit a livable and potentially euphonic one). By contrast, the Abyss seems no less detailed than the Stax, yet it is arguably the more neutral and thus more chameleon-like performer. What is the 'sound' of the Abyss? Well, if you spend enough time listening through these 'phones you may conclude that their sound is neither more nor less than an amazingly accurate mirror to the sound of the recordings in play. Put on a dark, powerful, brooding, metal-inflected rock recording (e.g., 'Dogman' from King's X) and the Abyss will sound dark, powerful, and brooding—almost overpoweringly so. But play a delicate, subtle, sonorous, and polished string quartet (e.g., the Cypress Quartet's recording of the late Beethoven String Quartets) and you'll hear a performance that is as gracious, delicate, and elegantly refined as high tea served in the company of landed gentry. On and on this pattern goes, with the Abyss exploring in astonishing depth and detail the sound of each of the recordings with which it is fed.



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Apart from its intrinsic worth, the ability of the Abyss to retrieve very low-level details pays substantial dividends in terms of reproduction of spatial cues in the music. Unlike the left-blob-of-sound vs. right-blob-of-sound presentation of some headphones, the Abyss allows soundfields to unfold on an extremely broad continuum stretching from the far left of the listener to the far right and hitting every point in between. As a result, AB-1266 listeners can “read” the placement of musicians and instruments within the soundstage almost as if they had a floorplan of the recording venue detailed with the utmost precision. While no headphone, the Abyss included, can match the soundstaging characteristics of fine loudspeakers, the AB-1266 offers—in its headphonic way—a very satisfying alternative. The Abyss is all about discovering (or rediscovering) your favourite recordings in full detail and with tonal colours and dynamics rendered to near perfection. Over time, I found myself thinking, “I won’t really know how a recording sounds until I hear what the AB-1266 will do with it.” When listening to recordings made ten, twenty, or more years ago, for example, it occurred to me that in the Abyss I had a transducer far more accurate and revealing than any that would have been available to the producers or musicians when those records were first made. Part of why one might consider owning the Abyss headphones, then, would be to seek out those musical truths that typically lie buried within

our favourite recordings—truths that fall just outside the reach of most transducers, but that the AB-1266s can access with the greatest of ease.

Two other areas where, in my view, the AB-1266 unequivocally surpasses the Stax SR-009 (and other top-tier headphones I have heard) would include bass performance, which is simply stupendous, and dynamics, which are incredibly expressive and have—for all practical purposes—virtually unlimited headroom. I have rarely if ever heard any transducer (whether a loudspeaker or a headphone) that could match the Abyss' combination of low frequency weight, power, extension, transient speed, and control. Whether you are listening to a Fender bass guitar at full song (as on Marcus Miller's 'M2'), or to a pipe organ (as in the 'Pie Jesu' section of the Rutter Requiem), or to powerful tympani and concert bass drums (as in the Hohvanness Mount St. Helens Symphony), the low-end of the Abyss is powerful yet never overblown or overstated, controlled yet not overly tightly wound, and articulate without any loss of weight or warmth. In simple terms, it's hard to imagine a better bass transducer, although 'bass-heads' should be aware that this headphone will never generate low frequency content that's not actually present on the record (as some headphones frankly do).

In terms of dynamics, as with textures and timbres, the Abyss simply reflects what's present in the recording, which can at times prove eye opening. As I listened to some tracks that I would have thought were a bit compressed or congested, the Abyss quickly showed me that the sonic problems I encountered in the past were not the fault of the recordings (as I had supposed), but rather were limitations of the transducers I had been using. Through the Abyss there is the sense that the headphone has 'taken the lid off the music,' allowing it to breathe and flow freely. A great example would be the Chicago Symphony Brass recording of Revueltas' 'Sensemayá', which presents a series of passages each more expansive (and at times more explosive) than the last. Where the Stax SR-009 does a very fine job with this track, the Abyss really sets it free and unleashes its full dynamic power, outperforming the excellent Stax in the process.



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Is the Abyss AB-1266 the finest headphone in the world? I believe the Abyss AB-1266 has established a new benchmark for top-tier headphone performance. It is a stunning achievement—one made all the more impressive by the fact that it represents Abyss' first-ever effort in the category. Will you appreciate and value the Abyss as much as I do? That's a personal question only you can answer. Let me simply say that if you wish to hear what one of the greatest world-class headphones ever produced can do for you and your music, you owe it to yourself to give the remarkable AB-1266 a careful listen.

## Technical Specifications

Type: Circumaural planar magnetic headphone

Frequency Response: 5Hz to 28kHz

Impedance: 46 Ohms nominal (non-reactive)

Sensitivity: 85dB

Distortion: Less than 1%; less than 0.2% through the ears' most sensitive range

Weight: 660 grams (without signal cables)

Price: £4,254

Manufacturer: JPS Labs/Abyss Headphones

URL: [www.abyss-headphones.com](http://www.abyss-headphones.com)

UK Distributor: The Music Room

Tel: +44(0)141 333 9700

URL: [www.music-room.com](http://www.music-room.com)