

# Vivid Audio B1 Loudspeakers

Category: Full-Length Equipment Reviews

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Written by **Doug Schneider**

*Note: Measurements taken in the anechoic chamber at Canada's National Research Council can be found through [this link](#).*



Fool's gold (iron pyrites) is a common mineral that some might mistake for the real thing. Pity the sucker who pays a premium price for something worthless. No doubt that's often happened in the mineral biz, but it also happens again and again in the ultra-high-price loudspeaker market. Contrary to what many big-spending audiophiles might want to believe and other writers might want you to think, in loudspeakers, there is no correlation with price and performance. In my 15 years of reviewing I've come across way too many speakers priced over \$10,000 that use subpar technology to deliver sound that's inferior to that of speakers costing only a fraction of the price. Too much of the time it's a lot of hype with very little substance, and the consumer is ripped off.

Because of this, I eye every new speaker on the market with suspicion, and it's why for so long I basically ignored Vivid Audio. The B1, Vivid's first product and the subject of this review, was released some six years ago, and retails today for \$15,000 USD per pair. Since then, Vivid's product line has grown to six models of main speakers; the B1 is now fourth down from the very top model, the

radical-looking G1 Giya. But when I first saw the B1, I only glanced at its exterior and thought it another case of style over substance. And because I never had a good chance to listen to it back then, and very few people talked about the sound, I figured it couldn't be all that great.

That changed this year, when I had a chance to examine the speaker closely and listen to it at length. It was then that I knew that its appearance was deceiving -- there's a lot more to this speaker than meets the eye. Its sound is quite something, too. Too little too late? Let's hope not, and that I can finally set the record straight.



### **Description**

Vivid Audio is a multinational entity. The speakers are manufactured in South Africa but designed in England by Laurence Dickie, who was previously with B&W, and was responsible for the design of the original Matrix-series cabinets, as well as B&W's legendary Nautilus loudspeaker. I used to own a pair of Matrix 1s, but never knew I had Dickie to thank for them. Elements of his earlier work are visible in his Vivid designs, but there are also many unique things that appear to be new.

Most obvious is the B1's 48"H, 21"D cabinet, which has a teardrop shape and an integrated stand that can't be removed. I like the elegant, distinctive look -- it's quite unlike anything else out there -- but not everyone else does. Many feel the B1 looks too bizarre for a speaker, a comment that goes double for the G1 Giya.



The cabinet, made of polymer concrete, is extremely strong and exceptionally "dead," in an obvious attempt to eliminate cabinet-induced vibrations. It's also heavy -- about 85 pounds. Six standard finishes are available: Arctic, Sahara, Oyster, Borollo, Pearl, and Piano. The finish work is extremely good. Two sets of binding posts, for biwiring or biamping, are affixed to the rear of the base, and are lined up horizontally to keep the bottom plate shallow. These are covered with a "lip" that extends over the connectors to maintain a clean appearance. Stabilizing spikes screw in underneath.

The B1 is a three-and-a-half-way design claimed to have a sensitivity of 89dB/2.83V/m, an impedance of 4 ohms, and a frequency response of 35Hz-36kHz, -6dB. The drivers are made by Vivid, which I think is important -- no one else uses them, which makes the speaker unique. There's not necessarily anything wrong with using third-party drivers -- there are some good ones out there, and if manufacturers don't have the skill or resources to make their own, they're the only option. However, *successfully* making your own drivers requires a certain level of engineering expertise and manufacturing skill that few in the ultra-high-end speaker business have. If you do have those skills and resources, you have the advantage of creating exactly the drivers you need for a particular design.

The B1's tweeter is a 1" dome of aluminum with a hint of magnesium, and operates from about 3.5kHz up. The 2" midrange driver also has a dome of aluminum alloy and works from about 3.5kHz down to 900Hz. Both of these drivers have many important design features that I could go on and on about, but that's what white papers and technical briefs are for. Three, however, are key:

First, a tapered tube affixed to the backside of each driver terminates at the rear of the cabinet, where it's securely attached. This dissipates rear-firing energy from the driver, for the smoothest response. Second, the drivers' domes aren't perfectly round, but are more parabolic, to spread out the breakup modes and push the nastiest resonances to frequencies high above the audioband. A typical pure-aluminum-dome tweeter would generally "ring" somewhere around 20kHz, which is very close to the top of the range of human hearing. According to Vivid, the B1's midrange won't ring until 20kHz, and the tweeter not until 44kHz. Each of these frequencies is far away from the areas in which these drivers operate, which means that each driver operates "pistonically" within its assigned range. Third, the drivers are suspended on the front baffle with O-rings, to reduce the transfer of energy from them to the already-dead cabinet.

The front and rear woofers have 6.5" aluminum-alloy cones and are also suspended with O-rings. The rear-firing woofer is said to operate up to about 100Hz before it's rolled off with a shallow slope. The front-firing woofer goes up to 900Hz, where it hands off to the midrange driver. These different crossover points and overlapping ranges are what make this a "three-and-a-half-way" design. If

both woofers ran up to 900Hz, it would be a simple three-way design with two woofers run in parallel. Laurence Dickie didn't do this because of the problems that would be caused by the distance between the rear woofer and the midrange. Basically, the distance between drivers should be no more than the wavelength of the crossover frequency. The higher the frequency, the shorter the wavelength, and the closer together the drivers must be placed. The front woofer and midrange are close together, so a 900Hz crossover is fine. Because the midrange and rear woofer are much farther apart, the crossover frequency at which they hand off must be much lower -- which is why Dickie chose 100Hz.



Dickie mounted one driver on the front and the other on the rear to create a "reaction-canceling" effect to reduce cabinet resonances, a technique now commonly used in subwoofers. Likewise, Vivid says that the egg-shaped ports are opposed in order to "cancel out any reaction forces they create."

However, we discovered a problem with opposed woofers through measuring speakers in the anechoic chamber at Canada's National Research Council (NRC). If you look at our measurements, you can't miss the huge dip that occurs at around 300Hz in the on-axis frequency response. If you measure the speaker from directly behind, you see the exact same thing. This is due to the identical frequencies reproduced by the rear and front woofers "wrapping around" the cabinet to cause cancellations directly in front of and behind the speaker. Does that mean listeners *won't* hear 300Hz and the frequencies that surround it as they should? Not necessarily. When we saw this peculiarity, we took another measurement in the middle of the side of the cabinet, and found that at that position the drivers summed quite nicely, making for a fairly flat response *to the sides*.

What is the result of all this? Good question, but not one easy to answer. If we listened in an anechoic chamber, then there would definitely be a problem: there would be too little energy at and around 300Hz, because all we would hear would be the on-axis response. But we listen in rooms, where wall, floor, and ceiling boundaries cause reflections. What we hear at the listening position is a combination of the on-axis response (in front of the speaker) and the off-axis response (everywhere else). In a real room, the energy at the sides of the speakers will end up at the listening position by being reflected off the room boundaries. However, that will mean that the bass response the listener hears will have a lot to do with the layout of the room and how and where the speakers are set up in it. As you'll read below, that made my setup a bit tricky.

## Sound

The equipment combo I used with the Vivid B1s sounded absolutely amazing, but I suspect that these speakers will mate well with a number of associated products: the sound had some extraordinary characteristics that were attributable not to the equipment I used them with but to the speakers themselves. I've never heard a speaker sound *quite* as these did using these same pieces of gear. Plus, despite its 4-ohm impedance, the B1 seemed quite easy to drive.

The first thing I noticed was the lack of any sort of cabinet coloration. In all the years I've been reviewing speakers, that's *not* been the first thing to catch my attention. But with the B1s, the effect was uncanny. When I sat dead-center in the sweet spot, it was obvious that the sound was radiating directly from the drivers, with no resonances from the enclosure. This is in direct contrast to a speaker like the Harbeth Monitor 30, which I reviewed almost two years ago; it sounded very good, but it was obvious with any kind of music I played that not only were the drivers making sound, but so were the boxes. There was a blurred, resonant quality that was completely absent with the B1s. In fact, so noticeable was the lack of any cabinet "sound" -- more so than with any other speaker I've heard -- that I put my hands on the B1s again and again, with all kinds of music playing. The only place I could feel any hint of energy was right at the tip, and even then, it was minuscule. Try that with a typical box speaker.

I think the B1's extremely dead cabinet was at least partially responsible for the extraordinary resolution and refinement the speaker exhibited in the midrange and highs. I say *partially* because there were other factors, such as the crossover design and the Vivid-made drivers. It's hard to know how much each element



contributed, but the result was midrange and high-frequency performance that was exceptionally neutral, thoroughly refined, and so wildly transparent and lightning-fast that I recalibrated my internal reviewing scale for how detailed a loudspeaker could be without ever fatiguing me. The B1s were resolving through the mids and highs to the *n*th degree. What's more, they maintained these qualities of detail and speed at extremely low levels, *and* when I played them very, very loud.

Bruce Springsteen's *Tunnel of Love* (CD, Columbia 42000) is an interesting recording that I often listen to for the music, but also to hear what it sounds like through different systems. It's a pure-digital recording from 1987, and it has some strong points -- great dynamics for a Springsteen recording, for example, and his voice is well captured -- as well as many flaws. The recording's brashness and hardness in the midrange and top end were still audible through the B1s, but they weren't exacerbated -- a good thing indeed. If a speaker itself has a hard or coarse sound, recordings flawed in those ways, such as this one, can become unlistenable. What I was most impressed with was how neutral the B1s sounded in the mids and highs, and how much more I could hear -- mostly, better separation between the musicians, and subtle nuances and spatial cues I hadn't noticed before.

For instance, toward the end of "One Step Up," a woman can be heard singing "and I'm pretending" along with Springsteen, but she's far back in the mix. With most systems she's hard to pick out, let alone place accurately on the soundstage. Through the B1s her voice was a snap to hear, her placement precise, with clean separation from the other musicians; I could even detect a touch of "air" around her, something I hadn't heard before.

Likewise, I was floored by the separation of the choral voices in Ennio Morricone's score for the film *The Mission* (CD, Virgin CDV2402), a recording I've used to test systems with for over 20 years. Lesser speakers will mash the voices into a large wall of sound, no matter what associated electronics you have. The best speakers, driven by high-quality electronics, let you hear individual voices so distinctly that you feel you've finally discovered the recording's very lowest levels of detail. I heard the voices more distinctly through the B1 than through any other speaker I've reviewed.

The resolution the B1 was capable of was astonishing, and fully worthy of use with the highest-resolving front-end components you can find. I suspect that most audiophiles would come away from a session with the B1s shocked at how much they can hear through them. I sure was. But the B1 wasn't all hyped-up detail and nothing else -- its neutrality and refinement through the midrange and highs were second to none, including the Revel Ultima Salon2, which I use as a reference and which costs \$22,000/pair. People know I like the Revels a lot, but if they now ask me which speakers they should consider purchasing, I say *both*. They're peers through the midrange and highs, though the B1 probably has the edge in resolution -- I'd never heard so much detail through any loudspeaker before.

However, there were significant differences in the bass. Despite its multi-thousand-dollar price and its unique advanced technology, the B1 is still a modest-size floorstander. I didn't expect superdeep bass from a pair of 6.5" woofers in a midsize cabinet, and I didn't get it -- 40Hz or so is about as low as the B1s went in my room. This is not a full-range speaker like the Revel Salon2, which extends solidly down to 20Hz. However, the B1 doesn't cost nearly as much and isn't nearly as large. It must also be said that Vivid offers three larger, more expensive speakers that better plumb the depths.

The B1's bass isn't about depth but "punch." When playing kick-drum-heavy music through the B1s (*e.g.*, most rock recordings), I noticed a greater-than-average wallop that made it seem as if I were listening to much larger speakers. This bit of boost was consistent regardless of the music I was listening to, and it was pretty obvious to me what was happening: There was quite a lot of energy in the upper bass, something that's often designed into small- or medium-size speakers to give a more convincing impression of bass "weight."

Sure enough, our measurements reflected just that: an emphasis at 100Hz at least 3dB over what would be seen in, say, the Salon2, which has "weight" simply because it can reach down to 20Hz. This emphasis in the B1 was also why it sounded quite different from the Magico V2 (\$18,000/pair), which I reviewed over a year ago. The V2 goes impressively deep in the low end -- lower than the B1 -- but it lacks energy in the 80-100Hz region. In fact, long after I'd written that review, while listening to some other speakers, I realized why I kept throwing more and more power at the V2s: not to make them play louder, but to make them

come more alive in the bass.

In contrast, despite its lack of really low bass, the B1 packed a wallop, and didn't need all that much power to come alive. Playing through the B1s a percussion-heavy track like "Objection (Tango)," from Shakira's *Laundry Service* (CD, Epic 498720), I got the sense that they could really boogie. In contrast, the Magico V2s sound slow. All in all, I liked the B1's voicing in the bass despite its departure from ruthless neutrality in the mids and highs. Such a sound suited this speaker well. After all, the last thing you want in a moderate-size speaker is that it sound thin or light -- and the B1 didn't.

However, this emphasis at 100Hz, coupled with the cancellation effect at 300Hz, meant I had to finagle the B1s' placements in my room more than I normally do. This was a bit of a surprise at first, because we measured them *after* I'd done all the hard setup work and most of my listening. Had I known at the beginning what I knew post-NRC, things would have been different; when I began listening, I was a little perplexed as to why it was so tricky to get the B1s to sound just right in the low and upper bass.

In a nutshell, with the speakers pulled way too far away from the walls, I lost some of the low-frequency reinforcement the walls provided. This meant less deep bass, but I also felt the upper bass was too recessed -- which, I guess, had something to do with the cancellation effect coming into play. The farther a speaker is from the walls, the less it interacts with them, so I wasn't getting enough energy at and around 300Hz. In the end, I found that I had to place the B1s a little closer than I usually do to the front and side walls, to take more advantage of those boundaries in getting more linear upper-bass response and deeper low-bass response -- but at the same time, I had to ensure that I didn't excite too much that 100Hz hump.

When the B1s were finally set up correctly, I'd attained respectable low bass (to about 40Hz), and a properly balanced upper bass that blended exceedingly well with the mids and highs. One of my tests for seeing if I've attained a good overall response is a great piano recording, such as Ola Gjeilo's *Stone Rose* (SACD/CD, 2L 2L48SACD). From the lows to the highs, the tonal balance was right, with no frequency dominating any others. This recording also taught me that the B1s' reproduction of the sound of the acoustic piano was spot-on and tremendously

precise. In fact, set up properly, there was hardly *anything* the B1s couldn't do right, with any type of music.

The B1's tricky setup isn't a deal breaker, but it was time-consuming. However, once that was done, I was enthralled by the speaker's overall performance, and in particular with its extraordinary resolution in the mids and highs. Playing Bruce Cockburn's *Humans: Deluxe Edition* (CD, True North TND 317), a recording I first purchased on LP 30 years ago, and hearing things through the B1s that I'd never heard before, it was obvious to me that hi-fi equipment for the home has advanced significantly in those three decades. Based on what I heard from the B1, Vivid Audio, despite being a relatively new brand, is a company whose products can be considered at the top of the heap.

## **Conclusion**

Vivid Audio's B1 is an extraordinarily good loudspeaker that has midrange and high-frequency neutrality, transparency, and refinement that are second to none. In resolution and detail in those mid- and upper ranges, every other speaker I've heard comes in second to it. Listening with the B1 was like training a microscope on my records -- it was truly revelatory in that regard. This makes the B1 a reference-caliber monitoring tool *and* a great home loudspeaker.

But the B1 isn't perfect -- just close to it. Its mids and highs bowled me over, but not its bass. I wish its low bass went slightly deeper, and mostly that setting them up to get the smoothest, deepest low- and upper-bass performance wasn't as tricky as it turned out to be. Those are my biggest beefs. However, those drawbacks will be somewhat room-dependent, and there are three Vivid models above the B1 that are all larger. Usually, bass performance gets better as the speaker gets bigger.

The B1 isn't the only thing that impressed me about Vivid -- the company itself has. For a relatively new speaker company to make all the major parts used in its products is as extraordinary as the B1 itself. Vivid Audio is no bunch of "kit builders," but true loudspeaker makers who are creating something distinctive from the ground up. I also admire Vivid for producing something so visually interesting. Not everyone will like the B1's looks, but many will -- and I think most will agree

that its appearance makes the speaker as unique as the parts it uses.

Obviously, these Vivid guys from England and South Africa comprise a bona-fide high-end force, and their B1 is no fool's gold of a loudspeaker. I think it's well worth 15 grand -- there isn't a speaker costing less that I like more. The only fool would be the person who spends anywhere near \$15,000 on something else without first listening to these. And you can consider *me* a fool for having overlooked Vivid Audio and the B1 for so long, based on mere assumptions. Now, finally, I hope I've set the record straight.

. . . *Doug Schneider*

[das@soundstagenetwork.com](mailto:das@soundstagenetwork.com)

### **Associated Equipment**

- **Amplifier** -- Blue Circle BC204
- **Preamplifiers** -- JE Audio VL10.1, Lamm Audio LL2.1
- **Digital sources** -- Simaudio Moon Evolution SuperNova CD player, Sony Vaio laptop computer, Ayre Acoustics QB-9 USB DAC
- **Speaker cables** -- Crystal Cable Piccolo, Siltech Classic Anniversary
- **Interconnects** -- Crystal Cable Piccolo, Siltech Classic Anniversary

### **Vivid Audio B1 Loudspeakers**

**Price: \$15,000 USD per pair.**

**Warranty: Five years parts and labor.**

Vivid Audio Limited

The Old Barn

Rosier Business Park, Coneyhurst Road

Billinghurst, West Sussex RH149DE

England, UK

Phone: +44 1403-78-2221

Website: [www.vividspeakers.com](http://www.vividspeakers.com)

North American distributor:

On a Higher Note

P.O. Box 698

San Juan Capistrano

CA 92693

Phone: (949) 488-3004

Fax: (949) 488-3284

Website: [www.onahighernote.com](http://www.onahighernote.com)