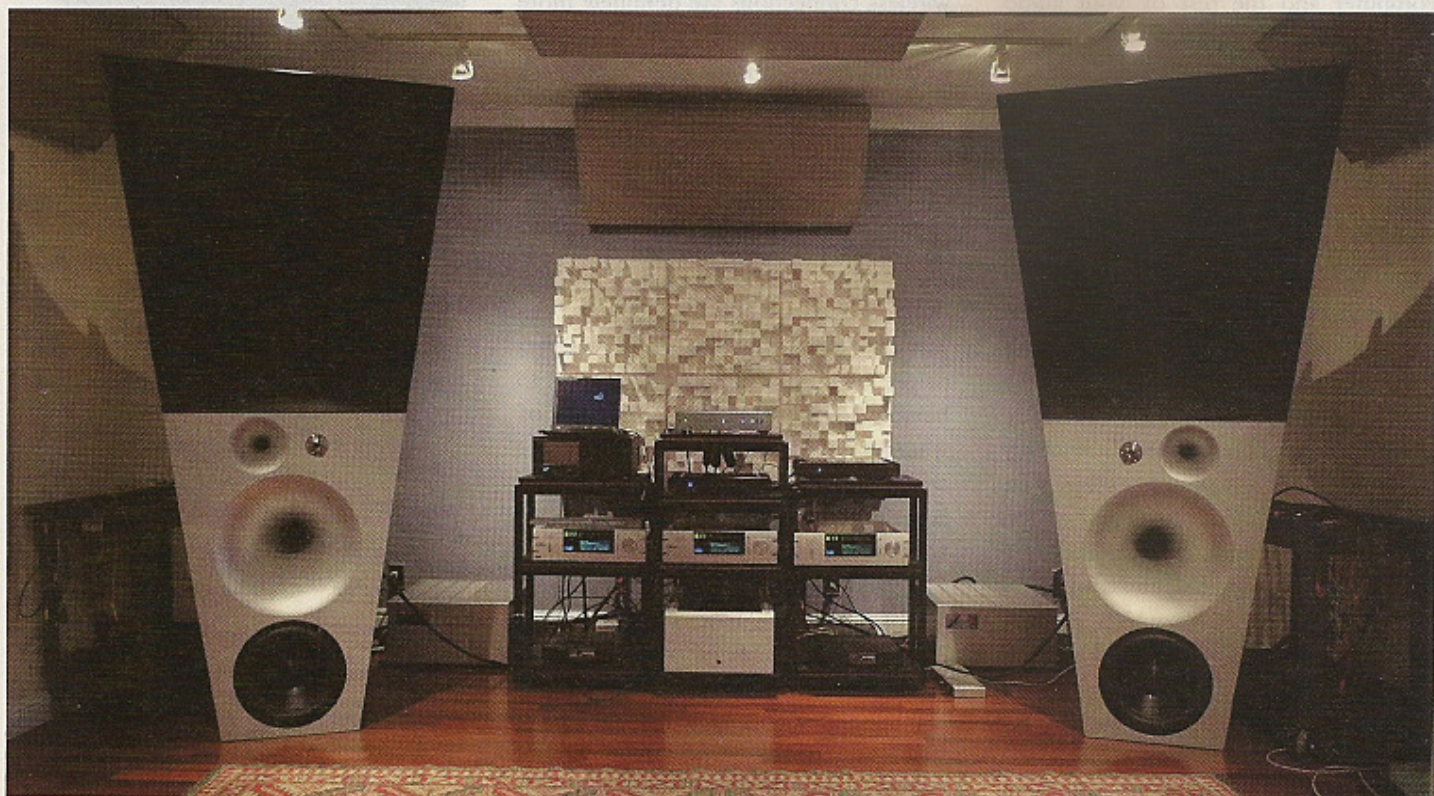


# First LISTEN



## Magico Ultimate II Horn Loudspeaker

Following A Dream

Tom Martin

I recently had the chance to visit Alon Wolf at Magico to listen to the Ultimate II horn speakers (\$395,000—that's not a typo). You may recall this speaker because Jacob Heilbrunn listened to the same setup and commented briefly on it a few months back on our AVguide.com Web site. Several years ago, Robert Harley covered the Ultimate I in *The Absolute Sound* (the Ultimate II is a significantly revised production version of the I, which was basically a one-off handmade effort).

Since I've been periodically blogging on our Web site about horns, this trip was particularly interesting. Magico has a reputation for building some of the finest conventional cone/box speakers currently available. When its top-of-the-line speaker is a horn, you sense further confirmation that horns are not your father's loudspeaker technology. But are they really something special or is Alon Wolf a cynic who simply builds expensive stuff because a few fools will pay for it? Those practicing experience-free living will already know their answer. The rest of you will want to read on.

The idea behind the Ultimate II is pretty simple: Build a technically correct, cost-no-object horn speaker that fits into medium-sized or larger rooms. Sounds simple, but a few hours with Alon makes it clear that his version of "technically correct" isn't a casual statement. Alon focuses on the science of loudspeakers and puts a lot of emphasis on thinking through the fundamental issues. He's the kind of guy who took the mention of "first principles" seriously in science classes.

In any event, Alon points out a key problem with horns: You either have to build a very large midbass/lower midrange horn (because you can't change the wavelengths of sounds) or your woofer has to extend up to rather high frequencies. The former means you actually have a speaker that is mostly horn-loaded, which is the straightforward way to have sonic continuity across most of the spectrum. The latter allows you to build a less expensive system, but also means that you have cone drivers handling a larger part of the spectrum with some inevitable discontinuity (or a discontinuity in a different place). Since the



Ultimate II is a cost-no-object design, Magico has designed and built a necessarily large and very costly midbass horn that works down to 100Hz. (This is the black horn at the top of the trapezoidally-shaped speaker shown in the pictures.)

Alon makes another interesting point, "There are no inexpensive technically correct horns because horns have to be relatively big." This is true even if you don't go as far as he does toward a full-range horn system. Alon believes that it is essentially impossible to build a technically correct horn without such costly approaches, which is why his other speakers, even though costly, do not use horn-loading.

Once on this path, Alon decided to use the best compression drivers he could find. They're Japanese, they're expensive, and they're huge. The midrange compression drivers have more metal than most woofers I've seen. The voice coils are of large diameter and the machining is beautiful. The rest of the system is an enthralling mix of techno-geek and modern art, which I would say is audio pulchritude at its finest (but you might hate it).

The woofer is the only cone in the system. The Ultimate uses a 15" driver with sealed-box loading. Each woofer is powered by an integral 2000-watt amp and has 2.5" peak-to-peak excursion, allowing plenty of output down to 15Hz in normal rooms according to Magico.

Audio porn is cool, but really doesn't matter much. What matters is how the Ultimate II sounds. I would add that it also matters what this Magico tells us about horns and about music reproduction in general.

You probably hate caveats, but honestly I am compelled to say that the following comments are based on a brief listening session in a room I've never been in before, with equipment I don't know. This is not a set of "bet my life on it" comments.

Not only that, I'm about to pin what I heard on the speakers, but, seriously, maybe the speakers were completely generic and what I'm commenting on is Alon's interconnects. And I didn't listen to the speakers blind so I could be hallucinating, with most of my comments the result of some misguided patrician or commercial bias (or both). That said, I doubt it.

Now I'm a pretty left-brained guy, and that bias causes me to want to analyze the Ultimates as a way of communicating what they do. But before I do that, let me give you a more holistic view.

The Ultimate IIs are completely and utterly exceptional. If you prefer, they are revolutionary, stunning, and amazing. They blew me away. They do things that I haven't heard any other speaker do (I listen to approximately twenty systems per year and have

for most of the twelve years I've been in charge of *The Absolute Sound*). Much of what the Ultimate IIs do well is musically consonant, and they do relatively little that isn't musical. The result is certainly a speaker that one could declare the best in the world.

Except, I don't believe in the idea of "the best speaker in the world." It is a misguided idea in its singularity. Singular superiority is misguided because experience tells you that nothing is perfect and people respond differently to different imperfections. Logic also tells you that every engineering choice involves trade-offs, and often these are pretty severe. Those severe trade-offs mean that products will inevitably do some things well and others not so well. This yields choices for the consumer about what sonic mix generates the best virtual reality sensation.

None of this means that music reproduction can't be thrilling. *Au contraire!* I can honestly say I prefer my reference system to some live music I hear, and I think live music is thrilling. It just means that choosing equipment requires a little personal involvement.

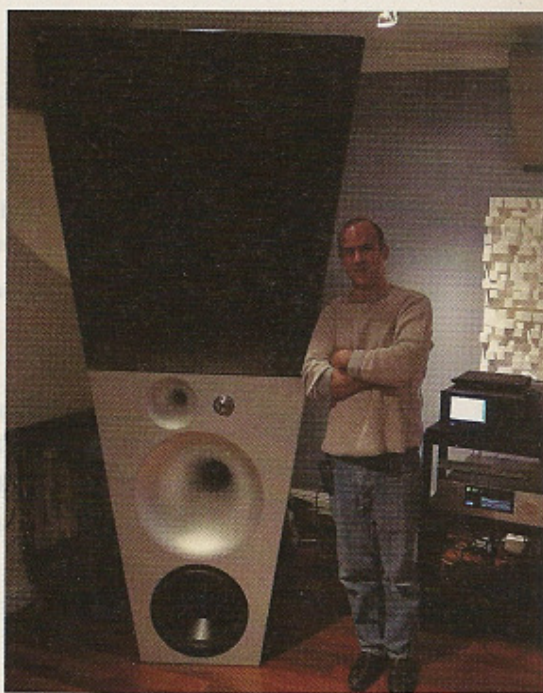
Okay, I feel better now. And since we can now talk in the realm of reality, we can discuss what the Ultimate IIs do well and what trade-offs they make, with the understanding that just because there are trade-offs doesn't mean these aren't very good speakers.

The biggest thing about the Ultimate IIs, I think, can be described as relaxed resolution. The sense of transparency that the Ultimate's give is absolutely top-notch. You hear detail as clearly as on any speaker I've heard. In this it is reminiscent of electrostatic speakers. But it is different from many of those electrostatic speakers in that you don't have the sense that the detail is partially produced by the speaker as an artifact or "enhancement."

The detail just seems to be there as it is in reality. The resolution of the Ultimates is relaxed in the sense that it sounds like it is supposed to be there. It sounds like the detail is integral to the core sound (voice, horn, guitar, drum). Strain, glare, etch, fizz, and the like just aren't part of the picture when playing good recordings.

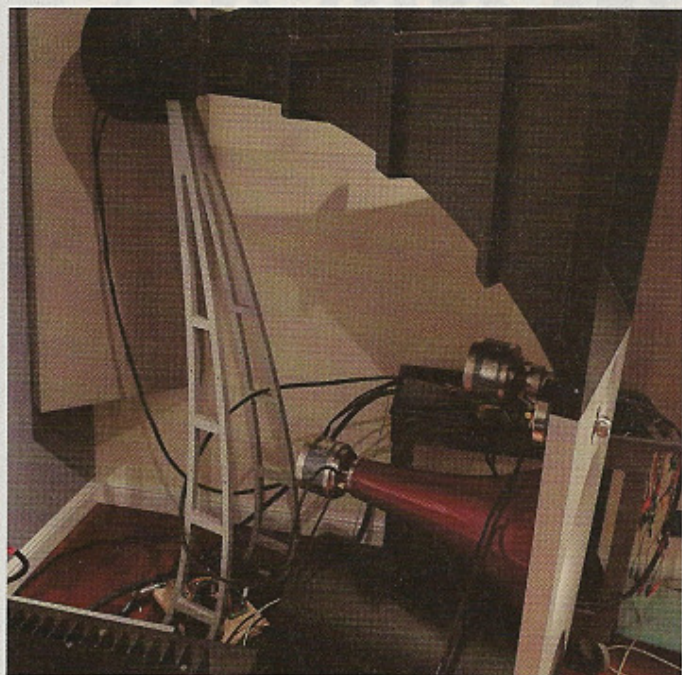
Alon attributes this to low distortion. It got me to thinking that we really don't talk about distortion in speakers, as if they have vanishingly low distortion like amplifiers. But that isn't the case. Anyway, whether it is low distortion or something else, the Ultimate IIs sound clean without being painful.

The next area where the Ultimate IIs are exceptional is their dynamic capability. On the music Alon played for me, this was more a matter of what we might call "microdynamics"—the sense



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that each instrument is uncompressed. Each instrument breathes and pulses naturally when microdynamics are superb as they are with the Ultimates. That contrasts with "macrodynamics" which is the sense that the full orchestra or the band can go from quiet to full-tilt tutti without compression. I thought the Ultimate IIs were also very, very good in this area, but the music we played wasn't primarily geared to show this off.

I also have to say that occasionally this dynamic capability has a side effect that I didn't love. A few sounds seemed exaggerated, as if a mild anti-compressor had been applied. This tendency to "shout" (a little more dramatic term than is warranted) is one I've heard on other horn speakers. Whether it is an interaction with the listener's ears, or a resonance or something else, I don't know. It isn't a big problem (it doesn't happen very often), but it is there.

When we get to tonal balance, we're in an area where I expect highly transparent, very dynamic speakers to be revealed as poseurs. Not so with the Ultimates. I'd rate the tonal balance as just about perfect, because it reminded me so much of live music. The treble certainly wasn't hot, as I suspected it might be. The bass was probably a little too strong at times, but I don't think this was a balance issue as much as the inevitable bumps down low due to room modes in what was a smallish room. Because of this, I thought the bass character wasn't perfectly matched with the rest of the system.

On these standard items the Ultimates are very special speakers. When we get to soundstaging and perspective we enter a realm where it isn't as easy to be unequivocally positive.

Let me say right off the bat that I was impressed with the ability of the Ultimates to get the image off the speakers. Central imaging and lateral placement were impressively good. That said, the Ultimates are visually very, very large and it is at times hard not to let your mind locate the sound on the speaker. Or maybe a better way of saying this is that the visual dominance of the speaker makes it pretty clear that this is reproduced music, not virtual reality. Some people would want to listen to these in the dark for the full effect.

Perspective is also an interesting and debatable element of the Ultimates. If you are accustomed to the orchestral analogy, one could say these are speakers with a "podium" perspective. I would say my reference mbl 101e system has more of a Row J perspective. Many highly transparent direct radiators sound like their perspective is from about Row E. So, when I say that the Ultimates have a podium perspective, it is meant to convey the sense they give of sitting more where the conductor is rather than in the audience. These notions aren't exact and they depend on the recording, but I hope they give you some idea of the relative differences on offer.

Another way of bringing all this together is to say that the Ultimates sound more like you are listening to the microphone feeds than delivering a virtual reality. Some significant level of veiling has been removed, and so has some of the ambience of the venue. The instruments themselves seem more clearly to exist in local space, with decay and air and instrumental body stunningly well represented. Alon points out: "In this case there is no loss of spatial cues, on the contrary. The horns project information in a fundamentally different way than what we're used to hearing from a point source or a planar. Once you get accustomed to this, they sound more like the real things rather than a window to it." It seems likely to me, given the higher directivity of a horn, that the reproduction of ambience is different here and likely involves less ambience being "added" by the speaker/room than with other wider dispersion systems. The horn approach would seem to be better, but how this is accounted for in the recording is another interesting matter that will vary from disc to disc.

Perhaps now my rant about singular superiority makes more sense. On the podium you get something you don't get in the audience. And vice versa. You can't be a short-tall person or live in a big-small house. In the case of speakers, these are choices. The Ultimates present a rather different choice than most speakers we hear. To my mind that is a good thing.

I sense that this unusual combination of qualities is significantly related to the horn drivers in the system. It certainly suggests that if you can find horn speakers in your price range, you should hear them because they can sound: a) very good, and b) very different.

Finally, I want to comment briefly on the issue of value. These are extremely expensive speakers. They aren't perfect. If you're one of those people who think products like this shouldn't exist, well, I feel sorry for you. If you are one of those people who think a product at this price point should be perfect, I encourage you to work on your connection with reality. I was deeply impressed by the artistic spirit behind them. I, frankly, prefer to live in a world where people follow their dreams and share them (by manufacturing them and selling them as Magico does) with others. Alon Wolf and the team at Magico are having one heck of a dream. 