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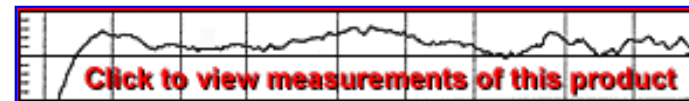
Magico V2 Loudspeakers



In the last 14 years, I've reviewed more loudspeakers than any other type of audio product. Everything about them fascinates me, and particularly that they come in all shapes and sizes, and that no two models look identical or sound exactly alike. That makes for a never-ending range of possibilities, with always the potential for surprise.

The only frustrating thing about loudspeakers *today* is that sky-high prices are not only becoming common, but often defy common sense. Too often, I've seen speakers costing five or even six digits per pair that look nice and have fancy finishes, but whose performance is laid to waste by better-designed speakers at only a fraction of the price. This happens more often than not, and makes these high-priced speakers not genuine audio components but mere trophies of status. Of course, this doesn't describe *all* high-priced speakers, and I'm not saying that I'll never touch one -- I have, in the past, reviewed some very expensive speakers, a few of which have approached the state of the art. But too often, I've been let down.

I've said similar things many times in the past; none of it should surprise anyone who reads my reviews, including manufacturers. But despite knowing my feelings about high-priced speakers, Alon Wolf, president of Magico, sent me a pair of his brand-new V2 speakers, which cost \$18,000 USD/pair -- and the V2 is his *least* expensive speaker yet. Magico's V3 costs \$27,000/pair, the Mini II \$30,000/pair, and the M5 \$89,000/pair. The Model 6 and Ultimate II cost so much you don't even want to know. Some might



think Wolf crazy to send me even his lowest-priced model; others might see him as a risk taker. Whatever the case, he sent me the V2s with nary a word.

Description

The V2s arrived in my house in tip-top shape, packed in two big boxes. After unpacking them, I was pleased with their modest size: 42"H x 10"W x 12"D. I hate huge speakers that practically reach the ceiling.

Viewed from the side, the V2 is tilted back a few degrees, more than likely to achieve the best acoustic integration of the outputs of its three drivers. At 120 pounds the V2 is heavy, but its small footprint and backtilt make it not all that stable, particularly on a carpeted floor. Stabilizing spikes are provided; these screw into the V2's bottom plate, and I recommend using them. Once the spikes were in place, they sat solidly.

A lot of the V2's weight is due to how the cabinet is made. The walls are of 17-ply Baltic birch, although all of the panels aren't made quite the same. The top, bottom, front, and back are of more traditional plywood construction -- large layers the dimensions of those panels stacked, glued, and pressed together. The side panels, which are the largest and require the greatest strength, are made of long narrow strips Baltic birch about 1" wide that run the height of the cabinet. These strips are stacked, glued, and pressed together to make up the width of the panel. As a result, the ply lines on the side run vertically -- which is what Wolf says the V in V2 stands for.

While Magico prefers Baltic birch for the main cabinet body, they're adamant that wood is a poor material to screw drivers into: it won't hold them securely enough, and the screw holes are too easily stripped, even if the drivers are removed and reinstalled only a few times. Hence the approximately 1"-thick front baffle of "aircraft-grade 6061-T aluminum," to which the drivers are bolted. This baffle's surface is slightly convex to eliminate diffraction on the horizontal plane (the convexity extends to the baffle's edges). The baffle's finish is perfect, which is important -- the V2 has no grille or provision for one: baffle and drivers are exposed in full-frontal nudity.

To secure the baffle to the cabinet, three rods of stainless steel extend through the cabinet from the rear panel, their threaded ends screwing into the back of the baffle. These are tightened by turning three big, exposed aluminum pucks on the rear panel. (Magico supplies a rod with which these pucks can be tightened.) Where the rods enter the cabinet, gaskets ensure that the sealed enclosure remains airtight.



The V2 has a 1" ring-radiator tweeter and two 7" woofers governed by what's called a "two-and-a-half-way" crossover: The two woofers work together in the deepest bass region to get the most output down low; however, only one of these woofers is assigned to also handle the midrange before handing off to the tweeter. Magico doesn't talk much about the details of their crossover, but I did squeeze this out of Alon Wolf: the top woofer transitions to the tweeter at just over 2kHz, while the bottom woofer goes up to 300 or 400Hz before it's rolled off. Magico says they design their speakers for smooth frequency response both on and off axis. That response is a claimed 32Hz-40kHz.

The woofers, Magico's own design, are made of something they call Nano-Tec. According to their literature, the cones comprise an "asymmetrical sandwich composite of several different weights of carbon fiber intricately woven and bonded to a Rohacell core. The bonding is done under tremendous pressure using thermo plastic mixed with carbon nanotubes as the bonding agent." The cone, shaped to improve dispersion, is reported to be extremely light but with a high level of tensile strength, meaning it won't easily deform. Magico says that the Nano-Tec cone's first breakup mode is at least two octaves above the range the upper woofer is asked to handle. This is combined with a robust motor system, also designed in-house. The result, claims Magico, is a driver that has high output capability and low overall distortion.

Like all Magico speakers, the V2 is a sealed design. Sealed-box speakers have been around for eons, but these days are increasingly rare -- most modern designs employ a port to augment the bass. However, Wolf is firm in his belief that a sealed box is the way to go for the tightest, most accurate bass reproduction.

Magico says the V2's impedance is 4 ohms and its sensitivity 89dB/2.83V/m; they recommend power amplifiers in the 40-300W range. There's only one set of very-high-quality binding posts on the back; the V2 wasn't designed for biamping or biwiring.

As I said, I'm suspicious of very expensive speakers, and the Magico V2 is definitely a luxury item. However, no speaker at a lower price that's come into my listening room has been built this well. The V2 is one of the best-made speakers I've had here, and its construction quality is commensurate with its price. Also, the fact that I prefer the appearance of the V2 to that of any other Magico speaker I've seen has a lot to do with its size. Magico's bigger speakers, particularly the M5, can look blocky and overpowering. In comparison, the V2 is subtle and elegant.

The only complaint I have is a small one, and has nothing directly to do with the V2's quality of construction. The warranty is just three years, whereas the industry standard is five. Given the V2's price and the fact that it's clearly a robust, high-quality design, I feel that, for \$18,000/pair, Magico should at least match the industry standard.

Associated Equipment

Digital sources -- Simaudio Moon Evolution SuperNova CD player, Zanden Audio Systems 2500S CD player, Benchmark Media DAC1 HDR

Preamplifiers -- Blue Circle Audio BC3000 Mk.II, Benchmark Media DAC1 HDR

Power amplifiers -- Blue Circle Audio BC204, Axiom Audio A1400-8

Integrated amplifiers -- Classé Audio CAP-2100, Zanden Audio Model 600

Speaker cables -- Nirvana Audio S-L, DH Labs ST-100

Interconnects -- Nirvana Audio S-L, Nordost Quattro Fil



Sound

Once I had the Magico V2s set up correctly -- about 3.5' from the sidewalls and 5' from the front wall -- its strengths were readily apparent and its deficiencies negligible. Now for the details.

Whenever I discover that I have a reference-level piece of equipment in my listening room, I pull out the demo recordings that I've been using for years. One of my favorites is Blue Rodeo's *Five Days in July* (CD, Discovery 77013), in particular the seven-minute opening track, "5 Days in May." This track has well-recorded vocals, natural-sounding instruments, and a rich, vibrant tonal balance with an excellent capturing of recorded space.

I've heard this track sound startlingly good through many other speaker systems, but it never sounded as impressive as it did through the V2s. The bass was superdeep, with great resolution and weight, laying a firm foundation that not only gave the music heft, but contributed to the outstanding sense of space that enveloped my room. Greg Keelor's and

Jim Cuddy's voices sounded a touch more transparent through the [JansZen Model One speaker](#) I reviewed at the end of 2007, and they sounded just as effortless and clear through [Aurum Acoustics Integris Active 300B speaker](#), which I praised in 2006, as they did through V2. (The Model One and Integris Active 300B are both active, or self-powered, speaker systems, and each cost \$30,000/pair at the time I reviewed them.) But never had I heard these singers' voices sound as rich, robust, and textured, while still sounding natural and real, as through the Magico. The V2's midrange also had the uncanny ability to sound full and detailed but never analytical or harsh.

This held true when I then turned to women's voices. I played Fado singer Mariza's *Transparente* (CD, Times Square TSQ-CD-9047), an album that I find very useful as a reference disc: it's very well recorded, and I've heard Mariza perform these same songs live in a simple setting, sometimes without electronic amplification. Like the men of Blue Rodeo, Mariza sounded natural, present, and realistic through the V2s -- their reproduction of her voice was the closest I've heard in my room to what I've heard from her in concert. I was also impressed by the dimensionality of the voice, which more or less hung there in space like a tangible object -- something I attribute to the V2s' subtle midrange richness.

Thrilled with all of this, I tried a brand-new recording I'd just received, of a band I'd never heard of before: Madison Violet's *No Fool for Trying* (CD, True North TND529). Two women, Brenley MacEachern and Lisa MacIsaac, are the lead singers, and the songs have a country feel. This recording is thinner than *Transparente*, with more sibilance, and those flaws were readily apparent through the V2. However, while the V2 clearly revealed those problems in the recording, it didn't emphasize them as some speakers do, and certainly added no objectionable character of its own. What I noticed was that the V2 had an amazing way of revealing detail while always conveying a musical and "listenable" sound. I may not have liked the way some recordings were made, but I was never put off by what I heard.

The transition between the top woofer and the tweeter was seamless, the highs extending sweetly and unobjectionably far past the upper range of my hearing. I can hear flaws in most tweeters, regardless of price. Often there's undue hash and edge, which rears its head in the sound of cymbals; other times there's a metallic sound that shows up with guitar. But with the V2, the only objectionable sounds I heard were those in the recording itself. Whereas I end up criticizing most speakers for being dry, brittle, or edgy in the top end, the V2 was clean, clear, and thoroughly effortless, leaving me nothing to criticize -- a rare thing.

My reference loudspeakers for creating a large, spacious soundstage are the [Mirage OM Design OMD-28s](#) (no longer available; \$8500/pair when reviewed) -- large floorstanders that employ Mirage's unique Omnipolar technology,



by which each speaker can splay sound in a controlled manner through a full 360 degrees. The OMD-28s cast a wider, deeper soundstage than any other pair of speakers I've had in my room -- in fact, they were awesome in that regard. Bad news: The Magico V2s couldn't quite match the size of the Mirages' stage. Good news: The V2s came surprisingly close -- which speaks very well for their dispersion capabilities and their ability to get the sound "out of the box." That said, the V2s cast a tremendously wide stage that often squeaked outside the speakers' outer side panels, with depth that extended past the front wall of my room.

And in terms of imaging precision, the Magicos bettered the Mirages -- while the V2s' stage wasn't quite as big, it was tighter and better focused. However, it wasn't so tight that things sounded lean or constrained. Even with thinner-sounding recordings, such as the Madison Violet disc, there was enough spaciousness and heft to make the soundfield seem tangible and real.

An area I've so far touched on only briefly is *resolution* -- in particular, the way the V2 balanced a wealth of detail with maintaining all the pleasing musical qualities described above. This, I believe, is what made the V2 not just good but great, and is a quality it shares with the Aurum Acoustics Integris Active 300B, which I consider one of today's great speakers. Like the Integris Active 300B, the V2 is a high-resolution speaker capable of conveying astonishing amounts of detail from the bass through the highs, but never sounding clinical, dry, or in-your-face. This is not an easy balance to maintain -- some speakers sound very pleasing but aren't resolving enough, while others have sky-high resolution but are too emphasized in some region, and aren't always the easiest to listen to. The Magico V2's balance was spot-on.

My very positive impressions of the V2 shouldn't give you the impression that this speaker was without fault, and one of those faults was in its bass performance. As I've said, the V2's bass was extremely well controlled and had a lot of texture, and its depth -- down to 30Hz or so -- exceeded my expectations. On the other hand, despite going so deep, the V2's bass lacked a bit of punch -- that upper-bass "sock" that some speakers give. I attribute this to the V2's being quite linear down low, in stark contrast to many of today's speakers. It's not uncommon to see a speaker with a few decibels' worth of emphasis in the 80-120Hz range. (If you go to www.speakermeasurements.com and look at all the speakers we've measured, you can see which these are.) Emphasis in this region can give a subjective impression of "punch" or "sock" that is particularly noticeable -- *POW!* -- with something like kick drum. From what I could tell the V2 avoided that, instead choosing the path of accuracy over a touch of upper-bass excitement. So if you're used to that emphasis, it might take you a while to settle in with the V2's sound. But once you learn what truly deep, linear bass sounds like, you might not be able to live with that emphasis again.

Conclusion

On Amplifiers

I tried the V2s with four different amplifiers, all significantly different from each other in design topology and power rating. The biggest differences in sound resulted from the differences in these amps' power outputs. Zanden's all-tube Model 600 integrated amplifier, producing 30Wpc into 8 ohms, just wasn't powerful enough for the V2. The midrange was slippery-smooth, which is what the Zanden is known for, but the overall sound was thin and the bass very weak. In my opinion, don't even bother with low-power amps, tubed or solid-state, with the V2.

I had much better results with Classé Audio's solid-state CAP-2100 integrated, claimed to deliver 100Wpc into 8 ohms. I could have lived with this setup -- the V2s went

These days, it's not uncommon to see speakers that cost in excess of \$100,000 -- we've reviewed some of them here. But I'm a commonsense guy, and when speaker prices get *that* high, it gives me cause for concern. I start asking, "Should a pair of speakers *really* cost that much?" In the case of the Magico V2, the \$18,000 question is, "Is it worth it?"

While the V2 can't better every other speaker out there in every respect, no other speaker I've reviewed that's built this way and has this quality of performance, with next to no weaknesses, costs less. The only other speaker system that impressed me as much is the Aurum Integris Active 300B, and for pretty much the same reasons. But unlike the passive (*i.e.*, unpowered) Magico V2, the Integris Active 300B is an active (*i.e.*, powered by a built-in amplifier) speaker system that, at the time of the review, cost \$30,000/pair. It received not only our "Reviewers' Choice" nod, but the top honor of our 2006 "Edge of the Art" award as well. That's the kind of company the V2 keeps, and it's an indication of how much it achieves. Color me impressed.

I don't have \$18,000 to spend on a pair of speakers, but I have strong advice for those who do: If topflight sound from a moderately sized floorstander is what you want, Magico's beautifully built V2 more than delivers. It delivered deep, tight, superbly articulated bass down to about 30Hz; it had a gorgeously fleshed-out midrange with a hint of richness; it revealed a wealth of detail without ever displaying any excess bloat or unnecessary weight; and it had a clean, delicate top end that, insofar as dynamic drivers go, was beyond reproach in terms of cleanness and that elusive audiophile quality of "air." It may carry a five-digit price tag, but the V2 is more than a mere status trophy -- it's a true audiophile-grade performer with an overall sound quality that makes it the best passive loudspeaker I've ever reviewed.

. . . *Doug Schneider*
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loud enough, things sounded fleshed out, and the bass was more than respectable. Still, there wasn't that sense of effortless ease and openness that I got when I moved up to the Blue Circle Audio BC204 power amp, rated at 150Wpc -- *that's* when the V2s really began to move me. And things improved that much again when I hooked up Axiom Audio's A1400-8 power amp, which has a linear power supply, a switching output stage, and can deliver up to 350Wpc into 8 ohms or 700Wpc into 4 ohms. Power-wise, the Axiom was overkill, but with the V2 I'd rather have more than less. While Magico recommends power amplifiers rated from 50 to 300Wpc, I suggest that, for best results, you err on the high side and start with an amp that puts out at least 150Wpc.

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Magico V2 Loudspeakers

Price: \$18,000 USD per pair.

Warranty: Three years parts and labor.

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Magico V2 Loudspeakers: *Measurements*

All loudspeaker measurements are performed independently at the National Research Council of Canada. Please [click to learn more](#) about how we test loudspeakers there. All measurement data and graphical information displayed below are the property of *SoundStage!* and Schneider Publishing Inc. Reproduction in any format is not permitted.

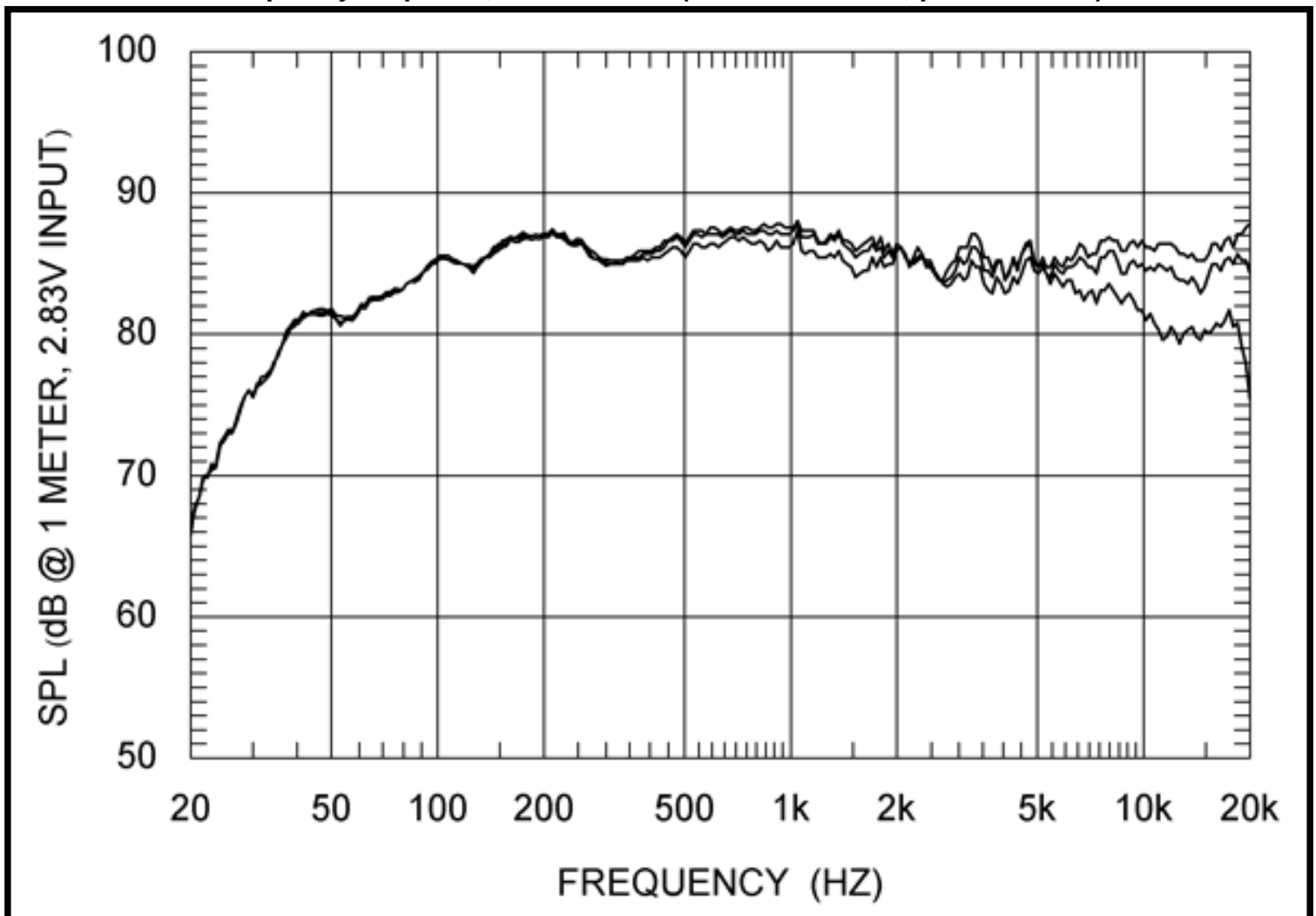
Chart 1 - Frequency Response and Sensitivity

Microphone measuring position: tweeter axis

Grille: n/a

Sensitivity: 86.0dB (averaged 300Hz-3kHz, 2.83V/1m)

Frequency response, 20Hz - 20kHz (measured @ 2m, plotted @ 1m)

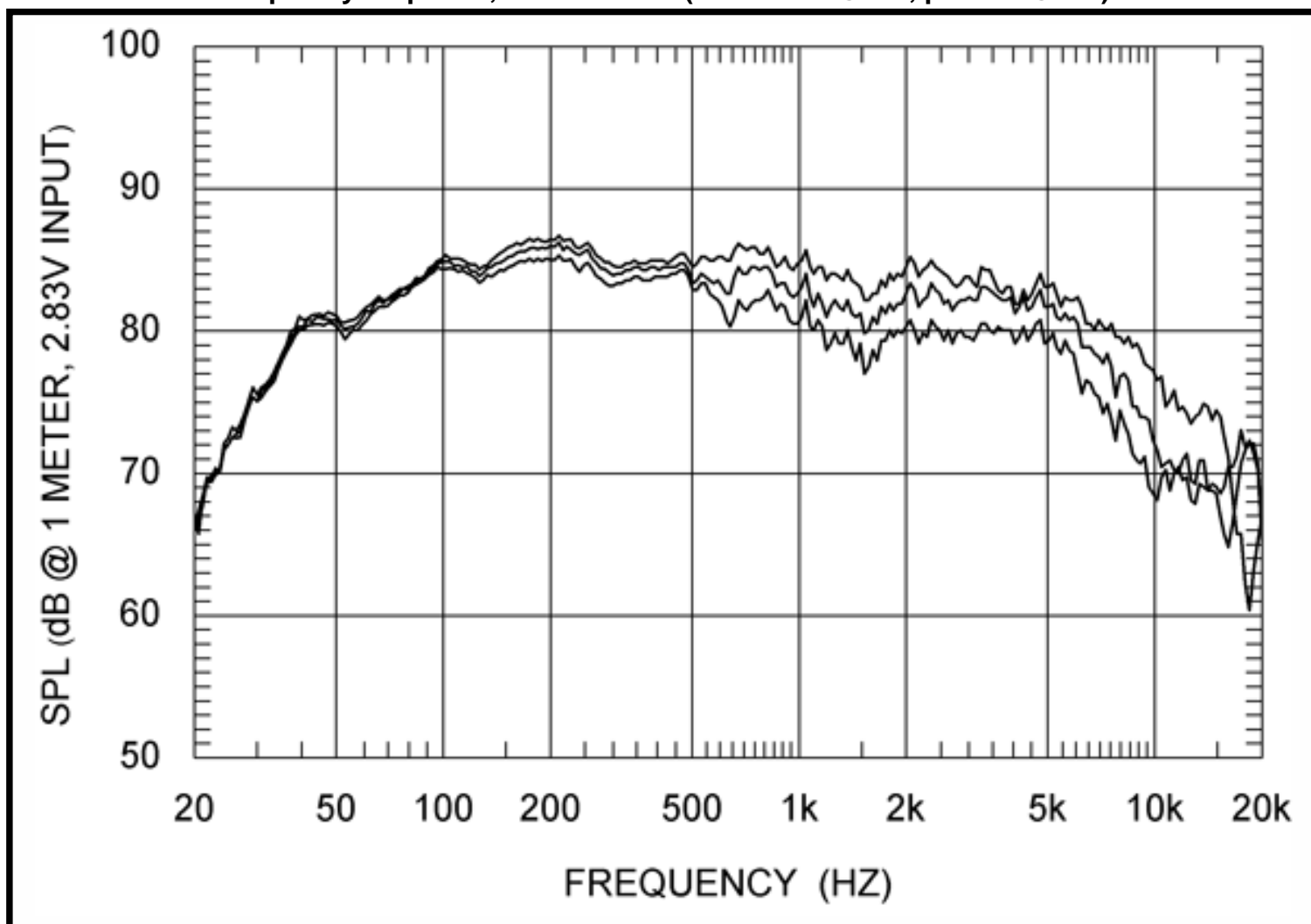


Top curve: on-axis response

Middle curve: 15 degrees off-axis response

Bottom curve: 30 degrees off-axis response

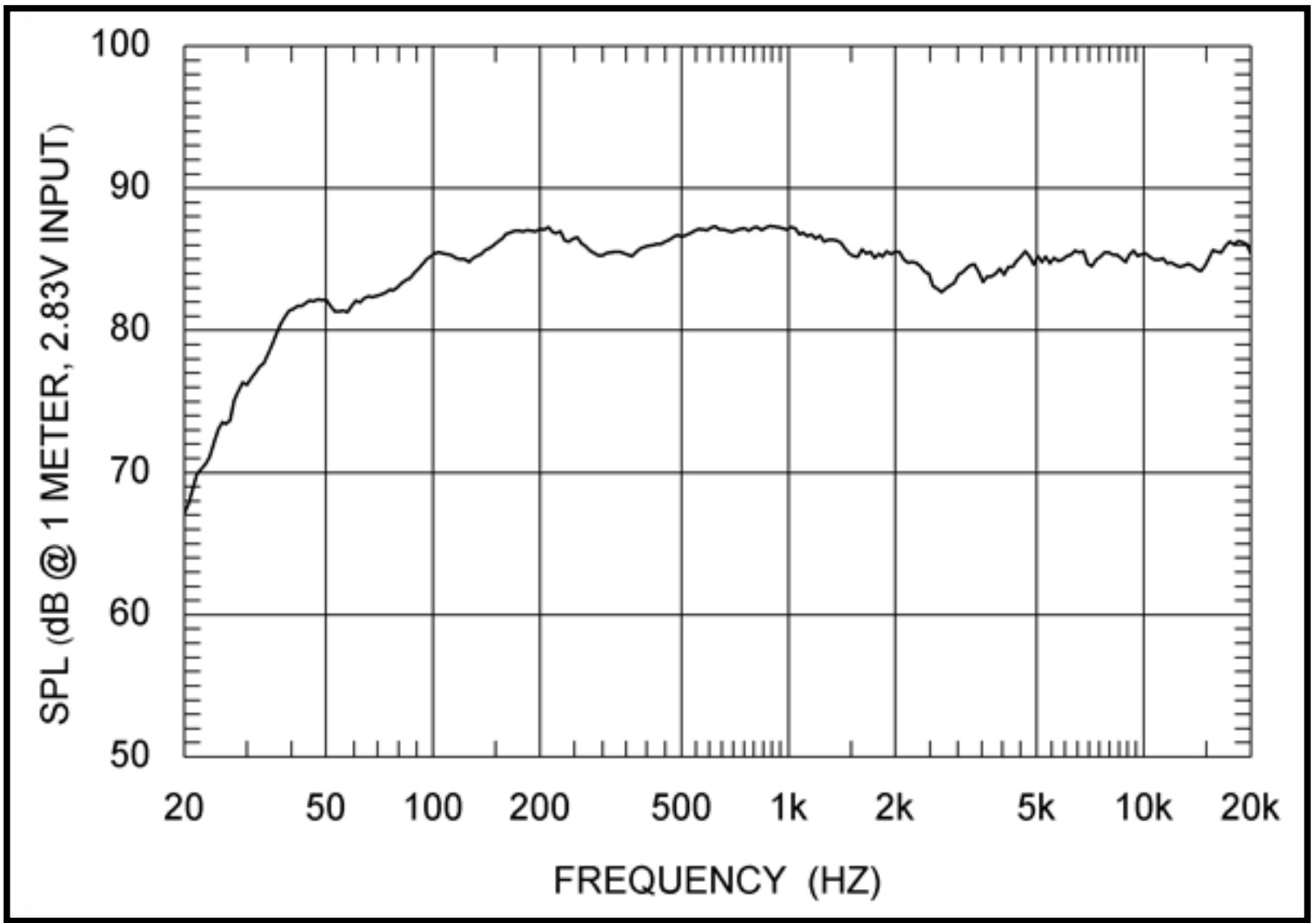
Frequency response, 20Hz - 20kHz (measured @ 2m, plotted @ 1m)



Top curve: 45 degrees off-axis response
Middle curve: 60 degrees off-axis response
Bottom curve: 75 degrees off-axis response

Chart 2 - Listening Window

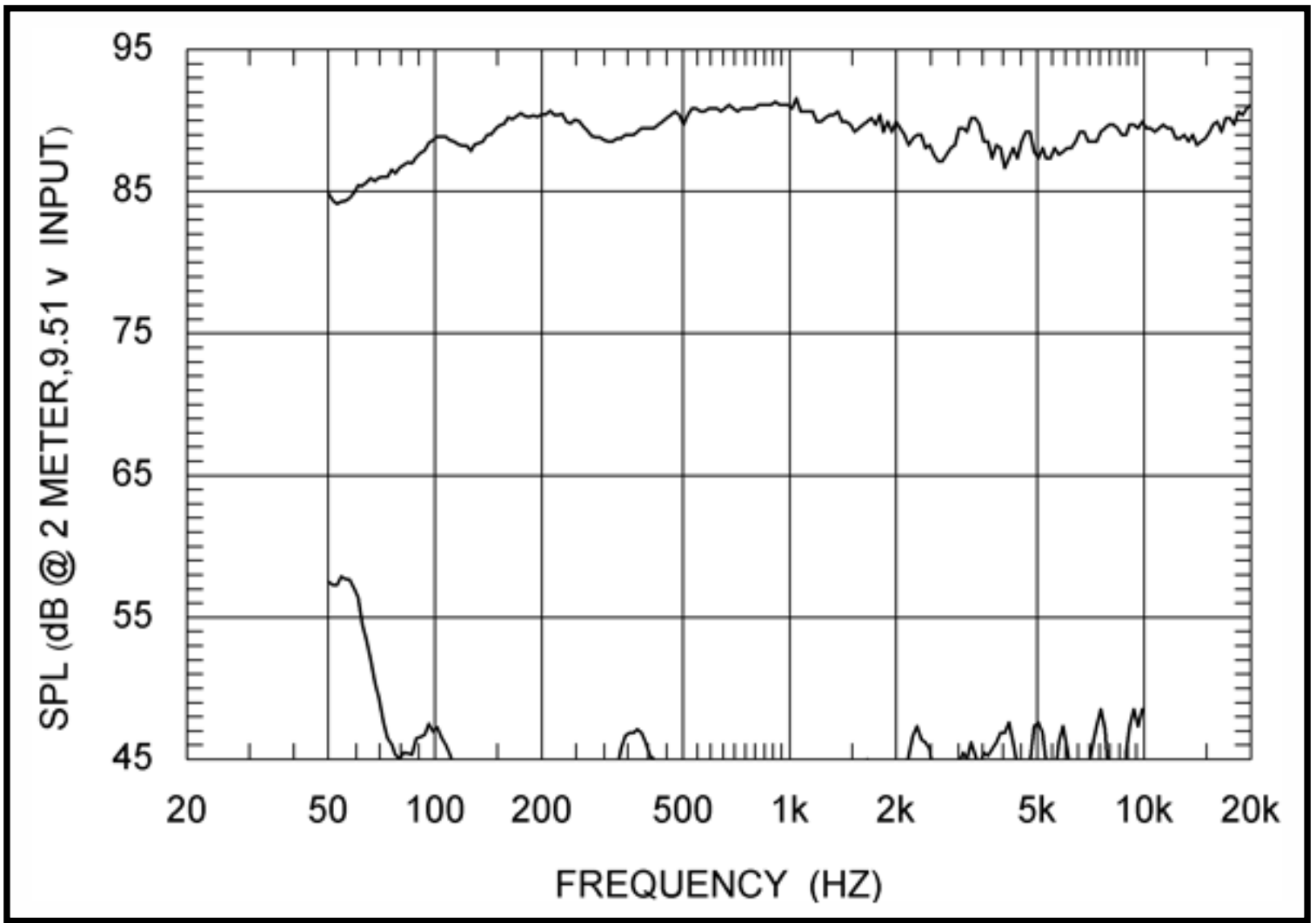
Listening Window, 20Hz - 20kHz (measured @ 2m, plotted @ 1m)



Response curve is an average of five measurements:
on-axis, 15 degrees left and right off-axis,
15 degrees up and down off-axis

Chart 3 - Total Harmonic Distortion + Noise

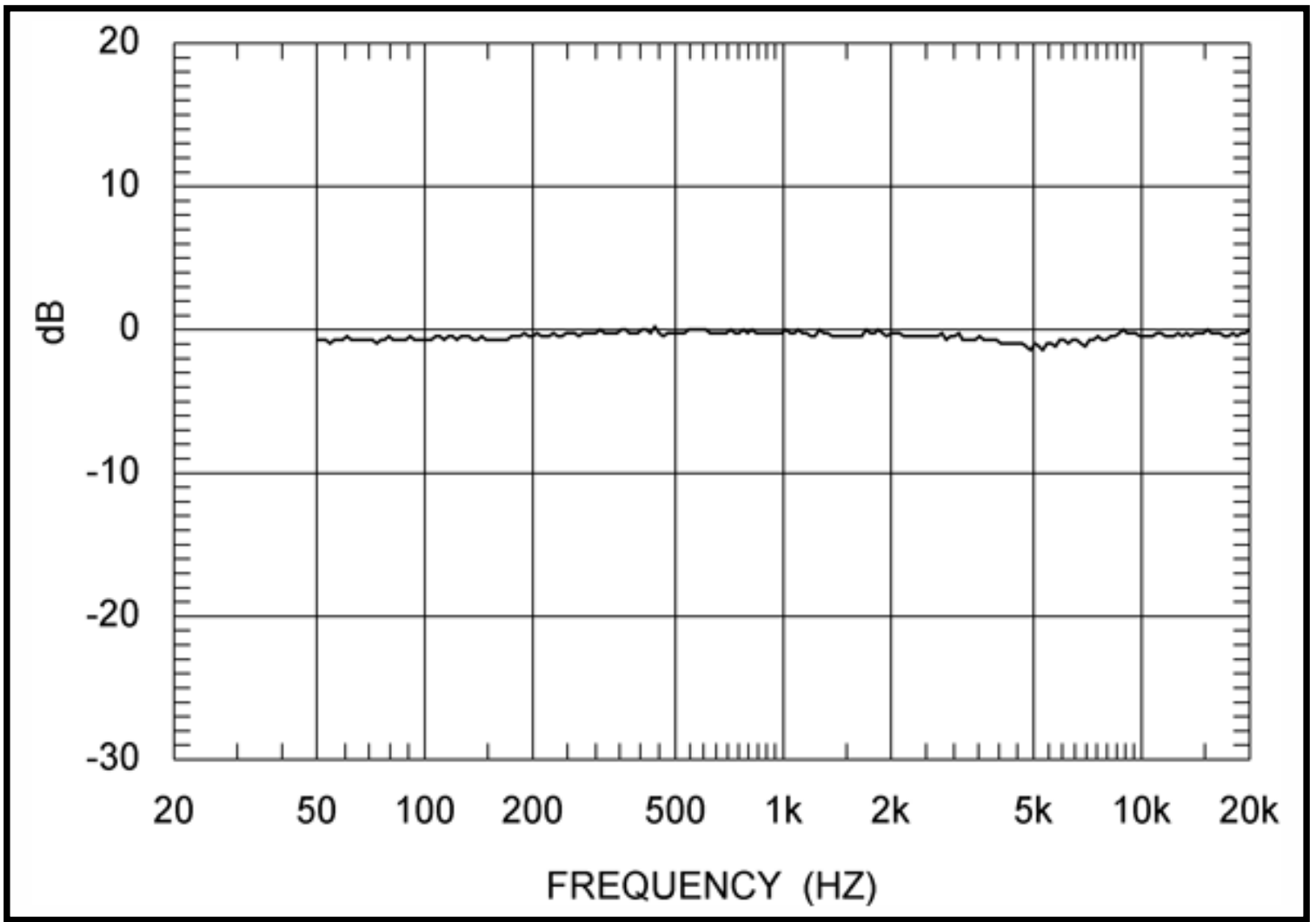
THD+N @ 90dB, 50Hz - 10kHz (measured @ 2m)



Top curve: frequency response @ 90dB SPL
 Bottom curve: THD+N @ 90dB (50Hz - 10kHz)

Chart 4 - Deviation from Linearity at 90dB and Above

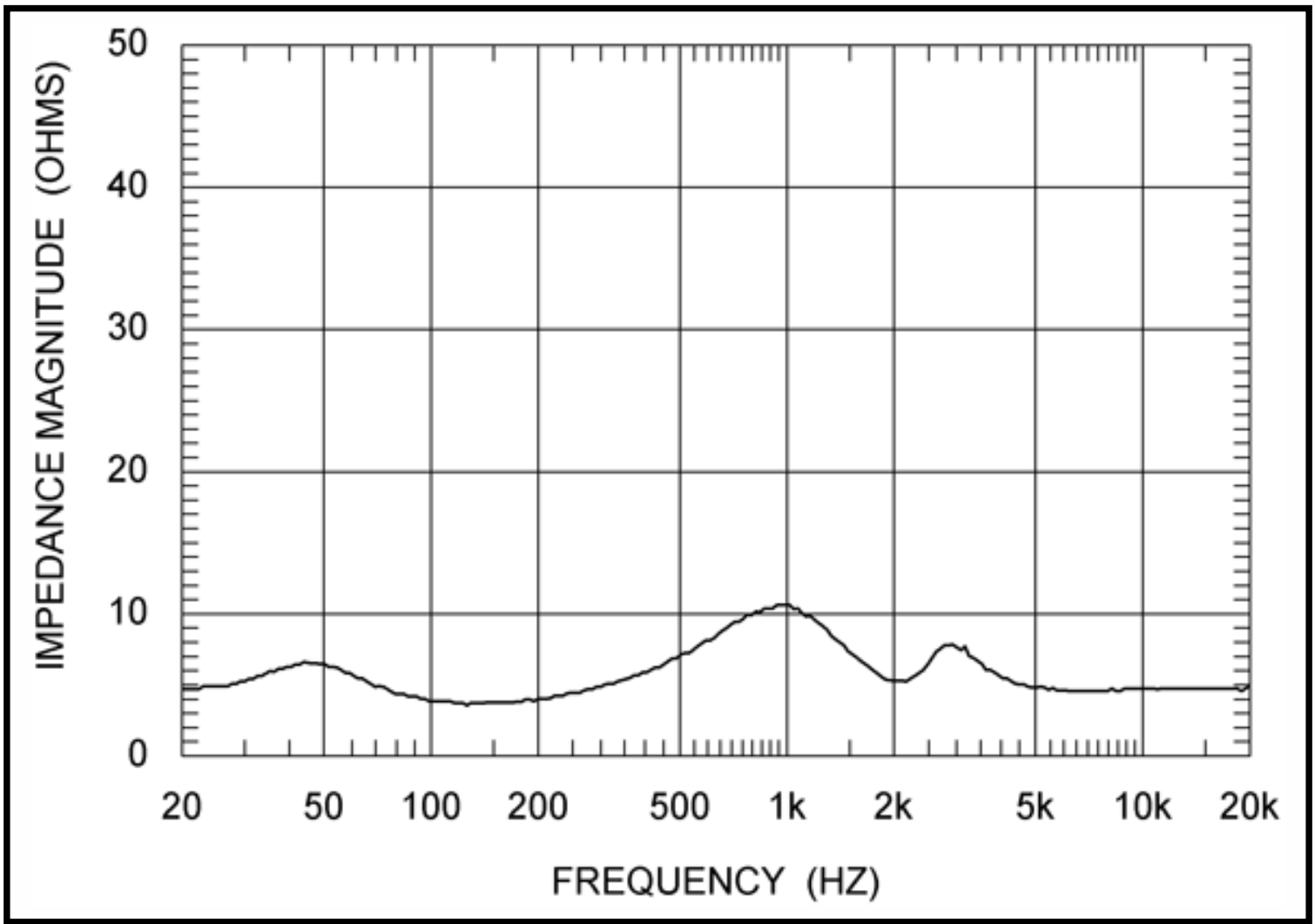
Difference @ 90dB, 50Hz - 20kHz (measured @ 2m)



Curve: difference from 70dB at 90dB

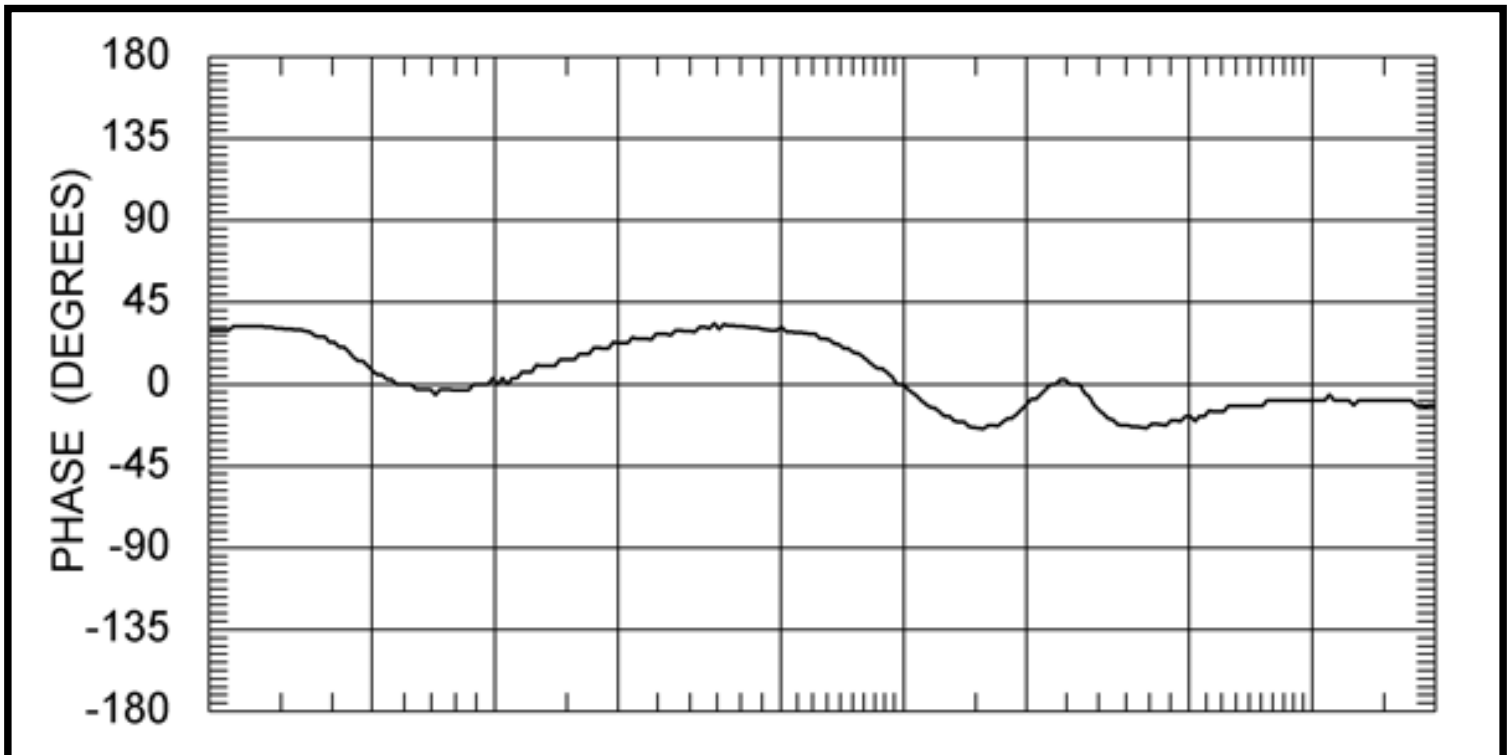
Chart 5 - Impedance Magnitude Variation and Electrical Phase

Impedance curve



Vertical axis: impedance
Horizontal axis: frequency

Electrical phase



Vertical axis: phase
Horizontal axis: frequency

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