

To Build a Small Fine System: Part 1

Magnepan MG12/QR Loudspeakers

After 20 years in the audio press, I've heard my share of mammoth systems—speakers nearly seven feet tall costing more than \$200,000; amplifiers at \$30,000, CD playback equipment, two-boxes, \$30,000 each; cables that cost more than exotic reptiles, which they in many ways resemble: beautiful, hard to handle, lethally good at what they are designed to do.

Such systems can sound eerily real. On well-recorded LPs, CDs, and SACDs, many of them possess that quality Harry Pearson (founder and for 25 years editor-in-chief of *The Absolute Sound* and later *The Perfect Vision*) calls

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"continuousness," that is (if I understand the concept correctly), the flow of live music—all the elements of each note properly in their places, like a living stream of water particles. Gordon Holt, founder of *Stereophile*, describes the response that I believe comes largely from this phenomenon as the goose-bump factor. You listen, and experience the involuntary response you get from live music that moves you deeply—your hairs stir, your skin chills.

To make this magic, though, money does not necessarily have to flow in like fashion. Some small elegant systems also can do the trick, indicating that "musical" does not equate with complete (expensive to achieve) accuracy from 20Hz to 20kHz, but depends rather on a balance of elements, known and unknown.

For some years now I have lived far out in the country. Here I am, hooked on musical sound, not easily able to visit a good high-end store—and living on a budget. Many music lovers share my dilemma, I suspect, and I began to wonder if I could put together a truly musical system for a modest \$5000. So I set out on an at-home journey. At the end, my little pot of gold would have to produce a readily available, reliable (this is especially important if you live in the sticks) system that reveals the continuousness of music and to boot gives me goose-bumps.

My testing set-up is a good one for the purpose: clean, unassuming front end; good speakers; clear, natural overall sound. The Marsh Sound Design amp and preamp retail for about \$3000, together; Monster Cable power conditioner (a must in my area) about \$700; my Thorens CD player is old, but was expensive in 1990 at about \$3000; my reference speakers (Be Ones from Mainland China, excellent but not available in the US) about \$1200. Cables run about \$300. To achieve my goal, I will need to create a \$5000 system whose sound quality equals or even exceeds that of my roughly \$8500 reference system.

I began by listening to speakers. I'll go on to subwoofers and then other components in the chain as I explore them. But I've found that really good speakers have unsuspected performance in them; they reveal hidden abilities as you improve the ancillary equipment. A good pair should see you through other upgrades for a long, long time. I have listened to many in the \$1000 to \$2000 range. My three-way floor-standing dynamic models outperform competitors costing \$4,000 and more. They are clean, balanced, and natural sounding. So I was looking for speakers in their price range that could stand up to these tough taskmasters and provide the proper base for the rest of the system.

I got lucky. The first speakers I tried out were the Magnepan MG12/QRs. Small, musical, and, at \$1099, more than kind to the budget.

Magnepan's Magneplanar MG12/QR Quasi-Ribbon Loudspeakers

Yesterday, a friend dropped by while I was listening to Canteloube's *Chants d'Auvergne* [CBC Records]. He's a rock musician with a small recording studio, and as he stepped into the room, he said, "Wonderful separation in the instruments and voice. What are you listening to?" "Planar magnetics," I said, assuming he was referring to the speakers and not the gor-

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geous voice of Karina Gauvin and the spectacular Canadian Chamber Ensemble. Right on cue, he said: "What?" Proving, as I've long suspected, that most music lovers who have not been reading audio magazines know nothing of electromagnetic type speakers. He was in for a treat.

Most ribbons, hybrid ribbons, planars, and electrostatic speakers are expensive and hard to find if you live outside a major city. The main stumbling block, I expect, is that the whole concept of tall, thin, panel-like dipole speakers seems weird to the uninitiated. My recordist friend, accustomed to cones and horns in hefty enclosures, wanted to know all about the MG12's innards and used a flashlight to try to wrinkle out the secrets of the Mylar strips behind the cloth grills. By then, I was playing *Spiorad* [Shanachie], with Talitha MacKensie's rich contralto soaring in Gaelic over thunderous bass. Not only did her voice rise, clear and ecstatic, over the deep throbbing of drums, but each instrument in her small ensemble took its place and made its music. Stuff to get a rock musician's attention!

The MG12s actually don't run true to the genre's peskiness. Jim Winey, their designer, founded Magnepan in the late 1960s with the goal of making planar magnetic speakers that would be within the budget of most music lovers and solve some of the problems that plague electrostatic and ribbon designs—no bass, unattractive appearance, difficulty in placement (my wonderful old electrostats, the Quad ESL-63s, commanded the very center of my former live, glass-walled living room in Sea Cliff, New York). The Magnepanns are modest in price, easy to hook up, happy (a not-so-easy discovery) when placed a hair more than 2.5 feet from one of the short walls in my present, much less live room, and don't look like black tombstones.

And they were *immediately* and wonderfully true to music, from about 200Hz up. Over time, their performance has deepened. But I sus-

pect the bottom bass is forever missing in my room, and I will have to add a woofer system of some kind.

Set-up & Break In

My review units arrived in a single box 6 inches deep by 5 feet long, were light enough for me to handle alone, and included clear instructions and all the tools I needed to hook them up. In under a half hour, I was falling under the spell of their extraordinary clarity and naturalness of tone.

All Maggies take a long time to break in, and I've been playing these daily for a month. The midbass still has not settled in, and so there is a perception of thinness in larger ensemble sound. There is also an almost audible change in texture ("almost" because some listeners hear it and some don't) where, after I added a subwoofer, that sub meets speaker. But there is magic here, and I detect small improvements on a daily basis. I suspect that in another six weeks, I'll mourn no more for the midbass of my reference speakers.

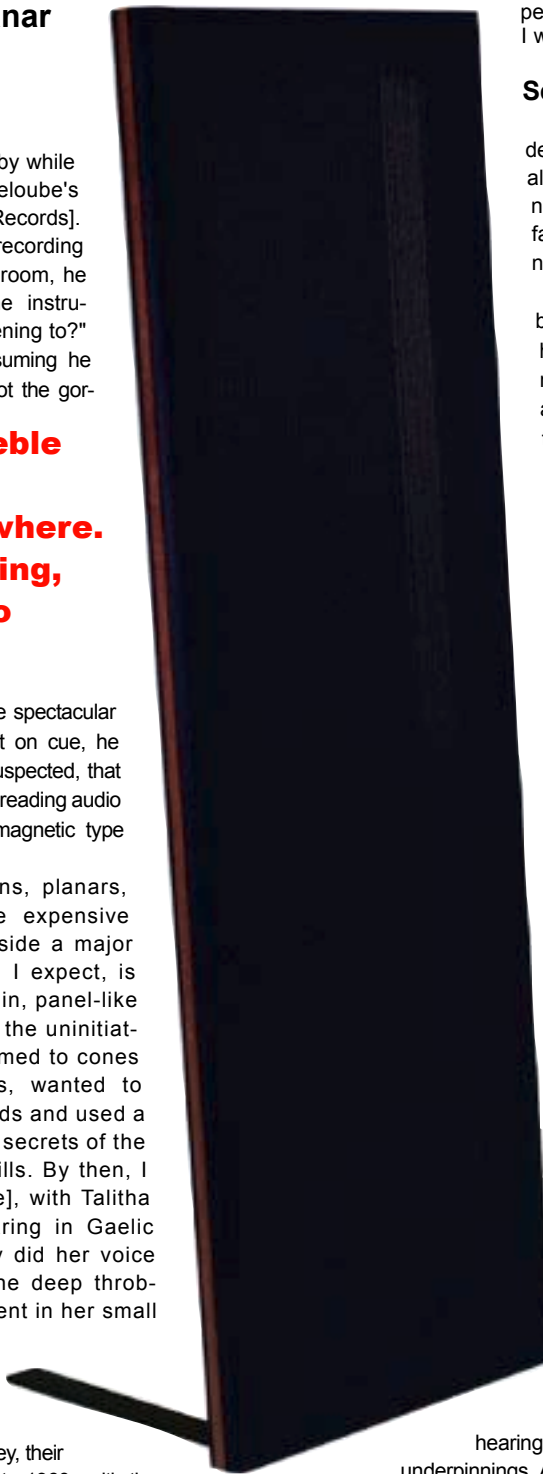
This perception of thinness may be in part the result of the Magnepanns' very clarity. Sometimes much of what we identify as richness in the middle and low frequencies is the un-cleanliness of complex sounds as reproduced by most dynamic speakers (partly from the enclosures). We get used to a certain thickness, or texture, that really isn't on the recording. But live music often has similar texture, so we like it in our systems. Much of "system sound" seems witchery, anyhow—unmeasurable, inexplicable.

I brought in a listening panel so that all kinds of musical tastes would get a fair shake. (All three other listeners share with me a love of clean, natural sound and a distaste for the boom and sizzle of the stereo/video-shop variety—which many high-end stores are as guilty of as Circuit City.) We started without a subwoofer.

After experiencing David Carter's *When I Go* [no label], Loudon Wainwright III's *Last Man on Earth* [Red House Records] and *Grown Man* [Virgin Records], Over the Rhine's *Ohio* [Virgin/Back Porch], several raunchy offerings from the Trailer Park Troubadours [Rugburn Records], and Ravel's *Piano Concerto for the Left Hand* [Chandos], we agreed that while voices, guitars, banjos, violins, and flutes were unbelievably clear, well placed in the soundstage, separated—indeed, we were hearing the singers' breaths, their head and chest sounds, the distinct beginnings and ends of words, all the high-end clichés of clarity—we were not

hearing the bodies of the larger instruments, music's midbass underpinnings. And we were missing the chorus of low low instruments in the opening of the Ravel, whose growly dark melody sets the mood for the piano epiphanies that follow.

So in went the first subwoofer, a prototype someone had lent me, and after a good bit more than the usual fiddling subs require, we got it dialed in at a listenable frequency and volume. Now we had spectacular highs and midrange and decent low lows. The midbass was still not satisfactory, but we expected that. And we agreed that a close-miked trio of banjo, guitar, and violin from track 1 of Nickel Creek's eponymous *Nickel Creek* [Sugar Hill] was ravishing, the best any of us had heard, bar live, and it was as close to live as a microphone has any right to get. The



Ravel was improved, though it still lacked "liveliness," and the pianist's pedal sounds were missing, as was the second set of trumpets not too

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far into the piece. But the orchestral shriek at the end turned me (physically) cold, as it should—and does on magical systems.

Now comes confession time. (I'm always happy to admit errors that others might make. About simple stupidities, less than naught will be said.) In the middle of the excitement that excellent sound and good music bring, one of my panelists said: "I think you have these things set up wrong. The instructions say the tweeters should be on the outside and I can see them on the inside." Really?! We made the change and were rewarded instantly with a richer midrange and wider soundstage. The trumpets were audible on the Ravel and so were the pedal sounds.

Thus ended the first day. Over the ensuing weeks, I have played more than 100 CDs through these speakers and love what I hear. The midbass continues to get better. The highs remain angelic. The low end has its moments.

In talking to experienced Magnepan owners, I've learned a few things worth passing on. First, yes, the tweeters-to-the-outside works well in squarish rooms like mine (20 by 25 feet). But in narrow spaces, tweeters-on-the-inside might work better, instructions notwithstanding. And break-in can take six months or more! This can give the reviewer, who has a memo loan for 90 days, a real headache. But on the other hand, used Magnepan might be a truly great buy—far from being aged wrecks, they'll probably just be well seasoned. Finally, working with subwoofers on this model, I was told, can be tricky. Do tell.

Summing Up the Sound

The MG12/QRs, first, have that fantastic treble. You'll hear musical details and harmonics you've never heard before, on all your recordings. This is not high-end hype, but heaven's truth. Female singers reveal the wonder of the human voice, and every whispered syllable comes clear. I keep going back to the Canteloube to hear the subtleties Gauvin brings to these songs—the humor, the loneliness, the yearning, the mischief—emotional dimensions that lie in her intonation. You really will not get them on most systems. The flute on these pieces will make you cry for joy—the phrasing, the moisture in the mouth, the piercing sweetness of the high tones, oh my. With the MG12s, you will hear soft phrasings and syllables subtly shaped by the mouth of singer and flutist, sounds that dwell in harmonics and dynamics so easily lost in the usual mesh of sound.

This is the best treble reproduction I have heard perhaps anywhere. If it's on the recording, the MG12s give it to you. Indeed, Magnepan supplies two resistors to use if you find the highs too much of a good thing, a problem perhaps with some aggressive studio-fiddled rock music. They will attenuate the treble a bit, softening the sound. I did not use them.

The midrange, where guitar, violins, some winds, and a good chunk of the piano dwell, is clear, transparent, and wonderful. Small ensembles melt your heart. Male voices move from chest to head and you hear the shift. Their deeper tones set up vibrations in your body: Try David Carter's clear tenor on *When I Go* or David Thomas' stirring bass on *Arias for Montagnana*, a spectacular recital of the villains' arias and recitatives from Handel operas [Harmonia Mundi].

The soundstage, once you have the speakers placed correctly, is broad, deep, realistic, with plenty of air and separation between the instruments, as my rock-musician visitor noted. You can turn these speakers up without smoking ribbons or wires or the neighborhood. I don't go much over 85dB because I value my ears, but reasonably loud

stays clean and pure. Music happens. Music flows. The hairs on your arms rise. You get a chill. I go back and back to Bartók's *Bluebeard's Castle* [Mercury] just to hear the strings make the walls sigh.

The midbass is still a bit thin, especially on full-ensemble rock music and large orchestral pieces. One panelist says he isn't ready to give up his fine box speakers for the Maggies, though he's enchanted by their clarity and sweetness on certain recordings. "Maybe I could fit two pairs of speakers in my room," he muses. Or maybe he'll change his mind in six months. Another panelist would make the trade this very minute. Musical taste is the arbiter here.

Low bass? Well, what these speakers do, they do exceedingly well. That stops, now, in my room, at about 87Hz—the second F below middle C on the piano. (For instrumental frequencies, see John Pierce, *The Science of Musical Sound*, Scientific American Press, 1983.) Acoustic bass lacks the wood resonance that makes that instrument sing (systems without clean low-end extension often make the bass into a one-note Johnny). Large drums lack reverberant thump; bassoon, contrabassoon, tuba, bass sax and clarinet, even cello, all use these frequencies and suffer accordingly. And the extraordinarily lovely decay of undamped notes in the treble and midrange is missing down below. Yes, I moved the speakers all over the place to give them the benefit of every doubt. And yes, they *will* need a subwoofer—possibly, for rooms like mine (square rooms eat low frequencies, I'm told), something a little above strictly "sub."

The perfect partner in the low end, though, will take the MG12 as close to goose-bump truth as a cat's whisker.¹ And no perfect partner, I suspect, is easy to find.

Real-world complications are, of course, part of the expected challenge of creating an exquisite small system that fits within a \$5000 budget, so my success here may necessitate an exploration of some of the gray areas in audio. But the journey should prove interesting and—with just a little luck—fun.

¹ **Speaking of cats, the planar drivers are covered their entire length with thin cloth. The speakers look like giant scratching posts, and the instructions suggest that you spray them with a cat repellent. My brainy Maine Coon agreed long ago not to pick at my stuff, but I've banned all less cooperative cats for the duration.**

Specifications
Type: 2-way Quasi-Ribbon
Frequency response: 45Hz-22kHz
Sensitivity: 86dB, 500Hz/2.83V
Impedance: 4 ohm
Dimensions (inches): 17 wide x 51 high x 1.5 deep

Manufacturer Information
Magnepan Incorporated
Phone: (651) 426-0441
www.magnepan.com
Price: \$1,099/pair

Associated Equipment
Marsh Sound Design A400 (solid-state) amplifier; Marsh Sound Design P2000 preamp; Thorens TCD 2000 CD Player; Monster Cable HS 53500 power-line conditioner; Be One 306 speakers; Monster Cable prototype subwoofer; REL Q108 subwoofer; Monster Cable Reference 2 interconnects; various speaker cables