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## ONHIFI

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### Guru Pro Audio QM10 Loudspeakers

Audio shows are great places to discover new and, sometimes, exciting products. At the 2008 Consumer Electronics Show, *SoundStage! A/V's* Wes Marshall was intrigued by a new Swedish speaker company, Guru Pro Audio, and its remarkable QM10 minimonitor (\$2695 USD per pair). A brief audition had Wes wondering if the QM10's designer, Ingvar Öhman, had found a way to defy the laws of physics. Despite the speaker's small size, it produced "honest bass down into the bass-drum range" and projected a "flawless soundstage." That's pretty high praise, especially from a brief hearing in the less-than-ideal acoustic environment of an audio show. So when the opportunity arose to give the QM10 a closer listen, I didn't hesitate to accept.

In Sweden, there has been an apparently insatiable demand for Ingvar Öhman's speakers for almost 30 years. But Öhman, whose first love remains the study of human hearing, has never been interested in being a speaker manufacturer. It was his attempt to increase our understanding of humans' perception of sound that led him to speaker design in the first place.

In 1977, Öhman founded a research institute to map the properties of human hearing from the perspective of sound reproduction. In other words, in seeking to understand how the auditory system reacts to recorded and reproduced sound, Öhman realized that he needed a truly neutral wideband loudspeaker that could reproduce his test tones without coloration or distortion. The problem was that no such speaker existed. The obvious and only solution open to him was to design and build the needed "laboratory instruments" himself.

Öhman's first three pairs of speakers were ready by the start of 1978, and he then began his studies in earnest. But as often happens in science, he soon encountered a wholly unexpected phenomenon: His test subjects liked the speakers so much that they started playing music through them. Before long, subjects were bringing their favorite recordings to the lab and holding listening sessions between test sessions. Inevitably, someone commissioned Öhman to build a set of speakers, and that person told two friends, and so on and so on.

Thus began Öhman's 26-year struggle to stay *out* of the speaker business. As one set of speakers left his basement workshop, orders for five more would arrive. Under different circumstances, this would have been a welcome state of affairs, but Öhman had an institute to run. He didn't want to be distracted from his studies, but he also didn't want to turn away people who showed sincere interest in his designs. A partial solution to his sudden popularity was to make it as difficult as possible for prospective customers to reach him. Still, the orders kept trickling in.



So things went until the mid-1980s, when a chance conversation between Öhman and legendary Swedish recording engineer Bertil Alving led to a surge in demand that has not let up. Discussing the qualities that would be found in an ideal recording-studio monitor speaker, Alving and Öhman discovered that they were of like mind. Alving then commissioned him to start building these "super-accurate portable monitor speakers." The performance of the speakers impressed everyone who heard them. Demand skyrocketed, and ever since, the "popularity has been ridiculous."

This popularity led not to an increase in production, but to an ever-lengthening waiting list. At one point, three years separated order from delivery. This state of affairs lasted for about a decade, until Swedish violist and Öhman aficionado Erik Ring came to the rescue. In 2004, after "26 years of trying not to become a speaker manufacturer," Öhman, with Ring, founded Guru Pro Audio.

The three years that elapsed between Guru's founding and the introduction of Guru's first product were spent turning "a quite offensive looking" speaker into the aesthetically pleasing QM10. This slow approach was taken to ensure that any change in the speaker's look would not negatively affect its performance one iota. Öhman and industrial designer Erik Espmark seem to have met this challenge without a hitch.

## Description

If you're going to design an unconventional loudspeaker, you might as well shred the rulebook, burn it, then grind its ashes into dust. Only then will you come up with a speaker like the Guru QM10. At a svelte 11.7"W x 9.8"H x 9"D (300mmW x 252mmH x 232mmD), the QM10 isn't much bigger than four loaves of bread stacked two by two. It doesn't look like a speaker that can reach 80Hz, let alone its claimed in-room response of a floor-vibrating 30Hz. To get that low, the QM10 is equipped with only a single 4" (102mm) woofer, designed and made by Guru, and a clever enclosure.

The QM10's treble transducer, also a Guru proprietary design, is a 2/3" (16mm) dome tweeter said to reach up to 20kHz. The speaker's claimed nominal impedance is 5 ohms (4 ohms minimum), and its stated sensitivity is 86dB/2.83V/m in-room. The recommended amplification is 20-60Wpc, and the speaker's maximum power handling is "greater than" 160W.

Most minimonitors purported to offer deep bass come in heavy, reinforced enclosures, but not so the QM10. In keeping with the speaker's nonconformist design, its cabinet is remarkably light, weighing only 13.2 pounds (6kg). That said, the cabinet, modeled on a Helmholtz Resonator, easily passed the knuckle-rap test. It sounded very inert.

A Helmholtz Resonator is not only a tongue twister, it's also a full-fledged marvel of science. For the purposes of this review, a simple description will suffice: It's an air space connected to the outside world by a narrow neck. Picture an empty beer bottle and you've got the general idea. Öhman chose an H-Resonator (as he calls them) because they're "quite a bit more efficient than a horn" and "are simply the most efficient way of producing high quality bass in a small loudspeaker."

To recapitulate, the QM10 uses a small woofer in a small, light, efficient box to, Guru claims, produce so much bass that a reasonable person will ask where the subwoofer is hidden. That person might also ask if there's *anything* conventional about this speaker. The answer: *Absolut icken!* (That's Swedish for *Not!*)

The QM10's drivers and long, narrow, slotted port are positioned on the QM10's widest dimension, à la the Snell Type E and Audio Note's AN series of speakers. This means the QM10 is wider than it is deep or tall -- the opposite of most speakers made today. Even the QM10's feet are unconventional. You might suppose that rigid spikes would be used, but Guru specifically advises against using spikes or hard cones. Instead, under each corner of the QM10 is a built-in Guru Anodyne Pad -- compliant (squishy) feet. Guru says that the GAP pads prevent the speaker from inducing vibrations in adjacent equipment.

Even the QM10's cable interface falls outside the norm. Feel free to use any speaker cable connector you like, as long as it's a banana plug. That's right -- no standard five-way binding posts here. Instead, you'll see two small, color-coded holes in the QM10's rear panel, into which only bananas can be inserted. Banana plugs are actually the *last* thing you'd expect to see on a modern European speaker; EU regulators have effectively banned bananas because they look too much like some European AC plugs. But Guru is obviously not about conformity. There's even an LED between the QM10's woofer and tweeter that flashes when the speaker is being pushed into its distortion band, to mildly suggest that the volume should perhaps be reduced a notch.

The QM10's crossover, comprising high-quality film capacitors and audio-grade resistors, *looks* normal enough, but



appearances can be deceiving. The speaker has only two drivers, which means it should have a simple, fixed crossover frequency. It doesn't. Guru's literature describes the crossover as a "2-7kHz, non-schoolbook function" design. What does that mean? As Lars Erickson, proprietor of Sjöfn HiFi, Guru's North American importer, told me, "I witnessed Ingvar explaining his crossover to several engineers. They all had their arms crossed, nodding solemnly, with a vaguely glazed expression in their eyes. I think it's fair to say that only Ingvar understands how his crossover works."



The review pair of Guru QM10s came finished in a handsome, rubber-like, black-and-gray material that says more "air defense fighter" than "high-end monitor." The speaker is also available in a stunning gloss black for a \$300/pair premium.

## Setup

Before setting the Guru QM10s atop my 26"-high stands, I had to spend some time in my workshop making 8" x 11" plywood platforms to accommodate the wide QM10 and its feet. I then secured platforms to stands with generous amounts of Blu-Tack. Placing the Gurus on the 0.75"-thick platforms put them 2.75" higher than the recommended ideal height of 24" (60cm).

There's really only one way to position the QM10s, and that's as close to the front wall as possible. Ideally, they should also be located a couple of feet in from the sidewalls, toed-in toward the listener. (In my room, the QM10s ended up 2' in from the sidewalls and 3" from the front wall.) Without such room-boundary reinforcement, the Guru outputs about as much bass as you'd expect from a 4" woofer (see the attached anechoic measurements for ample proof of this). It is also highly recommended that a sound-absorbing material be placed between the speaker and the front wall (I explain why below). The QM10 manual shows heavy curtains; I used a 24"-square Sonex acoustic panel on the front wall directly behind each speaker.

Guru cites the "ideal listening distance" as falling within a range of 1-4m (about 3-12'). More specifically, they say that this ideal listening distance should be 1.2 times the distance between the two speakers. In my room, the QM10s were 8' apart, which made the optimum listening position 9.6' away. Happily, my regular listening seat is just 5" farther away than that, so I didn't have to adjust my seating arrangement.

The Gurus (and my wife) were unhappy with my pre-existing room layout, which had the speakers along a long wall of my 12' by 16' listening room. Although other speakers were fine with that arrangement, the Gurus were definitely happier when placed along the short wall. As my new, narrower audio rack now gives me more flexibility of speaker placement along the short wall, this new arrangement has become my reference system's permanent home.

## System

My Simaudio Moon Classic i5.3 integrated amplifier (85Wpc into 8 ohms, 130Wpc into 4 ohms) took its usual spot in Reference Central. My digital source is a laptop computer feeding losslessly compressed audio files to a Blue Circle USB Thingee. This in turn sends signals to an Audio Note Kits DAC 2.1 D/A converter. Speaker cables were either Supra Ply 3.4/S (recommended by Guru) or Furutech u-2T.

## Sound

When I began to experiment with the Guru QM10s, it wasn't clear that they could reach the lowest notes claimed to be within their range. Part of the problem seemed to be the layout of my room, which wasn't conducive to the way the Gurus do business. It was a couple of weeks, too, before I had the Sonex panels in place, which seemed to help the Gurus cover the last mile between them and that claimed lower limit of 30Hz.

But once the Gurus had been set up properly, my listening notes began to reflect which of the QM10s' qualities most stood out: their ability to produce low bass. While listening to "Drum Kit Practice," from Ray Kimber's *Isomike Tests 2005B* [CD, Kimber Kable], I wrote, "Bass drum is substantial and sounds very real. Tom-toms have huge depth." *War Dance*, from Respighi's *Queen of Sheba Suite*, on the high-resolution sampler *This is K2 HD Sound!* [CD, First Impression Music FIM K2 HD078], is a favorite test track for its abundance of deep, howitzer-like percussion. Listening to this piece through the QM10s, I asked, *How can these little speakers reproduce timpani and bass drums like that?* This was deep, wholesome bass with solid impact -- the kind you'd expect from a much larger speaker, not something as small as the QM10. But if those selections didn't make the QM10s break out in a nervous sweat, surely, I thought, the next one would.

The deepest bass notes in my music collection come from Charles Dutoit and the Montreal Symphony's spectacular rendering of Holst's *The Planets* [Decca 417 553-2]. In *Mars, the Bringer of War*, a full-size cathedral organ plumbs the sonic depths as only that instrument can. Most speakers, including my Audio Note AN/Es, get many of these notes, but the lowest are more implied than actually reproduced. To my great surprise, the tiny QM10 was able to reproduce most of these notes with real

gusto; only the lowest -- perhaps those right around 30Hz -- were beyond its reach. For a small speaker, this level of bass performance is simply astonishing. What's more, despite the fact that the Gurus were pumping out solid, deep, tight bass, there was no evidence of port noise or chuffing.

The Sonex panels mentioned above were absolutely mandatory to achieve midrange performance that was not overly forward. Without the panels, the QM10s were prone to some midrange shout; with the panels in place, Michael Bubl 's vocals on "That's How It Goes," from *Totally Bubl * [CD, Koch 91418], sounded slightly forward but otherwise open and airy, with no evidence of chestiness. Jo o Gilberto's deliciously subtle voice on "The Girl from Ipanema," from Gilberto's and Stan Getz's *Getz/Gilberto* [CD, Verve 73145214142 2] -- which had caused the Mark & Daniel Maximus Monitors some trouble -- was as smooth as proverbial silk through the Gurus.

The Gurus' treble performance was somewhat variable, depending on the recording and the speakers' toe-in angle. In most cases I found that, directly on axis, the QM10s sounded bright, and could beam with bright recordings. With about 10  of toe-in, the brightness largely fell away but the soundstage narrowed appreciably. Toeing the speakers *out* by 10  reinvigorated the soundstage and, to a large degree, did away with the brightness as well.

Some glassiness was evident, though, in the higher chords played by guitar virtuoso Pepe Romero on *Zapateado*, also on the FIM K2HD sampler. Conversely, Raul Midon's guitar and vocals on the title track of *State of Mind* [CD, EMI 71330] were refreshing, accurate, and clean, with not even a hint of excess treble energy. Most interesting, though I can hardly stand its overbright sound through most speakers, was the vibraphone on *Jazz at the Pawnshop* [CD, Proprius 7778], which was highly listenable with the QM10. Could it be that this Swedish speaker prefers Swedish recordings like *Pawnshop*? Probably not; it's more likely that the QM10's slightly dry treble just worked better for vibraphone than for guitar. It also worked quite well for piano. As a guest in my listening room said of Herbie Hancock's playing on his *Empyrean Isles* [CD, Blue Note 98796], "The piano sounds so real!"

Coherence between the woofer and tweeter was excellent; the two drivers did a very good impression of a well-executed coaxial speaker. This helped the Gurus "disappear" with most good recordings. On tracks featuring well-recorded hall ambience, these speakers were sometimes mesmerizing. The vast interior of the cathedral that served as the recording venue for Holst's *The Planets* was transported into my small listening room to a degree that almost had me wondering if my walls and ceiling had been removed. The imaging was pinpoint, and the orchestra's various sections were presented so three-dimensionally that I felt I could get up and walk around them. Smaller venues, too, fared well; the Ray Brown Trio's *Bassface: Live at Kuumbwa* [CD, Telarc CD-83340] sounded particularly spacious and full of verve.

## Comparison

The QM10s were in house at the same time as the Mark & Daniel Maximus Monitor (\$2980/pair), reviewed last month, and the two speakers went head to head on a number of occasions. I also compared them to my Audio Note AN/E speakers (\$2349/pair with cabinets), which were assembled from a kit in professionally made cabinets.

Both the Maximus Monitor and the AN/E have larger woofers (6.5" and 8", respectively) and larger cabinets than the QM10 -- in the case of the AN/E, much larger. While those other speakers were therefore able to reproduce bass of greater weight -- it was clear that each could move more air -- the Guru was to reach deeper than the Maximus Monitor, though not as deep as the AN/E.

The AN/Es can produce deep bass that's rich in texture and slightly warm in tone. They ran out of steam on the two lowest notes of the Holst *Mars* test, though what bass they did reproduce there had significantly more weight than what the Gurus offered. The Mark & Daniel Maximuses have terrific punch but seemed to have little energy available for the lowest notes, which sounded more like humming than organ notes.

The Audio Note excels in the treble domain and was a more pleasing listen overall than the Guru. Where the Guru tended toward glassiness on some recordings, the AN/E provided a softer, gentler performance that was nonetheless still quite detailed. The Mark & Daniel's Dreams driver, which serves as both midrange and tweeter, was somewhere in between the Audio Note and Guru. Its ability to retrieve detail led the pack, but the Dreams driver lacked the QM10's ability to realistically convey a soundstage of any size.

## Conclusion

That one should never make judgments based on appearance alone is a lesson relevant to this review. When I first saw (and lifted) the Guru QM10, I seriously doubted that it could live up to the performance claims made for it. Logic seems to demand that this little speaker not be able to do the things it does. But then, speaker design is all about physics, a science replete with examples of things that at first *seem* absurd (black holes come to mind) but whose existence are then borne out experimentally. The QM10 may have had its genesis in Ingvar  hman's hearing

**on performance:**



**on use:**



**on value:**



institute, but by now it is far more than a lab instrument. The QM10 has been Guru-fied into a card-carrying high-end speaker, and it is a remarkable achievement. If this initial offering from this new company is any measure, Guru Pro Audio might become as familiar a Swedish name as Volvo, Ikea, or (dare I say it?) ABBA. Anyone considering spending about \$2700 on a pair of speakers of any size must hear the Guru QM10.

. . . Colin Smith

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**Guru Pro Audio QM10 Loudspeakers**

**Price: \$2695 USD per pair.**

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

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