

Q Acoustics Concept 500 loudspeaker

Thomas J. Norton | Feb 14, 2019



Q Acoustics was founded in the UK in 2006, but has appeared on the radar of US buyers only in the last few years. Until recently, Q has aimed its efforts at the budget sector, earning enthusiastic reviews and commercial success.

But during that time the company also been quietly working on a product considerably more upscale, though still affordable in a marketplace now glutted with products at if-you-have-to-ask prices. The result is the Concept 500 (\$5999.99/pair), first seen in the UK in 2017 and recently made available here. But you won't find it at your local audio shop (if you still have one); in the US it's currently sold only online, through Q Acoustics' US website, with a 30-day, money-back guarantee that includes shipping costs—both ways.

When the review samples arrived in two huge, well-padded, double-thick cartons tied to a shipping pallet, I wondered what I'd gotten myself into. This might be familiar territory for those who review multi-hundred-pound speakers costing five or six figures per pair, but not for me.

Yet while the Concept 500 itself is relatively large—the biggest speaker Q Acoustics has ever made—those boxes were a little misleading. The speaker sits 45.3" high, but only 7.8" wide and 13.8" deep—it shouldn't look overbearing in a room of medium to large size. The speakers are delivered with their metal bases, or plinths, firmly attached, rather than the usual "some assembly required."

Design

The Concept 500 is a two-way system employing a 1" soft-dome tweeter and two 6.5" mid/bass drivers, the three drivers arrayed in a vertical D'Appolito configuration: a column with the tweeter in the middle.



The driver configuration is only part of the design. With the Concept 500, and in cooperation with Fink Audio-Consulting, in Germany, Q Acoustics has launched a serious attack on speaker-cabinet vibrations. The approach they've used is sophisticated. It avoids the extreme-mass solutions popular in cost-no-object speakers, but impractical with speakers priced for the real world.

In a [white paper](#), Q Acoustics describes the four key aspects of the Concept 500's design in more depth than I have room for here. The main cabinet material is MDF, commonly used in loudspeakers for its low cost, workability, and good damping

properties. (Humble particleboard, once used for speakers in audio's Jurassic Age, is even better damped and easier to work with, but MDF is stronger, denser, and free of voids.) It's the three other aspects of the design that set the Concept 500 apart, though two of them, bracing and constrained-layer damping, aren't really new. The bracing in the Concept 500 consists mainly of cross-bracing between the sidewalls rather than the more conventional shelf braces. This cross-bracing, which Q Acoustics has trademarked P2P (point to point), is used primarily near the top of the cabinet, where all three drivers are. Using finite-element analysis and laser interferometry, Fink has determined that this is where the bracing will be most needed and most effective.

The cabinet walls comprise triple layers of MDF, separated by a proprietary, nonsetting gel that Q Acoustics calls Dual Gelcore. These constrained layers convert cabinet vibrations into heat.

Last but not least, tuned tubes inside the cabinet quell internal resonances (standing waves) that develop in the longest dimensions of a speaker enclosure. Q calls this Helmholtz Pressure Equalization (HPE). Standing waves aren't typically an issue in the shorter width and depth of this speaker cabinet or most others, or in the shorter heights of smaller, stand-mounted designs; the frequency of those waves is easily squelched by conventional damping materials, typically wool or polyester batting, used in most speakers.

Both drivers are proprietary, and designed specifically for the Concept 500. I'm usually skeptical of claims of proprietary drivers—there are hundreds of superb off-the-shelf drivers that are used in many speakers, including many high-end designs, often with no, or only subtle, custom modifications. Designing drive-units on the one hand and using them to design an original multiway loudspeaker on the other are distinct and rarely overlapping technical skills—it's much like expecting an electronics designer to create the integrated circuits, resistors, capacitors, and transformers she plans to use in an original amplifier.

But I have no reason to doubt the claim. The Concept 500's woofer has an impregnated/coated paper cone, a rubber surround, and a large (35mm) voice-coil wound with a double layer of copper-clad aluminum wire (CCAW). To reduce distortion, there are an aluminum inductance-compensation ring and a copper cap on the pole piece.

The 1" (28mm) soft-dome tweeter of coated microfiber has a wide surround claimed to offer wide dispersion, high power handling, and low dynamic compression, and a copper-capped pole piece of its own. The gently dished front plate around the tweeter appears too modest to act as a waveguide. The drive-units are secured to the cabinet from the rear by being attached, under spring pressure, to the cross-braces. This eliminates the typically conspicuous front fastening screws.

The crossover network is fourth-order acoustic, Linkwitz-Riley. According to Q Acoustics, it comprises parts of very high quality, including premium polypropylene capacitors, and a Mundorf air-core inductor so heavy that it's secured to the bottom of the cabinet—though I didn't take it apart to confirm this!

While the shape of the Concept 500's cabinet is conventional, the look isn't. Designed in conjunction with Industrial Design Associates Ltd. (UK), the speaker is available in two finishes: Gloss Black or Gloss White, with wide bands of glossy veneer in Dark Rosewood (with Gloss Black) or Light Oak (with Gloss White) across the rear third of the sides and top and on the entire back. Taste will determine your choice, but I'd look no further than the gorgeous black and rosewood of the review samples. Magnetically attached grilles are included. The only change I'd prefer is in the plinth, an attractive and unique open ring offering good stability, with a choice of spikes or hard, rounded feet—but it comes only in silver chrome. For me, gloss-black chrome would look better with the darker finish.





Around back you'll find the port—foam plugs are included to partially or completely block it if needed, but I didn't use them. Also on the rear panel are two pairs of high-quality input terminals, and three more terminals closer to the top of the cabinet, spanned by removable jumpers. The jumpers can be used to configure the speaker for flat response or $\pm 0.5\text{dB}$ in the treble. I used the $+0.5\text{dB}$ setting for most of my listening.

Setup

My listening space measures 16' by 21', with an oddly sloped ceiling at an estimated average height of 9'. But this space is part of an open floor plan: one 21' side is almost entirely open, producing an acoustic space actually far larger than 16' by 21'. This area also accommodates the home-theater setup that I use for my work for our sister publication *Sound & Vision*, and includes two projection screens that I can fully retract when the main attraction is music. The room is relatively live, but the floor is largely covered with thick rugs. Against the back wall, several feet behind my listening seat, shelves filled with books, CDs, and videos rise from the floor almost to the ceiling.

I drove the Concept 500s with a new [Marantz AV8805](#) surround preamplifier-processor used in two-channel stereo mode, together with Outlaw Audio's new Model 7220 power amp, specified to output 220Wx7 into 8 ohms. To meet this spec with all seven channels driven, the Outlaw needs a 20 amp power line. My outlets are only 15 amps, but that limitation was irrelevant for this review, for which I used only two channels.

The source was a Marantz UD7007 universal BD player, connected to the Marantz pre-pro with a coaxial digital link for CD playback. (All recordings mentioned in this review were on CD.) The wiring was Kimber Kable AGDL digital coaxial from source to pre-pro, Cardas Hexlink interconnects from pre-pro to power amp, and AudioQuest Rocket 88 from amp to speakers.

The Concept 500s were positioned about 9' apart and 11' from the main listening seat, toed in to aim directly at it. The front baffles were about 5' out from the front wall, and the tweeters were 36" above the floor. While the latter isn't far different from the ear height of a typical listener sitting in a comfortably upholstered chair, my seat puts me a couple inches higher. And because there are hardwood floors under the area rugs, I didn't use the speakers' spikes.

Listening

It's long been my opinion that symphonic orchestral music is the most difficult to record and play back—perhaps one reason for its drop in popularity in recent decades. Multichannel recording and playback is typically more convincing than two-channel stereo on such material, perhaps because it can better reproduce the ambience of the recording space, thus at least partially compensating for the fact that no home audio system can reproduce the full power of a symphony orchestra at full concert levels.

But there are well-recorded two-channel exceptions, and some of the best I've heard have been film soundtracks, which is odd because most modern soundtracks have been recorded in multichannel sound. However, there's an art to mixing down multichannel to two channels, which is one reason many original-soundtrack albums sound far worse than they do on the same film's video release. The latter hasn't been mixed down, nor is it a victim of the current fetish for compressing the life out of recordings—its soft passages can't be allowed to overwhelm the dialogue or the effects!

One of these exceptional recordings is Harry Gregson-Williams's score for *Kingdom of Heaven* (CD, Sony Classical SK 94419), which deftly combines orchestra and chorus and was one of my 2019 picks for "[Records to Die For](#)." It sounded superb through the Concept 500s, with excellent imaging, convincing depth, and a remarkable sense of space and openness surrounding the performers, particularly the chorus.

The late James Horner's score for *Sneakers* (CD, Columbia CK 53146), one of my R2D4 selections for [1995](#), was recorded by [Shawn Murphy](#), who's been responsible for some of the best-sounding orchestral soundtracks of the past 30 years. Murphy has recorded virtually every John Williams film score since the mid-1980s (and used to use Wilson Audio WATT/Puppy speakers as his studio monitors). He's also worked extensively with film composer James Newton Howard. Horner's soundtrack for 1989's *Glory* has long been an audiophile favorite, and *Sneakers* is another special recording but a hidden gem—it was composed for a long-forgotten box-office fizzle. My favorite track is "Playtronics Break-In," a 10-minute tone poem featuring orchestra, wordless chorus, and soft passages punctuated by abrupt dynamics, all presented on a deep, wide, realistic acoustic space.

From ambience to dynamics, the Concept 500s captured it all beautifully. Their bass impact wasn't quite as punchy, powerful, and deep as I've heard from a few other speakers in my room, but it was never less than satisfying. A subwoofer or two (which I did try) will of course add a bit more bottom-end impact, but with anything less than big pipe organs, savagely huge drums, or the most challenging electronic pop, this was rarely a concern—and might not be one at all in a room of more average size.

Classical or jazz double bass, and bass guitar, were reproduced with similar effectiveness. Unless I turned up the volume too high, making those inevitable room modes more audible, the Concept 500s' bass rarely sounded woolly or boomy. When I tried heavy deep-bass material with the speakers' magnetically attached grilles in place, they rattled—but this wasn't a problem, as I typically leave the grilles off.

Comparisons

I did briefly compare the Concept 500s to my [Monitor Audio Silver 10s](#). The now-discontinued Silver 10 costs less than half the price of the Q 500, so this comparison, however interesting, wasn't entirely fair to the Monitors. I kept the levels matched as closely as possible (though this is dicey at best with speakers that aren't absolutely flat in-room—and no speakers are). I played the same tracks, and set up only one pair of speakers at a time in the same positions, which added an unavoidable delay of about 10 minutes while I swapped speakers.

The Silver 10s, with their dual 8" woofers (but smaller, lighter cabinets than the Concept 500s), did have slightly more explosive bass and harder-hitting transients. But the latter were likely helped by the Monitors' marginally brighter top, as it's the higher frequencies that define edge clarity, even with abrupt bass transients: The sound of a drumstick or mallet striking a drumhead, or the rush of air through organ pipes, can affect how we judge the overall sound—bass isn't inherently "fast," but its accompanying overtones are. Neither speaker could challenge a good subwoofer, but the Silver 10s did provide a bit more subjective grunt in my room.





One complicating factor in this comparison was that I preferred the AudioQuest speaker cables with the Concept 500s, and usually prefer an older pair of slightly softer-sounding Monster Cables with the Monitors. But for most of my comparative listening I used the AudioQuests throughout—after all, I was reviewing the Concept 500s, and wanted to keep the unavoidable delay in switching speakers as short as possible. This may have put the Monitors at a slight disadvantage, as their brighter top end with the AQ cables wasn't necessarily a plus. The more expensive Concept 500s sounded sweeter and smoother on top, but in no way dull.

Back to the Concept 500

The Q Acoustics speakers continued to impress me with a wide range of music. They were particularly good with voices—much better than I'd expected. A two-way design, the Concept 500 has no dedicated midrange driver, instead relying on its two 6.5" woofers to cover that region until they hand off to the tweeter at 2.5kHz. This does provide the cost savings entailed by a simpler crossover and one fewer driver—money that can be put into the speaker's elaborate cabinet structure while keeping the price down—but it forgoes the theoretical advantages of a separate midrange driver. The latter is typically smaller, offering potentially better performance throughout the entire vocal region. That said, successful designs from well-known brands, including Wilson Audio and Bowers & Wilkins, often use midrange drivers as large as 6".

And from my primary listening seat, I heard nothing from the Concept 500s that revealed any boxy, nasal, or unnatural coloration. The balance was neither clearly forward nor recessed. The *DALI CD Vol.3*, a compilation from the Danish audio manufacturer DALI, has superlative sound quality (footnote 1). Sophie Zelmani's clear, breathy voice in "How It Feels" is crisp

and open; and in "These Days," Ane Brun's singing is enhanced by what sounds like artificial reverb. While the Concept 500s made these clear, the effect was subtle, not unnatural. On both tracks the instrumental accompaniment, including the drum kit, wasn't overly powerful, but in this music it doesn't need to be—the speakers did their job by avoiding either excess or leanness.

It had been years since I'd listened to Jay Leonhart's *Salamander Pie* (CD, DMP CD-442), and I'd forgotten how convincingly this 1983 release reproduces the sound of a jazz duo featuring Leonhart's, um, interesting singing and fine double-bass work, assisted by pianist Mike Renzi. With song lyrics as quirky as in the title track ("Crunchy, munchy, good for you . . .") and "Goodbye Miami" ("The ocean has risen about thirty feet . . ."), it's irresistible. So were the voices of other singers, from Eric Bibb's on *A Collection of Cyndee Peters and Eric Bibb* (CD, Opus3 CD 7706/03) to Elvis Presley's in "Fever" (on *The DALI CD Vol.2*). With all of these selections, the Concept 500s did everything right and nothing wrong.

I mustn't fail to mention Annie Lennox's "Into the West," the concluding track of Howard Shore's magnificent score for *The Return of the King* (CD, Reprise WMG Soundtracks 48521-2). Lennox's vocal, her and Shore's music, and this recording's sound were all sublime through the Q Acoustics. (Note to self: Why haven't you bought any of Lennox's albums? Correct this oversight ASAP.)

All of these selections, and many more, brought out the best in the Concept 500s. It might be presumptuous to say that the Concept 500s also brought out the best in these recordings, but I'm certain that, perhaps apart from the deepest bass—a major challenge for most speakers in my large room—you may have to spend a lot more to do better.

Conclusions These days, the audio market, and most demonstrations at audio shows, are so dominated by big, expensive speakers that it might seem as if relatively affordable models are disappearing. That's not the case. While the average shopper might think \$5999.99 an outrageous amount of money for a pair of speakers, it's actually in the sweet spot for audiophiles willing to squeeze their budgets a bit harder to get something special.

And the Q Acoustics Concept 500 is special. Its only obvious flaw is that you can't go give it a casual listen at that audio shop that used to be just around the corner. The good news is that a home trial of these speakers requires little more than the effort to order them, unpack them, and set them up. If you don't like them, you can ship them back within 30 days at no cost, not even return shipping. But I doubt that, once they've entered your listening room, they'll ever leave.

Sidebar 1: Specifications

Description: Three-driver, two-way, floorstanding loudspeaker. Drive-units: 1.1" (28mm) tweeter, two 6.5" (165mm) mid/woofers. Crossover frequency: 2.5kHz. Crossover system: fourth-order acoustical. Bass function: rear port. Frequency response: 41Hz–30kHz, –6dB/+3dB. Sensitivity: 90dB (conditions not specified). Impedance: 6 ohms nominal, 3.7 ohms minimum. Recommended amplification: 25–200W.

Dimensions: 45.3" (1150mm) H (including plinth) by 7.8" (200mm) W by 13.8" (350mm) D. Weight: 92 lb (42kg).

Finishes: Gloss Black with rosewood veneer, Gloss White with oak veneer.

Serial number of review samples: QA2810 0051700403.

Price: \$5999.99/pair. Approximate number of dealers: sold direct only at the time of writing. Warranty: 5 years.

Manufacturer: Q Acoustics, Stortford Hall Industrial Park, Dunmow Road, Bishop's Stortford, Hertfordshire CN23 5GZ, England, UK. Tel: (855) 279-5070. Web: www.qacoustics.co.uk (UK), www.qacoustics.com (US).

Sidebar 2: Associated Equipment

Digital Source: Marantz UD7007 universal BD player.

Preamplification: [Marantz AV8805](#) preamplifier-processor.

Power Amplifier: Outlaw Model 7220.

Loudspeakers: [Monitor Audio Silver 10](#).

Cables: Digital: Kimber Kable AGDL (coaxial). Interconnect: Cardas Hexlink. Speaker: AudioQuest Rocket 88. AC: Manufacturers' own.—**Thomas J. Norton**

Sidebar 3: TJN'S In-Room Measurements

To provide a picture of what the Concept 500s sounded like in my room. I ran a number of in-room measurements on the Q Acoustics Concept 500s using the OmniMic test system from Parts Express. I took all of these at my main listening seat, with the speakers positioned as they were auditioned.

Figs. 1 and 2 show the left- and right-channel responses of the Concept 500s, taken at an average of 10 positions around the height of my ears when I'm seated, and with the speakers' HF jumpers set to "+". All results shown here were 1/6-octave smoothed. The anomalies, particularly in the deep bass, are common to most in-room speaker measurements, though the details significantly vary with the room.

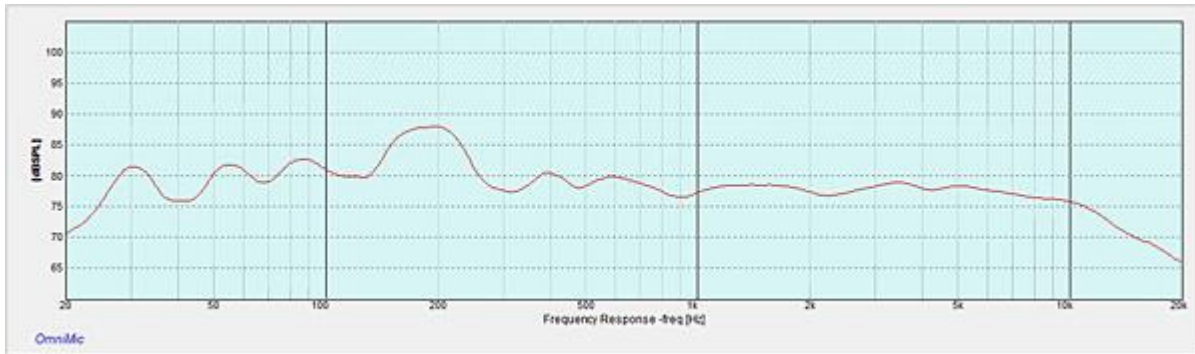


Fig.1 Q Acoustics Concept 500, left channel, spatially averaged, 1/6-octave response in TJN's listening room.

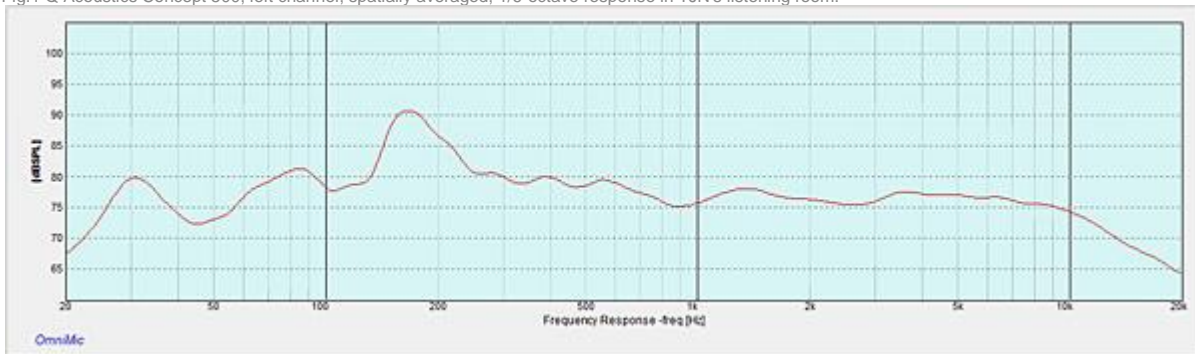


Fig.2 Q Acoustics Concept 500, right channel, spatially averaged, 1/6-octave response in TJN's listening room.

The peak at around 150Hz was far less audible than it looks, though it might have added a little warmth to the sound. The dip at just under 50Hz likely kept the bass from being as weighty as it might have been. Note the similar deviations in the Monitor Audio Silver 10 (fig.3) measured in the same position. The Silver 10 does show roughly 2dB more output in the deep bass. This might not look significant, but while the ear is relatively insensitive to the lowest bass, it's more sensitive to small *differences* in that region.

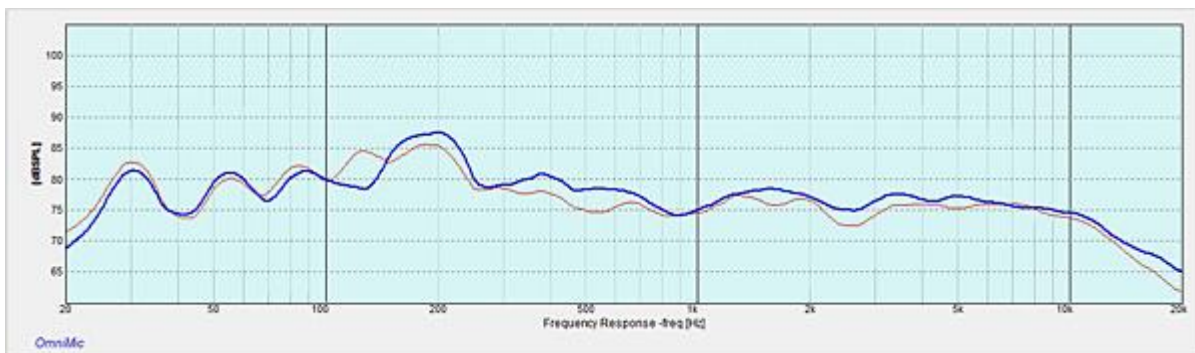


Fig.3 Q Acoustics Concept 500, response at TJN's head position (blue), and of Monitor Audio Silver 10 (red).

As an experiment, I made use of two features in the Marantz AV8805 pre-pro: its Audyssey room equalization and its Bass control. I first ran a full-range Audyssey routine. When I then determined that the bass, while now far more uniform and balanced in both channels than before, was a bit lower in level than is desirable, I also used the Bass control to raise the low-frequency output by 4dB. Interestingly and usefully, the Marantz's Bass control raised the entire bass region more or less

linearly. I also changed the high-frequency adjustment jumpers on the Concept 500s' rear panels to their "0" position (though the difference between "0" and "+" was only about 0.5dB).

Fig.4 shows the result for the left channel (the improvement in the right channel was equally impressive). The EQ'd response is shown in blue, the non-EQ'd result in red. (The results shown in figs. 3 and 4 are from a single reading taken directly at my head position rather than the 10-point average in figs. 1 and 2.)

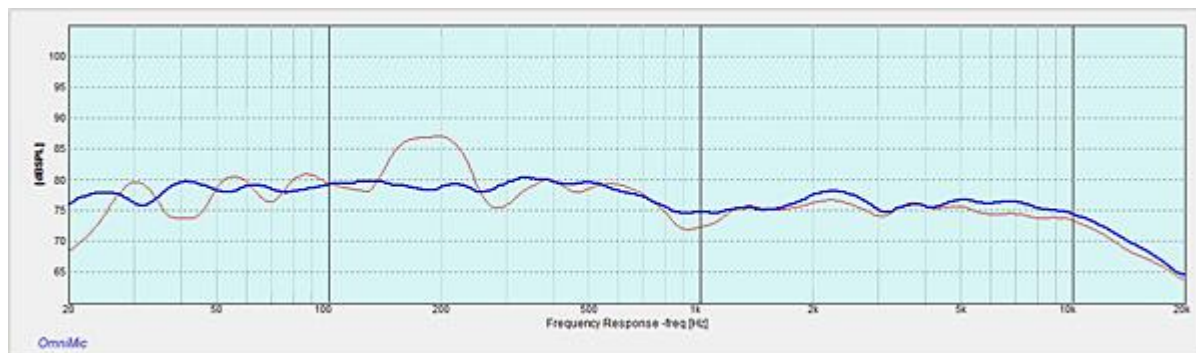


Fig.4 Q Acoustics Concept 500, response at TJN's head position with EQ (blue), and without EQ (red).

The result was a dramatic improvement in the Concept 500's bass response, although, apart from the elimination of the peak near 200Hz, this may not be obvious from the curves. But the apparent near-flatness of response down to 20Hz shouldn't be taken too literally, since it was measured at less than 80dB spl. Yes, the bass reach from the equalized Concept 500s was now as potent as any I've heard from a subwooferless speaker in my room. But pushing the EQ'd speakers too hard with deep-bass material in such a large room did cause them to show signs of distress, if only rarely—so I didn't pursue this too far. If you want clean, powerful, *deep* bass at realistic levels from most full-range speakers, use one or more subwoofers.

The point of this experiment was not to specifically recommend room equalization, which anyway isn't widely available in two-channel preamps and integrated amps. I don't use Audyssey often, and not at all for reviews (except for special digressions such as this). I used it here to try to simulate the bass room gain you might experience naturally with the Concept 500s in a listening space smaller than mine.

None of the listening observations in the main review were made using any room EQ or tone controls, apart from the speaker's own rear-panel HF jumpers.—**Thomas J. Norton**

Sidebar 4: Measurements

I used DRA Labs' [MLSSA system](#) and a calibrated DPA 4006 microphone to measure the Q Acoustics Concept 500's frequency response in the farfield, and an Earthworks QTC-40 microphone for the nearfield responses. Q Acoustics specifies the Concept 500's sensitivity as 90dB/W/m; my estimate was close to that, at 89.2dB(B)/2.83V/m, which is usefully higher than average. The Concept 500's impedance is specified as 6 ohms, with a minimum magnitude of 3.7 ohms. Fig.1 shows how the Concept 500's impedance and electrical phase varied with frequency with its reflex port open. Though the magnitude does drop below 6 ohms in the midrange, with a minimum value of 3.9 ohms at 193Hz, and there is a current-demanding combination of 5.5 ohms and -39° electrical phase angle at 99Hz, the Concept 500 will not be a particularly difficult load for an amplifier to drive. With the port blocked with the supplied foam plug, the impedance plot (fig.2) indicates that the Concept 500 behaves as a sealed-box design with a woofer tuning frequency of a relatively high 59Hz.

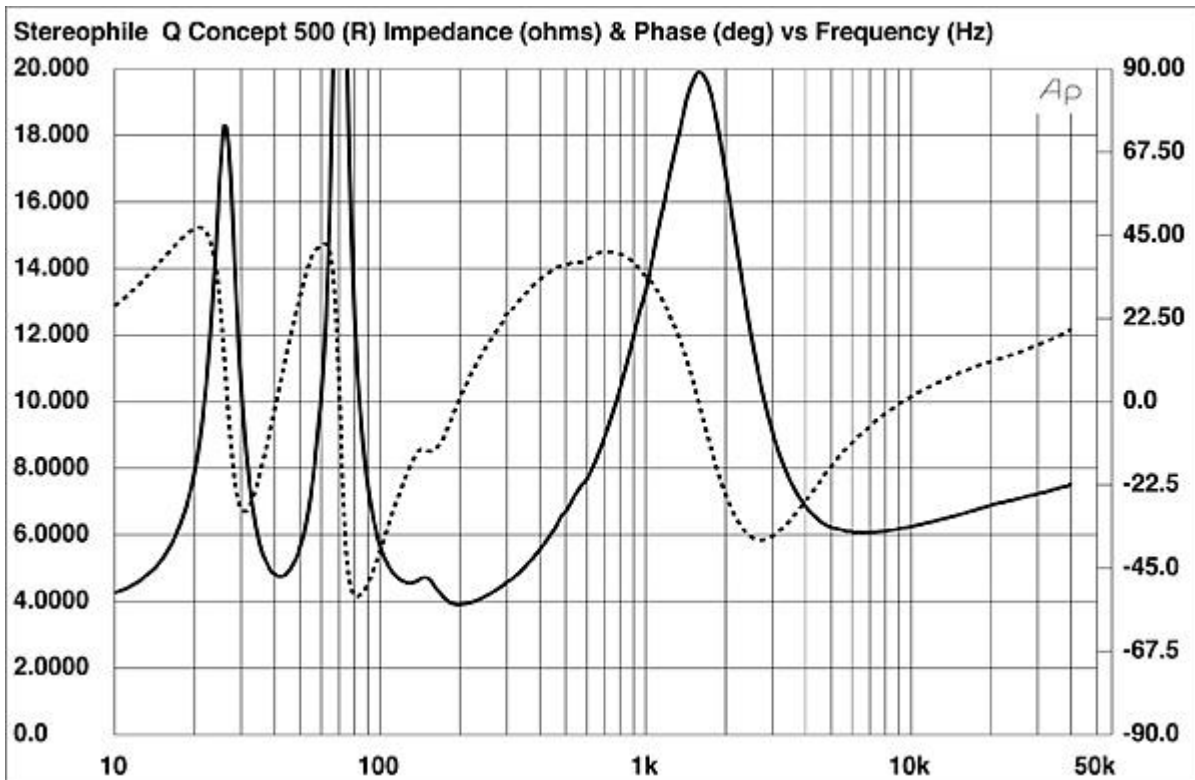


Fig.1 Q Acoustics Concept 500, electrical impedance (solid) and phase (dashed) with port open (2 ohms/vertical div.).

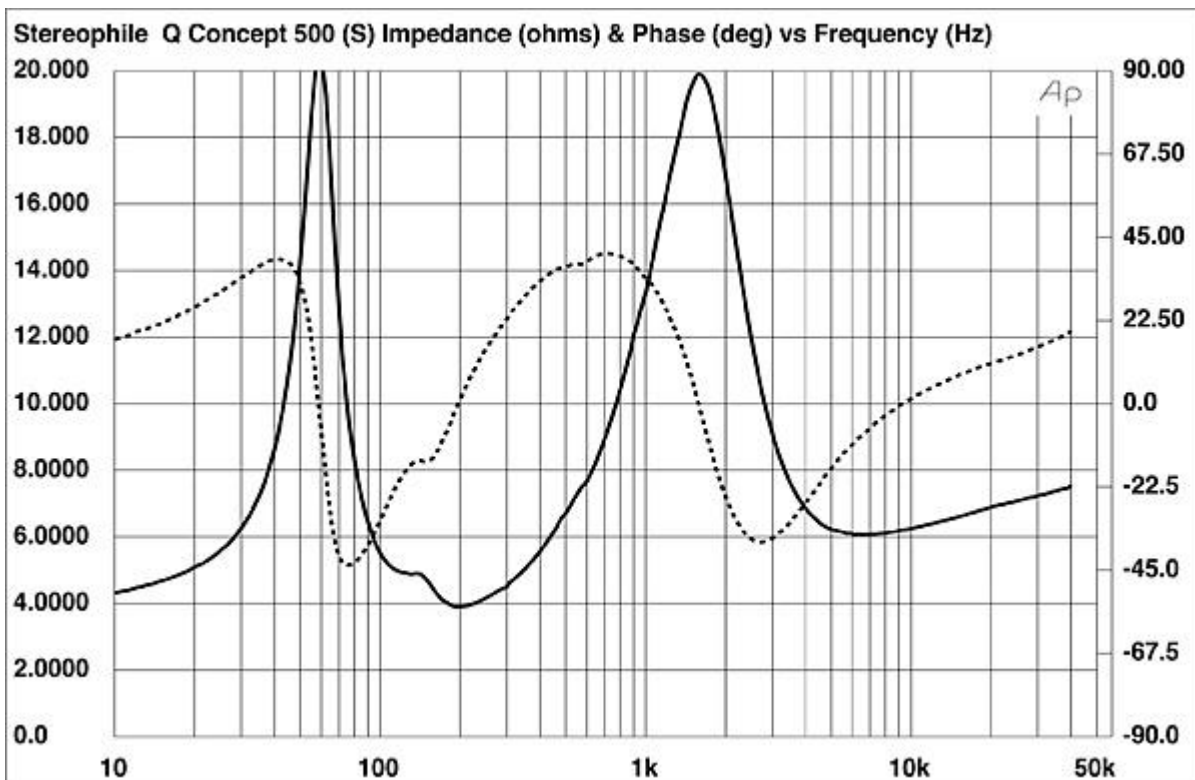


Fig.2 Q Acoustics Concept 500, electrical impedance (solid) and phase (dashed) with port blocked (2 ohms/vertical div.).

When I investigated the enclosure's vibrational behavior with a plastic-tape accelerometer, it seemed relatively inert. Fig.3 shows a cumulative spectral-decay plot calculated from the accelerometer's output when it was fastened to the front baffle midway between the lower woofer and the speaker's base. I did find some resonant modes in the midrange on all surfaces, but these are all low in level.

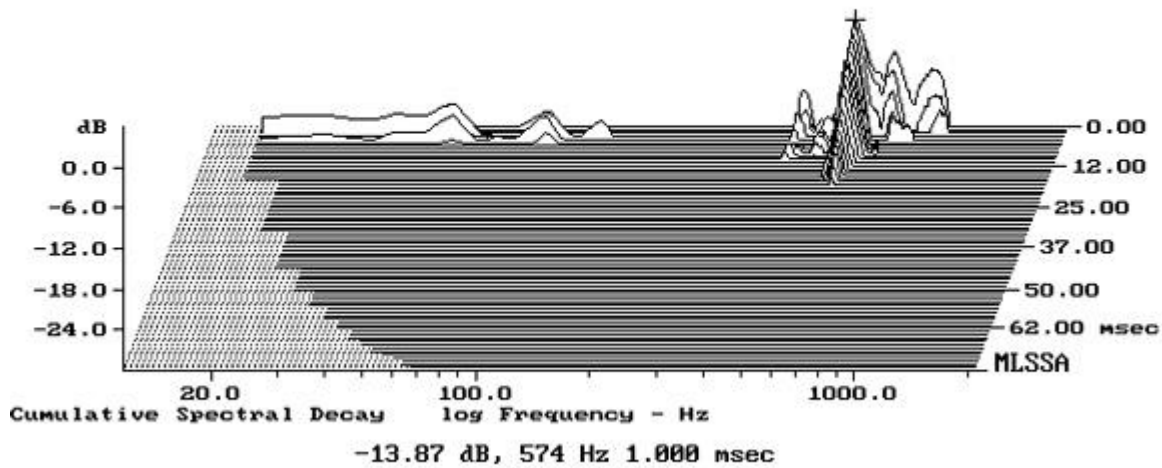


Fig.3 Q Acoustics Concept 500, cumulative spectral-decay plot calculated from output of accelerometer fastened to front baffle halfway between lower woofer and base (MLS driving voltage to speaker, 7.55V; measurement bandwidth, 2kHz).

With the port open, the impedance plot has a saddle in the magnitude trace centered on 42Hz (the lowest note of the four-string double bass and bass guitar), which suggests that this is the woofers' reflex tuning frequency. The two woofers behaved identically, and when measured in the nearfield had the expected minimum-motion notch in their outputs at 42Hz (fig.4, blue trace). The port's output (red trace) peaks between 30 and 90Hz, but its upper-frequency rolloff is disturbed by a shelf at around 150Hz, the frequency of a small bump in the impedance-magnitude trace. There is also a sharply defined resonance at 710Hz in the port's output, but this is 20dB down compared with the woofer's level, and its audibility will be further reduced by the fact that the port fires to the speaker's rear. Higher in frequency in fig.4, the woofers (blue trace) are crossed over to the tweeter (green) at the specified 2.5kHz.

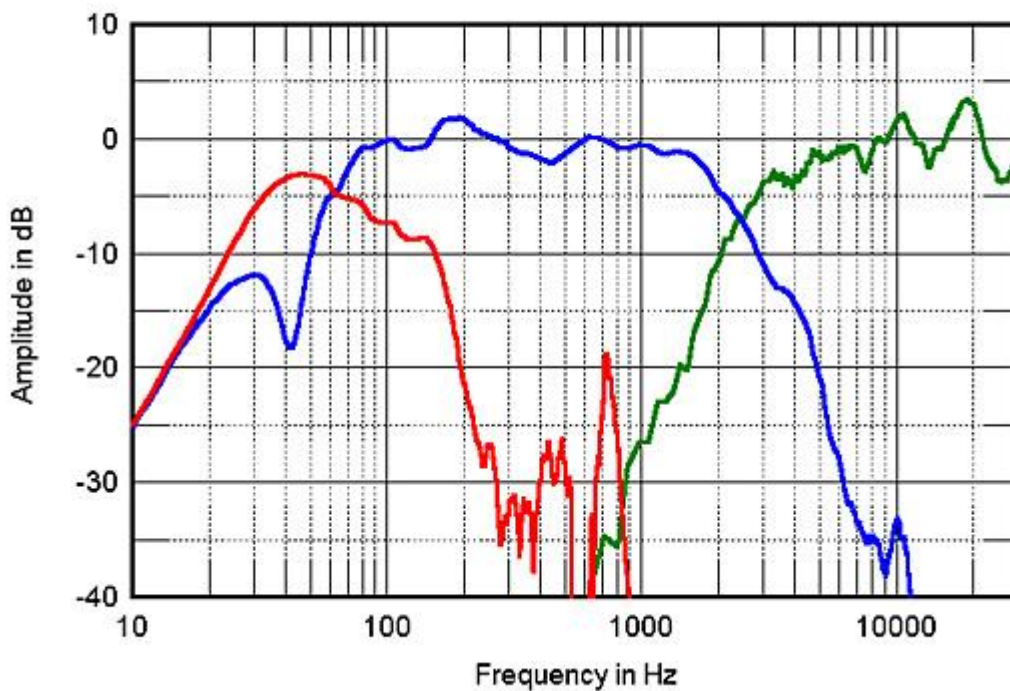


Fig.4 Q Acoustics Concept 500, acoustic crossover on tweeter axis at 50" with port open, corrected for microphone response, with the nearfield woofer (blue) and port (red) respectively plotted below 350Hz and 900Hz.

In fig.5, the black trace below 300Hz shows the complex sum of the nearfield woofer and port responses, taking into account acoustic phase and the different distances of each radiator from a nominal farfield microphone position. The nearfield

measurement technique assumes that the drive-unit is mounted in a true infinite baffle—ie, one that extends to infinity in both the vertical and horizontal planes—and this results in a peak in the upper bass with a speaker that is actually maximally flat in the bass. The Concept 500 has only a small bass peak, which implies that its woofer tuning is optimized more for definition than for weight, as TJN found. However, the boundary reinforcement in the low bass, due to the fact that the port is placed close to the floor, will result in a better balance of clarity and weight in the low frequencies.

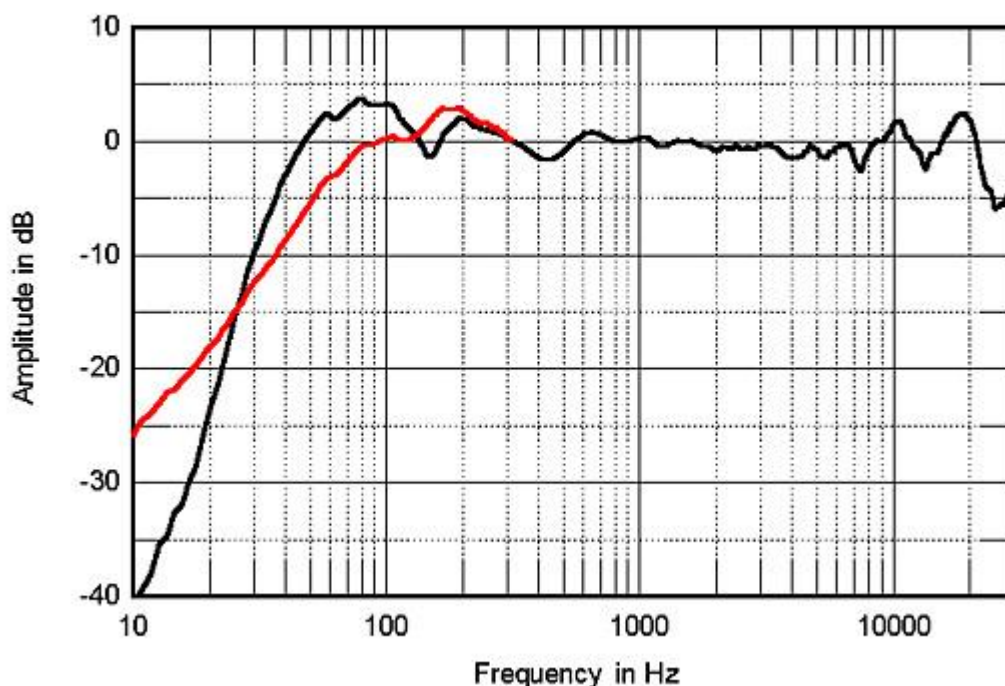


Fig.5 Q Acoustics Concept 500, anechoic response on tweeter axis at 50°, averaged across 30° horizontal window and corrected for microphone response, with the complex sum of the nearfield woofer and port responses with the port open (black), and the woofer response with the port closed (red), both plotted below 300Hz.

The red trace in fig.5 shows the nearfield output of the woofers with the port sealed. It rolls off below 80Hz with the expected 12dB/octave slope compared with the reflex tuning's 24dB, but this suggests that the speaker will sound lean with the port blocked.

Above 300Hz in fig.5, the black trace shows the Concept 500's farfield response, averaged across a 30° horizontal window centered on the tweeter axis. It is *superbly* flat. This graph was taken with the rear-panel jumper set to its Normal position. With the jumper set to More Treble or Less Treble, the tweeter's output was respectively raised or lowered by approximately 0.5dB.

The plot of the Concept 500's horizontal dispersion (fig.6) indicates a well-controlled radiation pattern. The evenly spaced contour lines in this graph suggest that a pair of these speakers will offer stable stereo imaging, due to the fact that their direct sound and the reflections of that sound from the room's sidewalls will not have different characters. In the vertical plane (fig.7), the Concept 500 is not fussy about having the listener's ears the same height from the ground as the tweeter (37" with the speaker on its spikes).

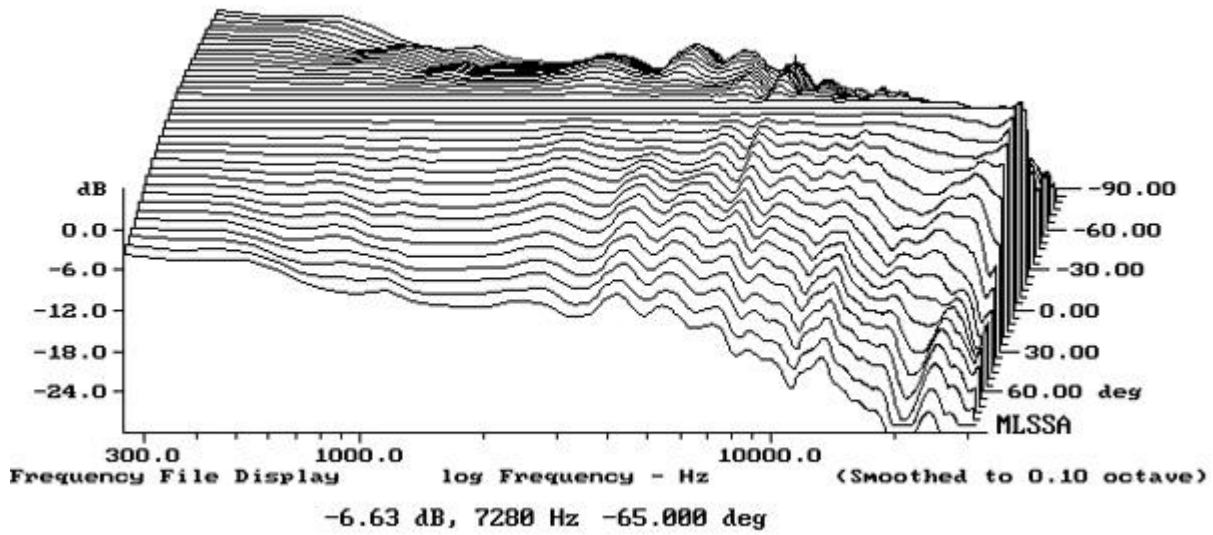


Fig.6 Q Acoustics Concept 500, lateral response family at 50°, normalized to response on tweeter axis, from back to front: differences in response 90–5° off axis, reference response, differences in response 5–90° off axis.

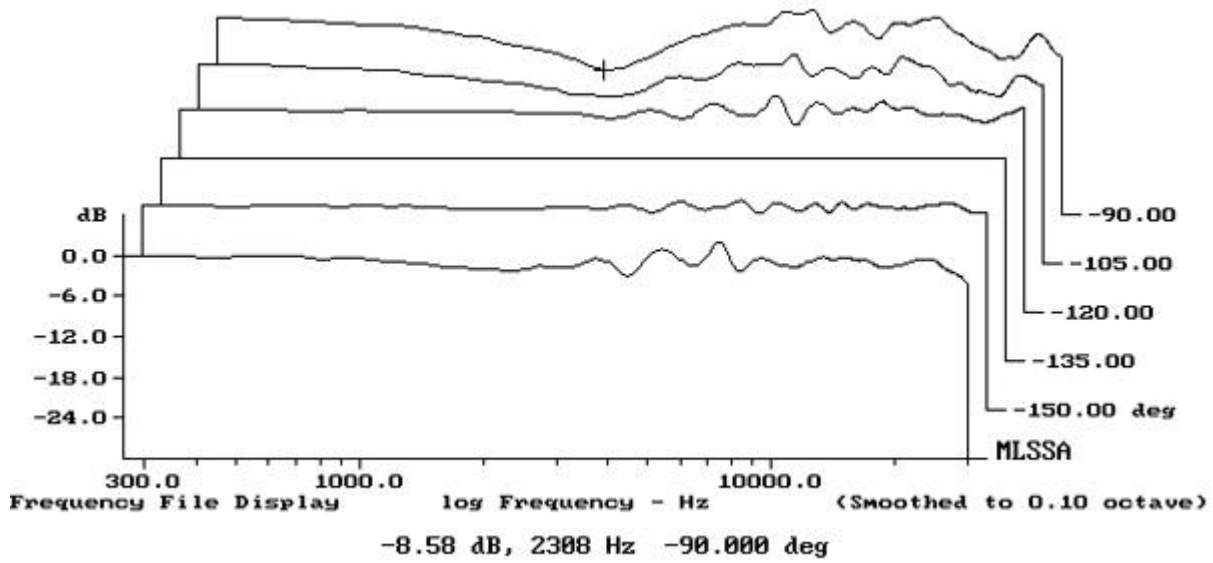


Fig.7 Q Acoustics Concept 500, vertical response family at 50°, normalized to response on tweeter axis, from back to front: differences in response 15–5° above axis, reference response, differences in response 5–10° below axis.

In the time domain, the Concept 500's step response (fig.8) indicates that the tweeter and woofers are connected in positive polarity. The decay of the tweeter's step blends smoothly with the start of the woofers' step, suggesting optimal crossover design. The Q's cumulative spectral-decay plot (fig.9) was superbly clean.

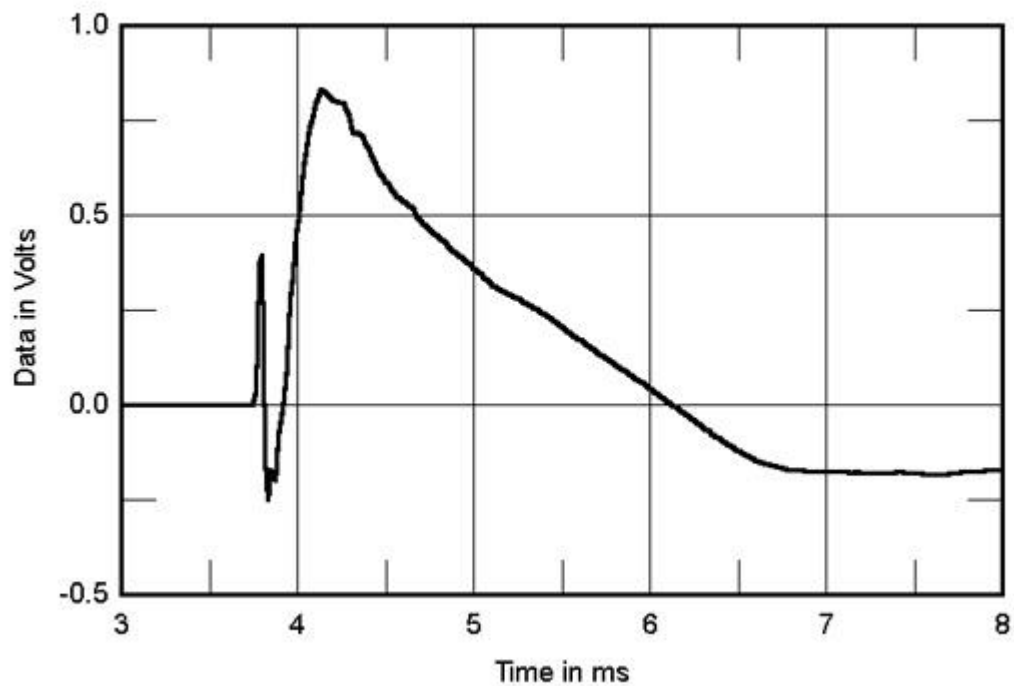


Fig.8 Q Acoustics Concept 500, step response on tweeter axis at 50° (5ms time window, 30kHz bandwidth).

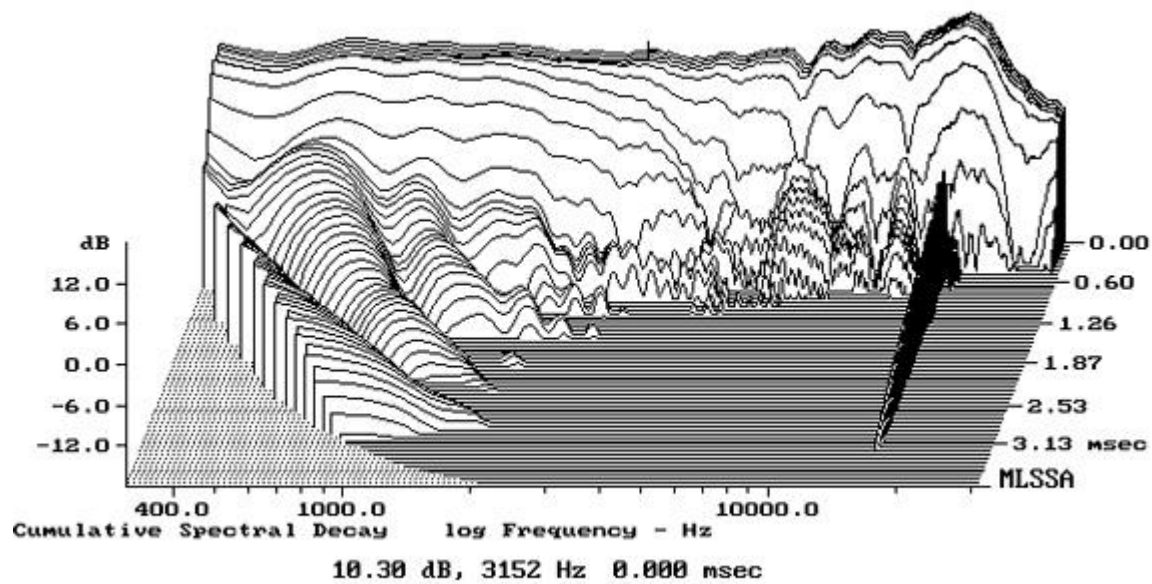


Fig.9 Q Acoustics Concept 500, cumulative spectral-decay plot on tweeter axis at 50° (0.15ms risetime).

I was impressed by the Concept 500's measured performance. It exemplifies textbook loudspeaker design.—John Atkinson