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ISSUE 189

ELECTRONICALLY REPRINTED FROM JANUARY 2009

MBL'S

X-TREME!

SPEAKER

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Zowie!

MBL 101 X-Treme Omnidirectional Loudspeaker

Jonathan Valin

MBL 101 X-TREME OMNIDIRECTIONAL LOUDSPEAKER

Over the years I've reviewed my share of big, expensive loudspeakers, but none as big or as expensive as the six-and-a-half-foot tall, three-thousand-five-hundred pound, four-chassis, mbl 101 X-tremes. And none, I am relieved to say, as good.

Why relieved? Well, if you were at the last two CESes you wouldn't have to ask. Even driven by MBL's own superb, ultra-pricey, near-dedicated electronics, the Xes sounded—how shall I put this?—not very good. *Real* not very good. Indeed, when I went to Germany to visit MBL's offices and manufacturing facility this past spring, I had no intention of reviewing MBL's flagships. I'd come for the debut of the 101 E MkII, a revised version of the speaker that has won more TAS Best Sound of Show awards than any other competitor.

What made and makes the 101 Es such showstoppers is their uncanny ability to get the first step in enjoying music right. Before it does anything else (and it does many things else), music works on us physically. It excites us. Gets us moving. Starts our toes tapping and our butts wiggling and our arms waving like air-guitar players (or air conductors). When a performer or a hi-fi really allows us “into” the music and the music “into” us, we are always and only a half-step away from dancing and singing and sheer self-abandon. It's one of the chief reasons why we listen.

The 101 Es own this first step in musical enjoyment. They are the thrill rides—the rollercoasters—of the high-end audio amusement park. Though they have any number of things going for them, it is primarily their sensational dynamic range, speed, and impact, their huge enveloping soundstage, their uncanny three-dimensional presence, their through-the-floor bass, and, of course, their ability to play very loud without compression or confusion that make them so electrifying. Sheer sonic excitement may not mean much to those joyless souls who want to hear a vocalist or a Mahler symphony sound precisely as good or as bad as she or it did in the engineering booth on the day of a recording session; as for me, I still thrill to the thrill of getting goosebumps on my arms or feeling a chill run up my back when a stereo—a mere contraption playing back another mere contraption—captures the excitement of the real thing.

So...given my intention to review a greatly revised version of a speaker I knew was great, how did I end up with a speaker that I thought I knew wasn't? This, my friends, was serendipity—combined with a touch of lunacy on my part and on Wolfgang Meletzky's (late of MBL, the “M” in “Meletzky, Bienecke, Lehnhardt”).

As fate would have it, before visiting MBL's Berlin offices and its factory in Eberswalde (a picturesque town outside of Berlin), I made the mistake of stopping at the Munich High-End Show for a few hours, where I heard the 101 X-tremes properly set up and playing in a much better room than the echo chambers of The Venetian at CES. What a difference! I literally didn't recognize the sound—it was that improved. Though still a little dark in balance and perhaps a little too lively in the upper mids and lower treble (the Munich room was enclosed in glass), this was a far cry from the shrieking harridan I'd heard at CES. Sweet in timbre, incredibly wide and deep in soundstage, huge in dynamics, with sensational bass and top treble and the kind of three-dimensionality in the midrange that only Radialstrahlers seem to own, the X-tremes sounded like giant 101 Es but with

a timbral and dynamic suavity, a focus and refinement that the wilder, woollier 101 Es never quite managed.

By the time I got to Berlin, my schnitzel was cooked. Hell, I'd already reviewed the 101 Es; I wanted a crack at the Big Boys.

Of course, there were the little problems of the Xes' sheer size and mass to deal with.

What we have here, on *each* speaker-side, is essentially two 101 Es without their subwoofers and subwoofer cabinets—one trio of Radialstrahler (Deutsch for “omnidirectional”) drivers facing upward and another, immediately above it, down, in a mirror-image array. The bottom trio of Radialstrahlers is mounted on a massive (over 500 pounds) base constructed of birchwood, brass, and aluminum in a constrained-layer sandwich; the upper set is bolted to a similarly massive top piece, also made of a constrained-layer sandwich of birch, brass, and aluminum, with a high-quality dynamic “ambience tweeter” nestled out of sight on its roof. Thick struts of stainless steel and cross members of powder-coated brass provide top-to-bottom and side-to-side structure and support. Each speaker-side weighs half-a-ton.

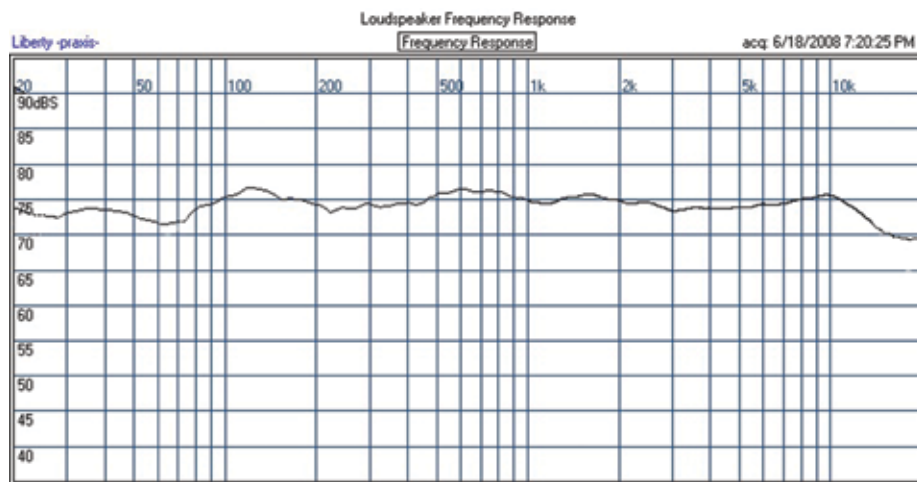
In addition to the gigantic Radialstrahler “towers,” the 101 X-tremes come with two six-and-a-half-foot-tall subwoofer towers that weigh better than half-a-ton all by themselves. Each sub array comprises three ported, lacquered-birch and aluminum boxes, fitted on top of each other via heavy-duty aluminum pegs and sockets, with the sub crossover controls and the MBL amplifier that drives the entire array housed in the middle box. Two 12" aluminum-cone drivers with very wide and flexible surrounds are mounted in a push-push configuration inside each of the three boxes—one woofer on the right side of the enclosure, one on the left, both stabilized and cross-braced by a massive aluminum rod running between them to prevent the drivers from passing resonant energy to each other and to the box itself. That makes a total of six 12" woofers per speaker-side, twelve 12" woofers altogether. *That*, my friends, is a lot of bass.

Although the 101 X-tremes break down into pieces, the pieces themselves are massive (roughly 300 to over 500 pounds each). With the invaluable help of three of the strongest human beings on earth (piano movers from the Cincinnati company of Elam and Sons), Jürgen Reis (the X-treme's designer, who had come over from Germany to assist in setup), David Alexander (MBL's then U.S. importer), and I managed to haul the 101 Xes upstairs to my listening room. (Those of you interested in how this Herculean feat was accomplished, go to the forum on AVguide.com and look at the thread “mbl 101-Xtreme Radialstrahler” in the “Speakers” category.)

After assembling the speakers, Reis positioned the Xes and dialed them in—a two-day process that involved many large and small adjustments in the physical location of the Radialstrahler towers and their woofer stacks, as well as adjustments of the controls for each of the twelve Radialstrahler drivers and the two ambient tweeters on top of the Radialstrahler towers, plus tweaking of the gain, group delay (phase), and Q of the woofer stacks. (The crossover point between the woofers and the Radialstrahlers is fixed at around 100Hz with a slope of 18dB/octave and cannot be adjusted.) This is a very large, extraordinarily heavy, exceedingly complex speaker system that absolutely requires professional assistance in setup. In other words: Kids, don't try this at home without adult (German)



MBL 101 X-TREME OMNIDIRECTIONAL LOUDSPEAKER



supervision (and, of course, the Elam brothers).

If the 101 Es looked, as I once wrote in TAS, like R2D2 in a hot tub, the assembled 101 X-tremes looked like the jungle-gym in Nikolai Tesla's house. As a visiting wag remarked, like 'em or hate 'em, they certainly make a design statement. What I expected to hear from these ultra-cool high-tech giants was more or less what I'd heard in Munich—a bigger, better 101 E. But from go, that's not the sound I got.

Let me be honest here: Forget everything you may have heard from the 101 Xes at CES—I had to. Forget everything you've read, including everything I've written about the 101 Xes (counting what I just wrote about its poor-to-mixed performance at CES and its excellent performance in Munich)—I had to. In all candor, this was the most surprising first listen I've had with *any* loudspeakers. They simply didn't sound at all like what I expected based on my show experience, good or bad.

First of all, the 101 Xes were so much more neutral in balance than I anticipated that I was shocked (and still am). They didn't seem to have any of the of the frequency-response lumpiness—the darkness or over-ripeness or hard aggressiveness or searing treble or bloated bass—that I had (secretly) expected to hear from them on the basis of CES auditions. Indeed, if the 101 Xes sounded like any other speaker, it was the Magico Mini IIs, which is to say that they were solidly and impressively and, again, totally unexpectedly (at least to me) uncolored, undistorted, and “flat.”

Of course, Radialstrahlers have always sounded boxless (they have none) and incomparably big, open, and spacious. But 101 Es were never what I would call truly neutral in balance. The 101 Xes *were*, and even bigger, more open, more spacious than the Es—and not by a little bit. Plus, they had simply sensational dynamic range and scaling—truly lifelike speed, pace, and impact even on instruments (like huge drums or plucked bass guitar) that are nearly impossible to scale realistically in a home. At the same time they had the same “in the room with you” presence on voice and guitars and pianos and strings that makes listening to the 101 Es like looking into a diorama.

Pleased but mystified, I did an RTA on the 101 X-Tremes after Reis and Alexander departed—just to find out if I was fooling myself about their neutrality. I wasn't. At the top of this page you'll find the RTA, taken in my listening room with a calibrated microphone and Liberty Instruments' Praxis software.

For what it's worth, from 20Hz to about 14kHz this is the

flattest frequency response I've measured in my listening room with *any* loudspeaker, including the Magico Mini IIs! The Xes' waterfall and impulse plots were also superb.

Though these plots were a reassuring confirmation of some of what I was hearing, they scarcely accounted for all that impressed me about the 101 X-tremes, which, like any Radialstrahler, have a unique sonic presentation that no measurements can describe.

To explain the uniqueness of the 101 Xes (or the 101 Es) you have to consider how they generate sound. Radialstrahler drivers are omnidirectional. They are, literally, pulsating spheres—point sources that radiate equal amounts of energy at all frequencies through a 360-degree soundfield. Unlike conventional wide-dispersion dynamic drivers, they do not sound or measure substantially differently “off-axis,” which is to say, they don't change in frequency response or introduce higher amounts of distortion and phase/time incoherence as you move away from the central axes of their drivers (in fact, their drivers don't have central axes). They produce precisely the same signal whether you are sitting in front of them, to the sides of them, or behind them. Necessarily, this means that they bring the entire listening room into play in a way that no other kind of loudspeakers (including dipoles and bipoles) does.

You might think that energy being broadcast in equal amounts at all frequencies toward literally every surface of your room would make the sound you end up hearing a confusing, echo-chamber-like mess. That it doesn't has to do with two interrelated phenomena: the 101 Xes' frequency-independent, constant-directionality dispersion, and the Precedence Effect.

First, unlike conventional loudspeaker drivers (particularly tweeters) that tend to send spotlight-like beams of inherently-more-distorted off-axis sound toward sidewalls—where, delayed only slightly in time, they bounce back to your ears alongside the direct output of the loudspeaker, screwing up timbres, dynamics, and durations at certain frequencies—an omni doesn't “selectively” energize specific spots on your walls. It doesn't work like a specular flashlight. It works like a diffuse glowing ball. It energizes your room *uniformly* at all frequencies, so that any reflected early arrivals will comprise the entire signal and not a small distorted piece of it.

Of course, an omni is still creating broadband room reflections, but we don't hear them as colorations because of the Precedence Effect.

The Precedence Effect is a psychoacoustic phenomenon whereby an acoustic signal arriving first at our ears suppresses our ability to hear any other signals, including echoes and reverberations that arrive up to about 40ms after the initial signal (provided that the delayed signals are not significantly louder than the initial signal). As Dr. Siegfried Linkwitz says on his fascinating Web site at www.linkwitzlab.com: “The ear/brain automatically relegates [these late-arriving signals] to the earlier



MBL 101 X-TREME OMNIDIRECTIONAL LOUDSPEAKER

learned acoustic behavior of the room and readily blankets that information and thereby the [sound of the] room itself.” Far from being more colored by room reflections, drivers, and enclosures, boxless omnis are in principle much *less* colored by all of these things and potentially much more faithful to sources because they essentially take the room sound *out* of the equation, thanks to the Precedence Effect and the fact that they are lighting up reflective surfaces uniformly at all frequencies rather than selectively at specific frequencies.

Omnis not only light up every surface of your room evenly; they light them up with *tremendous* energy, greatly reinforcing uniform power response through the passband (albeit at a price in loudspeaker sensitivity). Part of the reason that MBL Radialstrahlers are so famously lifelike in dynamics (particularly when they are played at moderate to loud levels) is the sheer amount of energy they are generating thanks to the unusually large surface area of their drivers. Consider a Radialstrahler woofer (the big silver pumpkin-like driver at the bottoms and tops of the Radialstrahler towers in the photos of the mbl 101 X-tremes). Every square inch of these giant spheres is producing sound with the same intensity as the central portion of a conventional dynamic woofer (and without any of the center-to-edge drop-off in power or increase in distortion of a conventional woofer). In radiating area a Radialstrahler woofer is the equivalent of something like twelve 12" cones! (And each side of the 101 X-treme has two of them!). The exact same thing is true of the Radialstrahler midrange and tweeter (and what a tweeter!).

You might think that drivers this large would be slowed down by their mass and would ring like bells being struck when hit with an electrical signal, but their size actually works to their advantage. Since they’re driven over the entire surfaces (they expand and contract, accordion-like, when playing), they have to move only very small amounts to make very loud sounds. These small excursions also mean that they don’t have to move very much to *stop* making sounds. Plus for all their size they are made of lightweight materials (the midranges and tweeters are formed from petals of carbon-fiber, the woofers’ from an aluminum-magnesium alloy) and, because of the volume of air inside them, are virtually self-damping. No, Radialstrahler drivers aren’t as lightweight as, oh, Quad ESL-2905 or MartinLogan CLX membrane drivers. (And, at *really* low listening levels, not as quick on transients or as high in resolution, either—though the difference in speed of attack and resolution of detail is surprisingly small and is completely gone at moderate to loud volumes, while the difference in sheer lifelike power delivery on big dynamic swings is hugely in the 101 Xes’ favor. ‘Stats and ribbons are fast but relatively “weightless,” like hummingbirds. Radialstrahlers are fast and strong, like bulls.)

Putting all of this energy into your room is going to mean that—omni theory notwithstanding—you will need to selectively damp certain surfaces of your room, particularly the walls between the speakers and behind the listening position. But then you have to selectively damp walls with any speaker. What you will get for your trouble is, I promise you, something extraordinary.

Everyone who’s heard the mbl 101 X-tremes—from my usual listening panel of friends and colleagues (many of whom have auditioned every piece of gear that has come through my room)

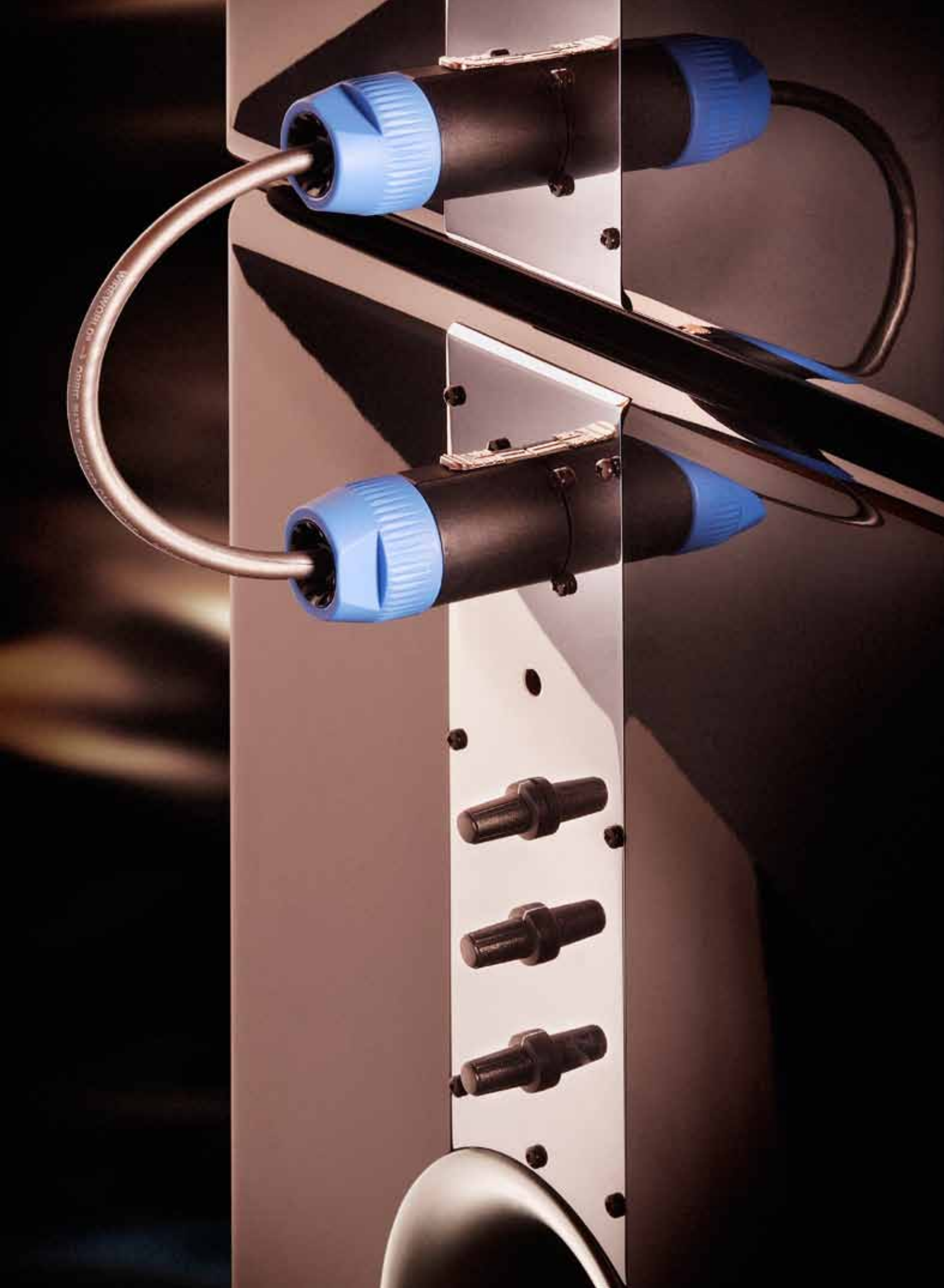
to visiting manufacturers (some of competing loudspeakers)—has had the exact same reaction, expressed in almost exactly the same words: “Where are the speakers?” Despite any shortcomings (and I will come to these), the mbl 101 Xes (properly situated and adjusted) sound less like loudspeakers than any other speaker system I’ve heard. All of the various ways in which speakers betray that their sound is being projected in narrower or broader dispersion patterns by individual drivers in resonant enclosures simply aren’t present (lending considerable credence to Dr. Linkwitz’s argument about the superiority of frequency-independent, constant-directionality transducers). What you hear, instead, is a soundfield that seems, magically, to have been imported *in toto* from some other place—from a concert hall or a recording studio—and plopped down in your listening room. There’s simply little to no vestige of “speaker” in the traditional sense. To put this differently, where other transducers sound the way movies look—like a two-dimensional medium imitating a three-dimensional one—the 101 X-tremes sound the way a *theatrical play* looks—no ersatz third dimension, but actual people on an actual stage right there in front of you (albeit reduced in size).

I’ve heard speakers with great “disappearing acts” before (the Magico Mini IIs, *par excellence*), but none like this one, which doesn’t so much disappear as not show up in the first place. It’s really a bit bizarre that a system that calls so much attention to itself when the music isn’t playing, because of its huge size and ultra-cool high-tech looks, vanishes so utterly when the music is on. It is, perhaps, the most astonishing bit of acoustic legerdemain I (or any of my friends) have ever witnessed.

When the recording allows, the Xes’ magical three-dimensional soundfield extends far beyond the boundaries of the speakers (including their woofer towers) and far beyond the backwall. When the recording doesn’t, the stage shrinks accordingly. The notion, advanced by some, that the “soundstage control” of omnis is always set to “11,” to borrow from Nigel Tufnel of Spinal Tap, just isn’t true. Yes, they add an attractive bit of air and spaciousness to most recordings, but like any great transducer they reproduce what they are handed with high fidelity.

Where omni detractors used to have an indisputable point was imaging. For all their many virtues, something like the 101 Es had trouble focusing vocalists and instrumentalists at center stage (though not at the sides of the stage); there was always a vagueness, a swimminess to their central images, which lacked the specificity of other high-end speakers. However, I am happy and astonished to report that imaging is no longer an issue with the 101 X-tremes, which focus voices or instruments at center stage with all the precision of Magico Minis (and with more lifelike size, to boot).

What’s changed? Well, there are two Radialstrahler arrays now per speaker side, in a mirror image (or quasi D’Appolito) configuration; the midrange and tweeter Radialstrahlers have been greatly improved with new formers and voice coils; the crossovers have been upgraded with new caps from Mundorf and Intertec; the 101 E’s vibration-producing subwoofers have been moved to their own constrained-layer enclosures; and the entire Radialstrahler tower is now heavily damped and braced by massive applications of constrained-layer materials. In other words, all of the drivers and crossovers have not just been audibly



MBL 101 X-TREME OMNIDIRECTIONAL LOUDSPEAKER

improved, made higher in sensitivity, and less subject to exciting room nodes (thanks to the D'Appolito configuration), but they are also seeing orders of magnitude less vibration than they did in the 101 E, which, I have to think, was a large part of why they didn't image very well.

Not only have these changes in drivers, crossover, and support system wrought big improvements in imaging, they have, to my ear, also improved overall smoothness of frequency response, resolution at low volume levels, and bass response.

Let's start with the last first. Putting twelve 12" woofers in two towers might seem like a recipe for overloading a room. But I'm here to tell you that the effect is just the opposite. While the 101 Es low bass was one of its glories, because it went so incredibly deep and sounded so incredibly fast and dynamic for a single driver in a small, dual-ported enclosure, it was also (or occasionally could be) one of its shortcomings. As great as it was to hear bass drum strikes detonating like sonic booms, or doublebass choirs growling like semis pulling away from a curb, or organ notes rattling the floor and walls like a subway passing outside the window, the 101 E's bandpass sub *was* a little wild and woolly. It was fast and powerful all right and tremendously exciting, but it was adding vibration to itself and the Radialstrahlers ensconced above it and it was more likely to excite room nodes (since it was fixed in one spot facing downward toward the floor).

In my room the 101 E subs tended to lump up around 60–80Hz, to the extent that with the right recording (or should I say the wrong one), like, say, just about any LP or CD with good solid Fender bass, you could be wowed and annoyed simultaneously—wowed by the sheer extension and floor-shuddering, pantsleg-shaking power of the MBL's bottom end, annoyed by the sub's room-induced boominess at select frequencies. Don't get me wrong. I still think that the 101 E's bass is astounding. The best I've heard. I just think that the 101 X-Tremes' bass is better. By adding more and better woofers and locating them at different heights from the floor, walls, and ceiling (both in the bass towers and in the Radialstrahler towers), the Xes are *much* less likely to reinforce room nodes—and so they sound. They may be a little less purely astounding now, but that is because they are calling less attention to themselves. They are audibly and measurably flatter, smoother, better controlled, lower in distortion, and much better integrated with the Radialstrahler drivers than the 101 E's bandpass subs. At the same time, they are every bit as impressive in extension, speed, and power delivery as the 101 E's subs, and more impressive in resolution. If you think you've heard all there is to hear in the way of timbre, texture, and dynamics in low-pitched instruments (like bottom-octave piano, double bassoon, doublebass, bass drum) think again. In the bass, these things sound the way 'stats would sound if they went down flat to 20Hz and had the weight, body, and density of tone color of great cones. The Xes' sheer resolving power coupled with their speed, neutrality of timbre, lifelike cushioning of air, and astonishing three-dimensionality make things like forcefully bowed cello or bass (or forcefully struck timp) come alive in a way that very few other speakers I've heard can match—and none that I've heard in my home exceeds. It may be that the Wilson Alexandria X-2 Series 2 that Robert Harley recently reviewed or the Magico M6 would outdo them in the bass; even so, this is phenomenal low end.

As those of you familiar with my writing know, I'm generally no fan of outboard subwoofers. Not to put too fine a point on it, I almost always hear them as separate and separable drivers. With the 101 X-Tremes, for once, I don't. This is the most seamless blending of subwoofer and main speakers I've heard. Indeed, I would dare anyone, who didn't already know where they crossed over, to tell me by ear alone where the 101 X-Treme sub towers were starting and the Radialstrahler towers stopping. They are as much of a piece as the Radialstrahlers themselves.

Of course, it probably doesn't hurt that they are being driven by built-in MBL amplifiers. And I *know* that it doesn't hurt that they have been painstakingly tweaked in by Jürgen Reis. (Before he worked his magic, you *could* hear the sub towers quite plainly. Indeed, I believe that the proper dialing in of the sub towers has been the chief problem at shows—that and playing these things at jet-airplane-engine levels.)

Lowering the amount of resonant energy and improving the drivers and crossovers of the Radialstrahlers and their subs has also improved another area of 101 E weakness—realistic playback at lower volume levels. Like dipole Maggies, the 101 Es tended to lose a little dynamic scale at both the *piano* and the *forte* end of the spectrum when played softly. You needed to turn up the juice to make them come to life (which was why the MBL gang has always played them loud at shows). Though still not the match of a Magico Mini II, a Quad ESL-2905, a MartinLogan CLX, or a Symposium Acoustics Panaroma in timbre, texture, and dynamic nuance when played at low volumes (under 80dB average SPLs), the 101 X-Tremes are *considerably* improved in all three areas over the 101 Es—to the extent that you can now listen through them to chamber or acoustic rock or folk music with the same pleasure (and with very nearly the same sense of verisimilitude) that you'll get through them from any and all kinds of music played at louder levels (80dB+ average SPLs). It used to be said that MBLs were a rock 'n' roller's loudspeaker. Not anymore. Low-level resolution, top-to-bottom neutrality, and dynamic scale at all volumes have been greatly improved. And at lifelike SPLs, the Xes are very nearly unmatchable in every area save for top-treble extension, where the ribbons in the Symposium Panoramas and the ring-radiator tweeter in the Mini IIs outdo them. (While not as extended on top as these two other great speakers, let me assure you that neither the Pans nor the Minis can reproduce a cymbal as realistically as the Xes' Radialstrahler tweeter.)

As noted earlier *in re* electrostats, the 101 X-Tremes don't just deliver the goods with superior speed and startling neutrality; they deliver them with a power and a lifelike duration that reminds me of the TW Acoustic Raven AC-3 turntable. Through the 101 X-Tremes, instruments like struck cymbals aren't just wispy, floaty little things expressed with exquisite delicacy that then die away like a sigh—half color, half air, like aural half-tones. They are the big, powerful, *solid* bell-bronze instruments they are in life, whose sound is reproduced with the power and lingering, shimmering sustain that describes their physical presence—their three-dimensional shape and material composition—in addition to their timbre and texture. All instruments are so described by the 101 X-Tremes, not just in richly colored outline but in solid, richly colored shape. To hear the Xes—well, not really the Xes because they aren't there as sound sources—but to hear the

MBL 101 X-TREME OMNIDIRECTIONAL LOUDSPEAKER

way they conjure up something like Mark Cohn's terrific cover of Willie Dixon's "29 Ways" is to hear something much closer to musicians in a club or hall or recording studio than to mere hi-fi. Cohn's centered voice, his voice doubled for backup and panned hard right and left (sometimes well "outside" the physical bounds of the speakers), the hard spikes and soft-palmed strokes of percussion distributed throughout the stage, that wonderful purling Hammond organ that comes flooding across (and beneath) the floor like a dark, burbling tide...once again, it is like watching a play to hear these things conjured up in three dimensions before eye *and* ear. While we all listen, perforce, blind to stereo, the 101 X-Tremes go further toward compensating for our hunger to see what we hear—to fulfilling the definition of the word "stereo" (which literally means "three-dimensional" or "solid")—than anything else I've yet auditioned.

The 101 X-Tremes are not the only great loudspeakers I've heard—merely the best. They aren't quite as transparent as MartinLogan CLXes. They aren't quite as lifelike in timbre as Magico Mini IIs. They aren't quite as fast in transient response as Quad ESL-2905s. They aren't as colorless in the midband and treble as Symposium Acoustics Panoramas or as microscopically finely detailed (at least at low-to-moderate volume levels). They are ungodly expensive. They are huge. They require extensive setup and fine-tuning, and in spite of the fact that they are 6dB more sensitive than 101 Es they still do best biamped with *four* of MBL's own \$100k/pair 9011 monoblocks and fed by MBL's own superb 6010 D preamp (although the ARC Reference 3 preamp is, IMO, every bit as good as the MBL 6010 D with MBL's powerhouses, and a pair or two of ARC's 610Ts represents much-less-expensive and equally impressive alternative amplification). They need the best sources and cabling that money can buy. They are handmade to order and take at least 90 days to build. In short, a system built around them represents an insanely complex and expensive investment of time, space, and upwards of half-a-million dollars, which, in this economy, is a stretch even for the ultra-rich and ultra-loony. Although they did exceedingly well in my smaller room (so well that even saturnine Jürgen Reis pronounced himself greatly pleased), they will probably do better in medium-sized-to-large rooms, although I would be wary of rooms that are too large (since Radialstrahlers need to see walls at some distance to function the way they are designed to function).

There may be other speakers—in fact, there are other speakers (some of which I've mentioned)—that *marginally* outdo the 101 X-Tremes in this area or that, and there are some on the horizon (two in particular from Magico and Kharma) that will doubtlessly prove competitive. That's OK. There's room for more than one great transducer, even at this level of excellence. This said, I rather doubt that the 101 X-Tremes will be beaten out by any other kind of loudspeaker when it comes to their uncannily realistic recreation of space, their three-dimensionality, their dynamic range and scaling from top to bottom (above 80dB

SPECS & PRICING

Type: Four-way omnidirectional loudspeaker with separate subwoofer towers and ambi-

ence tweeter in four chassis

Drivers (per speaker side): Two Radial TT100 woofers, two Radial MT50/E midrange, two HT37/E Radial tweeters, one "ambience" dome tweeter, six 12" aluminum cone subwoofers

Frequency response: 20Hz-40kHz

Sensitivity: 88dB/2.8V/2pi

SPL: 109dB

Power handling: 500W (continuous), 2200W (peak)

Weight: 3600 lbs.

Price: \$263,000/pair

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JV'S REFERENCE SYSTEM

Loudspeakers: MBL 101

X-Treme, Quad 2905, Magico

Mini II, MartinLogan CLX

Line stage preamps: Audio

Research Reference 3, Audio

Space Reference 2, and MBL

6010 D

Phonostage preamps: Audio

Research PH-7, Lamm Indus-

tries LP-2 Deluxe

Power amplifiers: Audio

Research Reference 610T, MBL

9011, Lamm ML-2

Analog source: Walker Audio

Proscenium Black Diamond

record player, DaVinci Gabriel

turntable/DaVinci Grandeeza

tonearm

Phono cartridges: Air Tight PC-

1 Supreme, Clearaudio Goldfin-

ger v2, Koetsu Onyx Platinum,

DaVinci "Grandeeza"

Digital source: dCS Scarlatti,

dCS Puccini, ARC Reference

CD7, MBL 1621A transport/1611

F DAC

Cable and interconnect: Tara

Labs "Zero" Gold intercon-

nect, Tara Labs "Omega" Gold

speaker cable, Tara Labs "The

One" Cobalt power cords,

Synergistic Research Absolute

Reference speakers cables and

interconnects

Accessories: Shakti Hallo-

graphs (6), Walker Prologue

Reference equipment stand,

Walker Prologue amp stands,

Richard Gray Power Company

600S/Pole Pig line/power

conditioner, Shunyata Research

Hydra V-Ray power distributor

and Anaconda Helix Alpha/

VX power cables, Shunyata

Research Dark Field Cable El-

evators, Walker Valid Points and

Resonance Control discs, Winds

Arm Load meter, Clearaudio

Double Matrix record cleaner,

HiFi-Tuning silver/gold fuses

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SPLs), and their "you-are-there" presence.

Frankly, the other reaction that every single listener who's heard the 101 X-Tremes has had, once he gets past the Xes' disappearing act, is: "This is the most realistic stereo system I've ever heard." It hurts me to say so, since I will never be able to afford them, but I have to agree. **TAS**



unique high end audio

MBL Akustikgeräte's products (such as the X-treme Reference System) are designed by a team of talented engineers. Chief Developer Jürgen Reis has been responsible for shaping the acoustic imprint of all MBL products for nearly thirty years. Time and again MBL has developed jewels of sound whose naturalness and synergy far exceed those of any established standards. For all employees at MBL, technically sophisticated circuitry is just the first step in a long journey of listening and research in the quest for the perfect audio component. Guided by long experience as a musician and sound engineer, Jürgen knows that in the world of natural sound, with its multilayered patterns and interwoven structures, there are dimensions that lie beyond anything he learned in electrical engineering textbooks. Development of MBL products can only be concluded when the act of listening to music transcends the technical and blossoms into a highly emotional experience.

MBL products are manufactured in our own factory outside Berlin. To build a tweeter capable of reproducing every nuance of natural sound - and this component serves as an example of every product we produce - MBL had to strike out in new directions and pursue them through to their ultimate consequence. When we found no tweeter on the market capable of performance we knew was possible, Jürgen invented our own carbon-based Radial Tweeter - a true masterpiece of engineering and craftsmanship. It takes no less than twenty-one hours before even a single MBL radial chassis has completed all its stages in the production process. Vertical integration at MBL is one hundred percent because only in our own factory can we build such high precision components to our exacting standards. Obviously we could save a great deal of money and effort if we took a standard dome tweeter that comes off a sub-supplier's mass production line at the rate of nearly one a minute. But if we did, we'd be depriving you of the enjoyment of too much sonic bliss.

MBL products are distributed in over 40 countries through a world-wide distribution network which are designed to bring you service commensurate with MBL performance. Please visit our website or contact us for further information on the MBL experience, whether for a single component, Radialstrahler speaker or a complete MBL system.

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