

MK Sound LCR950 Speaker System

PRICE: \$4,798 **AT A GLANCE:** Tripole surround speakers • Push-pull dual-driver subwoofer design • Magnetically attached perforated metal grilles

Rikki Don't Lose This Number

It's a tragic tale with a happy ending—or maybe happy sequel is more accurate since the saga isn't over yet. Read on because this is the story of a speaker company that helped shape home theater (and even music recording) into what it is today. Along the way, there's a sad crash and (spoiler alert!) a much welcome resurrection.

For those of you who are relatively new to the home theater world (and by relatively I mean within the last 20 years), you probably take the idea of a satellite/subwoofer system for granted. Why, what could be more ubiquitous than the sat/sub system with all the bazillions of HTIB systems based on that concept in people's homes? Very few of us would consider a home theater to be serious if it didn't include a subwoofer (or multiple subwoofers) placed in ideal spot(s) for best bass performance. Well, it took someone to be the first to popularize the idea that the requirements for reproducing the best bass response (both cabinet size and room location) are different than that needed for getting the best mid- and high-frequency performance. That someone was Ken Kreisel.

Now for some quick history. Back in 1973, Walter Becker of Steely Dan approached high-end audio salesperson/budding recording engineer/speaker designer Ken Kreisel about making a speaker system for the band to use in mixing their album, *Pretzel Logic*. Kreisel decided that the only way to do the system right was to use small speakers optimized for mid- and high-frequency performance along with a separate speaker designed specifically to provide the bass. Out of this work arose

what the MK Sound people claim was the world's first satellite/subwoofer configuration, which used a subwoofer that they called the Bottom End. The sub was so popular that, in 1974, Kreisel and Jonas Miller formed M&K Sound in order to start selling a version of the subwoofer to the general public. Two years later, they started selling the famous David and Goliath satellite/subwoofer combination—the first sub/sat system marketed to the general public. It didn't take long (in 1977) before M&K introduced the world's first self-powered subwoofer. And the list goes on.

Another long list is the incredible number of mixing studios that have used M&K speakers to create the soundtracks for movies that have gone on to be nominated for and often win Academy Awards for sound, including films such as *The Lord of the Rings* (all three), *Black Hawk Down*, *Star Wars: Episode One*, *Pirates of the Caribbean*, and *Finding Nemo*. Dolby Labs used M&K speakers for the research and development work and first demos of Dolby AC-3 (which went on to be called Dolby Digital); and, later, the very first Surround EX soundtracks were mixed using M&Ks.

Fast-forward to early 2007 and the tragic part of the story, as M&K Sound is forced to close its doors, leaving many of its loyal fans (including me), devastated. (Well, OK, I wasn't *devastated* as in I couldn't eat or sleep, but I was saddened by the news.) However, the sequel begins as many of the

key people associated with M&K restart the company as MK Sound with the intent of continuing the legacy rather than prostituting the brand as might have happened.

Last year, the folks at Abt Electronics—MK Sound's flagship dealer—invited me to visit their gorgeous and enormous (gorgeormous?) store in Chicago for an in-depth look at the new/old MK Sound speakers. Many of the models had been carried over, including one of my favorite speakers of the last decade, the S-150THX satellites, and the involuntary-bowel-movement-inducing MX-350 THX subwoofer. Once I'd listened to enough models to tell that MK Sound was a serious continuation of the old M&K, I started asking

about reviewing a system—specifically the 950 Series system, as these were some of the first new models to be introduced by the MK Sound team instead of being carryover models.

Three-Fifths of Awesome Still Has Plenty of Awe

The MK Sound 950 THX Select2 system includes a trio of LCR950 satellite speakers, a pair of SUR95T tripole surround speakers, and an MX-250 subwoofer. The LCR950 is three-fifths of the MK S-150THX, the perennial favorite I mentioned earlier. Although it includes a pair of 5.25-inch midbass drivers, the LCR950 has only one 1-inch silk-dome tweeter (rather than the S-150THX's three). Whereas the



older speaker is cube-shaped and has an angled front baffle, the LCR950 is rectangular (16 inches high by 7 inches wide) with a straight-on front baffle. In keeping with MK's design philosophy of keeping the front baffle as small as it can be in order to manipulate baffle-related diffraction that can affect the sound of the speaker, the LCR950 is just a bit wider than the midbass drivers themselves. The tweeter is a new one developed for a couple of MK's pro monitors,

SPECS

SPEAKER:	LCR950	LCR950	SUR95T
TYPE:	Two-way, monitor	Two-way, center	Tri-pole, surround
TWEETER (SIZE IN INCHES, TYPE):	1, silk dome	1, silk dome	1, silk dome
MIDRANGE (SIZE IN INCHES, TYPE):	None	None	3, coated paper (2)
WOOFER (SIZE IN INCHES, TYPE):	5.25, poly cone (2)	5.25, poly cone (2)	5.25, poly cone
NOMINAL IMPEDANCE (OHMS):	4	4	4
RECOMMENDED AMP POWER (WATTS):	30-200	30-200	30-200
AVAILABLE FINISHES:	Black Satin	Black Satin	Black Satin
DIMENSIONS (W X H X D, INCHES):	7 x 16.1 x 8.8	7 x 16.1 x 8.8	7 x 10.2 x 8.7
WEIGHT (POUNDS):	12	12	10.25
PRICE:	\$600/each	\$600/each	\$1,200/pair

and it includes some advances over the original S-150THX's

tweeter. One new feature is an aluminum front plate that's bolted to the magnet structure, which makes it an extremely rigid assembly. It also incorporates a "double-flow resistor foam plug" that sits behind the dome itself, along with a vented pole piece and a low-compression rear chamber. All of this is supposed to make the tweeter sound smoother across a larger frequency range. The MK Sound people like this new tweeter so much they're going to use it in the S-150THX II to be released in early 2011.

Another aspect the speakers share is what MK calls its Phase-Focused crossovers. Unlike many speaker manufacturers that design crossover networks using only measurements of the drivers' frequency response on one axis, MK measures response characteristics at various angles in both the vertical and horizontal planes and tries to optimize the speaker's three-dimensional output. The desired result is smooth response over a much wider listening area. That aspect is especially welcome in a speaker being used for a home theater in which there will typically be more than one person watching (and listening). Something that's very cool about the LCR950's aesthetics is the metal grille that magically snaps in place thanks to invisible magnets that are recessed behind the finish of the front baffle. However, some folks may not like the fact that the drivers are quite visible through the perforations on the grille. (The MK Sound logo on the front is a bit big, too.) Others will like the appearance because of its high-tech look.

using direct-radiating speakers (the typical bookshelf speaker), and the same goes for dipole speakers. The former can give you better surround-channel localization, which some consider best for multichannel music listening, while the latter creates a more diffuse surround field that's recommended (by THX and others) for both movies and music. Rather than sacrifice the benefits of one design or the other, MK Sound engineered a unique tripole speaker that simultaneously acts as both a direct radiator and a dipole—so you get the benefits of both types of speaker while minimizing the drawbacks, all in one cabinet. The SUR95T incorporates a tweeter and midbass driver on the front baffle (the direct radiating part), while special 3-inch mid-tweeters are mounted on the slightly angled left and right sides of the cabinet (for the dipole part).

Because of this unique dual nature, placement of the SUR95T is a little more critical than with other surround speakers in order to get the best performance—and when you think about it, it's not surprising since you're actually trying to position two different

Two for the Price of One
MK Sound's SUR95T surround speaker is one of the most unusual you'll find on the market. As you probably know, there are advantages and disadvantages to



HT Labs Measures

MK SOUND 950 SPEAKER SYSTEM

L/C/R Sensitivity:
89 dB from 500 Hz to 2 kHz

Surround Sensitivity:
84 dB from 500 Hz to 2 kHz

This graph shows the quasi-anechoic (employing close-miking of all woofers) frequency response of the LCR950 L/R (purple trace), MX250 subwoofer (blue trace), and SUR95T surround (red trace). All passive loudspeakers were measured with grilles at a distance of 1 meter with a 2.83-volt input and scaled for display purposes.

The LCR950's listening-window response (a five-point average of axial and +/-15-degree horizontal and vertical responses) measures

+5.01/-3.06 decibels from 200 hertz to 10 kilohertz. An average of axial and +/-15-degree horizontal responses measures +5.08/-3.25 dB from 200 Hz to 10 kHz. The -3-dB point is at 80 Hz, and the -6-dB point is at 68 Hz. Impedance reaches a minimum of 4.24 ohms at

186 Hz and a phase angle of -42.58 degrees at 111 Hz.

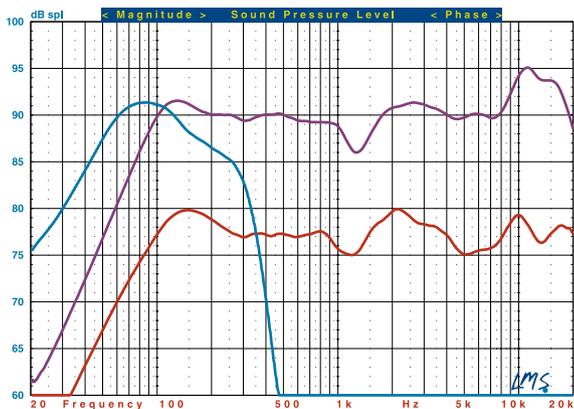
The SUR95T's three-face averaged response measures +2.37/-2.55 dB from 200 Hz to 10 kHz. The -3-dB point is at 81 Hz, and the -6-dB point is at 66 Hz. Impedance reaches a minimum of 4.96 ohms at 4.5 kHz and a phase angle of -35.71 degrees at 108 Hz.

The MX250's close-miked response, normalized to the level at 80 Hz, indicates that the lower -3-dB point is at 53 Hz and the -6-dB point is at 43 Hz. The upper -3-dB point is at 148 Hz with the Low Pass Filter control set to maximum.—**MJP**

Visit our Website for a detailed explanation of our testing regimen, plus a list of our reference gear.

on the web

MK SOUND 950 SPEAKER SYSTEM



speakers. The front-firing tweeter should be the closest driver to your ears; so if you're mounting the speakers above ear level, MK recommends that you use them upside down with the tweeter positioned below the woofer.

Pushmi-Pullyu

I suppose MK Sound could have gotten the idea from Dr. Dolittle, but the push-pull dual driver configuration in the MX-250 isn't a freak of nature nor a storyteller's fantasy. Instead, it's a clever use of physics ("Oh, Mr. Physics, you've done it again!") that both increases the output of the sub by 6 decibels (over a sub with an

equivalent single driver) and is supposed to reduce even-order harmonic distortion dramatically. So what's so special, you say, about a subwoofer with two drivers? Isn't that common? Well, in many cases, subwoofers with two drivers include only one active driver with the second being a passive radiator. This can help extend the system's bass, but it does little for reducing distortion.

The clever part is that, in addition to both drivers being active, one driver is mounted on the front of the cabinet while the second driver is mounted inverted. In other words, the front of the second driver's cone faces to



SPECS

MX-250 SUBWOOFER
ENCLOSURE TYPE: Sealed **WOOFER (SIZE IN INCHES, TYPE):** 12, coated paper cone (2) **RATED POWER (WATTS):** 250, RMS **CONNECTIONS:** Speaker- and line-level (RCA) **CROSSOVER BYPASS:** Yes **AVAILABLE FINISHES:** Black **DIMENSIONS (W X H X D, INCHES):** 15.3 x 23.5 x 20 **WEIGHT (POUNDS):** 82 **PRICE:** \$1,799

the inside of the cabinet, while the back side (including the rear of the cone, the magnet structure, and the frame) faces down to the outside. If you just ran the drivers normally in this configuration, they'd do a great job of cancelling each other out, since the sound of each would be out of phase relative to the other. Instead, they run out of phase both electrically and, by virtue of the placement, mechanically. Acoustically, though, they're in phase and wind up pumping a lot of bass into the room. The other big advantage is that since the position of each cone is exactly opposite of the other, as one pushes the other pulls, even-order harmonic distortion caused by nonlinearities in the cones' motion is inherently cancelled out.

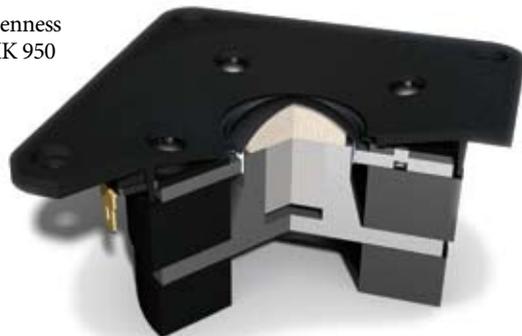
Another aspect of the MX-250 that MK Sound touts is their proprietary Headroom Maximizer IV circuit that's supposed to prevent audible amplifier clipping under heavy demands. We used to joke that my old boss (who shall remain nameless, but Bjorn in San Antonio, you know who you are) liked to do his demonstrations so loud that customers would leave the room with blood pouring from their ears. In reality, he usually stopped just short of major hearing loss. I bring this up because MK subs were always his favorite subwoofers—because they sounded great and he could drive the crap out of them (the subwoofers, not the customers).

Weightless

There's an amazing openness and lightness to the MK 950 system that's hard to characterize. It's common for reviewers and salespeople to talk about a more revealing speaker as lifting a veil from between you and the

speakers. That's not how I'd characterize the experience with the 950 system. When I listened to this system, I got the sense that a weight had been lifted from my shoulders. I can understand why sound designers like to use MK speakers for their studios—there's a life and energy to these speakers that makes them oh-so-easy to listen to. And then when you add that MX-250 subwoofer into the mix, it's kind of like what you might get if you crossed the Vienna Boys Choir with Jay-Z: "Stick 2 the Script(ure)" featuring Pope Benedict.

Just for fun, I decided to start listening to some tracks from Steely Dan (among them, "Rikki Don't Lose That Number" from the *Pretzel Logic* album that started the whole MK ball thumping). The speakers not only produced a wide soundstage with pinpoint accuracy, they also created a stereo image that was quite enjoyable from all three listening positions on my couch (left, center, and right—not drunk, asleep, and half-naked). The LCR950s also maintained consistency regardless of the height of the listener's ears. On Steely Dan's "Peg," the splendid integration of the LCR950s with the MX-250 stood out with each drum stick snap on the



drumhead. With Eminem's latest CD, *Recovery*, it's not always easy to make out some of the low-level vocals; but that wasn't the case with the MKs. Despite the heavy bass beat and other instruments, Eminem's voice came through quite distinctly, for example, during the beginning of "Cinderella Man."

Next, I moved on to multichannel music and discovered that, in my room in any case, the best positioning of the SUR95T tripole speakers was slightly behind my couch at about ear height with the front baffle angled directly toward the listening area. It greatly improved the sensation of the tight space of the Village Vanguard on Barbara Streisand's *One Night Only* DVD. Along with creating the ambiance, the SUR95Ts also allowed pinpointing of individual claps in the audience. And the LCR 950s were annoyingly adept at reproducing every pop when Streisand spoke while holding the microphone a bit too close to her mouth.

With any system employing a good subwoofer, I have a hard time not bringing out my *Band of Brothers* Blu-ray Discs. Even more

impressive than the depth of the bass during explosions was the fine detail that the 950 system brought to the forefront. At the beginning of episode 3, "Carentan," when the troops first approach the Café de Normandie, there's the high-pitched, ominous squeak of a light post moving back and forth in the breeze that sounded as good as if you were there. Later, as Easy Company comes under attack while crossing a field, the SUR95Ts brought forth the individual bullets, as well as the overall diffuse chaos of the battle. The recent Supreme Court decision—oops, sorry, the movie—*Monsters vs. Aliens* is so filled with surround effects, I believe they created those first and then added the dialogue and music simply to flesh the movie out. There's nary a scene in which the SUR95Ts failed to delight, with both a smooth sense of envelopment and pinpoint accuracy.

Insert Superlative Here

It's hard to find enough superlatives to describe the MK Sound LCR950 system. I even broke out my *Reviewer's Superlative*

Handbook and couldn't find enough. *Juicy* even came to mind—as in, the MX-250 sub sure sounds juicy. In fact, it's one of the juiciest subs around. Very simply, anyone who's serious about home theater should seriously consider this system. Aside from the price tag (obviously, not everyone can afford nearly five grand for a speaker system), the only other potential downside to this system is that designer-types won't care for the aesthetics. While I think they look great, the LCR950s are still traditional black-box in-room speakers. Yes, they're pre-tapped for wall-mount brackets, but it won't be the same as hanging a Def Tech Mythos or other style-conscious speaker on the wall. The MX-250 isn't the smallest subwoofer on the market, either. It all adds up to making the MK Sound LCR950 package a system you'll build a room around rather than fuss over integrating into a room's décor.

MK Sound is still developing its dealer base, so you won't find it in a great many places at the moment. But I think it's worth the time and effort to find one, since

the LCR950 system is so spectacularly good at both movies and music. It's a system that's sure to please the old fans and create oodles of new fans of MK Sound, as well. ¶

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