

Form Following Function

Ken Kreisel, President, M&K Sound Corp.

by Nancy Caronia

Ask Ken Kreisel, president of M&K Sound Corporation, a question about recording or sound and then be prepared to sit back and listen. A walking encyclopedia of audio, Kreisel enthusiastically shares what he knows from 26 years in the audio business.

Kreisel first walked into Jonas Miller Sound in 1969 to purchase a set of speakers his parents promised him for high school graduation. Kreisel and Miller hit it off, and Kreisel began hanging out in Miller's retail store, bringing his own master tapes to demo. The recording bug had bitten Kreisel at an early age; he was designing speakers, hi-fi systems and making live recordings from the age of nine. He went to college, but as Kreisel says his mother put it, "I was studying medicine in college, but majoring in hi-fi at Jonas Miller Sound." Kreisel chuckles at the memory and says that within two years he quit school and became Miller's partner at the retail store.

Kreisel began spending time with one of Miller's closest friends, Dr. Lester M. Field, a retired chief scientist and VP of Hughes Aircraft Company. Previously, Field had been a full professor at Caltech and Stanford Universities and had done research with Bell Telephone Research Laboratories, where he co-invented the traveling wave tube with John Pierce, the father of the transistor. Field, an acoustic hobbyist, and Kreisel spent many nights experimenting in Field's home. Sometime in 1971, Field brought Kreisel to the East Coast where they visited Bell Labs.



"At that time they had the largest anechoic chamber in the world," Kreisel remembered. "I was able to do a whole series of tests in the chamber with the top people in acoustics. It was a revelation to me. There are things I learned at that time that still drive everything I do."

In 1973, Walter Becker of Steely Dan asked Kreisel to design a reference speaker system for the group. "Everybody loved the system's unique dual-driver sub and wanted to buy it," says Kreisel. In response, Miller and Kreisel formed M&K Sound to manufacture subwoofers and, in 1976, they added M&K RealTime Records to the mix, where Kreisel began direct-to-disk recording.

Kreisel admits that through the years, his company's involvement with pro and consumer markets has offered them a unique perspective of the audio business. "In the '70s we had this high-end retail store," he shared. "It was one of the few places where the consumers were going to the same place as the pro guys. I was dealing with the high-end consumer audiophile and the cutting-edge recording side studio personnel. Here we were, selling the finest, most expensive equipment from all over the world, and when it came to building our own direct-to-disk recording studio, I had to design my own speakers. I couldn't find anything that would satisfy me." His motto is simple, "I first build

product for myself. If it holds up in my studio, then we can sell it in the home."

To this day, Kreisel remains hands-on. "The key to it all is 'form follows function.' Everything we make is the answer to something that I've needed." In the late '70s and early '80s M&K RealTime moved from analog to digital when they purchased one of the first Sony digital recorders. Kreisel states that the purchase poised them to be ready when CDs hit the marketplace, but also put them in the center of the analog/digital controversy. "Everyone thought I was copping out," Kreisel noted. "We were at the top of the field in analog direct-to-disk recording. They said, 'How can you go to digital?' In those days, people were either anti-analog or anti-digital. There was this incredible feud." But his desire for the perfect "wave" won out.

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"When CDs finally hit, we were about the only company that had speakers which worked for very clean, very dynamic program material." At that point, business was booming, but something else was happening which proved just as important. In 1977, *Star Wars* premiered in Dolby Surround in theaters. Soon after, Sony introduced Beta hi-fi and then came VHS and digital stereo laser discs. According to Kreisel, the birth of film on consumer video brought a whole new

View from the TOP View from

perspective to bear on the audio consumer market. "The sound came from the same Dolby surround encoded master that was being used to cut the 35mm optical film soundtrack," he pointed out. "There were extra channels encoded on the tapes and laser discs. Shure Bros. came out with a consumer decoder to decode these soundtracks. One of the things these decoders had was a subwoofer output."

M&K was already enjoying a reputation as the father of modern-day, satellite subwoofer systems, so it was only natural that Lucasfilm, in 1990, asked M&K to be one of the first consumer THX licensees. "They set standards for high-performance satellite subwoofer systems similar to what we were already building," Kreisel stated. "In 1990, we went ahead and designed our first THX-specific equipment, which included a vertical directivity requirement, which is exactly what we came up with in 1977 for a speaker in our studio."

Kreisel admits that between 1986 and 1993, he concentrated on new speaker designs, but in 1993 a collaboration with Dolby began, as Dolby was developing AC-3. Once this collaboration began, Kreisel's interest in recording piqued again. "I realized that sometime in the future we were going to be delivering 5.1 channels to the

public. In 1993, we started to build a state-of-the-art 5.1 audio/video studio to produce 5.1 audio and video projects. That was when I figured out we needed to come up with a 5.1 bass management box. I immediately started to work on this before engineers realized there was a need for it. Slowly, these cutting-edge people found their way to us because Dolby told them we had the 5.1 monitoring solution."

Kreisel is clearly happy with the new studio, where work on a new DVD with drummer Max Weinberg is being completed. "I call the recording studio my R&D lab. Some of my most creative speaker design ideas have come while working on new recordings. I work intimately with gear that many people won't be working with for one or two years. I first design for my own requirements, but I know in one or two years everybody else is going to need this stuff."

The lines between consumer and pro have crossed often in Kreisel's career, but never so dramatically as when George Lucas' people called, asking him to design a THX monitor speaker for their Avid studio where they were starting to rework first three *Star Wars* films for re-release. The



Ken Kreisel recording the English Chamber Orchestra at Abbey Road Studios in London

solution Kreisel offered worked so well that Lucas' JAK Productions used it throughout the production chain on *Star Wars—Episode 1*.

Irony is the solution, for this system came about from a gift of THX speakers that Lucas bought for James Earl Jones back in 1992. Kreisel went out to help with the installation and immediately saw a problem. "Jones had room for the tall left and right THX speakers, but there was only a 7-inch shelf above his 35-inch TV, requiring that the center-channel speaker have a horizontal orientation. Because this normally leads to severe lobing, I told Jones I would design a special angled center-channel speaker with a special crossover design. I had him sit where he normally sat, and I measured the angles, which is why I call it the 'James Earl Jones Angle.'

"When I got the call to design the speaker for the Avid room, I said, 'I worked this thing out for Jones. I can take this special crossover and put it into a speaker we make, with a few little variations.' But if they hadn't asked me to go out to Jones' house, I might have said, 'You know, I don't when we will be able to do it.'"

According to Kreisel, the need in the Avid room was the same as the need in Jones' home. Both had horizontal speakers

sitting on top of a TV set, and the angled baffle and phase-focused crossover solved the lobing problem found on virtually all other horizontal center-channel speakers.

"It's not rocket science," Kreisel insisted, and, for him, the bottom line is saving the mixing engineer time and ultimately money. Additionally, without his visit to Jones, the S-150 speaker, one of M&K's most popular models and based on the speaker he built for Jones, might not have become a reality.

Kreisel says the most important job he does is making sure he's providing "a creative tool for mixing engineers and artists that will make their job easier, better, and faster. That's what excites me. I don't want anyone telling me this is the most perfect speaker, or it's the greatest in the world. But, 'you know what, I used it. It works great. The mixes come out fabulous, and translate seamlessly between the studio, cinema and home'."



Kreisel and Maurice White of Earth Wind & Fire discuss the installation of M&K Pro MPS-2510Ps in White's Kalimba Studio in Santa Monica, CA.

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