

Bringing the Performance

Ultra high-end audio systems should be engineered into multiple venues, inside and outside the home

by Brian Barr

For thousands of years, human civilization has created its own live entertainment. Regardless of wealth or status, people throughout the world have enjoyed accurate, natural sounds emanating from real instruments and singer's voices in venues of all types and sizes. Day or night, indoors or outdoors, in the foreground or background, from romantic dining to hard core partying, music was an integral component of most entertainment and activities. Even with the best 21st century state-of-the-art audio components and acoustic engineering, reproducing the experience of listening to natural sound is very difficult.

Though natural sound has been created for thousands of years, the widespread use of recorded and reproduced music is barely 100 years old. And yet, though technology continues to advance, allowing audio reproduction and playback to approach reality (in elite studios armed with engineers, room acoustics, ultra high end audio equipment, and calibration), most end-users listen to plastic in-wall speakers that barely rival stan-

dard car audio and "boom box" systems.

Though the "plastic fantastic" in-wall speaker industry did a great job marketing the concept that "background sound" should be enjoyed in multiple venues throughout the interior and exterior of the home, these same companies did not choose to market the massive sonic differentiation of low-end versus ultra high-end audio components, acoustic engineering,

and overall system performance. Due to inferior audio reproduction, cheap plastic in-wall/in-ceiling components, poor speaker placement, absence of proper acoustic engineering, under-powered distribution amplifiers, and 16-and 14-gauge cabling, people throughout the world began to classify all whole-house and outdoor audio systems as "background sound." They stopped hearing and enjoying accurate, realistic music.



The author at high-end two-channel CAT MBX music listening room in Antwerp, Belgium.

They stopped including music as an integral part of their lives.

The unfortunate result was that luxury customers, and even installers, began to care less about providing quality audio to multiple locations throughout the interior and exterior of their homes. Instead of budgeting thousands per venue for accurate audio reproduction, they began to budget less than \$500/pair for plastic speakers. They stopped including music into their daily life routines. They lost their love for music. They forgot how much their ancestors loved involving music into almost all of life's activities.

Up until the plastic in-wall/in-ceiling speaker invasion (approximately 20 years ago), audio/video dealers enjoyed providing their clients with great sounding, large, and expensive loudspeakers, amplifiers, equalizers, and speaker cable for all their music reproduction. Clients were elated as they "cranked up" their large speakers in numerous rooms of their homes and often placed multiple pairs outside, as well. Today, most state-of-the-art recording/mix studios, clubs, restaurants, and resorts still follow this wonderful path. Music is accurately reproduced and enjoyed everywhere. Clients who purchase high-end audio systems are elated, as they receive far greater value (per dollar spent) when they spend over a thousand dollars per pair for high quality, non-plastic speakers.

It can be easy for A/V dealers to get sucked in by the high-margins of most cheap, plastic in-wall/in-ceiling speakers and inferior, low quality zone amplifiers and speaker cable. I would argue that, instead, dealers look at their actual net profit at the end of a project when they place inferior plastic speakers throughout a project versus installing and calibrating high-end audio systems. With high-end audio loudspeakers, electronics, cable, and calibration, clients and A/V dealers both enjoy the "win-win."

Though the profit margins, or points, for high-end loudspeakers and electronics are often equal to or worse than cheap, plastic speakers and low quality zone amplifiers, dealers actually receive greater gross and net revenue when they sell high-end audio elec-

tronics. Increased overall profits are generated for the same amount of work as installing inferior plastic speakers and zone amplifiers. Conversely, the clients get far greater value, performance, and reliability for each dollar spent. Most successful high-end A/V integrators that are surviving in this economy are making an honest profit by up-selling, installing, and calibrating high-end audio systems into multiple venues inside and outside of the home. This positive differentiation helps them stay in business!

WHY HIDE THE AUDIO?

We all know that even the finest, multi-million dollar recording studios can only attempt to recreate the natural, live sounds that emanate directly from an instrument or singer's voice. Fortunately, the best come very, very close. In fact, listening to a top recording through a world-class audio system can often reveal more balanced details than the live event. For example, rarely, if ever, does a seat exist at a live performance where

“Most people spend far more time and money on design and architectural considerations regarding the placement of high-end video—not high-end audio. In fact, I have never seen a client (or even a designer) place fabric in front of the projector lens, screen, or flat panel display during operation. I wish I could say the same for their endless attacks on audio.”

—Brian Barr

one can perfectly hear, in balance, every instrument in a jazz ensemble or symphony orchestra. Thus, world-class audio playback systems can sometimes even exceed reality.

But, in contrast, until the video industry starts offering software and hardware similar to the perfect holographic reproductions akin to the "Holodecks" on *Star Trek* or R2D2 transmitting Princess Leia's message in *Star Wars*, video is not even close to the real thing. Yet, most people spend far more time and money on design and architectural considerations regarding the placement of high-end video—not high-end audio. In fact, I have never seen a client (or even a

designer) place fabric in front of the projector lens, screen, or flat panel display during operation. I wish I could say the same for their endless attacks on audio.

Can you imagine asking a world-class violinist to stand in the corner behind a drawn drape and cover themselves in fabric during their performance? How about placing them in the ceiling, pivoting them towards the listener, and broadcasting their music through plastic louvers that promise to evenly disperse their sound? As preposterous as this sounds, most people treat speakers in this manner throughout their home. In most cases, accurate sound reproduction continues to take a backseat to aesthetics. For example, even the best, perforated movie screens and acoustic grille fabrics impair the audio quality to some degree. Fortunately, proper acoustic engineering, calibration, and the use of state-of-the-art DSPs (digital signal processors) and high-end loudspeakers and components, can yield stunningly accurate results while appeasing even the most discerning, aesthetically conscious individuals.

The problem is, most end-users, architects, builders, designers, and A/V integration specialists lack the necessary education and experience regarding the understanding of how ultra high-end audio systems can add value to the lives of all. Few have ever experienced the awesome music playback performance of a multi-million dollar, state-of-the-art studio or two-channel music system.

Thus, due to lack of education and experience, most homeowners do not envision placing audio systems that deliver true musical and theatrical quality into rooms and venues throughout the inside and outside of their homes. Why? Because most people do not realize that elite studio-level and two-channel music systems are not just for recording engineers, recording artists, and old "audiophile" men. They also think of state-of-the-art, top studio-grade loudspeaker systems as being excessively large or that the equipment requires an engineering degree to operate. They also incorrectly believe that ultra high-performance audio equipment is less reliable than cheap, standard audio

equipment. Of course, they are wrong.

Elite music systems are usually more reliable and easier to operate than inexpensive audio systems. Correctly engineered and calibrated audio systems don't even require the end-user to make any treble, midrange, bass, or "equalization" adjustments. To operate top audio systems, the end-user simply chooses a source, and turns the volume up and down.

To satisfy even the most demanding architects, builders, designers, and aesthetically conscious homeowners, the best A/V integrators and custom ultra high-end audio manufacturing companies offer endless audio solutions that do not compromise aesthetics or performance. And, in reality, the best, properly engineered, manufactured, and calibrated music playback systems are perhaps one of the most reliable and easy to operate luxuries a fortunate person will ever own.

Most importantly, unlike their ancestors, a vast majority of 21st century people have not been educated as to the value that listening to ultra high-quality audio music throughout their homes will add to their lives. They can't imagine how great audio will add to the ambience while they savor fine wines. They don't envision being serenaded by fantastic music while they dine with family and friends. They often own and enjoy viewing multi-million dollar art masterpieces, but rarely have the ability to play high-end audio music in these venues at all! They spend hundreds of thousands, or even millions, on their outdoor landscapes, but have no ability to listen to true, high-performance audio. They may own an awesome indoor home theater, but have never experienced the benefits of a world-class outdoor theater and ultra high-end outdoor music playback system.

FEED THEIR NEED

In the luxury market there is a desire for high-end audio. At CAT, we have seen some of our most acoustically educated, sophisticated and artistically driven clients actually hire soloists, duets, trios, quartets, and quintets to perform at their homes on a weekly basis. Depending on the venue, these live performers play live through high-end CAT audio systems throughout the interior and exterior of the home.

These same homeowners, who regularly hire live musicians to serenade their families and friends, also understand and appreciate the value of placing ultra high-performance audio systems in numerous rooms and venues throughout the interior and exterior of their homes. They appreciate hearing a freestanding bass player, even at low volume levels, while they dine. They understand that elite audio systems can play "background" music at low volume levels, but still let you hear the details of a musician's fingers as they gently caress the strings of their instruments. They also enjoy hiring live "rock", jazz, and classical musicians that simply plug into their "hidden", permanent outdoor audio system without the hassles and logistics of bringing trucks full of audio equipment, cables, and power generation.

Unfortunately, what do most clients ask for and receive? They get cheap, plastic speakers to deliver "background music." Equally disappointing, these cheap, plastic speakers are placed at the designer's discretion and are not the A/V integrator's choice for proper acoustics.

These speakers are usually powered with 60 watts or less from inferior zone amplifiers that deliver inferior power to the cheap, plastic speakers via hundreds of feet of cheap speaker cable. Thousands of "gimmicks" (such as pivoting and louvers) are advertised and executed by the mass in-wall speaker companies, but everyone knows that the final audio quality is often inferior to even a standard car audio system or upper echelon "boom box" or table radio.

I am not trying to demean the plastic in-wall/in-ceiling speaker and cheap zone amplifier industry. Like everything in life, it has its place. In fact, we should all thank that inexpensive industry for promoting and providing numerous options for placing inexpensive, affordable audio in multiple venues throughout the interiors and exteriors of residences and commercial spaces throughout the world.

Now, if only people would learn that there is a very significant difference between cheap, plastic speakers, multi-zone 60-watt amplifiers and world-class studio-grade loudspeaker monitors, driven by multi-hundred-watt ultra high-performance "fully differential output stage" au-

dio amplifiers, calibrated on site by acoustic engineers with state of the art DSPs!

For those top A/V integrators who are reading this article, don't let your elite clients settle for cheap, plastic, background audio in all of their indoor and outdoor venues. It's your job to educate your clients on the benefits of high-end audio. In this recessed economy, you clearly need to positively differentiate your business from your inferior competitors. Even though your clients, architects, builders, and designers are asking for plastic "background audio" for \$500 a room, you need to educate them on the benefits of high-end audio (starting at \$1,000 per room). Remember, some clients spend tens of thousands and even hundreds of thousands (per room and/or outdoor location) on their world class audio systems! Similar to top recording/mix studios, some fortunate clients spend millions on their elite audio systems throughout the interior and exterior of their home, mega-yacht, or commercial space.

A/V integrators need to demonstrate to their clients, architects, builders, and designers how high-end audio speakers can produce accurate sounds at both low and high volume levels, the superiority of high-end 150-watt and 250-watt-plus amplifiers, and the advantages of adding a DSP to calibrate each speaker on site. And don't forget to explain the benefits of wiring a whole-house system with high performance 12-gauge speaker cables.

Bring high performance audio, music, and theater into your client's lives and indoor and outdoor living spaces. In the end, you will all be better for it. •



Brian Barr is president, CEO and co-founder of California Audio Technologies (CAT) and Newport Audio.



CATTM

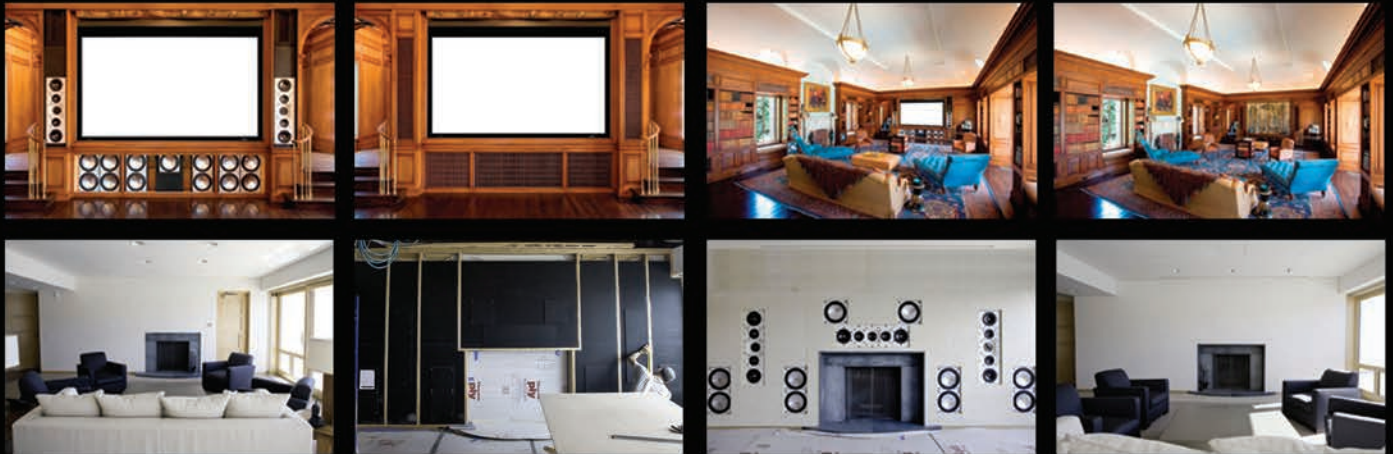
CALIFORNIA AUDIO TECHNOLOGY, INC.

For 19 years, we've engineered "STANDARD" masterpieces like this

For 20 years, we've engineered "CUSTOM" masterpieces like these



CAT MBX 10.9S44
@ \$288,000/pair



To succeed at our commitment to aesthetics and unrivaled audio performance, we provide:

- ***CUSTOM** ultra high end loudspeaker **ENCLOSURES** in any size (we can fit into standard walls), shape (to avoid construction obstacles), material (HDF, Corian, granite, aluminum), and color (thousands of choices)
- *Our own, custom manufactured **DRIVERS** (woofers, midranges, tweeters)
- *Custom passive and electronic **CROSSOVERS** and **DSP's** – digital signal processors
- *Application specific, reliable, "un-clippable", ultra high power "Fully Differential" audiophile **AMPLIFIERS**
- *Custom, industry defining **LOUDSPEAKER CABLES** and **INTERCONNECTS**
- ***POWER AND GROUNDING SYSTEMS**
- ***CAD**
- ***SOLID WORKS**
- ***OFF-SITE ACOUSTIC ENGINEERING**
- ***ON-SITE CALIBRATION**
- ***WORLD-WIDE SERVICE***

*Loudspeakers (from \$2,000 ea. to \$1.4 Million ea.) * Amplifiers (from \$4,000 ea. to \$48,000 ea.)

Complete Audio Systems (from \$28,000 to \$12 Million)

Contact a CAT concierge @ 888-HEAR CAT (432-7228) or visit us @ www.calaudiotech.com