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What Is High-End Audio?

High-end audio is about passion—passion for music, and for how well it is reproduced. High-end audio is the quest to re-create in the listener’s home the musical message of the composer or performer with the maximum realism, emotion, and intensity. Because music is important, re-creating it with the highest possible fidelity is important.

High-end audio products constitute a unique subset of music-reproduction components that bear little similarity to the “stereo systems” sold in department stores. A music-reproduction system isn’t a home appliance like a washing machine or toaster; it is a vehicle for expressing the vast emotional and intellectual potential of the music encoded on our records and CDs. The higher the quality of reproduction, the deeper our connection with the music.

The high-end ethos—that music and the quality of its reproduction matter deeply—is manifested in high-end audio products. They are designed by dedicated enthusiasts who combine technical skill and musical sensitivity in their crafting of components that take us one step closer to the original musical event. High-end products are designed by ear, built by hand, and exist for one reason: to enhance the experience of music listening.

A common misperception among the hi-fi–consuming public is that high-end audio means high-priced audio. In the mass-market mind, high-end audio is nothing more than elaborate stereo equipment with fancy features and price tags aimed at millionaires. Sure, the performance may be a little better than the hi-fi you find at your local appliance store, but who can afford it? Moreover, high-end audio is seen as being only for trained, discriminating listeners, snobs, or gadget freaks—but not for the average person on the street.

High-end audio is none of these things.

First, the term “high-end” refers to the products’ performance, not their price. Many true high-end systems cost no more—and often less—than the all-in-one rack systems sold in department stores. I’ve heard many inexpensive systems that capture the essence of what high-quality music reproduction is all about—systems easily within the budgets of average consumers. Although many high-end components are high-priced, this doesn’t mean that you have to take out a second mortgage to have high-quality music reproduction in your home. A great-sounding system can be less expensive than you might think.

Second, high-end audio is about communicating the musical experience, not adding elaborate, difficult-to-operate features. In fact, high-end systems are much easier to use than
mass-market mid-fi systems. This is because the high-end ethic eliminates useless features, instead putting the money into sound quality. High-end audio is for music lovers, not electronics whizzes.

Third, anyone who likes music can immediately appreciate the value of high-quality sound reproduction. It doesn’t take a “golden ear” to know what sounds good. The differences between good and mediocre music reproduction are instantly obvious. The reaction—usually pleasure and surprise—of someone hearing a true high-end audio system for the first time underscores that high-end audio can be appreciated by everyone. If you enjoy music, you’ll enjoy it more through a high-end system. It’s that simple.

Finally, the goal of high-end audio is to make the equipment “disappear”; when that happens, we know that we have reached the highest state of communication between musician and listener. High-end audio isn’t about equipment; it’s about music.

The high-end credo holds that the less the musical signal is processed, the better. Any electronic circuit, wire, tone control, or switch degrades the signal—and thus the musical experience. This is why you won’t find graphic equalizers, “spatial enhancers,” “subharmonic synthesizers,” or other such gimmicks in high-end equipment. These devices are not only departures from musical reality, they add unnecessary circuitry to the signal path. By minimizing the amount of electronics between you and the musicians, high-end audio products can maximize the directness of the musical experience. Less is more.

Imagine yourself standing at the edge of the Grand Canyon, feeling overwhelmed by its grandeur. You experience not only the vastness of this massive sculpture carved deep into the earth, but all its smaller features jump out at you as well, vivid and alive. You can discern fine gradations of hue in the rock layers—distinctions between the many shades of red are readily apparent. Fine details of the huge formations are easily resolved simply by your looking at them, thus deepening your appreciation. The contrasts of light and shadow highlight the apparently infinite maze of cracks and crevasses. The longer and closer you look, the more you see. The wealth of sensory input keeps you standing silently at the edge, in awe of nature’s unfathomable beauty.

Now imagine yourself looking at the Grand Canyon through a window made of many thicknesses of glass, each one less than perfectly transparent. One pane has a slight grayish opacity that dulls the vivid hues and obliterates the subtle distinctions between similar shades of color. The fine granular structure of the next pane diminishes your ability to resolve features in the rock. Another pane reduces the contrast between light and shadow, turning the Canyon’s immense depth and breadth into a flat canvas. Finally, the window-frame itself constricts your view, destroying the Canyon’s overall impact. Instead of the direct and immediate reality of standing at the edge of the Grand Canyon, what you see is gray, murky, lifeless, and synthetic. You may as well be watching it on television.

Hearing reproduced music through a mediocre playback system is like looking at the Grand Canyon through those panes of glass. Each component in the playback chain—CD player, turntable, preamplifier, power amplifier, loudspeakers, and the cables that connect them—in some way distorts the signal passing through it. One product may add a coarse, grainy character to instrumental textures. Another may reduce the dynamic contrasts between loud and soft, muting the composer’s or performer’s expression. Yet another may cast a thick, murky pall over the music, destroying its subtle tonal colors and overlaying all instruments with an undifferentiated timbre. Finally, the windowframe—that is, the electronic and mechanical playback system—diminishes the expanse that is the musicians’ artistic intent.
High-end audio is about removing as many panes of glass as possible, and making those that remain as transparent as they can be. The fewer the panes, and the less effect each has on the information passing through it, the closer we get to the live experience and the deeper our connection with the musical message.

Why are high-end audio products more transparent windows on the musical event than mass-market “stereo systems”? High-end products are designed to sound good—that is, like the real thing. They’re not necessarily designed to perform “well” according to some arbitrary technical specification. The true high-end designer listens to the product during its development, changing parts and trying different techniques to produce the most realistic sound possible. He combines technical skill with musical sensitivity to create a product that best conveys the musical experience. This dedication often becomes a zealous pursuit, involving many hundreds of listening hours and painstaking attention to every factor that influences the sound. Often, a more expensive part will be included to improve the product’s sound, while the retail price remains the same. The higher cost of this musically superior part comes off the company’s bottom line. Why? Because the high-end designer cares deeply about music and its reproduction.

Conversely, mass-market audio components are often designed to look good “on paper”—on the specification sheet—sometimes at the expense of sound quality. A good example of this is the “THD wars” of the 1970s and ‘80s. THD stands for Total Harmonic Distortion, a specification widely used by uneducated consumers as a measure of amplifier quality. (If you’ve done this, don’t worry; before I learned more about audio, I, too, looked at THD figures.) The lower the THD, the better the amplifier was perceived to be. This led the electronics giants to produce products with vanishingly low THD numbers. It became a contest to see which brand had the most zeros after the decimal point in its THD specification (0.001%, for example). Many buyers bought receivers or amplifiers solely on the basis of this specification.
Although low THD is a worthy design goal, the problem arose in how those extremely low distortion figures were obtained. A technique to reduce distortion in amplifiers is called “feedback”—taking part of the output signal and feeding it back to the input. Large amounts of feedback reduce THD, but cause all kinds of other problems that degrade the amplifier’s musical qualities. Did the electronics giants care that the large amounts of negative feedback induced to reduce their products’ THD measurements actually made those products sound worse? Not a chance. The only thing that mattered was making a commodity that would sell in greater quantity. They traded musical performance for an insignificant technical specification that was sold to the public as being important. Those buyers choosing components on the basis of a specification sheet rather than listening ended up with poor-sounding systems. Ironically, the amplifiers that had the lowest THDs probably had the lowest quality of sound as well.

This example illustrates the vast difference between mass-market manufacturers’ and high-end companies’ conceptions of what an audio component should do. High-end manufacturers care more about how the product sounds than about how it performs on the test bench. They know that their audience of musically sensitive listeners will buy on the basis of sound quality, not specifications.

High-end products are not only designed by ear, but are often hand-built by skilled craftspeople who take pride in their work. The assemblers are often audiophiles themselves, building the products with as much care as if the products were to be installed in their own homes. This meticulous attention to detail results in a better quality of construction, or build quality. Better build quality can not only improve a product’s sound, but increase its long-term reliability as well. Moreover, beautifully hand-crafted components can inspire a pride in ownership that the makers of mass-produced products can’t hope to match. High-end audio products are often backed by better customer service than mid-fi products. Because high-end manufacturers care more about their products and customers, they generally offer longer warranties, more liberal exchange policies, and better service. It is not uncommon for high-end manufacturers to repair products out of warranty at no charge. This isn’t to say you should expect such treatment, only that it sometimes happens with high-end and is unthinkable with mass-market products. High-end companies care about their customers.

These attributes also apply to high-end specialty retailers. The high-end dealer shares a passion for quality music reproduction and commitment to customer service. If you’re used to buying audio components at a mass-market dealer, you’ll be pleasantly surprised by a visit to a high-end store. Rather than trying to get you to buy something that may not be right for you, the responsible high-end dealer will strive to assemble a system that will provide the greatest long-term musical pleasure. Such a dealer will put your musical satisfaction ahead of this month’s bottom line.

Finally, most high-end products are designed and built in America by American companies. In fact, American-made audio components are highly regarded throughout the world. More than 40% of all American high-end audio production is exported to foreign countries, particularly the Far East. This is true even though high-end products cost about twice as much abroad as they do in the U.S., owing to shipping, import duties, and importer profit. The enthusiasm for American high-end products abroad is even more remarkable when one remembers the popular American misperception that the best audio equipment is made in Japan.
On a deeper level, high-end products are fundamentally different from mass-market products. From their conception, purpose, design, construction, and marketing. In all these differences, what distinguishes a high-end from a mass-market product is the designer’s caring attitude toward music. He isn’t creating boxes to be sold like any other commodity; he’s making musical instruments whose performance will affect how his customers experience music. The high-end component is a physical manifestation of a deeply felt concern about how well music is reproduced, and, by extension, how much it is enjoyed by the listener.

The high-end designer builds products he would want to listen to himself. Because he cares about music, it matters to him how an unknown listener, perhaps thousands of miles away, experiences the joy of music. The greater the listener’s involvement in the music, the better the designer has done his job.

A digital processor designer I know epitomizes this dedication. He had specified a premium-quality resistor at a certain point in his new design. This resistor cost $1 rather than the pennies most resistors cost. Just as the design was about to go into production, he looked even harder for any changes that would improve the product’s sound. For fun, he tried an exotic $10 resistor in the circuit in place of the $1 resistor. He was surprised at how much better the product sounded with this change, and couldn’t bear to see the product shipped with the $1 resistors. The company made the product with the $10 resistors although the retail price had already been established based on the parts cost using $1 resistors. High-end designers try to add quality to, rather than subtract cost from, their products.

To the high-end designer, electronic or mechanical design isn’t merely a technical undertaking—it’s an act of love and devotion. Each aspect of a product’s design, technical as well as musical, is examined in a way that would surprise those unaccustomed to such commitment. The ethos of music reproduction goes to the very core of the high-end designer’s being; it’s not a job he merely shows up for every day. The result is a much more powerful and intimate involvement in the music for the listener than is possible with products designed without this dedication.

What is high-end audio? What is high-end sound? It is when the playback system is forgotten, seemingly replaced by the performers in your listening room. It is when you feel the composer or performer speaking across time and space to you. It is feeling a physical rush during a musical climax. It is the ineffable roller-coaster ride of emotion the composer somehow managed to encode in a combination of sounds. It is when the physical world disappears, leaving only your consciousness and the music. *That* is high-end audio.