
The Complete Guide to High-End Audio

Fifth Edition

Robert Harley

Acapella Publishing

Carlsbad, California

hifibooks.com

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Foreword

By Keith Jarrett

Music is the sonic motion of intention. With words, sound can be divorced from meaning by taking away the physical quality of speech. But music's meaning is *in* its physical quality: its sound. When a musician plays something a certain way and we can't hear the intent (the reason) behind it, we are hearing wasted motion, and register it as such because we haven't been given enough clues about the intent. We can then grow to think that everything is only gesture, and miss the real thing.

The media through which we hear music (our systems, rooms, etc.) cannot be separated from our ability to experience the music. It isn't the same *music* on a different system because we cannot separate music's rhetoric (its words) from its physical reality (its delivery). This makes the "delivery systems" (our stereos) more important than we might think they are. Can they *tell* us what the musicians on the recording are telling us?

As a musician, I often—too often—had the following experience: I would play a concert, hear the tape afterward, and wonder what was missing. I would remember incredible things in the concert that just weren't on the tape. The notes were there, but notes are not music. Where was the music, the *intention*?

We could think of it this way: On the tape, the rhetoric had no meaning. Had I trusted the tape and not my memory of the actual event, I would have never grown to understand that, even though the sound is on tape, it doesn't mean you've recorded the *music*. If you've heard a certain CD on a certain system, it doesn't necessarily mean that you've heard what's on the CD. We must learn to trust the responses of our own system—our ears—to music systems. Of course, this demands that we be in touch with ourselves—no easy thing.

People to whom music is important need to get close to the intention in a recording, and there's only one way to do this in the home: learn about the world of audio equipment. Use your (and others') ears to help remove whatever hinders you from the musical experience on the recording. Of course, it's not only the reproduction side that needs care—but that's the only side the listener has control over.

For instance, it's demonstrable that by merely flipping a two-pronged AC plug on a CD player, or even a turntable, a record you thought you didn't like can become a favorite—just because the polarity was wrong. Since music cannot be divorced from its emotional content,

the *sound* of a record can determine whether you think you like the *music*. And vice versa, when you can't listen to music you really think you like because of how it was *recorded*.

Obviously, the musical experience is a delicate, complex thing, and we humans are more sensitive than we sometimes think. But we have the option to tune our music systems to better balance the equation. We can get closer to what we want if we *know* what we want.

There are stereo components that approximate the musical experience at many different price levels. We all know what our financial limitations are; but, given the desire to improve our systems, we *can* do it.

It by no means follows that musicians have to be audiophiles. Though I've been recording since 1965, I didn't seriously think about much of this until the mid-1980's. But audiophiles and music lovers push the envelope, and we all benefit. Also, the more serious audiophiles are determined to keep their minds and ears open, keep learning, and try to remain patient during the process. Doing this thing right can take time.

There are a lot of people out there listening to all of these components for us. I recommend *using* this fact, and *carefully* reading others' evaluations, until you can tell whether a reviewer's preferences in sound match your own priorities. You *can* sort of get to know these guys over a period of time.

But, of course, it's *your* ears that count. I think you should pay attention to their needs. After all, we're talking nutrition in an age of diet soft drinks.

Preface to the Fifth Edition

Each time I revise and update this book, I'm made vividly aware of the technological changes that shape the ways in which we enjoy music. Although the fourth edition was published less than five years ago, that short span of time has seen more profound changes in audio technology—transformative developments that open startling new possibilities for accessing music—than in any previous *decade*.

The new technologies that most readily come to mind are music servers, streaming audio, wireless networking, and high-resolution downloads. As I write this, I'm listening to full CD-quality streaming audio on my desktop system, and have the ability to instantly access just about any piece of music I can think of. It's like living in a virtually infinite music store. I can stream that music wirelessly to audio components distributed throughout my house. In my main audio system, a network-attached storage drive holds a growing collection of high-resolution downloads along with most of my CD collection, all accessible with a few finger taps on a tablet. That system includes an audio component that was unimaginable five years ago: an integrated amplifier and high-res wireless streaming DAC that's more accurately viewed as a general-purpose, software-controlled audio platform that can be programmed, via Internet download, into whatever configuration suits my needs. And when I travel, I can take high-res music with me, and listen to it through planar-magnetic headphones whose sound quality rivals that of six-figure loudspeakers. Never in history has so much music been so readily available to so many listeners.

But beyond these attention-grabbing examples of advancing technology, the quest for more lifelike musical reproduction has moved forward in myriad small ways across nearly every aspect of audio reproduction. These advances may not be obvious or profound, but, cumulatively, they take us that much closer to high-end audio's *raison d'être*: equipment that makes it possible to fully experience at home the intents of the composer and musicians. Take, for example, the apparently prosaic power amplifier: How much room for improvement was there in this category of audio component? As it turns out, a lot. Today's best power amps have significantly advanced the state of the art with improved power supplies and novel circuit topologies.

Every advance in one product category spurs improvements in other areas—a more resolving amplifier provides designers of loudspeakers and source components with a more transparent window on the sounds of their own products. Even that most venerable of audio technologies, the LP record, has a few new tricks up its sleeve. With the market for vinyl playback gear and new LPs exploding, the industry has responded with a slew of innovative products aimed at extracting the most music from vinyl. Even more exciting,

most of the records being pressed today sound better than LPs ever have. Audiophile reissues of classic albums, produced with loving devotion, bring the music back to life and engender the feeling that, for the first time, you're hearing the music as it was meant to be heard.

Audiophiles talk of the "golden age" of audio as being the 1950s or 1960s, when many of today's audio paradigms were established. As great as that period was, I think we're in the middle of a new golden age, and not just because of the advancing state of the art. The past few years have been marked by a democratization of high-end audio in which simple and affordable products designed and built with high-end values have become commonplace. Most of the people who buy these products wouldn't identify themselves as audiophiles, but these listeners nonetheless want high-quality sound. The future of high-performance audio looks bright indeed.

Finally, a few notes about how to use this book. As in the previous editions, each chapter begins with the most basic information and progresses to more technical discussions. When you've reached a level of complexity you're comfortable with and don't wish to go deeper, simply skip to the beginning of the next chapter, to begin reading the most basic information about the next subject. This book is meant to be used as a reference, rather than read straight through from beginning to end.

Keep in mind that you don't need to understand the technical aspects of audio to enjoy music in your home. I've included the more technical content for those readers interested in knowing how audio works, and to make this book truly *The Complete Guide to High-End Audio*.

Robert Harley
Carlsbad, California

About the Author

Robert Harley is the Editor-in-Chief of *The Absolute Sound* magazine. Founded in 1973, *The Absolute Sound* is the world's most respected journal of high-end audio. He is the author of two other books on home audio, *Home Theater for Everyone* and *Introductory Guide to High-Performance Audio Systems*. His more than 1000 published equipment reviews and articles on music and home-theater sound reproduction have helped thousands of enthusiasts improve their home-entertainment systems. His books have sold more than a quarter of a million copies in five languages.

Robert is also the editor of *The Absolute Sound's Illustrated History of High-End Audio*, a series of richly illustrated large-format books celebrating the audio industry's legendary designers and their iconic products.

Robert Harley holds a degree in recording engineering and has taught a college degree program in that field. He has worked as a recording engineer and studio owner, compact-disc mastering engineer, technical writer, and audio journalist. Before joining *The Absolute Sound* and *The Perfect Vision* in 1999, he was Technical Editor of *Stereophile* magazine for eight years, and also served in that capacity at *Fi: The Magazine of Music and Sound*.