



Company Overview  
&  
Cable Design

## Company Overview

Over thirty years ago, Acoustic Zen started out as an independent research consultant, designing advanced cable designs for several high profile audiophile cable manufacturers.

Acoustic Zen's first audiophile product was model True Image pure Class A power amplifier. The design was to create affordable Class A amplification with superb neutrality with plenty of power. It was a Do It Yourself (DIY) MOSFET power amplifier for an overseas market.

This True Image power amplifier received critical praise from discerning listeners such as Dick Olsher of Stereophile magazine. It remains, twenty years beyond its first appearance, among the most tube like solid state amplifiers ever made. It is truly a classic that is treasured by many owners.

Soon after, Acoustic Zen's first speaker was the "Hologram" speaker. It amazed dozens of reviewers because of their unrivaled seamless coherence across the sonic spectrum. It achieved what many speaker manufacturers have long sought... invisibility and an utterly convincing depiction of music in space.

In 2021, Acoustic Zen product line of speakers and cables are among the most affordable musical sounding products on the audiophile market. Only the highest quality material, design and construction techniques are used in these products. Please visit Acoustic Zen's website to read the technical white papers, professional reviews, and awards.

## Research Overview

As research into the acoustical properties of cable materials advanced over the last two decades, a related field of research emerged to supplement that work. In Acoustic Zen's laboratory, cable design research moved forward alongside those advances.

Acoustic Zen's research with materials and the acoustical delivery properties of cables gained insight from once-classified technical work exploring long-distance sonic transmission and the dispersion characteristics of underwater acoustical signals.

That did not happen accidentally or whimsically. For many years, highly technical sonic research supported military programs investigating esoteric areas of surveillance. In recent decades, the detection of submarines at long distances and the tracking of high-altitude aircraft and intercontinental ballistic weapons were primary to such efforts. This research was conducted, with different strategic emphases, in North America and Europe (among NATO nations) and in the former Soviet Union.

Declassification of large areas of once sensitive research has assisted the shift of global technological priorities from military to commercial uses. This access to once restricted research has enhanced several areas of audio reproduction and acoustical research.

Acoustic Zen was founded to draw upon, and advance, the most sophisticated research in the production of musically accurate sonic transmission. The primary goal of its work is to bring improved cable designs and materials to the commercial audio market.

The following four primary laboratory objectives governs the design and manufacture of Acoustic Zen's state-of-the-art interconnects and speaker cables:

1. The development of extremely sensitive amplification and preamplification circuitry for use in the Acoustic Zen laboratory to support critical testing and design refinement.
2. The use of innovative 24-bit surround sound recording technologies that challenge the limits of accurate, seductively meaningful music reproduction. These play a role in understanding the micro-behaviors of signal dispersion in a dynamic musical sound field.
3. The experimenting and use of exotic new digital audio networks including proprietary digital to analog converters (DACs) and analog to digital converters (ADCs).
4. The exploration of power conditioning for the explicit purpose of increased signal control and sound reproduction accuracy. Acoustic Zen's dynamically coherent power cords, the TSUNAMI and the KRAKATOA, stand alongside SATORI speaker cables and the handcrafted "zero crystal" Reference analog and digital interconnects. These are the initial pathbreaking cable products for Acoustic Zen.

## Cable Design Overview

Acoustic Zen is among a small but elite group of innovative cable design researchers.

Over thirty years of pace-setting work has brought Acoustic Zen to a scientific understanding of materials and design structures. Acoustic Zen views cables as inherently musical instruments.

Cables often function as "tone controls," as many people in the audiophile press insist. But Acoustic Zen views cables as integral to audio networks. Cables are intrinsic to the structure of recording networks and of reproduction (stereo and surround sound) networks, as well. Without cables, no music.

Comprehending the complex nature of the integration between cables and sound systems has been one of Acoustic Zen's primary research objectives.

One of Acoustic Zen's primary research goal is to understand the material and design properties of low-level signal transmission. Acoustic Zen's aim is to create the most accurate possible delivery of musical information. Acoustic Zen believes that sonic accuracy is innately musical.

Acoustic Zen's research in signal delivery characteristics of cables has resulted in the following five variables that are fundamental in cable design:

1. The choice of materials
2. The internal structure of materials
3. The amenability to design configurations
4. Cable and network (or system) interaction
5. The bundling of first order sonic signals and associated internal cable reflections.

Acoustic Zen's first White Paper outlined a number of insights and technical outcomes that follow from this research to frame Acoustic Zen's evolving design philosophy.

Acoustic Zen's musical background plays an important role in cable-design work. The early design objective was to create the most musically accurate, sonically glorious audio components possible within real world retail prices. That ambition to enlarge and enhance the sonic envelope without exaggerated price tags has been constant.

Acoustic Zen always wanted to create a full-scale concert hall realism in listening rooms. To that end, Acoustic Zen's cables extend the range of sonic accuracy and dynamic impact. They are as tonally perfect as analog and digital interconnects can be at the present time.

Each Acoustic Zen cable is assembled by hand. Each pair is aurally inspected, listened to carefully, and critically before it goes out into the world. Acoustic Zen cables are handcrafted to be state of the art instruments for the delivery of music.

Acoustic Zen believes "Cable Design is an Art".

Cables are the physical pathways that deliver music to each of us. There is no other way to make music come alive in the absence of an on stage live concert performance. Each music lover is completely dependent upon cables by using meters of interconnect and speaker cables in order to hear what a musician works hard to perfect.

Cables are also pathways for extremely spiritual events since music, especially great and beautiful music, is spiritual ...something beyond wood and metal, flesh and bone. Therefore, our job as musicians, cable designers, lovers of great sound and magnificent music, is to create works of cable art that deliver the delicate signals we know as MUSIC.

Acoustic Zen's objective is to reward the critical listener with "Cable Art." Acoustic Zen believes in the power of art to give technology a soul. Acoustic Zen names the cables and company Acoustic Zen because it names our musical and design values.

Music, at its best, has an indefinable character of soulfulness ... Acoustic Zen calls it "Sound Afloat". When music is right, when it is perfect, it seems to soar and dart like children playing on a big, green, open lawn. Music takes you with it. Music gathers us inside itself. It changes our lives. Great music makes us high on nothing but itself. It lets us be as elevated as we truly are, at our best, inside our souls. And so I think that the most perfect music is like zen. And the most beautiful and accurate sound is like acoustic zen.

Acoustic Zen's objective as a romantically inspired and hard headed engineers is to be a partner for anyone who deeply loves music. We want to help people experience a sense of inner height and personal enlightenment. This may seem eccentric because everything in our world is number-oriented. Nevertheless, we want to do our work, which we believe is a form of art, for people who know how to let Acoustic Zen's cables move them closer to the truth of music's "mysterious happiness."

## The Design & Fine-Tuning of Audio Cable

Among the audiophile community, few topics elicit more discussion and debate than differences in interconnects and speaker cables. The reason for this interest and disagreement is easy to understand.

Only in the 1990s, after decades of high-end audio growth, did sustained attention focus on the inconspicuous but wholly important role that interconnect wires and speaker cables play in the transmission and enjoyment of music. Only the most complete audio cynic today believes that speaker cables and interconnect wiring is insignificant or irrelevant. Anyone with good ears can hear, first hand, how system-dependent are most cables that operate in a stereo or surround sound system. Even a fledgling audiophile can discern differences in audio presentation constructed from various cable designs, materials and wiring networks.

Prior to creating Acoustic Zen, we explored the use of pure, continuous cast "single-crystal" wire. Research into its superior signal integrity and transmission characteristics proved its benefit for digital and analog interconnect cables. Therefore, Acoustic Zen exclusively uses "zero crystal" (extremely long-grained) pure and unextruded, continuous-cast wire. Pragmatic experience as well as theoretical research led Acoustic Zen to somewhat unconventional cable design techniques, cable structures that maximize coherent signal delivery.

The purpose of any interconnect or speaker cable is to deliver the most absolutely coherent musical signal possible. That goal is more complex than it may appear.

Musical signals are combinations of interacting and overlapping signal frequencies at varying levels of magnitude. Such rising and falling acoustical dynamics contain phase based information as well as low level harmonic "strands" or sonic "fabrics" that are fragile and easy to deform. These minute signals can be blurred and, in the time and space through which musical energy travels among pieces of audio equipment, obscured, degraded or, worse, obliterated utterly.

The notion of "obliteration" here points to an important feature of the work that cables carry out. Cables literally "read" and transfer delicate musical signals that flow through them with an almost infinite variety of electronic characteristics. Each cable design, each set of cable materials, interprets the signals it delivers.

Cables are not like plumbing. They are not tubes that allow music to pour like water through hollow cavities. Acoustic cables receive, interpret, and discharge extremely small amounts of precisely aligned musical energy. Because this temporal sequence is "music itself," existing as a flowing bundle of minute electrical signals in motion within acoustic cables, it is obvious why cable design and cable material is important. Cables capture music at the point of recording. Cables carry and dispense recorded music in mono, stereo and surround sound reproduction.

Cables are at the heart of the musical experience. They sit at the core of the music making enterprise. In a very concrete sense, cables and the wires that deliver sound shape the image of music from beginning to end.

Music is not only a set of organized sounds moving through air in ambient space. Music is a network of infinitely braided micro-level sonic energy that carries highly refined and extraordinarily delicate signals. These delicate signals contain vast amounts of acoustic and electronic information.

Additionally, there is the perplexity of the work that cables must do. They must "read" minute electrical patterns that are subject to alteration in delivery as if those signals were the original and subsequently successful recreation of acoustic sound in three-dimensional space. Without confusing an already difficult issue, acoustic sound occurs in time and, therefore, adds its fourth dimension to the three dimensions of height and depth and width that construct the "staging" and "imagery" of convincing acoustical reproduction.

Music is "all about the sound" and cables are "all about music" when they achieve refined clarity and timbral delicacy.

Acoustic Zen regards cable design to be an art as much as a technologically based engineering practice defined by measurements and decisions based on verifiable performance evidence. The choice of materials used in cables is of great importance. Design structures chosen to craft those materials is equally important.

Acoustic Zen cables are seen to be enmeshed in all phases of music creation. Our aim is to create inherently "musical" cables that are physically sympathetic to musical signals. A quick look at how central cable design and cable crafting are to the world of music is revealing.

At the moment of creation, microphone cables receive music as it is recorded. Cables throughout the recording chain preserve and transmit or unwittingly degrade signals captured at the microphone interface.

Ultimately, post production delivery of a completed recording depends upon all the cables and interconnects that transmit music from its reproductive source (a DVD/CD player, a turntable, or a tape machine) across pre-amplification and amplification, and on to speakers that divulge musical provocation, power, and engagement.

Cables, in sum, are everywhere music is at stake. That is why research into the design of cables and the materials that comprise them is crucial to improving the creation of music from its source to its end result as listening enjoyment.

Again, please visit Acoustic Zen website to read the loudspeaker technical White papers, professional product reviews, and awards.

We invite you visit your local authorized Acoustic Zen dealer to experience the musically satisfying Acoustic Zen loudspeakers and cables.