

BASIS “PERFECT SIGNAL TRANSMISSION TECHNOLOGY”

LOUDSPEAKER CABLE

Basis PSTT Loudspeaker Cable redefines the upper limits of loudspeaker cable performance. Never has a speaker cable performed at state of the art levels in so many areas: bass definition, bass impact, midrange clarity, midrange naturalness, transparency, high frequency extension, high frequency “sweetness”, overall “microdynamics”, overall dynamics, image width, image depth, image stability, and overall focus.

When you audition Basis PSTT Loudspeaker Cable you will hear your system perform at new, **far increased levels of clarity AND musicality** (many times mutually exclusive attributes of a given cable). In the past, particular cable brands were known for one or two overall, pervasive sonic characteristics. Brand “A” might be known as the very detailed, but somewhat fatiguing cable. Brand “B” might be known as natural, but “closed-in” sounding. Basis cables have forever “raised the bar” of overall cable performance possibilities. Extreme detail, fabulous bass, along with total effortlessness and naturalness are now available, for the first time, in the same cable.

Please read below to understand how only a cable designed with proper engineering, resulting in perfect impedance stability, can perform at the level of Basis cable.

PURE PHYSICS AND PROVEN ELECTROMAGNETIC THEORY

As with all design projects, we at Basis begin with research in the pure physics of the product involved. Those familiar with Basis will notice that this approach, using a “clean slate” with no predetermined design biases, has been the Basis approach with all products from the original Debut through the revolutionary Vector tonearm and the amazing Work of Art turntable.

From initial design through the final product the **fundamentals of physics and electromagnetic theory** have guided us toward the goal of offering the most truthful audio cables available. No “audio industry dogma”, theory, or standard practice regarding materials or configuration was allowed to intrude upon our research and the development of the cables. Available audio cables were only used to test our developing theories regarding the relationship between measured electrical characteristics and sonic performance in audio cables. Numerous examples of the best available cables and our own prototypes were measured for all electrical characteristics, then tested in state of the art stereo systems. Basis developed a database of electrical properties and sonic characteristics of cables that allows us to understand the connection between the measured parameters of any particular cable and its sound. No cable can be exactly predicted by measurements. There is no substitute for listening, and the Basis Cables are the result of many hundreds of hours of listening. However, a full understanding of the physics involved and an increasing ability to correlate sonic performance with measurable criteria are necessary to expand the envelope of cable performance.

A COMPLETE DESIGN

Most audio cables have been designed along one or two favorite features of the designer. In the case of one cable this may be the winding of the conductors into a particular pattern. Another cable’s “feature design aspect” may be its ratio of wire size. Yet another cable may claim the use of “air tube” technology as its greatest feature. Ironically, many of these claimed “advantages” actually result in sonic *disadvantages*. Many “air tube” designs, for instance, result in unstable geometry, where the conductors float in the air tubes, and give unstable electrical characteristics and unpredictable performance. We at Basis have measured 30% changes in electrical characteristics of such cables by simply changing the bend of the cable while measuring.

Many audio cable companies operate under the naive, erroneous assumption that capacitance, inductance, or both are “bad” and should be driven to zero if possible. Cables designed to be extremely low in either inductance or capacitance are typically of inappropriate impedance and grossly deviate from an effective transmission line. Such cables perform very differently with different types of equipment. As an example, most audiophiles are familiar with the flat, ribbon cables made by some companies. Flat cables typically result in unusual values of capacitance and impedance, which is why some such cables are actually unstable with particular electronics, even requiring discrete loading components to achieve stability. Basis cables, reflecting their “distortionless transmission line” design, are totally stable with all loads.

Fixating on one design aspect, as in the above examples, may make for “catchy” marketing, but invariably results in incomplete cable designs.

We at Basis understand that all aspects of an audio cable are critical. A **complete design** must account for many factors and not overlook any. Basis specifies such extreme requirements of materials and processes, all of which are necessary to achieve our performance and stability goals, that we have found only two high-tech/military cable specialist manufacturers in the USA who are capable of manufacturing Basis Signal Cables.

Basis PSTT Loudspeaker Cable effectively addresses all pertinent material and electrical properties, including:

1. **Conductor material:** The highest purity proprietary copper alloy is used throughout all cables.
2. **Dielectric material:** The most pure form of the world’s finest dielectric is used, un-dyed for all primary and secondary insulation needs as well as cable cores.
3. **Skin Effect design:** Using Basis “**Annular Ring Conductor Geometry**”, skin-effect concerns are eliminated, even at multiples of the highest audio frequencies, producing superior imaging, impact, reverberation, and tonality.
4. **Impedance matching:** Through innovative use of materials and geometry Basis has succeeded in bringing the impedance to unprecedented proximity of the typical loudspeaker load, preventing distortion producing and power compromising reflections at the loudspeaker terminals. Speakers perform to their ultimate capability with Basis speaker cables.
5. **High power handling ability:** Gauge size is important in high current applications. The Basis Speaker Cable is a full 7 gauge wire yet has the same exemplary skin-effect characteristics of the Basis 16 gauge annular ring conductor internal component wire. Basis has succeeded in producing a large gauge cable with the advantages of large cables while retaining the superior imaging characteristics of smaller cables whose strength is immunity from audible skin effects.
6. **“Distortionless Transmission Line” performance:** Electrical characteristics are balanced in the single, unique condition to meet “distortionless transmission line” conditions. This balance of conditions, **dictated by proven physics**, is the **only avenue to attain constant phase** across a wide frequency range.

A constant perfect phase relationship between all frequencies produces results not attainable if this condition is not met. Foremost in the sound of a “distortionless transmission line” may be a “natural coherence” that can be “felt” on an instinctive level by the listener. The individual sonic properties that many audiophiles analyze, such as attack, decay, tonality, and soundfield echoes so convincingly “play off of each other” and combine as to make analytical listening almost superfluous. So involving is the music that analytical listening is actually much more difficult to perform in a system with Basis signal cables from source through speakers. To explain just how natural this effect of correct phase is please contemplate this analogy. Imagine sitting in the middle of a totally dark room with a person speaking behind and to the left of you. In a few moments you would be able to locate this person. Your mind automatically would analyze the slight difference in the arrival of the sound between your left and right ears. Your mind would analyze the echoes to further locate the speaker as well as to determine the size of the room. None of this process is conscious or subject to logical analysis. In a similar manner, when you first listen to Basis signal

cables you will perceive a “rightness” which will transcend analysis.....**you will not need to analyze the sound.** However, when you force yourself to analyze the sound you will find that the “mental checklist” you have learned to make while evaluating audio equipment, with factors such as stage width, stage depth, natural decay, attack, quality of soundfield echoes, resolution, transparency, will be fully satisfied.

WIDE SYSTEM COMPATIBILITY

The favorable impedance of the Basis Speaker Cable (see item 4, above) combined with distortionless transmission line characteristics (see item 6, above) mean a cable which has neutral sonic characteristics and perfect phase performance when used with a wide variety of components. The **Basis Speaker Cables are as “at home” with OTL (output transformerless tube amplifiers) as high-powered solid-state amplifiers.** Whether you use single-ended transformer-coupled tube amplifiers, push-pull tube amplifiers, solid-state amplifiers, horn-loaded, cone, or electrostatic loudspeakers you will receive the same performance from your Basis Speaker Cables.

ADDITIONAL TECHNICAL DETAILS

For further technical discussion of the electrical characteristics of cables (impedance, inductance, capacitance, resistance, leakage, and the frequency dependence of inductance, capacitance, and impedance), and how these characteristics determine the sound of cables, please watch the Basis Website (www.basisaudio.com). In the near future Basis will provide a technical paper defining these parameters and their relationships. You may also e-mail Basis at any time regarding the availability of this paper.