

*SOUNDSTRING CABLE TECHNOLOGIES™, LLC*

# **WHITE PAPER**

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# *Soundstring Cable Technologies™, LLC*

**Your #1 Source for High Performance Power Cords, Speaker, Interconnect & Digital Cables**

You may recently have purchased a high-performance audio system, or you may own one for many years. It is equipped with a variety of components that may include one or more amplifiers and/or preamps, a turntable, DAC, CD, SACD or CD/DVD player, an AC power conditioner, a set of very good quality speakers, or multiple speakers for Surround Sound or Home Theater. You invested many thousands, perhaps tens of thousands of dollars on your system and put a lot of time and energy into carefully researching and choosing your components. You are disappointed and frustrated with the overall sound quality and want answers. The audio store or dealer where you purchased your components tells you it is not the components. Maybe it's the room acoustics or the quality of the recordings you play? Then, you start to consider the most overlooked component of high quality sound reproduction, rarely focused on and usually taken for granted, the connecting links to your components - ***the Power Cords, Speaker, Interconnect and Digital Cables!*** Overall system and individual component performance depends in large measure on the design, construction, quality and performance of the cables that inter-connect them. A really great sound system includes a winning combination of high quality recordings, components, speakers, cables, and proper room acoustics.

There are many types, styles, constructions and brands of high performance power cords, speaker, interconnect and digital cables available from companies worldwide. They include low cost standard "run-of-the-mill" inexpensive cables, high definition-low loss moderately priced cables and "high-end" specially designed and crafted higher priced cables. The retail cost for most high-end audio cables varies from several hundred to many thousands of dollars, depending upon the construction materials and connectors used, plus labor, overhead, packaging, shipping and related costs.

Soundstring Cable Technologies, LLC™ is a combination of the development and manufacturing experience of Superior Insulated Wire Corporation and the Lion Cords Division of Astrohonic Corporation of America, two veteran wire industry manufacturers that were established in the mid 1940's. **A total of 140 years of combined experience has been utilized to design and develop our products from the inside out.** Our current product lines and those in development for introduction in 2015 and beyond will all be part of the Soundstring™ family of innovative concepts in high-end audio cables setting new, higher standards for performance, quality and reliability with very affordable pricing!

We are "manufacturers" in the truest sense of the word. Starting with the base raw materials (copper and insulating plastics), we extrude (insulate), shield, cable and jacket them into many types of finished insulated wire and cable products. We control our own destiny by utilizing "in-house" design, engineering, extrusion, shielding, cabling, jacketing, cutting, stripping, terminating, molding, assembly, packaging, testing, quality control and shipping from our factory in South Norwalk, CT USA.

For high-end audio, we supply many types and styles of high performance domestic and international power supply cords that can be used in over 117 countries worldwide! Our power cords feature hand assembled Furutech plugs with 24 Kt. Gold contacts and polycarbonate housing shells. We also supply standard and bi-wire speaker cables, bi-wire jumpers and both shielded and unshielded single ended interconnects with our patented *Ultra Low Mass*<sup>™</sup> 24 Kt. Gold Plated RCA phono plugs, as well as the shielded and balanced style with Neutrik XLR's with 24 Kt. Gold contacts. In development for 2015 and beyond, we plan to add sub-woofer cables with RCA plugs and several types of digital cables, including the most current Ethernet ready HDMI and HDMI 3D cables; 75 Ohm Digital Coaxial Cables with RCA's or BNC's and a few styles of USB cables, as time and resources permit. We are proud to have received high praise, awards and many, many very favorable reviews from several of the industry's leading audiophile magazines, on-line web sites and component, speaker and power conditioner manufacturers.

Our Starfire Series Tricormaxial<sup>™</sup> Power Supply Cords, Speaker and Bi-wire Jumper Cables, our Octaphase<sup>™</sup> Interconnect and Microphone Cables and the first patented *Ultra Low Mass*<sup>™</sup> RCA Phono Plug with all crimp connections was our original line of high performance products bearing the Soundstring<sup>™</sup> name. In 2011, we developed and added our new *GEN II Platinum Series*<sup>™</sup> cables with UL approved "in wall" Power Supply Cables for making dedicated circuits directly from circuit breaker panel boxes to dedicated sound room wall outlets. The GEN II cables also have UL approved Power Cords, Interconnect, Microphone and Speaker Cables that can be used for "in wall" as well as standard applications. In 2013, we added the *GEN II Platinum Series "SE"*<sup>™</sup> (Special Edition) enhanced performance power supply cable and power cords, speaker and balanced interconnect and microphone cables with a unique and proprietary 98% braided RFI/EMI non-metallic shield barrier and enhanced conductor constructions. All of the GEN II "SE" cables are also UL approved for "in-wall" applications. For 2015 and beyond, we will finalize the designs and constructions and begin producing the sub-woofer and digital cables mentioned above, plus a line of specialty cables specifically used for amplified guitars and other types of amplified instruments. The plugs for these cables will have a special "silent" switch to eliminate "buzz" and feedback when plugging in or unplugging the cables with a live amplifier attached.

The level of performance for each of our products has been rated among the very best in the industry at the time each was introduced. We have been recognized and praised by many well-known and respected names in high-end audio systems. Many have partnered with us in trade show exhibit rooms at the International Consumer Electronics Shows (CES), The Rocky Mountain Audio Fests, the Stereophile Home Entertainment Shows, the Audio Karma "AK-Fests," T.H.E. Shows in Las Vegas and Newport Beach, CA, CEDIA, TAVES in Canada, and international shows in Munich, Singapore and Hong Kong through our international distributors and dealers.

In 2003, Philip Gold of 6moons.com named us to his "Best of 2003" list. In 2004 and again in 2013, we received a "Most Wanted Component" award from Dave Thomas, senior editor and reviewer of *The Stereo Times* Audiophile and on-line Magazine. In 2007, Jim Merod, the highly respected senior reviewer with Positive-Feedback online and the president and owner

of the Blueport Jazz Recording Studio in Southern CA, tested and reviewed our *Octaphase*<sup>™</sup> Omega Pro-Line<sup>™</sup> Microphone cables and in 2011 he again tested and reviewed our newer GEN II Beta 2-22S<sup>™</sup> microphone cables. He awarded them among his personal “Best of the Year Products” both times!

Our new **GEN II “SE” Platinum Series**<sup>™</sup> products, and recently developed prototypes of our new Sub-woofer, digital and guitar cables, have been tested and evaluated by several sound recording engineers, reviewers, Soundstring dealers and professional musicians. There is unanimous agreement that they are among the finest performing products in the industry at any price. The new **GEN II “SE” Platinum Series** products are available for sale since the beginning of 2014. The subwoofer, digital and guitar cables will be available as soon as possible in 2015.

Why choose Soundstring? Audiophile reviewers judge the overall performance for each new cable they are reviewing by playing a variety of musical selections on their chosen systems, with the cables usually “pre-cooked” for maximum performance. Measurements of speed (Velocity of Propagation), loss characteristics (attenuation), impedance, voltage ratings, frequency response, capacitance, inductance, and other factors are used to evaluate performance and to compare new cables with those previously tested and reviewed.

Why is the performance of Soundstring<sup>™</sup> products better? When new high-end cable products are brought to market, they incorporate some similarities in cable design to carry signals from a system’s components to its speakers, regardless of how innovative the design, level of performance or cost structure. Whether single or multiple wires were used, many designs were or are “uni-gauged.” That is, they used a single large AWG conductor, or several smaller AWG wires of the same gauge, bundled together at the points of termination, and equal in total to one larger gauge. Variations included the use of solid conductors that were round or flat, multi-stranded or rope lay designs of oxygen free or regular bare, tinned, silver plated or Litz copper. Insulating materials used included PVC, Polyethylene, Cellular Foamed Polyethylene, Polypropylene, PTFE and FEP (Teflon). Results achieved by these designs were moderately to highly successful in competing with already established products. Some companies promote the use of very thin insulation wall thickness over several individual conductors, some use a heavier wall thickness over one single larger conductor. Many companies have also adopted the practice of “cryoing” (hydrogen freezing at extremely low temperatures) of the metal content, or the whole finished product to further improve their product’s performance.

In the research, design, development, and testing of our products, we found that cable designs, raw materials and test results by reviewers and audiophile publications were important. They provided useful comparisons for cables that incorporated design similarities. This is not true of Soundstring<sup>™</sup> products. The patented designs of our original products, as well as those of our newer GEN II Platinum Series<sup>™</sup> cables and now the GEN II “SE” Platinum Series<sup>™</sup> cables achieve results not possible with many other cables. Our cables are *inversely* designed for the human hearing range. Our Tricormaxial<sup>™</sup> Power Supply Cable, Power Cords and Speaker

Cables and our Octaphase™ Interconnects are all constructed using 4-9's (99.99%) OFBC (Oxygen Free Bare Copper) in a *Progressive Geometric Multi-conductor/Multi-gauge™* design. The **GEN II and GEN II "SE" Platinum Series™** cables use 6-9's (99.9999%) of very fine multi-stranded OFHCBC (Oxygen Free High Conductivity Bare Copper) in their designs. Each of the multi-stranded conductors of both the original and GEN II™ and GEN II "SE"™ Platinum Series cables are individually insulated with a premium grade, thin wall VW-1 flame retardant 100% RoHS lead free PVC compliant to all national and international RoHS standards.

The outer jacket for each is made using a low durometer very soft, flexible 105°C, RoHS lead free PVC. All of our outer jackets are surface printed with directional arrows to maximize and insure uniform current and signal flow to all system components. The original **Starfire Series™** cables are covered with a premium grade, abrasion resistant tightly woven "Static Guard" Harvest Gold colored tightly braided Nylon multi-filament for maximum flexibility and eye pleasing esthetics. **The GEN II™ and GEN II "SE" Platinum Series™** jackets have the same tightly braided Nylon multi-filament covering in a Platinum Silver color. Both the Gold and Silver coverings are also highly resistant to induced static - a very significant "plus" in high end cable use and design!

All of our original, **GEN II™ and GEN II "SE"™** standard and bi-wired speaker cables are available with heavy-duty 24 Kt. Gold plated 8mm crimp style spade terminals or banana plugs, or a combination of both spades and bananas. The designs and constructions for all of our cables maximize the flow of all signals and frequencies as they travel virtually unimpeded, at incredibly fast speeds over the surface of the speaker and interconnect cables, or through the entire individual conductors of our power cords, from termination to termination. Your listening experience becomes more cohesive, open, transparent and neutral from the highest to the lowest frequencies, providing incredible, distortion free sound reproduction.

The Power Supply Cords for all three cable types are designed to provide maximum voltage flow with enhanced filtering and a bonus of energy savings! This allows the components they power to operate at maximum efficiency and peak performance. All original Tricormaxial™ power cords used in the U.S. and other countries that have 120 Volt service are supplied with hand assembled 120 Volt or 250 Volt Furutech 15 or 20 Amp grounded male and IEC 320-C13 or C19 female plugs. The Tricormaxial Power Cords are also available with our original molded-on male and IEC 320-C-13 female plugs. Three types of the Furutech international male plugs are available for international voltage and design requirements in the EU, UK and AU as well as most other counties worldwide. All **Gen II™ and GEN II "SE"™** power cords are supplied exclusively with the Furutech type hand assembled and tested male and female plug types and all are appropriately designed for the voltage and amperage requirements of the countries they are used in. All of the Furutech plugs we use also have 24 Kt. Gold contacts for maximum conductivity!

Why is the performance of our original Tricormaxial™ Speaker and Power Cables so good? Imagine that you are on a heavily traveled two lane local highway with a wide variety of

passenger and commercial vehicles traveling under ideal weather conditions at rush hour. Every driver is anxious to arrive at their destination as quickly as possible, but local speed limits and the volume of traffic results in congestion. Traveling at normal posted speed limits becomes impossible. Then, the roadway widens into multiple lanes with a higher speed limit. All vehicles can now travel in the lane of their choice, arriving at their final destination in a fraction of the time it would have taken on the clogged local road. This is how our patented ***Progressive Geometric Multi-conductor/Multi-gauge***<sup>™</sup> cable designs work with our cables in your audio systems. Signals, frequencies and voltage flow automatically and independently seek and utilize the path (conductors) of least resistance. There is no discontinuity. Full frequency profiled alignment is the key. You hear a mirror image of the recording. Any system connected with our cables, can achieve these results.

The ***Progressive Geometric Multi-conductor/Multi-gauge***<sup>™</sup> conductors on each leg of our original Tricormaxial<sup>™</sup> Power and Speaker cables and the Octaphase<sup>™</sup> Interconnect cables are constructed with 4-9s (99.99%) pure oxygen free finely stranded electrolytic bare copper. Our patented design virtually neutralizes skin effect promoting very fast heat dissipation. System components do not have to “work” as hard as with most traditionally designed cables. The result is a significantly cooler operation and longer component life. Traditional “break-in” time is significantly reduced compared to many other high-end cables.

Two other types of our original power supply cords are also available. Both are designed for use with lower amperage ratings of many system components. Both are similarly constructed with our patented ***Progressive Geometric Multi-conductor/Multi-gauge***<sup>™</sup> design, also using 4-9s (99.99%) pure oxygen free finely stranded bare electrolytic copper conductors for peak performance. The first is designed for use with power amplifiers, pre-amps, sub-woofers and tape equipment with a mid-range voltage requirement of up to 20 Amps. The second type is designed and used exclusively with all types of DIGITAL equipment, including DACS, CD/DVD/SACD players, outboard phono pre-amps and higher speed small transformer devices. It is designed to greatly enhance the speed of voltage delivery essential for digital applications. Both have been very favorably reviewed and complement our High Out-put **Tricormaxial**<sup>™</sup> Power Supply Cord. Both types are available with molded on plugs for 120V-15 Amp service, or with hand assembled Furutech plugs for domestic and international voltage and amperage requirements.

The simplicity of the ***Progressive Geometric Multi-conductor/Multi-gauge***<sup>™</sup> design is the “key” that unlocks the door to the highly rated performance of these original products. Very often, we discover that “simple is better.” Finding an easier way to do a difficult task is often more rewarding, less time consuming and less stressful. That is what we wanted to accomplish. Have a simple design criteria that works better than the more complex designs of many of our competitors. Best of all, you have the opportunity to own and enjoy the performance these cables bring to your audio systems at a fraction of the cost of most other high-end cables!

All of our newer **GEN II and GEN II “SE” Platinum Series**<sup>™</sup> products utilize 6-9’s (99.9999%) Oxygen Free High Conductivity Bare Electrolytic Copper in very finely stranded

Ropelay constructions. These designs further enhance overall performance with larger surface and circular mil (distance around) areas of the conductors for each cable type. This increases the speed and accuracy of frequency and signal flow over the surface of each speaker and interconnect cable conductor and the voltage flow through the entire multi-stranded construction of each power cord and power cable. There are 672 individual strands of copper per conductor for the high out-put power cords and the speakers cables and 168 strands per conductor for each style of the interconnect cables! New, softer durometer high profile insulating materials make these cables even more flexible than the original cables, as well as being 100% RoHS (lead free) compliant with all domestic and international standards. All **GEN II™ and GEN II “SE”™** products are also 100% UL & CSA approved for in-wall and in-ceiling use. The power cables are also approved for use as a dedicated power supply line for carrying and delivering line voltage from circuit breaker panel boxes to wall outlets in your dedicated music room! All the same principals of engineering are utilized in the design of the **GEN II™ and GEN II “SE”™** cables giving you even greater system performance and sound quality - and still at very affordable prices!

*and - that's just the beginning . . . . .*

Our original, GEN II™ and GEN II “SE”™ interconnect cables have all the attributes of the Speaker and Power Supply Cables and are designed for both digital and analog use. We miniaturized the design of each cable type to fit the demanding criteria for interconnect cable performance with DACS, CD/DVD/SACD players, high performance turntables, magnetic cartridges, microphones, etc. The technology and performance utilized in our Power Supply Cords and Speaker Cables is similar. The circular mil area of the conductors used in each leg of the design for the interconnect cables is equivalent to a #22 AWG. The shielded interconnects for both cable types have a finely stranded 6-9's (99.9999%) pure Oxygen Free High Conductivity Bare Copper spiral wound 98% shield for crisp, clean signal transfer and maximum accuracy. They are recommended for use in applications subject to possible RF/EM interference from magnetic phono cartridges, internal component designs or outside sources. The shielded cables are perfect for use as balanced cables with XLR's and for use with microphones for live concert and studio recording.

The conductors of our original Octaphase™, **GEN II™ and GEN II “SE”™** Interconnect Cables are all made using a Flame retardant, 100% RoHS lead free PVC thin wall insulation and a 105°C VW-1 low durometer soft and flexible RoHS lead free jacket with surface printed directional arrows. All are available as shielded or unshielded and single ended. All are terminated with our patented **Ultra Low Mass™** 24 Kt. Gold Plated Beryllium Copper RCA Phono Plugs, with a “*Low Mass*” Coca-Bola wood housing for additional reduced outside interference.

The shielded interconnects are also available as balanced cables with Neutrik XLR male and female plugs that have 24 Kt. Gold plated contacts. They are also used as very high quality, high performance microphone cables in longer lengths for live concert and studio recordings. All of our Interconnect cables are covered with our “Static Guard” Gold or Platinum Silver Nylon multi-filament covering, the trademarks of all Soundstring™ cut and terminated cables.

In addition to our extensive in-house testing, all of the **GEN II™ and GEN II “SE”™ cables** and newly designed prototypes for the digital products were made, tested and evaluated by several sound recording engineers, reviewers and several of our domestic and international dealers. The unbiased and completely independent results for ALL of these products were outstanding in every way. We are now producing and selling all of the original Starfire Series Cables™, the GEN II™ and new GEN II “SE”™ cables and will be ready to produce and sell the sub-woofer and digital cables in in mid 2015, sooner if possible. The **GEN II™** cables were introduced at the Rocky Mountain Audio Fest (RMAF) in October, 2011 and were again featured at T.H.E Show in Newport Beach, CA in June 2012. The **GEN II “SE”™** cables are now available for sales through all normal outlets and directly through our factory when there are no distributors or dealers in your geographic area.

Our continued success lies in our in-house capabilities. There are no middlemen to inflate costs. ***“High performance products at affordable prices”*** is our motto at all times! We are dedicated to providing you with the most rewarding, realistic listening experiences of a lifetime! **Every audio and video system, regardless of cost, can and will benefit from our advanced technology, special constructions and design concepts!**

Soundstring Cable Technologies™ . . . . . remember our name and treat your audio system to the “best connections” in the industry. Our products are the evolutionary pathways of least resistance in sound transfer and voltage control!

***JOURNEY INTO A WHOLE NEW WORLD OF LISTENING PLEASURE  
TURN UP THE VOLUME . . . . . AND ENJOY THE RIDE!***

♪ “Best of 2003” list - Philip Gold – 6moons.com

♪ “Most Wanted Component” award for 2004  
“*The Stereo Times*” Audiophile Magazine

♪ “Best of the Year’s Products” for 2007  
“Octaphase” Omega Pro-line Shielded and Balanced Mic Cables  
Jim Merod of Positive-Feedback On-line

♪ “Best of the Year’s Products” for 2011  
“GEN II” Beta 2-22S Shielded and Balanced Mic Cables  
Jim Merod of Positive-Feedback On-line

♪ “Most Wanted Component” award for 2013  
“*The Stereo Times*” Audiophile Magazine

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