



hardware

soundstring cable technologies

as reviewed by Will Wright



Teach Me Tonight

Cable! Starting with the RLC of it, right down to the characteristic impedance of it, help me solve the mystery of it. If you look at my system bio and do a quick calculation, you can come up with the following numbers: Interconnects = 8 pair, Power Cords = 14, Speaker Cables = 3 or 4 pair, depending upon whether I add the Raven tweeters to the mix or not. That's assuming one digital and one analog source including a battery powered phono stage not requiring a power cord. And doesn't include my FM tuner or the dedicated music server computer I'm currently working on.

I choke every time I look at the high-end cable market. Is it any wonder I started building my own cables? Obviously, it isn't that I don't think cable has a role to play in a good audio setup. I do have some audiophile power cords in my system, but mostly I did research on cable characteristics and applied that to my own designs. My initial foray was to design a power cord just to prove to myself that it wouldn't make that much of a difference. Imagine my surprise when my homemade cable easily outperformed a standard heavy gauge power cord. Yes, a thoughtfully engineered cable can sound good. If the difference in price between an adequately designed cable and a boutique esoteric design was, say, two or three hundred dollars, I wouldn't be shooting off my mouth. But can you honestly tell me you believe that the difference in sound quality between a thirty thousand dollar speaker cable and a two thousand dollar speaker cable is really worth the price difference? I

WILL WRIGHT'S SYSTEM

LOUDSPEAKERS

Extensively modified Carver Amazing loudspeakers. In addition to the four 12 inch woofers (not the stock ones) per side and the 60 inch ribbons, the panels are augmented by two DIY sealed subs made from 18 inch ID sonotube 3 feet tall with one 15 inch driver each. Each driver set has its own amplifier, making it a tri-amped system

ELECTRONICS

The subs are driven by Adcom 500-watt into 4 ohm monoblocks, the panel woofers are driven by large Hypex plate amps built into the base of the panels at approximately 720 watts into 4 ohm. The 60 inch ribbon is driven by one channel each of two Krell

200S stereo amps. The two electronic crossovers (one for each channel) are White Instruments 24 bit digital Paramedic 26 XLRs programmed via computer and can do numerous crossover types and slopes as well as delay, parametric EQ, level matching, polarity and just about anything else you'd expect from this type of unit. Pre amplification is an Alchemist Tim de Paravicini Signature plus Sutherland PhD phono stage.

SOURCES

Esoteric DV-50 Universal Disc player, a Goldmund Studio Turntable with T3 arm, and Lyra Helikon cartridge. Carver TX-11 FM tuner.

CABLES

Soundstring power cords and fully balanced interconnects. Soundstring single ended interconnects for the turntable and FM tuner.

ACCESSORIES

Equipment stands are Lovan. Power filtration for the front-end components is Jack Bybee/John Curl Signature purifier. Front-end equipment isolation is Critical Mass Grand Master isolation platforms for turntable and universal disc player, Halcyonics Micro 40 active isolation platform for preamp and phono stage. All other equipment is on Black Diamond Racing shelves, squares and cones. There are three dedicated circuits.

suspect anyone answering yes to this question has way more dollars than sense.

Yes, it's true that anyone who can afford an entire system of top tier equipment is also likely to go for those top tier cables, and never look back. But, hey! That's not me. If I had thirty large to spend, I'd be way more likely to go for less expensive but adequate cable and spend the change on better quality components. And in general, in terms of bang for buck, no one has been able to dissuade me.

For whatever reason, my system doesn't seem to be very sensitive to cable changes compared to other systems I've auditioned particularly interconnect cables, but there have been exceptions. Recently, I had some cables in for audition that totally red shifted my system sound from clean and neutrally balance to warm, warm, warm, and rich. That was just one pair of interconnects between source and preamp.

Conversely, a friend recently asked me to bring a pair of my balanced interconnects to his house so that he could get a sense of how his Chinese made Jungson power amp would sound running balanced. I just pulled a cable set out of my system based primarily on the length required in my friend's setup. This cable set exhibited no overt sound signature in my application but when paired with my friend's gear it sounded closed in and truncated the soundstage, especially in comparison to the single ended cable set my friend had been using.

When the still sea conspires an armor

So what could cause such a difference in sound? I suspect it has to do with the impedance matching of two components via the cable interface. For instance, the output impedance of different preamps can vary from below two hundred ohms to higher than a thousand ohms, whereas the input impedance of different power amps could range from five thousand ohms to one hundred thousand ohms. Now combine that with the variety of impedance characteristics that different cable designs bring, and this could easily shift the balance of the sound. Ultimately, cables can act as filters. Audiophiles who are loath to use tone controls or other forms of equalization will happily spend thousands on cables they perceive as sounding right between these devices.

Cable characteristics are dominated by resistance, inductance and capacitance, as are all electrical components. Capacitors, for instance, are not purely capacitive but instead exhibit resistance and inductance dictated by their geometry. Cables are no different. As a rule of thumb based on the impedance of the two components being connected, interconnects tend to be most affected by capacitance levels, whereas speaker cables are most affected by inductance. If specified by the manufacturer, the cable capacitance is usually given in pf/ft (Pico Farads per foot) and it is a good practice to keep the total cable capacitance below 1000 pf for interconnects to avoid roll off of the top end. If chosen wisely, the filtering effect from the cable impedance will either be outside the audio band in the application or will perhaps synergistically combine with the connected components and result in a balanced, or at least pleasing, sound. Clearly, knowing a bit about the components being connected and knowing the characteristics of the cables under consideration would greatly facilitate intelligent matching.

Sadly, this is not the kind of information commonly used to make intelligent choices in component and cable matching. Though some of this information is typically available in component specs, it is seldom provided for cables, though that is changing somewhat. Most audiophiles are not educated in the nuances of electrical engineering, but instead are encouraged to "play it by ear". Ultimately, a smart consumer will find out as much as possible about the cable. Though an interesting subject, all of the multitudinous aspects of cable interaction due to geometry, impedance, dielectric absorption, field mechanics, etc. are outside the scope of a cable review article. Those serious about this hobby, and at all curious, can do some Googling, and I think will find that there is not only a lot of info out there, but a

lot of controversy as well.

Got to be good looking 'cause he's so hard to see

Cable companies seem to be coming out of the woodwork these days, outnumbering any other single category in consumer audio. And is it any wonder when the manufacturers charge thousands for short lengths of wire and audiophiles grab them up at those prices and then rave about the results? Easy pickin's! Even magazines that include measurements of reviewed components avoid any attempt to quantify or measure the effect of cables. The cable industry as a whole is all a bit long on touchy feely and short on hard facts for my comfort level.

Color me frustrated. Audiophiles as a whole tend to ignore everything I've pointed out above. They are perfectly happy spending significant sums on cable, based solely on reviews, or simply swapping things in and out, and picking what they perceive to have the most pleasing balance, without ever questioning the technology or price structure. I firmly believe that equivalent results are available at much lower pricing.

So, depending on your perspective, I could be perceived as the worst person to be doing cable reviews. Here I am, a cable company's worst nightmare. Or, from another point of view, maybe I'm an excellent choice. After all, given my position on the subject, if I like the cable...

In search of the lost chord

Soundstring Cable Technologies out of Stony Point, New York is the subject of this review. According to their website; "Soundstring Cable Technologies is the brain child of Jed Hacker, a well known New York veteran broadcast industry musical producer and director. It is the collaborative effort of his ideas and concepts, combined with almost 100 years of manufacturing, design, packaging and sales experience of two industry veterans—Superior Insulated Wire Corporation, and Lion Cords Division of Astrophonic Corporation of America, both founded in the mid 1940s."

Soundstring has several patented or patent pending processes used in the design of their cable products including **Starfire Series Tricormaxial™**, a dual three conductor Progressive Geometric Multi-gauge design process; **Starfire Series Octaphase™** construction said to enable all signals and frequencies to independently seek the path of least resistance; and the **Ultra Low Mass™** RCA Phono Plug. All this is discussed in a white paper available on their website.

Though this white paper provides specific impedance characteristics for all Soundstring cables, the company claims that these specs are meaningless for comparison with other products. Unfortunately, they don't adequately explain why this would be so. Equally curious, from the description available, their Tricormaxial design would appear to be similar to multi-gauge/multi-strand products from other companies, but again they fail to clarify why or how they are not. To be fair, they may be playing coy with their patent info in an attempt to protect their intellectual property. I can live with that. At least they didn't anthropomorphize the technology by talking about mad, glad, sad or scared electrons.

Soundstring provided me with a full system's worth of power cords, interconnect cables and speaker cables. All their cable products are jacketed in a nylon covering in a color referred to as Harvest Gold, sort of a burnt orange or red brownish tan. Check out the pictures, you'll get the idea. It's a pleasing enough color and matched my room aesthetics acceptably well. Custom lengths are available. The power cords and speaker cables were reasonably flexible for their bulk. However, the interconnects are absolutely flaccid. These have got to be the most flexible cables for their size I've ever used. Fortunately, their performance was NOT flaccid.

Soundstring claims that their design greatly reduces traditional "break in" time to a fraction of that required by most other audiophile cables. My experience confirmed this claim, as I didn't notice any significant change in sound over time.

In an Octopus's Garden

I began the evaluation by inserting the power cords into my system. Both the power plug and the IEC connector were one piece molded plastic with no identifiable markings. I found no information on the website to indicate if these are made in house or purchased. They are solidly constructed and provided excellent connection. The IECs especially were a nice snug fit. This was a welcome change. The two-piece clamshell type IEC used on many other cable brands is always worryingly loose fitting in my components.

I let the power cables settle in for a while before doing any critical listening or evaluation though, as mentioned above, there was no significant change in sound over time. The first thing that I noticed was a very solid and consistent presentation. Initially, I attributed this to the fact that I was, for the first time, using the same power cable throughout my system. Later I came to conclude that it was more a factor of the cable technology at work. These cords provided solid, well-balanced sound performance that didn't spotlight any particular frequency range. The presentation was open and dynamic with no glare or grunge, and easily equaled or bettered my previous configuration. The soundstage was open and fairly deep with good layering but perhaps not as wide as before, though it varied somewhat from recording to recording as one would expect. Musical flow was slightly better and the sound a bit more engaging. These differences were not overt. I have found that leaving a system change in place for a couple of weeks and then removing it helps me to refine my perception.



Next, I inserted all the interconnect cables. I didn't bother adding them one at a time. My reasoning was that swapping out everything at once might enhance my ability to zero in on what these cables were doing. At this point, I encountered my first problem with the cables. With the balanced cables connecting my electronic crossovers to the Hypex amp powering the bass section of my panel speakers, hum increased noticeably. None of the other crossover to amp connections exhibited any issues. The problem didn't appear to be related to a specific cable set, which eliminated the possibility of a manufacturing defect in one set. This particular amp has rather low input impedance and I'd been concerned about this when I initially added it to my setup, but until now it hadn't caused any problems. The only solution I could come up with was to replace that set of Soundstrings with my own original cable and that is how the final configuration remained. There was still a small amount of hum present but enough lower that I could live with it. This is one reason not to purchase cables based on reviews only, without trying them in your specific application first. Without knowledge of the interacting impedances and an understanding of the combined affect, it is difficult to predict how the cable and components will interact without an audition. Even if you possess this expertise, it's always best to try before you buy.

My experience with the single ended Soundstring cables is somewhat limited due to the unfortunate failure of my turntable at the beginning of the review process. Subsequently, I hooked up my FM tuner using the single ended Soundstrings, but don't consider this a comprehensive exploration. The patented Soundstring RCA connectors are well made and handsome, and provided excellent grip, which is very important in providing first rate signal transfer. My experience with various cabling would indicate that the connectors play as important a role in delivering good sound

as the cable design. In the past, I have replaced binding posts and female chassis mounted RCA connectors on components with higher quality ones and been able to perceive an improvement in the sound. I've also put high quality male RCAs on inexpensive coax cable and created very nice sounding interconnects for very little money. I think this is called Champagne tastes on a Beer budget. It's also kind of fun to create your own stuff and compare it to expensive commercial designs.

My listening tastes vary widely, including Rock, Jazz, Blues, R&B, Hip Hop (without the Rap), Folk, and some classical. As I expand my tastes, I find myself reaching back to the '40s, '50s and '60s to explore musical genres and discover or rediscover gems from the past. At the same time, I'm always on the lookout for something musically new and innovative such as Progressive, Alternative, and even Metal on occasion. I've set my system up with an emphasis on being able to deliver power, size, and scale when called for, and without compression. There seems to be plenty of compression in the recordings and I don't want my system adding to that. So I like to dial up the volume level enough to simulate a live sound. To my ear, the biggest limitation of most recordings lies in their dynamic envelope, especially the percussion. When fine tuning my system I look for ways to enhance dynamics while avoiding brightness or harshness. This can be tricky and frustrating. I want all the bass, but without the boom and I want all the highs minus the sizzzzzzzle.

To me the beauty of the Soundstring cables is their neutrality. I don't notice any spotlighting of frequencies or roll-off on top. This was borne out by the fact that the Soundstring cables didn't favor one musical genre over another. All genres were given the same clean, clear presentation. The bass, though also pleasantly balanced, is not as punchy as that presented through some other cables, but I never had any complaints from visitors in this regard with these cables in my system. Electronica, with its ultra low synthesizer bass, came through with foundation shaking clarity. (Ask my wife.) Soundstaging with dipole panel speakers is very different from typical mini-monitor style presentation. Dipoles have a big open sound that places the musicians realistically, but not with the pinpoint holographic images of small speakers in small rooms. However, as pleasant as some listeners find holographic imaging, I've never heard it at a live concert. Dipoles also don't sound boxy (because there is no box). All of these characteristics come through clearly and cleanly with the Soundstring cables.

Interestingly, my limited use of the single ended Soundstring interconnects produced a sound that seemed generally warmer overall than their balanced siblings. I don't want to overstate this, as it was a subtle effect. I hope to explore this impression further when my turntable is back in service. My FM tuner could be exaggerating that impression of warmth.



I also received speaker cables from Soundstring but, due to the configuration of my main system, I was not able to audition them there. Instead I connected them to the main speakers in my small "Multimedia room" system set up in a spare bedroom. These speaker cables are similar in construction and design to the Soundstring power cords and proved just as satisfying, showing that same openness and neutrality. The sense of flow and timing accuracy was unequaled by my homemade cables. Speed

and dynamic agility were hand in hand with harmonic detail and ambience. Musicians were in excellent focus and the sense of the recording space was easily apparent.

Good, Good, Good, Good Vibrations

I believe that a properly implemented cable design should not exhibit a significant

sound of its own. These cables have been in my system for over six months. In that time, I made various adjustments unrelated to the cables, and every step forward in my tweaking has come through cleanly and clearly. The Soundstring cables have been unfailingly transparent to every change. That's exactly what I want from a cable. Setting aside my feelings about the cable industry as a whole, I am both appreciative of and satisfied with the Soundstring cable offerings. I am very satisfied with the performance of these cables, despite occasionally being frustrated with my inability to put my finger on and describe exactly what they are doing. After all, it's my job to search out and describe in detail how a device performs. These cables have proved a moving target. Everytime I had a handle on what they were doing, I would make an unrelated change in my system, which would then be conveyed with the same unfailing clarity, forcing me to re-evaluate the contributing effects. But that in itself is important. Ultimately, I don't want to listen to the cables, I want to hear the music.

My system has never sounded better. And here's one last bit of good news. These cables are a bargain by high-end standards. Below, I've included some typical pricing based on standard lengths. Excellent build quality, solid engineering design, first-rate performance and a courteous, professional staff combine to make this a home run product. **Will Wright**

Octapahse™ Alpha Series Unshielded

Retail: \$290 per 3 foot pair

Octapahse™ Omega Pro Line Shielded

Retail: \$298 per 3 foot pair single ended

Retail: \$226 per 3 foot pair Balanced Neutrik XLR

Tricormaxial™ High Output Power Supply AC Cords

Retail: \$304 each 6 foot cable

Patented Tricormaxial™ Speaker Cables

Retail: \$430 per 9 foot pair

Soundstring Cable

web address www.soundstringcable.com

