STEREO • MUSIC

the absolute sound®

GUIDE TO CABLES, POWER PRODUCTS, ACCESSORIES, & MUSIC

Sponsored by

SHUNYATA RESEARCH and MUSIC INTERFACE TECHNOLOGIES

NEXT PAGE

Multiple International Patents Pending

E-TRON™ Technology

A Scientific Breakthrough in Signal Transmission

2012 the absolute sound PRODUCT OF THE YEAR AWARDS

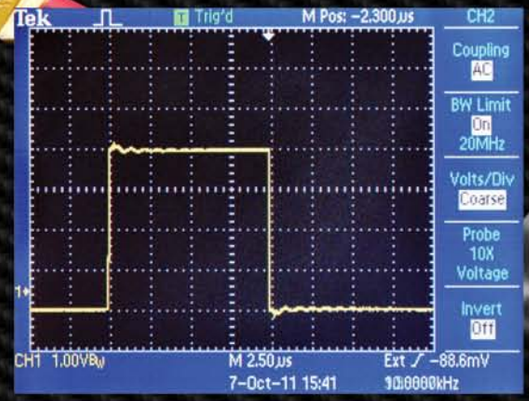
E-TRON™ Technology (pronounced Zi-Tron) is a verifiable advance in signal transmission through copper conductors. This innovation significantly improves signal transmission bandwidth and squarewave response compared to conventional transmission methods. These dramatic improvements are measurable and audible when used in any professional recording system or high-end home entertainment system.

Technically speaking, E-TRON™ Technology significantly reduces dielectric polarization within a signal conductor. This form of distortion reduces signal bandwidth and causes a blurring of the transmitted signal — which can be seen in the squarewave tests. E-TRON™ Technology incorporates an EFCC (Electric Field Compensation Circuit) that splits the electromagnetic signal into its two constituent parts; the first being the E-field (electric field) and the second the M-field (magnetic field). Each field is then transmitted independently across two coincident and concentric conductors. This unique method of transmission eliminates or significantly reduces dielectric polarization, skin effect and also reduces the characteristic impedance of the cable (when compared to identical cables without the EFCC). The absence of these distortions is readily apparent when compared to any and all cables that use conventional signal transmission methods.

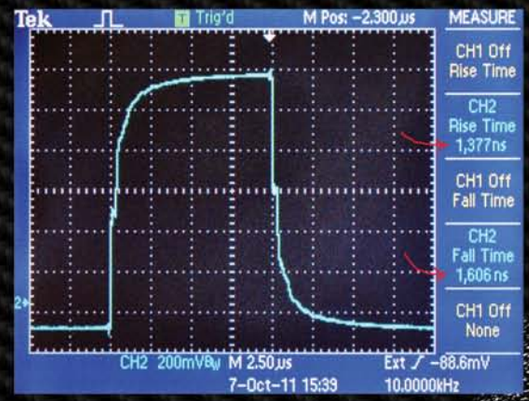
SQUARE-WAVE RESPONSE IN AUDIO:
Square-wave response graphs have been used for decades to test the accuracy of amplifier designs because they objectively represent a significant parameter of audible performance. Electronics designers know that even minor differences in squarewave response can represent significant performance differences in terms of resolution, timing and transient response. Square-wave test results are not typically published for signal cables because, until now, no significant differences are discernible.

WHAT THE SQUARE-WAVE GRAPHS SHOW:
Ideally the signal that appears at the end of the cable should look like the signal that enters the cable. At top right is a graph of the source signal as it appears from the signal generator. The center graph shows this same square-wave as it appears at the end of a conventional cable. Notice the rounded rising and falling edges of the wave. This demonstrates a significant distortion of the input signal especially at high frequencies. This is easily heard as a notable loss in resolution and transient response speed. The square-wave graph on the bottom is from the same type of cable, except it uses E-TRON™ Technology. Notice that the square-wave more closely resembles that of the input signal. If these were from an amplifier, the designer would be extremely pleased with the improvement. To make this magnitude of measurable difference in a cable — is simply astonishing.

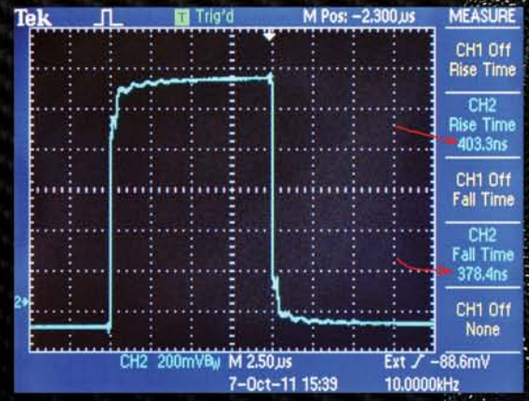
The pinnacle of price and performance.



SOURCE SQUARE-WAVE



CONVENTIONAL CABLE RESPONSE



SAME CABLE WITH E-TRON™ TECHNOLOGY

NOTE: Notice the much faster response time with the E-TRON™ Technology. Rise Time of 403 ns versus 1,377 ns.

OVER THREE TIMES FASTER!

"THEY (ANACONDA SIGNAL CABLES) COMPETE WITH, AND IN MANY WAYS EXCEED, THE PERFORMANCE OF THE WORLD'S BEST CABLES REGARDLESS OF PRICE. REFERENCE-QUALITY CABLES AT A REAL-WORLD PRICE."
— ROBERT HARLEY: EDITOR-IN-CHIEF, THE ABSOLUTE SOUND

"THESE REASONABLY PRICED CABLES EARN THEIR PLACE IN A HIGH-PRICED SYSTEM."
— MARC MICKELSON: EDITOR-IN-CHIEF, THE AUDIO BEAT

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Contents

Features

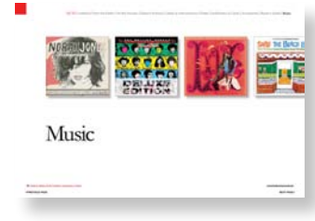
Buyer's Guide

Cable and Interconnect Reviews

Power Conditioner and Power Cord Reviews

Accessories

Music



Click on one of the links above to jump to that section, feature or review.

MIT®
Music Interface Technologies™

More than Just Cable!®

Made with pride in the U.S.A.

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GUIDE TO

CABLES, POWER PRODUCTS, ACCESSORIES, & MUSIC

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FROM THE Editor

Welcome to *The Absolute Sound's Guide to Cables, Power Products, Accessories, and Music (2012).*

We at *The Absolute Sound* are firmly convinced that well-designed audio cables, power conditioners, and accessories can enhance the sound quality of most any hi-fi system, regardless of cost—often in surprisingly dramatic ways.

Any of our editors could describe instances where careful cable selection and judicious use of power products have made a telling difference between audio systems that merely sounded "OK" versus those that truly brought the music alive in thought-provoking and profoundly moving ways. Our founder, Harry Pearson, famously observed that in audio systems, "*everything* sounds"—meaning that even seemingly small system elements like cables and power cords can yield big differences listeners can readily hear and appreciate.

To help you navigate the world of cables and power products, this Guide provides roundtable discussions and interviews with industry experts who explain why audio cables and power conditioners/filters are essential ingredients for good sound; plus a wide range of expert reviews covering everything from affordable entry-level cables, interconnects, and power cords to elaborate state-of-the-art products. More importantly, we also devote an entire section to the one thing audiophiles cherish most: music.

Highlights include:

- A preview of 42 new cable and power products soon to appear on the market.
- A "Roundtable" offering insights from five of the most influential cable designers in the world.
- Reviews of 32 cables and interconnects, plus 18 power cords and power products.
- An in-depth interview with one of the industry's leading authorities on power cords and power conditioning.
- Reviews of three killer accessories with great potential to improve system sound.
- TAS Editor's top picks for cables, power conditioners, and accessories.
- A music section with recommendations for 2012's best new releases and reissues in both compact disc and vinyl formats.

We all want better sound and deeper, more profound enjoyment of the music we love, and well-chosen cables, power products, and accessories can go a long ways toward helping our systems better serve the music. Doesn't it make good sense, then, to take the time necessary to choose those system elements carefully? We certainly think it does and hope that this Guide helps you to make good choices that will help your system "sing."

Happy listening.

Chris Martens

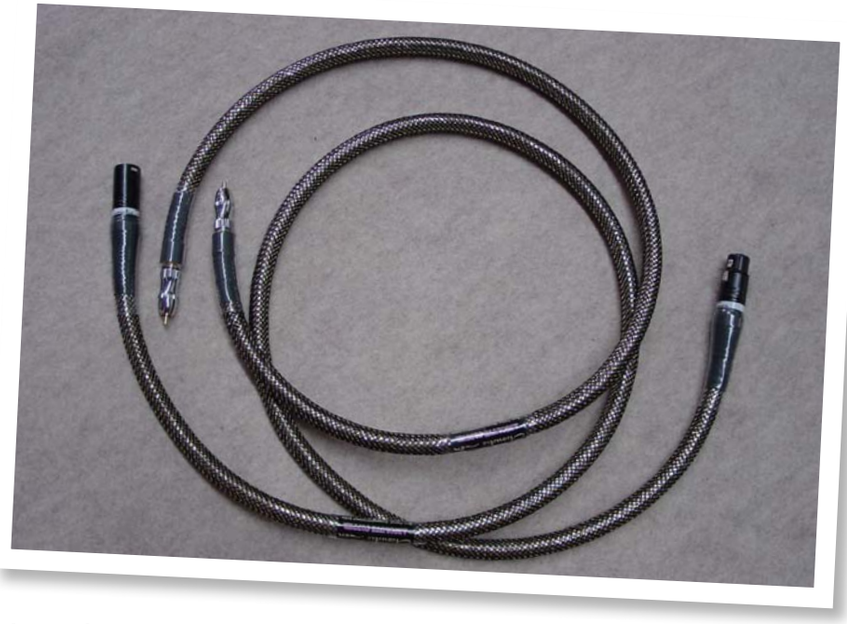
Click here to turn the page.

On the Horizon

ON THE HORIZON

Great New Cables And Accessories Coming Your Way

Neil Gader
& Chris Martens



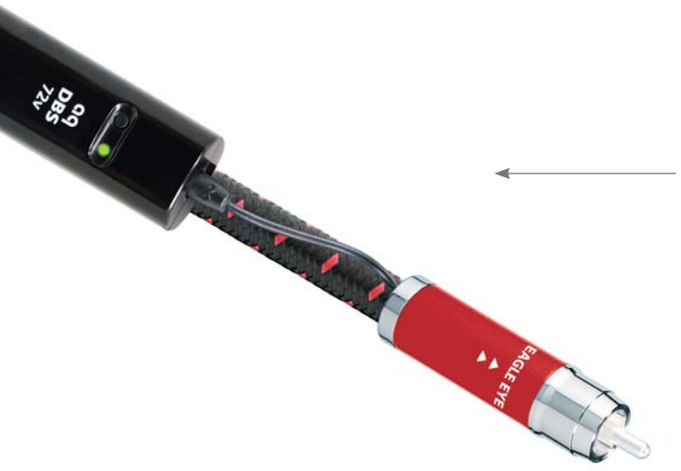
Acoustic Zen

Acoustic Zen's newest offerings are the **Absolute Copper interconnect and digital cables**, which feature 19AWG zero crystal ribbon copper conductors with Teflon and air insulation, with air-twisting geometry. The emphasis with Absolute Copper is on achieving a well-balanced combination of sonic virtues that together make the cables exceptionally faithful to the sound of real instruments and live music. Initial reactions from Acoustic Zen dealers—some of whom have conducted live vs. recorded music comparisons using Absolute Copper cables—has been extremely favorable, with many noting the cable's ability to transcend "hi-fi" categorization to focus instead on the music. **Price: $1488/1m RCA or XLR pair.** www.acousticzen.com

Audience

Audience Au24 SE interconnects: For the first time in five years Audience is introducing an improvement to its highly acclaimed Au24 e RCA interconnect cables. The Au24 SE interconnects represent a significant step forward in performance. The SEs are made with ultra low mass, high-purity and cryogenically-treated tellurium copper connectors allowing for the passage of low-level information that was previously inaudible. For example, Au24SE lets you hear much more decay-related and reverberant detail, while providing a richer sound throughout the full frequency spectrum. If you are already a fan of the Audience Au24 line of cables, the new SE version is sure to enhance your musical enjoyment to a surprisingly greater degree. **Price: $1,190/1m pair; upgrades from Au24 and AU24 e, $220/pair.** www.audience-av.com

ON THE HORIZON



AudioQuest

AudioQuest Wild AES/EBU and Eagle Eye Digital Cable: XLR terminations machined from solid copper blocks are just the beginning of the advanced technology within AudioQuest's Wild AES/EBU cables and Eagle Eye coaxial digital cables. Other features include AudioQuest's 72V Dielectric Bias System, 100% perfect-surface silver conductors, hard-cell foam insulation, copper-foil/silver-plated shield, and carbon-based seven-layer noise dissipation system. In Robert Harley's four-box dCS Vivaldi system, Wild data cables and BNC-terminated Eagle Eye cables in the clock links resulted in a surprisingly large improvement in performance compared with conventional cables. Resolution increased, the bass became better defined, and the sound took on a greater musical ease. **Prices: $2250 per meter (Wild Digital); $750 per meter (Eagle Eye).** www.audioquest.com

AudioQuest RJ/E Ethernet Series Cables: Ethernet has become the copper plumbing of the digital age. Whether you stream your digital entertainment to equipment a foot away or several rooms away, AudioQuest now offers a wide range of superior Ethernet cables, including a full line of leading-edge, fully-prepared cables as well as four bulk-spool models.

All AudioQuest RJ/E cables use the highest "Cat" standard, Category 7 (Cat7), which requires that each of the four differently-twisted pairs be individually shielded. To this Cat7 starting point AQ builds with better materials and unique-to-AQ additional technologies, including solid-core conductors, superior metals, and critical signal-pair geometry. **Prices: AudioQuest's prepared Ethernet cables start with Forest at $29/0.75 meters, and range up to Diamond at $595/0.75 meters.**

Cardas

Cardas Clear Light Headphone Cable brings much of the performance of our top-of-the-line Clear Headphone cable, but in a light, flexible, fabric-braided cable; it is also our most affordable Matched Propagation headphone cable. Clear Light is positioned between our standard Headphone Cable and Clear Headphone Cable. Clear Light Headphone Cable delivers smooth highs, tightened bass, and a wide soundstage. Clear Light Headphone Cables are available with appropriate terminations for Sennheiser HD800 and HD650/600, Audeze, HiFiMAN, and AKG K702 headphones. www.cardas.com

ON THE HORIZON

Chord Company
As the leading UK cable manufacturer, the **Chord Company** has introduced an all-new series of **Cobra VEE 3 interconnects** derived from their top-of-the-range Sarum Tuned ARAY cables. The updated Cobra VEE 3 includes new silver-plated multi-strand conductors with revised strand count—an update that brings big improvements to detail and dynamics across a wider frequency range. High-density shielding combining woven braid with over-wrapped foil, improves signal protection. New VEE 3 silver-plated RCA plugs feature resonance damping ABS casings combined with a new internal design that improves signal transfer across all frequencies. **Prices: Cobra VEE 3 cables start at $145/1m RCA pair, and are available fitted with VEE 3 RCA plugs, DIN plugs for Naim, or XLR connectors.** www.chord.co.uk

Another new range of interconnects from the **Chord Company**, called **Chorus Reference**, is also derived from the Sarum Tuned ARAY cables and thus features a Sarum-inspired tri-conductor configuration. The tri-conductor configuration (single signal and twin return, with semi floating shield) improves definition, detail and coherence across all audio frequencies. Fully floating high frequency shielding combines woven braid with heavy gauge foil, improves micro-dynamics and micro-details. **Prices: Chorus Reference cables start at $545.00/1m (RCA) pair and are available fitted with RCA plugs, DIN plugs for Naim, or XLR connectors.**

Clarus Cable
The Clarus Crimson High Current Power Cable, CCP-HC, is a high performance 8AWG power cable constructed of Pure Copper by Ohno Continuous Casting (PCOCC). Created by industry veteran cable designer Jay Victor, CCP-HC is engineered using multiple gauges and magnet wires made with proprietary winding techniques optimized for high current and maximum noise rejection.

R.C., a customer from Texas, wrote, "The Clarus Crimson Power Cable produced a 'calming of the seas' type of effect, where the water (i.e., music) no longer 'crashed' against the rocks uncontrolled. Instead, there was more of an 'ebb and flow,' the music rushing forward and carried forcefully by the current when called upon, but then receding softly." **Prices: $1,500/6-foot CCP, $2,900/12-foot CCP. Available now.** www.claruscable.com

ON THE HORIZON

Crystal Cable

Crystal Cable's Absolute Dream cables provide unrivalled performance for today's demanding audio systems, allowing listeners to hear the music—and nothing else. The cables are the world's first to use pure monocrystal metallurgy in both the core and shield for superior sonic performance. The Absolute Dream range features single-ended and balanced interconnects, speaker cables, power cords, and USB and FireWire cables.

The monocrystal silver core of Absolute Dream cables is protected with Kapton and PEEK dielectrics and shielded with layers of silver-plated monocrystal copper and gold-plated monocrystal silver. A transparent sleeve secures the braid, giving the cable its unique appearance. The cables are terminated with Crystal-specified, Furutech carbon connectors marked with laser-engraved serial numbers. **Prices: interconnects, $15,000/1m pair; speaker cables, $32,000/2M pair; AC cables, $11,000/1.5M.** www.crystalcable.com

Enklein

In 1Q13, **Enklein** will formally launch the **Digital AG**—a digital cable featuring conductors drawn form large-gauge fine silver and offered with AES/EBU or SPDIF (RCA) terminations. Thanks to Enklein's proprietary parallel/mirror symmetry topology, transmission signal degradation is dramatically reduced enabling DACs to reproduce the music in stunning detail with fine resolution from top to bottom. **Estimated pricing: $3,800 USD for the first meter.** www.enklein.com

Enklein's Aeros interconnect cables will begin to ship in 4Q12. Aeros represents the pinnacle of the company's low mass design approach, with internal construction that dramatically reduces the noise floor. As a result, fine detail and micro dynamics previously hidden are easily defined while imaging and complex choral spatial queues become pleasantly discernible. Aeros is a world-class cable from a company passionate about music. **Pricing: $8,500 USD for the first meter.**

ON THE HORIZON

Furutech

Many music systems suffer from noise pollution and to address this problem **Furutech offers its Flow-28 and Flow-15 inline power filtering units**, which eliminate common problems caused by contaminated electrical power lines. Specifically, the Flow-28 and Flow-15 protect against ground-noise distortion, voltage spikes, high frequency power supply noise and high-frequency digital noise—all without restricting current draw!

Technologies used in the Flow-series filters are deceptively sophisticated. For example, the body of the Flow-28 combines "active" materials (nano-sized ceramic particles, powdered carbon, and Nylon and fiberglass) to form a mechanically and electrically damped housing that helps components achieve natural sound and fine resolution. The filter also improves soundstaging, imaging, and dynamics while enhancing tonal purity and focus across the audio spectrum. **Prices: Flow-28, $541; Flow-15, $720.** www.furutech.com

Harmonic Technology

Harmonic Technology's Pro-9 Reference speaker cable are the finest the firm makes. Pro-9 cables allow the bass to be tight yet extremely dynamic while providing mid-range that is exceptionally rich, with tremendous detail and harmonic completeness that borders on realism. The highs are smooth but detailed, without any artificial "zing" and they allow the soundstage to bloom as large as your room. Pro-9 Reference cables are offered in three distinct configurations: Internal Bi-Wire, which combines woofer and tweeter conductor sets within one jacket; External Bi-Wire, which routes woofer and tweeter conductor sets in separate jackets; and Mono (Full-Strength) Speaker, which are non-bi-wire cables that provide doubled sets of +/- conductors housed in one jacket. www.harmonictech.com

Harmonic Technology MAGIC Link two interconnect is a unique hybrid blend of the finest high purity Single Crystal OCC silver and copper conductors, each individually insulated with flexible PE and Teflon tapes. Harmonic Technology's MAGIC Link Two helps you fully recreate the "magic" from a recorded event into your home with the highest degree of transparency; great detail; timbre; precise imaging, micro- and macro-dynamic freedom, detailed bass sounds and articulation classic interconnect under a lower noise floor, but more extension and a lot of air. **Prices: $850/1m pair (RCA); $900/1m pair (XLR).**

ON THE HORIZON

Kimber Kable
Coming in 1Q13, **Kimber Select USB cables** are 100% hand built and feature gyro-quadratic braid, carbon conductive shielding; the cables will be available with copper, copper/silver hybrid, and full-silver conductors. The "what-it-is" is far less important than what it does. This new design will set a new standard in USB cable performance, with series inductance 30 times lower than in conventional designs. www.kimber.com

Arriving in 4Q12, **Kimber HD09e** introduces **a new form factor in Ethernet-capable HDMI cables**, featuring an ultra slim design that does not sacrifice performance. HD09e is available in lengths from 0.5m - 2.5m.

Kimber's 12VS speaker cable is a perfect solution for the latest batch of lower priced speakers that will benefit from biwiring. Significantly, 12VS offers 50% more conductor mass than 8VS, and is even available in tri-amp terminations for L/C/R soundbar applications. This new cable gives you everything you liked about 8VS with a bit more resolution and control.

Music Interface Technologies (MIT)
Music Interface Technologies (MIT) MIT has entered the USB cable market with two affordable offerings, the $99 **StyleLink Digital** and $199 **StyleLink Digital Plus USB**. Both are built from premium materials including oxygen-free copper center conductors, triple shielding for RFI and EMI noise rejection, and 24-gauge conductors. The StyleLink Plus offers all the feature of the StyleLink but increases performance with silver-plated oxygen-free conductors and a rugged braided jacket. **Prices: $99 (StyleLink Digital); $199 (StyleLink Digital Plus).** www.mitcables.com

Building on **MIT's** popular AVt1 speaker interface, the new **Matrix 12 speaker interface** incorporates the latest technologies and features a smaller network enclosure. The Matrix 12 reportedly improves upon MIT's traditional strengths, including greater resolution of detail, increased image focus, and a wider and deeper soundstage.

The matching **Matrix 3 interconnect** features MIT's patented Multipole circuitry hidden within the RCA connector. Without a separate network box on the cable, the Matrix 3 brings MIT's network technology to a new low price and unprecedented ease of installation. **Prices: $499 per 8' pair (Matrix 12); $149 per meter pair (Matrix 3).**

MIT's top-of-the-line **Oracle Matrix MA-X SHD (Super High Definition) loudspeaker interface** allows the user to fine-tune the interface to their system MIT's variable Fractional Articulation Technology. Each network box includes a switch to select between 105, 130, and 155 articulation poles. This feature vaults the Oracle Matrix MA-X SHD beyond the previous-generation MA-X. Sonically, the MA-X SHD's density of tone color (particularly in the mid-bass to lower midrange) is unlike that of other cables, as is the sense of soundstage dimensionality. Robert Harley's reference. **Price: $39,999/8-foot pair.**

ON THE HORIZON

Nordost

Nordost's next-generation **Red Dawn power cord** joins the firm's premier line of Leif Series cables for audio and video components. Featuring similar technology to that used in our flagship 'Valhalla' and 'Odin' power cords, Red Dawn power cords offer heavy gauge (14 AWG) construction with multi-strand, 99.9999 oxygen free, copper conductors arranged via proprietary Micro Mono-Filament FEP technology. Red Dawn power cords provide a power handling rating of 10 amps and offer improved transient response, better power transfer, and increased thermal efficiency. Wrapped in a red, medical grade jacket, the power cables use high-grade IEC connectors with triple gold-plated Oxygen Free Copper for improved conductivity. Each power cord is handcrafted at the Nordost factory in Holliston, Massachusetts. **Price: $349.99/1m length (each additional half meter, $75.00).** www.nordost.com

Purist Audio Design

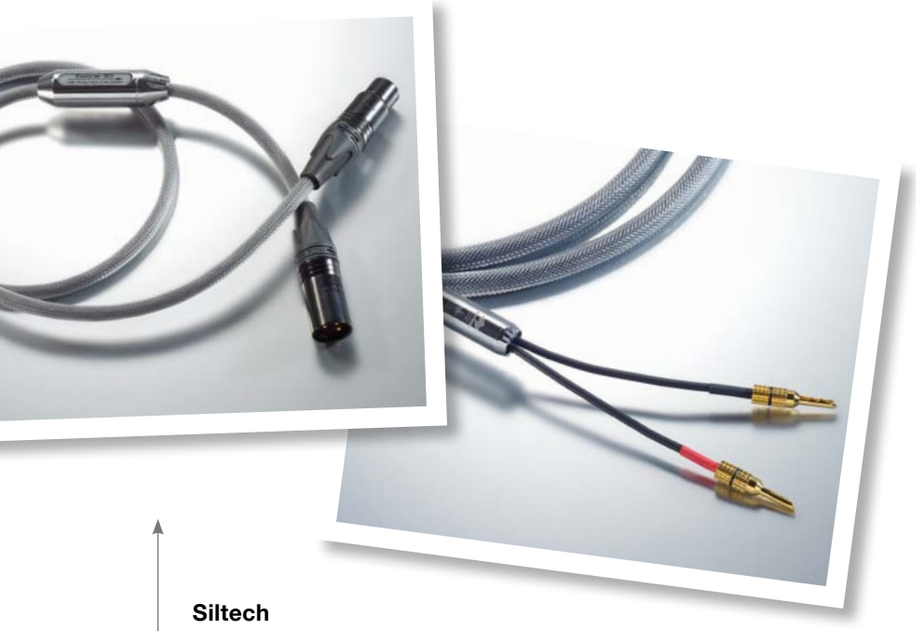
Purist Audio Design's Genesis-series cables are crafted with two important criteria: exquisitely detailed musical sound and a phenomenal price. For the past 26 years, through computer modeling, expert engineering, and extended listening, we continually work to improve our cables. The Genesis-series is a product of our passion. The cables utilize alloy conductors of copper and gold. Genesis interconnects use a finely stranded design with Santoprene dielectric. The digital cables are available in both SPDIF (RCA or BNC) and AES/EBU (XLR). The speaker cable uses a PVC dielectric. Genesis-series cables deliver a level of performance for their price that is unheard of in the audiophile community! **Pricing: interconnects, $310/1m pair (RCA) or $325/1m pair; speaker cables, $410/1.5m pair.** www.puristaudiodesign.com

Shunyata Research

Shunyata Research's Hydra Triton (*TAS Product Of The Year 2011*) has achieved a strong following among recording studios and consumers whwo demand the ultimate in performance from their sound and A/V systems. The Triton was originally designed as a two chassis power conditioner, with the Typhon being the second component. The **Typhon** improves upon the dramatic noise reduction capabilities of the Triton with two massive NICs (*Noise Isolation Chamber's*) that effectively double the size and volume of those found in the Triton. Hydra Typhon connects to the Triton via a proprietary power umbilical cable. Those who already own a Triton may upgrade simply by purchasing the Typhon and an associated umbilical cable. The two chassis Triton/Typhon combination is Shunyata Research's absolute, state-of-the-art power conditioning solution. **Price: Hydra Typhon $4,995.** www.shunyata.com

The **Shunyata Venom HC power cord** was developed primarily as a high current, low cost cable for Shunyata's Hydra Series power conditioners. Shunyata Research's DTCD (*Dynamic Transient Current Delivery*) analysis was extensively used in its development to optimize performance for the most demanding power requirements. The incredible value of the Venom HC was made possible with the use of massive 10 gauge OFC conductors along with Shunyata's exclusive custom molded connectors. Given the enormous popularity and cult status of the Venom 3, Shunyata applied all of its evolved design capability and customized parts to create this *one-of-a-kind* high-current sibling. Highly recommended for high-current amplifiers and power conditioners. **Price: Venom HC, $270.**

ON THE HORIZON



Siltech

Siltech has traditionally advocated silver and silver-gold conductors for audio cables, but a new technology for producing extremely pure mono-crystal copper conductors has enabled us to release of our high-performance yet surprisingly cost-effective **Explorer-series cables**. Apart from their copper conductors, Explorer cables use the same high-tech construction found in Siltech's Classic Anniversary cables, with jackets comprised of dual layers of Kapton and Teflon insulation that protect the conductors against EMI/RFI and mechanical vibration.

Explorer interconnects come in three grades and loudspeaker cables in two, while a power cord, FireWire, and USB cables complete the series. Explorer cables offer ultra-low distortion and sonic qualities unsurpassed in their class: large soundstages, fine detailing and coloration-free sound over the entire frequency range. **Prices: interconnect, $550/1m pair; speaker cable, $1000/2m pair; power cord, $600/1.5m.** www.siltechcables.com

Silver Circle Audio

Just as then-new Furutech GT-XD receptacles helped spawn Silver Circle's Pure Power One 5.0se power conditioner, Magnetic Innovations' new Wave Stabilizers have helped launch our new TCHAIK 6. The TCHAIK 6 features five Wave Stabilizer modules: two (positive and neutral) on the input side, two on the output side, and one on common ground to the IEC input. With these and other upgrades, the performance of the TCHAIK 6 rises to a level we never dreamed possible.

In addition to the Wave Stabilizers, the TCHAIK 6 features an upgraded Vesuvius II power cord, Eden Sound TerraStones footers, and sides constructed of a high-density polymer to complement the looks of the TCHAIK 6. **Price: The TCHAIK 6 retails for $9,500 complete with power cord.** www.silvercircleaudio.com

Synergistic Research

Synergistic Research Element-series power cords are the product of technology first envisioned during the design and development of the award-winning Galileo System cables. Chock full of industry-first technologies, including Active Shielded Air Dielectrics, Pure Tungsten signal conductors, and Enigma Tuning Circuits, the Element-series power cords expand on the performance of the award-winning Element Tungsten interconnects and speaker cables.

There are five Element-series power cord models: Element Copper, Element Tungsten, Element Copper/Tungsten, and Element C.T.S. Analogue and Element C.T.S. Digital (geared, respectively, for analogue and digital source components). Element Series power cords offer greater performance at a lower cost when compared to the outgoing TESLA line. **Pricing starts at $650 for a 5-foot active Element Copper cord, extending to $3,000 for the flagship Element C.T.S. Digital.** www.synergisticresearch.com

ON THE HORIZON

Transparent Cable

For more than 15 years Transparent's Reference Digital cables have pushed the state-of-the-art through careful attention paid to advanced dielectric materials and extrusion techniques, conductor size and composition, impedance matching, shielding, and connector technology. Together, all of these factors affect noise and jitter in high-speed digital signals.

Now, **Transparent** is announcing two all-new digital cables: **Reference II 75-Ohm Digital Link** and **Reference II AES/EBU110-Ohm Digital Link**. The goal for these cables is virtually to eliminate digital cable and connector-induced distortion. To this end, Reference II Digital Cables use Teflon dielectric material enhanced by Transparent's proprietary Advanced Expanded Foam Technology, thus achieving more precise impedance characteristics along the entire length of the cable along with superior noise reduction. **Prices: Reference II Digital Cables start at $1,575.** www.transparentcable.com

Tributaries Cable

Tributaries Series 8 Balanced Audio (8AB) cable is a high-performance balanced audio cable made by hand in Orlando, Florida. For true balanced audio signal transfer, the Series 8AB cables are designed with three heavy 20AWG long-crystal, oxygen-free (LC-OFC) copper conductors. The conductors have a unique individually insulated dual-gauge configuration that results in remarkably superior sound quality. Dual shielding includes a 95% copper braided shield and a 125% aluminum/Mylar wrap ensuring a lower noise floor and protection from electromagnetic (EMI) and radio frequency interference (RFI). The shield is connected only at the source-end making this cable directional and virtually noise free. The terminations are gold-plated, brass XLR connectors. 8AB is available in standard and custom lengths. **Prices: $350/1m pair, $400/2m pair.** www.tributariescable.com

VooDoo Audio

VooDoo Evolution Digital is a true **75-ohm S/PDIF digital interconnect cable** that provides dramatic reduction in phase-related high-frequency signal anomalies with optimal gain at constant impedance in the digital signal transfer. The Evolution Digital SPDIF cable is built with the cryogenically treated 99.999% pure silver 20 AWG conductors for wider signal bandwidth. The signal path is isolated in oil-impregnated silk dielectric that is triple shielded with copper foil and silver-plated copper wire braid for 100% protection from EMI, RF, and microwave interference. The Evolution Digital SPDIF cable is terminated with cryogenically treated rhodium-plated Tellurium copper RCA locking connectors, while the AES/EBU version is terminated with cryogenically treated Neutrik XLR connectors with silver plated-contact pins. **Prices: $500/1m, $550/1.5m.** www.voodoocable.net

VooDoo Silver IEC Adapters allow you to plug your power cord into either a 15 or 20-Amp IEC panel-mount connector. This premium audio-grade adapter is specifically designed for high-end audio with absolutely no current "loss" or phase shift. These adapters are sonically transparent—guaranteed! The Silver IEC Adapters are built with cryogenically treated 10 AWG solid-core 99.99% pure silver conductors that are RTV silicone-insulated and encapsulated in epoxy resin. All conductive components of the Silver IEC Adapters are cryogenically treated. Adapters are universal for 120/240V applications and offered in 15-to-20 amp or 20-to-15 amp configurations. **Price: $199 each.**

ON THE HORIZON

Wireworld Cable

Wireworld is releasing a line of upgrade **headphone cables** featuring what is believed to be the world's first ¼" phone plug with silver-clad copper contacts. Available in configurations that suit many popular high-end phones, these cables utilize a small and flexible version of Wireworld's acclaimed DNA Helix conductor geometry to produce substantial improvements over standard designs. Sold in 1.5m lengths, Wireworld headphone cables are offered in three levels, which differ only in the conductor materials used: the **Eclipse ($550)**, which has Ohno Continuous Cast® copper conductors; the **Silver Eclipse ($700)**, which has silver-clad OCC copper conductors, and the top-of-the-range **Platinum Eclipse ($1,675),** which has OCC solid silver conductors. www.wireworldcable.com

Wireworld's latest development is a series of c**ables for musical instrument and recording studio applications**. Featuring proprietary silver-clad connectors and Wireworld's exclusive DNA Helix cable geometry, the cables are available in five levels of conductor material, ranging from oxygen-free copper on up to the ultimate conductor material, Ohno Continuous Cast solid silver. All cables in the range feature Wireworld's Composilex insulation technology, which promises the lowest self-noise and handling noise of any cables currently available. The pricing for a 15-foot instrument cable begins at $70 for the Orbit, and continues up to $1950 the Platinum Eclipse. The pricing structure is the same for the microphone cables, which double as AES/EBU balanced digital cables because of their precise 110-ohm impedance. **Price range: $70-$1,950/15-foot cable.**

Wyred 4 Sound

After many hours of tuning, **Wyred 4 Sound** is finally introducing the all-new **P-1r power cable**! Featuring Rhodium-plated Furutech AC plug and IEC connector, the P-1r cable allows for enhanced top end control and reproduction. Born from the best selling P-1 cable, you will find that the new (r) version will help fine tune systems needing a little improvement in the mid to upper harmonics. Contrary to the new P-1r series, the new P-1g series is being offered for those looking to smooth out the mid and high frequencies. Heavy-duty metal clamps securely attach the new connectors to our custom cable and help grasp any stray resonating frequencies. **Prices: P-1r cables are available direct from Wyred 4 Sound and start at $265/1m.** www.wyred4sound.com

ON THE HORIZON

WyWires

WyWires announces two related products: the **Power Broker AC Distributor,** featuring 8-NEMA outlets in an exotic wood box, and the **Juice HC** high-current power cord**,** which comes integrated into the Power Broker but is also offered as a standalone product. The Power Broker represents a collaborative effort between Daedalus Audio (woodworking), Zesto Audio (design engineering), and WyWires (unique cable technology). The **Juice HC** extends WyWires' existing Juice II cable architecture to a power cord suited for high current applications. The Power Broker promises greater dynamic range, expanded soundstages, more detail, better image focus and an overall more visceral experience. **Prices: Power Broker: Basic, $2899/Bybee-enhanced, $3999; Juice HC: Silver, $899/Bybee-enhanced Gold, $1999.**

WyWires continues to offer **Blue, Silver and Gold-series interconnects** (Gold series cables incorporate Bybee Slipstream and Quantum Purifiers). All WyWires products are handmade using components and materials sourced in the US/EU. **Starting prices for interconnects: Gold: $899; Silver: $499; Blue: $249.** www.wywires.com

XLO Electric

UltraPLUS cables are updated replacements for XLO's popular Ultra-series cables that feature XLO's signature hum-bucking "exoskeleton" winding geometry, all-PTFE dielectrics, core structures, and jacketing. Specifically, UltraPLUS cables use the firm's Integrated Field-Balanced surface/diving winding geometry, which minimizes frequency-related phase-shift by reducing the thickness of each conductor grouping. The winding geometry also ensures that no wire has a "normal" position within the grouping thus avoiding any "normal" phase-shift problems. Inherently low capacitance and inductance further enable UltraPLUS cables to work better with a wider range of components. The UltraPLUS range includes single-ended and balanced interconnects, speaker cables, a phono cable, and coaxial and AES/EBU digital cables. **Prices start at $150/0.5m single-ended pair of interconnects.** www.xloelectric.com

Cable Designer Roundtable

The Pioneering Founders of The Cable Industry Discuss the History, Art, and Science of High-End Audio Cables

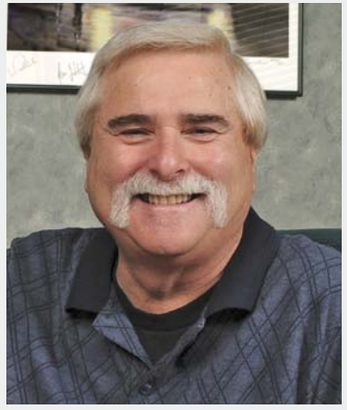
It's easy to forget that just 35 years ago cables were an afterthought in the pursuit of great sound.

Lamp cord and throw-away "patch cords" were the norm. And then, consistent with the high-end ethos of striving for improvement, a few intrepid souls ventured into uncharted territory to create the foundation of what would become an important contribution to realistic music reproduction as well as a major business segment. From humble beginnings in the late 1970s with relatively crude products, the high-end cable industry evolved dramatically, producing highly sophisticated designs unimaginable to someone in the 1970s. Today's interconnects and cables reflect more than three decades of research into what had been the apparently simple task of moving an audio signal from one place to another. For this Designer Roundtable I asked five of the founding members of the high-end cable industry—who collectively have more than 150 years of cable-design experience—to share their perspectives on this important component category.

—Robert Harley

Cable Designer Roundtable

Bruce Brisson • Music Interface Technologies (MIT)



Bruce Brisson engineered the first patented and purposefully built audio cable in 1981, the first of many patents and technologies he licensed to Monster Cable Inc. Many of Monster's products are still using his technologies today and have become some of Monster's most enduring and successful lines. In 1984, he founded Music Interface Technologies (MIT), which has been a leading force in the research, design, and manufacture of high-performance audio, video, and AC products.

Since forming MIT, Bruce has also designed or manufactured cables and components for many other well-known audio companies such as Spectral Audio, Jeff Rowland Design Group, Wilson Audio Specialties, Martin Logan Electrostatic Loudspeakers, Goldmund Audio, and most recently Constellation Audio. MIT products are used in many recording studios and have become crucial components in many Hollywood productions. If you have listened to a hit record or attended a hit movie within the past three decades, you have undoubtedly heard many of his products.

Each of you participating in this roundtable is a pioneer, designing cables long before cables and interconnects became recognized as important contributors to high-fidelity music reproduction. Why did you choose to work in the cable arena rather than in other fields of high-end audio?

It happened rather by chance. In the late 1970s I had a complex three-way speaker system with active crossovers. The system used three stereo amplifiers and therefore three pairs of speaker cable. I had purchased different types of cables as I added crossovers and amplifiers to the speakers while building out the system. So the system used three different variants of cables.

One of the crossovers broke and I repaired it. I then proceeded to hook the system back up. Because I had not paid attention before I tore it down to which cable had been used to hook up the amplifiers to the tweeters versus the midrange or woofers, I cabled the system back together differently. The sound of the system changed. I proceeded to move the cables back to where they had been before I had torn the system down, and everything sounded correct again. I decided to pursue the question of why.

What are the core beliefs that guide you in product development?

When measuring correctly using impedance analyzers, one understands that audio cables suffer from at least two resonances. As an example, an eight-to-ten-foot speaker cable will typically possess a series resonance somewhere below 1kHz as well as a parallel resonance somewhere between 150kHz to 250kHz.

Using a form of piecewise network analysis I optimize the cable's resonances using additional networks, hence the network box found on all MIT cables. Our best cables possess networks that optimize the cable to function without the series resonance down to a fractional hertz, or just above DC. Looking at the high frequencies in the time domain, our best speaker cables yield a useful transient response of 2.8 microseconds, or ~357kHz. When measuring using our test and measurement criteria, I have never come across any other cable that has a higher useful transient response than that.

The so-called speed or transient of the cable then has nothing to do with the velocity of propagation as others claim. It doesn't matter how fast the audio signal is transported through the cable. What matters is if there is a difference in delay between some high frequency of interest, and some low frequency of interest.

We also apply proper dampening around the high-frequency parallel resonance so that reflected energy is not sent back down the cable to contaminate the incoming signal. Therefore the cable/network is only dependent on the input signal being applied presently, and not some stimulus from the past. I can't emphasize how important all of the above is, particularly pertaining to timbre and textures, as well as maintaining pinpoint imaging and accurate soundstage size and proportions.

Next we measure and quantify the articulation of our cables. Articulation tells us how the cable will respond at various frequencies under dynamic conditions. Articulation in an audio-signal-carrying cable is simply a matter of how much energy a cable stores at any given frequency versus how fast the cable releases that energy. If the cable articulates to the same criteria at all frequencies of interest, then the music's timbre and textures will not be changed. The settling out of the cable is extremely important regarding imaging and soundstaging properties, as well as left-to-right channel delays.

Now that the cable industry has about 35 years of experience under its belt, has cable design approached its pinnacle where further improvements are likely to be marginal? Or will the improvements we've seen in, say, the past ten years follow the same trajectory?

I believe we still have further to go. Some future gains will come via the development of systems where each component's input and output impedances are held to certain values allowing the cable/interface to be optimized to those values. And some will come from independent research from companies such as MIT.

Cable Designer Roundtable

Today, unfortunately, it is sometimes done sort of "willy-nilly" in the field. Some amplifier manufacturers use 10k Ohm input impedances while some use 100–250k Ohm input impedances. Then a "random" selection of a preamplifier is inserted into the system, in the field, whereby the output impedance is never given any consideration. Then some cable with erroneous specs yielding 1000 nines of purity and bandwidth purportedly extending from DC to light is used to interface those components into something that is expected to function as a linear system.

We manufacturers must begin to work together to build linear systems. Another word for linear is "predictable." The random system described above might not articulate the same across the entire audio spectrum, and might also excite every impedance pole within the system. Timbre and textures, as well left-to-right channel delays, might all be affected negatively.

Regarding ongoing work here at MIT, several years back I became aware that very small delays between the left and right ear can be detected by humans. Over the past couple of years I have built five prototype cables dealing with minimizing delays between the left and right channels. In each case, we found when we tighten up the delays between left and right channels we have gained image and soundstage quality, particularly image specificity. Also, as expected, we reduced the background noise of the system by a noticeable amount. But unexpectedly, we also gained desirable timbre and texture improvements. No, I don't think we are through yet!

In a field that is overcrowded with competing designs and technical hype, what advice would you give consumers when choosing cables for their systems?

First, listen to as much live music as you can, and remember it. Secondly, read about music, tuning, temperaments, timbre, textures, pitch, etc. Third, don't let someone tell you it sounds good if it sounds bad to you.

Cable Designer Roundtable

George Cardas • Cardas Audio

George Cardas has a gift for mathematics and electronics, and a love of music. This passion can be seen throughout his home. Musical instruments in every room. Walls lined with LPs, tapes, and discs. A Golden Cuboid listening room with padded walls. A reinforced concrete turntable stand running through the floor to a concrete block poured in the ground. Speakers, amplifiers, preamps, turntables, digital players, and recorders of every type. Prototypes everywhere.

One of those who pushed audio systems from hi-fi to high end, George is always searching for more accurate recording and playback systems. George identified the issue of conductor resonance, and controlled it by using a "Golden Ratio" progression of strand sizes in his cable designs. This insight can be found in the bulk of the high-end cables sold today.

George has developed methods for cable stranding, and created pressure-differential microphones as well as new connector designs. He often works with other designers to produce better speakers, amplifiers, and music-storage systems. His latest venture is in the recording industry, making records, CDs, and AADs to audiophile standards. Helping musicians reproduce their music has always been the focus of Cardas Audio.

Each of you participating in this roundtable is a pioneer, designing cables long before cables and interconnects became recognized as important contributors to high-fidelity music reproduction. Why did you choose to work in the cable arena rather than in other fields of high-end audio?

Actually I would say that cables chose me! Everything was square in the middle of my interest and skills. I was engineering transmission lines at the phone company, obsessively interested in music, and looking for a way to help musicians reproduce their music. I have always loved solving puzzles and this was the greatest puzzle I had ever seen. At the time I was involved with some local musicians who were literally selling their blood to make payments on their instruments. I had figured out a key part of the cable equation and the rest is history. I put my friend Kip Dobler to work making prototypes and eventually terminating the first cables.

What are your core beliefs that guide you in product development?

Interesting question! I believe that by seeking perfection in all that we do and associating with others of like pursuit we are on the path to understanding perfection itself. The dynamic range and simple genius of the two-channel stereo makes it the perfect pathway for development. I believe that the human hearing/nervous system is the ultimate tool for sorting out what is of highest quality. The product's relationship to the musical signal is best measured with this tool.

On a theoretic level, I believe that the telephone transmission line is a huge magnifying glass for the anomalies of cable itself—the resolution of that model within the cable itself rather that with corrective networks was my ultimate goal.

Now that the cable industry has about 35 years of experience under its belt, has cable design approached its pinnacle where further improvements are likely to be marginal? Or will the improvements we've seen in, say, the past ten years follow the same trajectory?

I would say the process of perfecting what we are doing is an attitude not an end. Understanding and dealing with the things that affect cable performance is a dynamic, and if we are not vigilant we will regress to the easier ways. If the object becomes taking care of investors or simply satisfying tests, we might as well start over. We will progress as long as we have the passion for perfecting what we do.

In a field that is overcrowded with competing designs and technical hype, what advice would you give consumers when choosing cables for their systems?

The Internet is the great leveler of all that is hype. I would say the answer is clear: simply listen and feel, share what you have experienced with the world, keep your eyes open. There really aren't many different conductor designs, and there are many more people trying to hop on bandwagons that there are actual wagons. Musicality can be achieved in the simplest of systems if they are well focused. Work on focusing a nearfield system first—it will serve as your best tool in the end. If cost is an issue, start with simpler straightforward designs that focus on good symmetry in construction and excellent materials. Realize that the best design is not necessarily the most expensive design and that the things you are looking for will be found in the relationship of the music, the manufacturers, and their components. Look for products that are born of the passion for the sound of music.

Cable Designer Roundtable

Ray Kimber • Kimber Kable

Established in 1979, Kimber Kable is the brainchild of inventor, engineer, and entrepreneur Ray Kimber. Ray's fondness for new discoveries and experimentation began in the first grade when he built a crystal receiver, which he tweaked, without help or knowledge, by adding to it a set of army-surplus headphones. While working at a sound and lighting company in the 1970s, Ray discovered a technique for braiding cable that not only reduced noise, but also improved fidelity. He figured that if weaving cable could alter the sound so significantly, everything else about cables was on the table for discovery, rediscovery, or investigation. This led him to create Kimber Kable to market his ideas and discoveries.

Each of you participating in this roundtable is a pioneer, designing cables long before cables and interconnects became recognized as important contributors to high-fidelity music reproduction. Why did you choose to work in the cable arena rather than in other fields of high-end audio?

The phrase "Necessity is the mother of invention" was the catalyst behind the creation of Kimber Kable. In the mid-1970s I worked at a sound and lighting company in Los Angeles when the first big discotheques were being installed. The lighting systems generated noise that was picked up by the speaker cable. Traditionally sound and lighting systems were not installed right next to each other, nor did ordinary lighting systems have an array of noise-generating fixtures such as strobes and flashing or dimmable lights. But in a discotheque the lights and speakers were installed next to each other. The speaker cable was acting as an antenna array and bringing noise from the lights into the sound system.

We tried encasing the speaker cable in a steel conduit, and while that helped with the noise it also had the unintended consequence of lowering the audio fidelity. I had the idea of counter-rotating sets of conductors in the speaker cable to cancel the magnetic interaction and get rid of the noise.

> **"It was that discovery of noise elimination and improved fidelity [by counter-rotating conductors] that set me to developing cable designs and founding Kimber Kable."**

That technique worked; the noise was greatly reduced, but I also discovered that the sound quality also improved. It was that discovery of noise elimination and improved fidelity that set me to developing cable designs and founding Kimber Kable. The final version of the braided-wire concept not only rejected RF but also allowed the system to sound more musical. After this period of discovery I decided to take a risk and begin entertaining the idea of selling my new discoveries.

What are your core beliefs that guide you in product development?

Low noise, high fidelity, low employee turnover, high retained value.

Now that the cable industry has about 35 years of experience under its belt, has cable design approached its pinnacle where further improvements are likely to be marginal? Or will the improvements we've seen in, say, the past ten years follow the same trajectory?

In the absence of some fundamental breakthrough in either metals or insulators I would think that the improvements will be in steps rather than leaps.

In a field that is overcrowded with competing designs and technical hype, what advice would you give consumers when choosing cables for their systems?

Buy from a reliable dealer. If there are doubts about a recommendation then try before you buy.

William Low • AudioQuest

Born in 1951, William (Bill) E. Low grew up during a golden era of Western music's high-speed evolution, from about when Presley went into a studio in Memphis, through at least Dire Straits' first three albums, a time when awareness of a moving musical frontier was unavoidable. Bill credits hedonism rather than idealism for his involvement with music reproduction. He likes to say that music is the finest recreational drug, and he was hooked from an early age. A wide-ranging liberal arts education at Portland's Reed College stimulated the far corners of his brain with sociology, psychology, economics, religion, art history, political science, philosophy, physics, biology, and, as a history major, a whole lot of history. This meandering learning-how-to-learn exercise turns out to have been the best cable-designer education Bill could imagine.

Each of you participating in this roundtable is a pioneer, designing cables long before cables and interconnects became recognized as important contributors to high-fidelity music reproduction. Why did you choose to work in the cable arena rather than in other fields of high-end audio?

I never had a plan. I was simply born at the right time. When I started a second hi-fi store in 1978, the audio-cable business in the U.S. was almost two years old. (I use Polk Audio's introduction of Cobra Cable at the June 1976 Chicago CES as the opening shot in the cable wars.) By 1978, a particular Mogami cable imported by Jonas Miller Sound, Fulton Brown and Gold cables, and Cobra Cable were established in the leading-edge market where I "lived." I wanted a better cable for my store, and so I joined in with retailer MWK (Middleton, White & Kemp) in Anaheim, California, on an opening order of a cable instigated by Dave Gore (of Quatre DG-250 GainCell amp fame). That "original recipe" cable turned out to be a gigantic headstart towards a continuing evolutionary process. In 1980 I started designing cables and started AudioQuest, and have been climbing that same never-can-reach-the-top mountain ever since.

What are your core beliefs that guide you in product development?

Gee, it'll sound like one of my ads when I answer "Do no harm." Cable can only hurt the sound, so the discipline of designing cables means trying to understand as much as possible about the mechanisms which cause change, and then manipulating and juggling those variables so as to cause the least amount of damage. A speaker designer must make hundreds of voicing decisions, meant to accumulate into what that designer believes is a neutral (or at least desirable) voice in a process analogous to sculpting with clay, adding bit after bit. In comparison, a cable designer is more nearly sculpting in wood or stone, trying to take away as little as possible, and trying not to add anything at all. A cable designer does have an absolute reference thanks to being able to compare the sound of a wire to no wire at all (not to a short wire, which is no reference). This comparison is discouraging, but crucial toward making informed intelligent compromises, each of which can serve the goal of predictable neutrality.

> **"The real challenge in audio is not the passing on of more information, it is minimizing the adding of misinformation."**

Cables don't create energy. They don't have a "rising" top end, for example. However, they do distort the audio data in ways which cause the brain/computer to not be able to decode the data (perceived loss of treble) or to misinterpret the data, sort of a fun house-mirror effect (irritation causing the perception of elevated treble). There are many machine-measurable phenomena in audio, and there are many significant ways in which audio data is corrupted which we don't fully understand. I have been fortunate not to have been imprisoned by thinking that I must already know what is important in cable design. I was never tempted to misapply knowledge from a different application. I have been free to be a genuine scientist, investigating and acting on the empirical evidence—evidence measured by the only "instrument" that counts, the human auditory system of ear/microphone and brain/computer presenting a perceived aural reality to our consciousness. All scope-type testing is only ever valid or gains hierarchy when correlated with the ability to accomplish the stated function, in this case preserving the aspects of music which make it music and not just data. While a noble and worthy goal, the real challenge in audio is not the passing on of more information, it is minimizing the adding of misinformation.

Now that the cable industry has about 35 years of experience under its belt, has cable design approached its pinnacle where further improvements are likely to be marginal? Or will the improvements we've seen in,

PREVIOUS PAGE NEXT PAGE

Cable Designer Roundtable

say, the past ten years follow the same trajectory?

Over in the software arena, the packaging of digital audio will certainly evolve to where the data is more robust than it is today, and less easily damaged when passing through a cable. However, the evolution of cable itself will be much slower than in the 70s and 80s, though there will always be room for improvement because there will never be a perfect cable. Even for passing digital signals, cable is an analog challenge, and will improve incrementally. However, the audio industry in general has proven to be one of the least "perfect" markets in existence, often more like perfume than a sophisticated product like a camera. Inferior camera-makers go out of business very fast, but someone will sell, buy, and like even the worst audio, because when the listener is in the right mood and likes the music, even the worst hi-fi can provide great pleasure. In this sense, the greatest possible improvement in cables would be less variation in performance among the various suppliers.

In a field that is overcrowded with competing designs and technical hype, what advice would you give consumers when choosing cables for their systems?

Find a dealer you can trust who fully accepts being responsible for your happiness, and take his advice. The cable brand is not important in comparison. Without any outside advice… gee…maybe listen to entry-level cables from several plausible manufacturers, and when possible (very easy with speaker cable) compare the cables to no-cable in order to learn what the cable sounds like, whether it's honest and neutral, and not just whether your system favors a dull or an irritating cable.

Edwin van der Kleij-Rynveld • Siltech & Crystal Cable

Edwin van der Kleij Rynveld was born in 1953 and raised in Canada and Holland. A music enthusiast from a young age, he played bass guitar in a high-school band, and built amplifiers and speakers. This led him to complete a university degree in electrical engineering. After college he worked for Philips and Exxon, mostly working with computers. During this time he developed high-end audio products for established companies. His interest in audio led him to publish a paper on small-signal behavior in solid-state devices and vacuum tubes. After working with Siltech for several years as a consultant, he acquired the company in 1992. Edwin is married to Gabi van der Kleij-Rynveld, founder of Crystal Cable.

Each of you participating in this roundtable is a pioneer, designing cables long before cables and interconnects became recognized as important contributors to high-fidelity music reproduction. Why did you choose to work in the cable arena rather than in other fields of high-end audio?

After finishing university (electronics) I worked many years in the computer division of Philips and later for other computer companies. Simultaneously I helped high-end audio companies with their analog amplifier designs, something I loved doing next to the digital day job. This later materialized in the co-ownership of Siltech, where I could expand my interest into cable design.

As a specialized electronics engineer, I was very curious to know how cables create audible differences in sound. Step by step the mysteries unraveled. For a researcher this is heaven, as very little is published regarding audibility of cables used for audio. This early excitement still lives on today, helped by new and better measurement possibilities combined with the use of state-of-the-art multi-physics programming. With this multi-physics approach many complex combined effects of material and construction properties can be visualized before production even starts. This leads to better results than otherwise possible. We believe this is one of the key reasons for our worldwide success.

What are your core beliefs that guide you in product development?

A) Never think you're finished; in high-end audio there is no limit to quality. B) Keep comparing listening results with live music—it resets your hi-fi memory (by hi-fi memory, I mean getting used to errors by repeated listening). C) Keep innovating, never underestimate your competitors, and try harder to keep on top. D) Keep searching for new technologies and materials; material science develops fast. E) Make products that are practical, strong, and flexible so that the sound quality doesn't deteriorate over time. F) Use the best available materials. For both our brands, the highest-quality materials are used, starting at even the most affordable cable. A material example: Siltech Explorer 90i high-purity mono-crystal copper, DuPont Kapton plus Teflon-film insulation. Crystal Cable Piccolo: high-purity solid silver-gold-core conductor with dual-layer Kapton insulation and high-precision coaxial construction. Nowadays it is hard to find equally high-tech materials at this price level. F) Build it to perfection. This is why our company can give lifetime warranty for every cable from Siltech and Crystal Cable. Even 25-year-old Siltech cables still change hands today because of their still excellent sound and lifetime warranty.

> **"As a specialized electronics engineer, I was very curious to know how cables create audible differences in sound. Step by step the mysteries unraveled."**

Now that the cable industry has about 35 years of experience under its belt, has cable design approached its pinnacle where further improvements are likely to be marginal? Or will the improvements we've seen in, say, the past ten years follow the same trajectory?

I believe large improvements are still possible. As resolution and overall sound quality improve, so will cable performance have to follow. An interesting story: One of my old books dating to 1928 holds an ad from Philips in which a man sits comfortably in a chair reading a book while listening to the Philips Pagode loudspeaker and says "Just like in a real concert hall!" So in that time it probably sounded realistic. Similar claims are made today, despite the difference with that 1928 loudspeaker. It just means what seems real is what we believe in a certain time period.

So for all hi-fi components there is a lot to improve. Now for cables, will they stay? Twenty years ago we believed by now most equipment would be wireless. The digital technology makes it simple now. However, the continuous improvement in source quality, by technique and better recording equipment, gives a great advantage to hard-wired connections. There is no

PREVIOUS PAGE NEXT PAGE

Cable Designer Roundtable

conversion loss as in all-digital systems. Most high-end audio owners are very aware of this. For the highest in sound-quality there is just no replacement for a direct-wired connection.

In a field that is overcrowded with competing designs and technical hype, what advice would you give consumers when choosing cables for their systems?

Before spending on cables, make sure the whole system is already acoustically balanced. Correcting large acoustical problems with cables is impossible. Correcting harsh or boomy speakers with cables is equally illusive. If the sound system is already good sounding, then cable can bring the next 30% of quality improvement—the cables can let the system sing.

To start exchanging cables, work from source to the end (loudspeaker cable comes last). The music from the source is of the highest quality in your system, only to be degraded by whatever follows. For example, start by changing the interconnect between the source and the preamplifier input, then the interconnect between the preamplifier and the power amplifier, then power cords to the source components, then loudspeaker cables, and finally the digital cables.

One final note: Cables are as interesting as car tires. Boring at first sight and not the first thing you think of when buying a car, but essential for its performance. Like tires, cables are the connection to the real world. tas

Dirty AC Power: Getting it Out of Your (Audio/Video) System

Roger Sheker, *Audience*

Excerpted from *The Golden Ear's Guide to Audio System Setup and Evaluation*.

For most readers of this publication, it's no secret that the AC power coming out of your wall outlet is shockingly (pun intended) "dirty." In a perfect world, the AC power in your house should look like a perfectly smooth undistorted sine wave (when viewed on an oscilloscope). In reality, the AC can be corrupted with noise and distortion (dirty AC power looks pretty jagged and ugly on a scope). This noise can be heard as grain, "haze," and a general smearing or foreshortening of the soundfield/stage, or can be seen as a reduction of the sharpness, color accuracy, and detail of your video image. (Note: an audible 60-cycle hum or 120-cycle buzz in the system is the result of a grounding problem, which is not related to power line conditioning, and is a whole other subject that could be addressed in a separate article.)

The power supplies in your audio/video components are supposed to block all that AC power noise, right? Well, not always. Some components do a better job at filtering this grunge than others. In addition, the voltage coming out of your wall socket can vary widely from the 120/240 volts you're supposed to be getting (supply voltages can vary in other countries).

How can this AC power corruption be dealt with for us to achieve optimum audio/video system performance?

First and foremost: Never take anything for granted. Assume nothing in your system is optimum, and go on from there. For instance, when was the last time you cleaned all of your power connections? Connections should be cleaned at regular intervals, not ignored and forgotten. There are a host of other sources of AC power gremlins you might not be aware of. Note: Never clean a live connector; unplug everything before starting.

For example: Have you changed over to the new low-power florescent bulbs? These lights use a switching circuit with little filtering, and they can be a serious noise source. The older high-power fluorescents are generally more benign as they don't have noisy switching circuits.

Standard lamp dimmers can be very noisy (to the point of causing a very audible buzz through an audio system), and at the least should be either turned off or turned all the way up when listening or viewing.

You should turn off or unplug all of your unused "wall warts" (those ubiquitous black plastic AC power adapters) when listening to your system, or check to see that they're quiet and not affecting your system. These little troublemakers can be checked for noise radiation with an AM portable radio tuned off station. You might be surprised at how bad some of them are!

Have you upgraded/replaced your system's AC power outlets? This can make a surprising difference. In the old days of audiophilia, many enthusiasts swapped their standard outlets for hospital-grade outlets; this is still a viable option. These days, a number of aftermarket AC outlets are available, but one can't assume that because a product is expensive it is better. We have found that some of the expensive AC outlets color the sound and do more harm than good. Our recommendation is the Hubble hospital-grade outlets with solid unplated brass pins. Cryogenically treating also gives a further improvement and is recommended.

Are all of your high-frequency wireless transmitters, such as those found in all wireless products like portable phones, cell phones, wireless routers, etc. turned off or at least out of the room? These products can be a serious noise source.

The above factors are just some of the simplest and most common things to consider when cleaning up your AC power.

A more costly and complex way of optimizing your audio/video system's power would be to install a dedicated AC power circuit just to power it. This dedicated circuit should be rated at 20 amps or more and overbuilt as if it were going to be used for 30 amps. This expense is to be considered as an investment in sonic truth as this weak link will always be a problem otherwise. For this, three-leg, stranded 10 AWG, shielded and UL-rated wire for in-wall applications is recommended as well as the best dedicated and house mains breakers you can find. Again, cryogenic treatment is recommended for the

EQUIPMENT REVIEW - Dirty AC Power: Getting it out of Your System

wire.

After all of these considerations are addressed, the final step in optimizing your audio/video system AC power is to employ quality power conditioning for all of your audio components. This is such a complex and misunderstood subject that I have included some salient points here.

Currently in common use, there are five basic types of AC power-conditioning products. They may be employed singularly or in various combinations:

- Pure passive
- Active regulation
- Isolation
- Power factor correction
- DC blocking shunt

A pure passive power-conditioning design is an implementation of various types of passive noise filtering, such as inductors and capacitors of varying quality and size. The best of this type of conditioning will have independent filtering for each outlet with the filtering covering a broad band of frequencies. The very best of this type will also pay particular attention to having very low DC resistance from input to output insuring full peak power delivery. This is particularly important for preserving system dynamics. If not properly designed, a loss of sonic dynamics can occur due to the fact that most power amps draw far higher currents at dynamic peaks than the average value. DC resistance in the power circuit will cause a voltage drop, compressing this peak power draw leading directly to compression of musical dynamics.

As a class, AC power conditioners with active regulation will provide either partial correction/replacement or full regeneration of the AC power. Active regulation of necessity will also include some of the filtering found in passive units, thus providing some degree of input/output filtering and isolation.

There are various types of active power-regulation products in the marketplace, and some work very well for low-power-type front-end equipment (such as CD or Blu-ray players). However, active regulation will often limit dynamics and current delivery when used with power amps. Active regulation can also introduce other problems into the regenerated/regulated power, including reduced peak-power delivery and broadband noise. The best of this type of conditioner will offer very low power distortion, and often includes active power factor correction, reducing distortion of the input power. The regeneration-type power conditioner can even include the option of changing the output frequency.

Isolation of AC power input from the output is always implemented with a transformer. By nature, transformers inherently "separate" the incoming AC going into the primary winding from the outgoing AC from the secondary winding, with no direct DC connection. (Transformer design and the possible sonic consequences are a vast topic.)

Isolation transformers will be one of many differing types, from a simple standard EI core design (referring to the core shape, implemented with 2 pieces shaped as the E I letters) all the way to a more complex balanced power toroidal type. Input/output (I/O) isolation can also be implemented with a magnetic-amplifier-type transformer implemented as a ferro-resonant regulator/isolator. All ferro-resonant-type transformer units of necessity must be big and heavy to allow full system dynamics and power delivery. Ferro-resonant units can be, and most are, very noisy mechanically, giving off a power-line-frequency noise/buzz that requires installation in a remote location. Larger units may also require a dedicated AC line.

As a class, isolation transformers do not provide broadband noise filtering, however they can be effective in lowering residual power-line frequency hum problems. Balanced power isolation also can be very effective in reducing power-line frequency noise if the design is compatible with all the equipment being powered. This balanced power is implemented by splitting the AC voltage into equal but opposite phase voltages that are balanced from ground. This can prevent corruption of the ground, as the noise will also be equal but opposite and thus canceled out. The weak link here is the quality of the power transformer of the equipment being powered. If the high and low side input into the transformer have much of a difference in parasitic leakage the inputs will not be balanced so the balanced advantage will be lost.

More about power factor correction: PFC is not produced as a stand-alone power-conditioning unit. It is implemented with either active or passive circuits. Active PFC can be found in many of the active-regulation-type power conditioners, greatly reducing induced power-source distortion. Often a power factor correction circuit can be found in the power supplies of power amps or other high-power equipment. This type of correction/restoration insures full power delivery by reducing distortion of the input power. This restoration is done by regenerating the clipped peaks using stored power.

Power factor correction can rightly be thought of as power-line distortion reduction, and it is required in some countries for certain classes of electronic equipment. Typically it is actively implemented in the power supplies of these components.

Passive PFC is usually done by the power utility companies before the electricity reaches your home and is implemented using large banks of capacitors. These capacitor banks can often be found on power poles or in power sub-stations. Typical full passive PFC requires very large high-voltage capacitors and is impractical for home use. Passive power factor correction can only be an approximation of an optimum solution as one never knows what will be connected to the line.

Another often found problem with AC power is residual DC on the line indicated by a mechanical buzzing heard coming from power amplifiers occasionally, not constantly.

Since all power is delivered from the utility-company power lines coupled through transformers, this DC will average out to zero volts; however, it can reach several volts in the short term. Power transformers are AC-only devices and require a changing magnetic field to work. They have no direct electrical connection from input to output and therefore cannot pass DC. The big transformers used by the utility companies can hold an apparent DC voltage for up to several seconds. This apparent DC polarity will be reversed while being present again when the equipment causing the problem is turned off.

This residual short term DC can cause significant problems with equipment using large

EQUIPMENT REVIEW - Dirty AC Power: Getting it out of Your System

toroidal transformers in their power supplies. Toroidal power transformers have very low DC resistance on their inputs and any input DC present will cause very high currents to occur. This high current can cause saturation in the core during peaks in the AC power cycle. This saturation causes the input AC power to see a greatly reduced inductance, and as it is going into a virtual dead short on these peaks, there is very little to impede this peak current flow and it can reach hundreds of amps.

This high current will generate intense magnetic fields that the transformer core no longer can absorb and will cause the transformers to mechanically buzz. At the same time, this core saturation will cause massive distortion on the transformer's output. The only practical cure for this in the home is to eliminate the cause, or to shunt this DC and reduce it as much as possible. The only available way to do this is to use a large isolation transformer or place a large inductor across the AC line to act as a shunt. This shunting is done by the inductor having a very low DC resistance or short to the DC voltage. An inductor stores energy when a current is flowing through it and returns this energy by trying to maintain the current when the source is diminishing or cut off. An abrupt cut-off of this current can cause the inductor to release this energy as a very high voltage. As an example this is how the ignition coil in your car generates enough voltage to fire the spark plugs with only 12V applied.

This sounds like a simple enough solution—just put the proper value inductor in a power conditioner and be done with it—but it is not easy to implement benignly, as inductors' stored energy must be dealt with or huge voltage spikes can be created. These spikes are potentially damaging to audio/video components and can generate large amounts of noise. Also useful inductors are quite heavy and can be large. The best long-term solution is having the equipment causing the problem removed from the power source. (Note: This is sometimes easier said than done.) Cooperation can sometimes be gained from the utility companies in tracking down and correcting the cause of the unwanted DC.

In the design of a power conditioner with the goal being quality audio and video reproduction, the best rules to be followed are to first do no harm and second to be safe. Too often people have experienced a degrading of dynamic peaks, colorations and so on.

Because most of the newer front-end components and some of the new power amps are equipped with regulation circuits, they are relatively insensitive to low-order harmonic AC power distortion and long-term/slow AC voltage changes. These components can usually operate quite well to specification over a very broad range of voltages other than the desired 120/240 volts AC (in the U.S. and some other countries). This is usually implemented using highly regulated switch-mode power supplies, including, in some equipment, very effective power factor correction. However, what this new technology cannot do is effectively nullify/eliminate noise coming in on the power line. At the same time, this new technology can contaminate the power line with its own generated noise. Proper and effective noise filtration can only be assured by using quality dedicated power conditioning. tas

EQUIPMENT REVIEWS

Cables & Interconnects

EQUIPMENT REPORT

Clarus Aqua Speaker Cable and Interconnect

Neil Gader

The Clarus name is new to most cable watchers but its parent company Tributaries is a respected player of long standing in both A/V and custom-installation circles. So why the new name? It's about identity. Tributaries is the familiar and sensible blue-collar line, while Clarus has been tailored for two-channel, high-end sensibilities.

Based on 10 years of R&D, and utilizing technology derived from five different patents, Clarus Cables are uniquely designed with three different conductor types. Solid heavy-gauge conductors are used for bass, flat conductors for midrange, and spiral-ribbon conductors (with a non-conductive core) for high frequencies. They are then individually insulated to prevent coloration caused by interaction with adjacent frequency ranges. Currently there are two full lines of Clarus. There are Crimson, the flagship, and the lower-cost Aqua considered here. In both instances conductors are strictly PCOCC, Pure Copper by Ohno Continuous Casting. The characteristics of this single-crystal conductor are well known: freedom from impurities, flexibility, resistance to corrosion, low electric resistance, and non-crystal boundaries.

If I were to summarize in a phrase my general sonic impression of the Clarus Aqua it would be all about ease of presentation. Aqua isn't an attention-grabber in that it doesn't represent a stabbing, hyper-naturally "fast" sound or an overripe, fat sound. It's not a cable of extremes. Rather it has a mellower character that allows music to flow harmoniously across the octave ranges. Clarus' backgrounds are dead silent, and it has a sweet, almost honey-soaked midrange, delivered at an ever-so-slightly forward perspective. Images are well focused and detailed. The top end is very smooth, although under onslaughts of brass and winds it can on occasion turn slightly lean. But Clarus truly is all about the mids, as Aqua proved itself a worthy match for the luminous vocal of Alison Krauss as she gently sang "Slumber My Darling." There was no etch, no discontinuity between her chest and head voices—just silk.

One of Clarus' strengths is the gorgeous reproduction of low-end timbre, bloom, and tonal color. It has a spectacularly deep, dynamic low-end that actually took me off-guard during the opening bass drum strikes of Copland's *Fanfare For The Common Man* [Reference]. I marveled at the wide-open rush of upper-bass energy and the control in the lower octaves during Rimsky-Korsakov's "Dance of the Tumblers." The Clarus communicates the rich wood resonances of cello and acoustic bass nearly as well as any cable I've experienced. On *Appalachian Journey* Yo-Yo Ma's Strad radiates authentic vibrancy and warmth [RCA]. Similarly during the intro to Shelby Lynne's "Just a Little Lovin'" the impact of the kick drum (from pedal to the ripple of the drum skin) and the deep growl of the electric bass sat me up in my seat and caused me to drop my notepad. And then drop it again when Green Day drummer Tre Cool launched a suicidal fusillade of fills midway through "When September Ends" from *American Idiot*.

EQUIPMENT REPORT - Clarus Aqua Speaker Cable and Interconnecta

There were a couple areas where the Aqua wasn't quite as persuasive. Very low-level retrieval could be improved a bit. I could hear a little background smudging of the bar glasses clinking and supper plates shifting during Mary Stallings' "Sunday Kind of Love" on *Live at the Village Vanguard*. And though the Clarus has inklings of front-to-back dimensionality, it is no 3-D pop-up book. Images are more tightly packed together and the intricacies of orchestral layering are applied with a broader brush. Finally, compared to an expensive reference like the Synergistic Research Element Series cabling (review to come), Clarus Aqua can't quite match the impression of music breathing into a venue with air cushioning each note on something like soprano Audra McDonald's "Lay Down Your Head" [Nonesuch]. That it doesn't quite match the reference in this regard is a small defect, however. Within its price range Clarus could very well be the cable to beat.

Beyond a cable's most obvious responsibilities, it represents one of the more popular upgrades in high-end audio. As it happens Aqua is priced in the $500–$1000 sweet spot that suits the budgets of a broad spectrum of upgraders. The funny thing is that Aqua doesn't sound like a first-time upgrade. It's already so musical that it doesn't leave much room for improvement. Which in these hard economic times is just another way of saying that Clarus cables are music to the ears. tas

SPECS & PRICING

Price: Interconnect RCA $500, 1m/pr.; speaker cable, $1100, 8'/pr. power cords, $300–$600, 6' length

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Orlando, FL 32809
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COMMENT ON THIS ARTICLE ON THE FORUM AT AVGUIDE.COM

Clarus Cable Designer Jay Victor Discusses Aqua and Crimson

Could you explain Clarus' unique cable geometry?
I had found that a thin flat conductor by itself would give outstanding midrange, but with little bass and treble, due to skin effect. A thin conductor does not have the skin depth to support deep bass, and the large surface area in contact with the dielectric gives high capacitance, thus rolling off high frequencies. Adding a large, separately insulated solid conductor improves bass without adjacent frequency interaction with the mids, thus giving very clear and well-defined bass and midrange. Adding high frequencies is accomplished by winding a thin foil spirally around a non-conductive core, which is then also individually insulated. Since skin effect dictates that high frequencies travel primarily on the outside surface, this approximates a surface-only cable, to better reduce interaction between frequency ranges and give better definition throughout the audio range.

Why did you settle on copper as a conductor rather than an alloy or some other combination?
I have experimented with silver-plated copper, solid silver, silver-copper alloy, and all sorts of copper types. I have consistently found, using the exact same geometry, that PCOCC copper in correct orientation always sounds more musical and more natural. Thus, this is my conductor material of choice for audio cables. The lack of crystal structure in the PCOCC copper seems to be more significant for sound quality than absolute purity or conductivity. The crystal structure within a particular metal represents boundaries that the signal needs to cross, thus contributing to distortion of the original signal. The fewer the crystals, the better. PCOCC copper has little or no crystal boundaries.

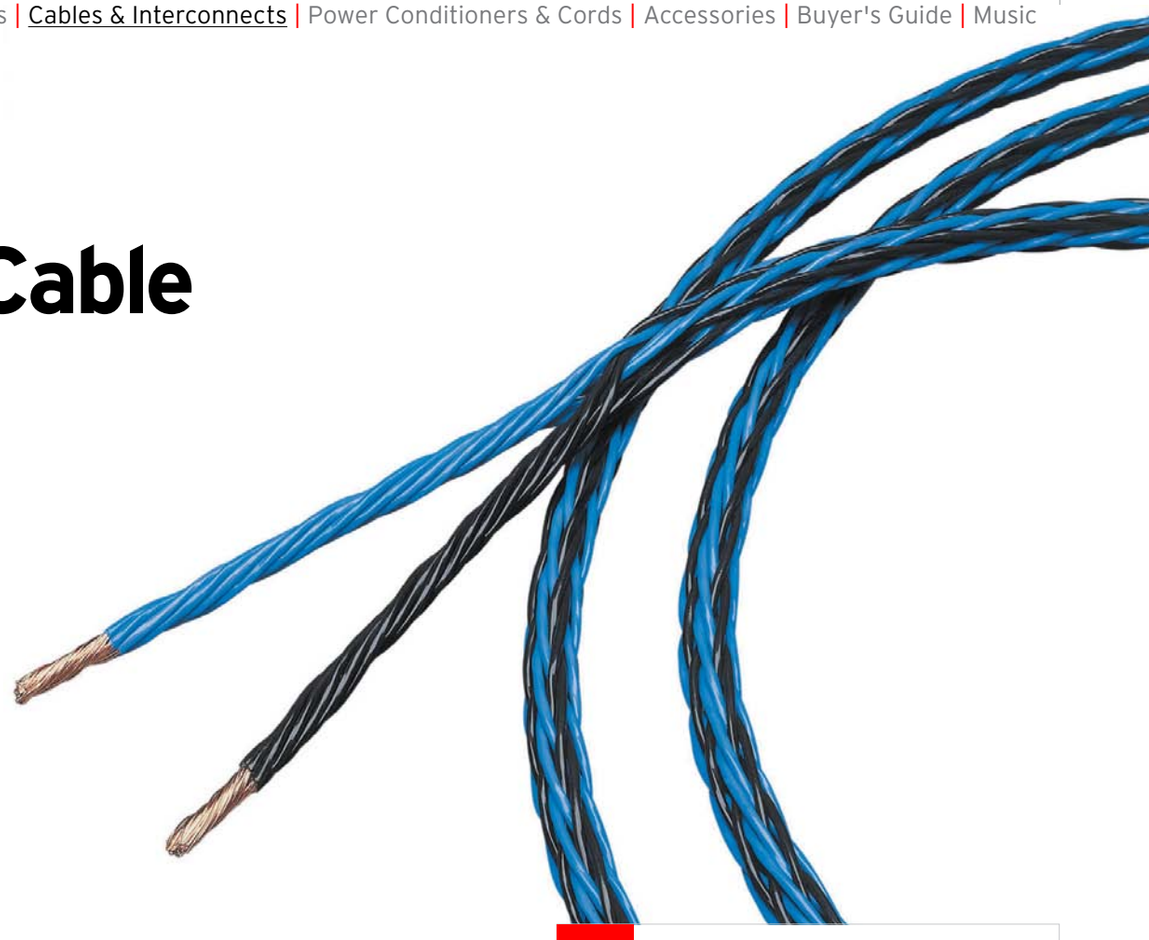
And the choice of dielectric and jacketing?
Air, of course, is the best dielectric. Teflon is second, and is very neutral in sonic character, but there are drawbacks. It can sound harsh and edgy in the high frequencies, although some would blame associated electronics for this. That harshness does often go away, however, after lengthy break-in. Teflon is also very stiff, and cables using Teflon are often very difficult to manage during an installation. I prefer Polyethylene because it is similar in dielectric properties to Teflon, with none of the disadvantages. It tends to err on the warm side of neutral, but I see this as an advantage. It is very musical in overall character, and after break-in is nearly as neutral as Teflon. The jackets are a proprietary PVC formulation, designed to dampen vibration and protect the inner structure.

Kimber 8TC Loudspeaker Cable

The Budget Standard

Paul Seydor

Paul Hillier's baritone and Andrew Lawrence-King's harps and psaltery in their beautiful Harmonia Mundi *Bitter Ballads* recital are captured in a rich ambience, which Kimber's 8TC renders with rare coherence and extension. The musicians are fractionally less immediate, transparent, and detailed than the reference, but also less edgy; on the whole I prefer the 8TC. On Jacintha's "Something's Gotta Give" from her *Autumn Leaves* [Groove Note, analog/SACD], singer and jazz ensemble enjoy a big, forward, open projection that ideally mediates detail, liveliness, tonal neutrality, and dynamic contrasts, with a very realistic soundstage. Murray Perahia's magnificent *Goldberg Variations* [Sony, DSD/SACD] brought the only anomaly in the 8TC's performance, slightly less control and neutrality in the presentation of his piano than the reference, though this was evident only in direct A/B. With orchestral music such as Christopher Seaman and the Rochester Philharmonic's excellent new recording of *Francesca da Rimini* [Harmonia Mundi, PCM to SACD], the 8TC suggested an even superior tonal balance to the reference, offering a wide soundstage and again superb detail, tympani clearly audible through densely scored passages. On Reference Recording's Oue/Minnesota Rachmaninoff *Symphonic Dances*—one of the half-dozen or so greatest orchestral recordings ever made—the perspective was ever so slightly distant compared to the reference, but holographic in its integrity of image and soundstage. This cable has been around for a commendably long time. Having used it for many years through countless changes in equipment and rooms, I can personally vouch for its versatility and benefits: great neutrality, transparency, and musicality, and a comfortable fit with amplifiers that never causes them distress. Tilting a tad toward the Yin on the Yin/Yang spectrum, the 8TC has that elusive ability to remain musical no matter what's happening fore or aft: an outstanding performer by any measure. tas



SPECS & PRICING

U.S.

Price: $384 (8-foot pair)

KIMBER KABLE
2752 South 1900 West
Ogden, Utah 84401
(801) 621-5530
kimber.com

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Kimber Kable 12TC Loudspeaker Cable

Even Better

Paul Seydor

12TC now brings to three the offerings in Kimber's TC (i.e., Teflon-coated) line of speaker cables, relegating 8TC to a middle spot between the newcomer and the entry level 4TC. Superbly neutral, transparent, and never, ever guilty of wrongdoing, 8TC has been the one constant in my system these last twenty years. Though I've enjoyed other cables, I always wind up returning to these stalwarts, which, despite their relatively modest cost, manage to go the distance against anything that comes my way. So the prospect of an even better TC cable filled me with excited anticipation, which was met with initial puzzlement: During the first few days, try as I might I heard virtually no differences between the 12 and the 8. Okay by me, I guess, 8TC being so good it leaves my ears desiring little more. But surely a heftier, pricier cable—$590 per 8' pair vs 8TC's $384—along the same lines should be better, yes? From Ray Kimber certainly, his products always embodying both high performance and high value. Several days' break-in was sufficient for some differences to become apparent: a slightly smoother, more extended top end from the new model; a better sense of ease and relaxation, not to mention more confident grip and control in the presentation; a more pleasing rendition of bloom and atmosphere, a greater sense of "opening out," as it were, especially from recordings rich in ambience (e.g., a glorious Vaughan Williams' *Wasps Overture* from Andre Previn in the days when he had some real fire in his belly [RCA, vinyl]). Tonally, the two cables could be clones, which is just fine—you can't get much more neutral than 8TC. Kimber claims greater bass authority for the 12; maybe, but I have to take it on faith that the sonic benefits of more conductors and a fatter braid manifest themselves more noticeably in dynamic woofers than in the electrostatic panels I use (i.e., Quad 2805s). For soundstaging the newer cable expands and breathes a bit more in all dimensions, the same for dynamic range, while resolution in the form of low level detail is about the same. 12TC's improvements are incremental rather than dramatic, and typically required intensive listening to ferret out. Perhaps additional break-in will make these and other differences more obvious—after all, my 8TC has been in use for two decades. Until then my provisional conclusion (which I doubt time will seriously modify) is that a line of cables distinguished for truly excellent performance and outstanding value now has an even better top model. Will the 12 replace my longstanding 8? More than likely, but I remain pleased how well the ever reliable 8 continues to hold its own. tas

SPECS & PRICING

U.S.

Price: $590/8' pair

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kimber.com

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Transparent Audio

The Link Interconnect and The Wave Loudspeaker Cable

Neil Gader

Transparent Audio, a gold standard in the high-end cable biz, has a reputation for designing wire on the cutting edge, like Opus MM2—an extreme cable and interconnect at out-of-this-world prices. But Transparent hasn't forgotten the rest of us Earth-bound audiophiles. I was urged to have a listen to one of Transparent's other extreme cables. Its extremely *inexpensive* ones—the $85/£94 The Link interconnect and the $200/£223 The Wave speaker cable.

Transparent's point-man, Brad O'Toole, described The Link/Wave as products that derive much of their design from elite cables further up the food chain. All point-to-point soldering is lead-free and still done by hand in Maine. The cables use five-nines (99.999% pure) copper conductors in a twisted-pair configuration. Cable networks are less a source of controversy than they were a few years ago, and O'Toole pointed out their advantages. The first goal was to eliminate the antennae effect by shelving frequencies above 1MHz. This reduces noise and hash and removes "hardness" from the sound. Additionally, the cable can be calibrated to match electrical values regardless of length—for example, a long cable will have identical filter characteristics to a shorter one, so they sound essentially the same. Networks also help maintain a common family-voicing. Finally, the network will add some inductance which benefit the frequencies below 2kHz. Practically speaking, The Link/Wave cable is also physically consistent with the smaller-scale systems it's likely to be paired with. They're flexible enough to be easily routed through tight spaces and around tricky corners.

The temperament of The Link/Wave is easygoing, unobtrusive, and elegantly balanced to the midrange—not going for too much extension on top or overly boosting the bottom. In my view, this is a good route to take. Less expensive systems often give up a bit of resolution and transparency at the frequency extremes, so a cable that slightly softens or rounds these rougher edges is merely being responsive to market realities. The Link/Wave throws a wide soundstage, if not an especially deep one. Imaging is very good and there's very little veiling of details. Low-frequency pitch and timbre were nothing short of remarkable. The only area where the cable exposes its modest origins is in its reproduction of the micro-dynamics of a recording. These tiny gradations are somewhat truncated creating a sensation of diminished pace and liveliness and a shallower sense of dimensionality—issues that arose during Mary Stallings' live version of "Sunday Kind Of Love" from [MaxJazz]. If you're familiar with Transparent Audio's more elite offerings you'd have to conclude that in comparison The Link/The Wave are a little slow off the mark—lively but not instantaneously so.

From the start, my cruel plan to embarrass The Link and The Wave with top-flight cabling from the likes of Wireworld and Tara Labs and Synergistic Research was thwarted by sonic realities. The Link/Wave combo may not be a competitive match for these fine brands but at a tenth the price, it's shocking just how good they really are.

Believe it or not, nothing gives even a jaded old audio reviewer more pleasure than discovering a product that's not only really good but almost embarrassingly expensive. In the bang-for-your-buck segment The Link and The Wave are triple-threat wires—they're neutral, they're natural, and they're a no-brainer. tas

Three Compelling Cables

Siltech Explorer, Cardas Audio Clear, Synergistic Research Element

Neil Gader

This survey examines cables from three highly regarded manufacturers, Siltech, Cardas Audio, and Synergistic Research. They know the territory and have been leading innovators for years. The selected cables occupy a broad range of prices to appeal to a wider range of budgets. In sonics, however, the disparity is not as wide as I might have predicted. Gone are the days where loose margins for tonal eccentricities were tolerated, even celebrated. What was once the wild, wild west of wire has been largely replaced by more scrupulous R&D and computer-aided electrical and materials analysis. Determining how a signal flows or doesn't flow is a serious endeavor especially when considering the heights of resolution that the rest of the high-end chain has attained.

As for this review's methodology, no one has yet convinced me that there's a better way to judge the performance of cable than to place the most transparent gear in its path. The better the chain, the more transparent that chain is to wire variations. Fortunately I was in the enviable position of conducting my evaluations through two premier systems—TAD Evolution One speakers accompanied by TAD electronics and the compact, MBL 120 loudspeakers with MBL Corona electronics (reviews to come). The dCS Puccini with U-Clock handled the digital source honors.

Before I proceed, let me add that buying cables is a little like shopping for a home mortgage. The first thing you need to do is get pre-qualified. Likewise, before you contemplate major wire upgrades you need to pre-qualify your system by assessing its strengths and weaknesses. The best cabling will only act like a very expensive microscope—magnifying the good and accentuating the not-so-good. So take the time to audition the cables in your own system. It will be time well spent.

Siltech Explorer

No Compass Required

A thousand bucks. That's where the action is in cables. This is the level where cable designers are able to open their bag of tricks just a little wider. They have more freedom with conductor selection and geometry, dielectric and jacketing materials, and terminations. In other words, this is where it really starts getting fun.

From my earliest days in the high end I've associated Siltech with precious metals and a Ritz Carlton air of exclusivity. In fact, I still refer to one of the company's multi-strand pure-silver interconnects from years ago. Siltech remains committed to the benefits of silver and combinations of silver and gold due to the stability of these metals over the long run. For the affordable Explorer Series, Siltech needed to hit price points that rendered precious metals conductors a non-starter. Copper, however, in the form of the Ohno single-crystal-type, proved an attractive alternative, as it has for various cable makers. These "six-nines" (6N, or 99.9999% pure) conductors are well known in wire circles. Their characteristics include good flexibility, high corrosive-resistance, low electric resistance, and non-crystal boundaries. Explorer mirrors Siltech's Classic Anniversary cables with jacketing that is composed of a dual layer of Kapton film with Teflon insulation to protect the copper conductors from mechanical vibrations, electromagnetic interference, and RF.

Tonally the Siltech Explorer is a straight-shooter, strengthened by an expressive and firmly weighted midrange. There are no discernable suckouts or weird tonal blips to reckon with. Its top end veers slightly to the drier side of the spectrum, and during the bluegrass-fusion romp "1A" from *Appalachian Journey* [Sony] I found the cry of the fiddle just a little tighter and a bit more sinewy. It could be a trifle sweeter in the lower treble, but I can't say any wires at this level of aggressive pricing have bettered the Explorer in this respect. Midband dynamics are

EQUIPMENT REPORT - Siltech Explorer, Cardas Audio Clear, Synergistic Research Element

nothing short of arresting, and bass extension is very good—tight and commanding with a range of expression that communicates many of the more specific textures in the lower octaves, such as the skin sound from drum heads and the woody resonances from bassoon and cello. Listening through the TAD Evolution 1, I ultimately felt that the gravelly rumble of a bass violin didn't quite send a shudder down into my wood floors the way a reference cable like the Wireworld Platinum did, but in comparison to the similarly priced Clarus Aqua, a recent Golden ear recipient, it wasn't too far off the mark.

Explorer's healthy midrange bias is sensitive to small shifts in vocal timbre. As I listened to Shelby Lynne's "How Can I Be Sure" from *The Look of Love*, I noted a slightly darker personality that the Explorer retrieved from this recording that added to the mood of melancholy to Lynne's plaintive vocal. This recording also revealed how the Explorer seemed to subtly amplify the deeply reverberant nature of these Dusty Springfield covers. Additionally, "Wish I Could," Norah Jones' spare opening track from *Not Too Late* [Blue Note], revealed the cable's strong low-level resolution. Inner detail was unexpectedly exacting. Specifically, Jones adds a very soft harmony track beneath her lead vocal midway through this tune. The vocal articulation of this interplay can easily get buried in the mix, but the Explorer very nearly matched the other cables in this survey.

The Siltech Explorer, by a wide margin the lowest-priced cable of this survey, makes no major missteps, but I've got a couple of quibbles. In fairness, these issues will be small potatoes in systems lacking the transparency of the TAD and MBL gear. However, on orchestral music the Explorer doesn't quite lay down the full three-dimensional spread of music across the full soundstage. During Rutter's *Requiem* it reduces the scale of the Meyerson Center, as if tugging in the venue's boundaries a bit. Compared to many premium cables (check out Siltech's Royal Signature, if you dare) the performance just misses that keen sense that the music's acoustic energy is bumping up against the walls. Finally micro-dynamics and low-level transient information are not quite as vivid as they are in the top-tier wires. For example, during "Slumber My Darling" with singer Alison Krauss performing with cellist Yo-Yo Ma, bassist Edgar Meyer, and fiddler Mark O'Connor, the best cables let me hear the rosin-laden bite as the bow touches down on the string and the bloom of the instrument's long, resonant sustain. Ideally I should be able to follow each string instrument as it harmonizes with the singer's melodic line. Explorer comes close, but these fine details were slightly muddled in comparison to my reference.

In sum, the Siltech Explorer is an excellent upgrade for mid-priced systems of above-average transparency. Along with a few other noteworthies it continues on the road to redefining cable performance at this price point. In a sector where it's easy to lose one's bearings, Explorer has an unerring sense of direction.

Cardas Clear

The Old Pro

If any cable company could assume the role of Zen wire-master, Cardas Audio would get my vote. Perhaps it's the mysterious icons and cryptography it uses to market the brand, the mix of innovation and calculated mystique. But, year in and year out George Cardas and his team go about the business of producing cables and accessories and interesting solutions that matter. In my experience Cardas products have been models of consistency and quality. Cardas Clear (and flagship Clear Beyond) are statement products incorporating the sum of decades of thought and experimentation in this field. Clear uses low-eddy-current copper in Cardas' perfect-mirror, matched-propagation design (the detailed Cardas Web site will fill you in). Terminations are the well-known bane of cables—quite literally their weakest link, prone to failure and oxidation. George Cardas sought a different path and came up with the method and the machine to manufacture crushed forged terminations. In Cardas' words, "pressure [is] applied so specifically and forcefully that it creates one solid copper junction."

The sonics of Clear combine the familiar with the fresh. Memories of the midrange/bass warmth-factor that I've commonly associated with Cardas wire over the years are still apparent, but now in a vestigial way, along with a dab of butterscotch in the mids, a roundedness on top, and a hint of shading overall. With Clear, however, these impressions quickly receded in comparison to the cable's much better resolving power and transparency, and its greater speed and agility across the transient landscape. It's a particular standout with classical music. Clear's relaxed character and bass warmth are consonant with symphonic music, and it reproduces selections from the Malcolm Arnold *Overtures* [Reference] as more fully realized facsimiles of the live event. Its naturalistic midrange still lends an agreeable ripeness and a sense of richer resonance to orchestral string sections. For example, Anne-Sophie Mutter's violin casts a liquid spell of resonant detail and harmonic energy so tangible that I could almost feel the vibrato fluttering off Mutter's bow. Yet the bravura performance is fully integrated within the fabric of the orchestra and bathed in the ambient bloom of the venue. There remains an almost buttery sweetness to the Clear, but also a fluidity that projects the full unbroken acoustic of the symphonic experience.

The "Second Concerto for Trumpet" [Jolivet] bears out the fact that some cables create a slightly broader impression of treble intensity and transient attack, while the Cardas tends to smooth and blunt the steely edges of music's harsher moments. What this implies to me is that Clear has avoided some of the phase distortion that often dogs wire in the highest frequencies. Such noise can be confused with extension, but in my view Clear has captured this recording cleanly in all its authenticity.

Clear is equally specific with low-level details, but it does resolution in a way that preserves the overall continuity of the musical moment. The smallest orchestral ornamentations, whether a horn line, a violin pizzicato, a flute trill, a plucked guitar chord, or a harp arpeggio, are lovingly revealed. The difference between a cable like Clear and a cable that's more hyped-up is easy to hear: Clear emphasizes the balanced and unified listening experience while the other amplifies extreme minutiae at the expense of the overall presentation.

At the end of the day, listening to great cables like Cardas Clear is not so much about small inequities in tonal balance. These cables are very flat in

EQUIPMENT REPORT - Siltech Explorer, Cardas Audio Clear, Synergistic Research Element

that regard. Rather their nature is more wrapped up in textural and timbral nuances and ambient distinctions—the sensation of the boundaries of a venue, the placement of an orchestra's sections and the layers within those sections, the immediate space around the instrument, even the physical three-dimensional presence of the singer in the room. It reproduces the face and body behind the voice. While listening to the violin solo from "I Am the Mountainy Singer" on *Feather and Bone* I was floored by the vast wealth of harmonics ringing into the cavernous Troy Savings Bank venue where this recording was made.

The Cardas Audio Clear comes deliciously close to some of the best wire I've heard. And if you're interested in getting even closer, Cardas has since brought to market the next step beyond Clear—appropriately christened Clear Beyond. Like many other pieces of premium wire, Clear is a cable that only fully roars to life on premium gear, where the full extent of its talents can be exercised. Otherwise it's kind of slumming. In the right company, however, just like on a clear day it can almost see forever.

Synergistic Research Element

Son of Galileo

The Element Series represents Synergistic's latest series of wire. The name itself is a nod to the "Periodic Table of Chemical Elements," a chart that any self-respecting wire company would (or should) be intimately familiar with. However Element cables reflect something more. It's Synergistic's innovative Galileo system technology in full trickle-down mode and tailored to more manageable price levels. Where Galileo designates pure gold and silver for its individual "strings" of conductors, the Element line is available at three performance levels, including the world's first interconnects and speaker cables to feature pure Tungsten conductors. Also available is an entry-level copper version, and finally the heady CTS, a premier combination of copper/tungsten/silver. Additionally the series uses actively shielded air dielectrics and Synergistic's Enigma Tuning Bullets that run in parallel with the active shielding. Synergistic also offers the interested buyer an *à la carte* menu of compatible accessories, all designed to function in concert with its wire and enhance performance each step of the way. My system, for example, was augmented with the Galileo Universal Speaker Cells that extend the reach of the Tesla PowerCell technology to include speaker cables and interconnects. The system provided was a little like going for the regular car wash and springing for the spray wax and Armor All treatment.

The interchangeable tuning bullets are supplied in three flavors. Gray is the default or neutral bullet, the place to begin. Prefer a darker, rounder sound? Switch to black. A more detailed, open sound? Try silver. Designed to ultra-fine-tune the system, their effect is subtle, but real. Try as I might to deny what I was hearing, the darn things have a discernable effect. I stuck with silver for much of this evaluation but substituted gray bullets on some leaner, edgier recordings. Synergistic suggests that when your system changes you can always re-tune by mixing the appropriate bullets.

In full CTS plumage it's difficult to classify Element's sound in terms of cool or warm, light or dark. Chameleon-like, Element takes its cues from the recording itself. By that standard its most distinguishing characteristic is the astounding collection of inner contrasts that come to light in a recording. It simply reproduces more of music's gradations—dynamic, micro-dynamic, timbral, and transient. Even an old SACD like Elton John's "Someone Saved My Life Tonight" from *Captain Fantastic and the Brown Dirt Cowboy* [MCA] yields fresh revelations. The heavy thrum as the electric bass enters—the sustained bloom from the crashing cymbals coming into full focus, not just the basic metallic splash but also the metal vibrations decaying in air like falling glitter. Element's near limitless palette of tonal colors paints the character of instruments with a specificity of a mere handful of wires I've experienced in the past. Like the first time I heard Tara Labs Omega or Wireworld Platinum, for examples. Whether it's Joni Mitchell strumming a dulcimer, or a triangle struck at the back of an orchestra, a Chris Thile/Nickcreek mandolin solo, or McCartney doubling his vocal on "Blackbird," in every case the Synergistic creates a fuller awareness of tiny timbral gradations and transient details.

One of the keys to its performance is silence. The Element CTS outputs music from a quieter place, free from haze or smudging. The backgrounds are as silent and black as a hearse. As I listened to the subtle vocal inflections that are a specialty of Jennifer Warnes, it became obvious that the cable was mining every nuance of the singer's interpretive abilities. Line by line, word by word I could hear tiny volume shifts as she wrapped her voice around each phrase. And on Laurel Massé's unaccompanied vocals the sense of air lifting each note was fundamentally bound and integrated into that note.

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Audio Plus Services
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Champlain, NY 12919
(800) 663- 9352
audioplusservices.com
Price: Interconnect, $500/0.75m. Speaker, $1000, 2m/pr. (spade or banana)

Cardas Clear
Cardas Audio, Ltd.
480 11th Street SE
Bandon, OR 97411
(541) 347-2484
cardas.com
Price: Interconnect, $1840/1m. Speaker, $4334/2.5m

Synergistic Element
Synergistic Research
17401 Armstrong Ave
Suite 102
Irvine, CA 92614
(949) 476-0000
synergisticresearch.com
Price: Interconnect, Element Copper, $1200/1m; Element Tungsten, $2000; Element Copper/Tungsten/Silver, $3600. Speaker, Element Copper, $1700/8ft. pr.; Element Tungsten, $2800; Element Copper/Tungsten/Silver, $7500. Galileo Universal Speaker Cells, $2500/pr.

EQUIPMENT REPORT - Siltech Explorer, Cardas Audio Clear, Synergistic Research Element

In many ways CTS reminds me of a studio control monitor. It can sound gorgeous and transparent from top-to-bottom with a particularly sweet top end. But like the studio monitor it's a tough-minded critic and can be ruthlessly revealing as it calls out the failings of a recording. Some cables may smooth the edges of an astringent recording, particularly a bad digital one, but Element CTS is not that cable. It is a cable that rides the fine line between unexpurgated resolution and a touch of romance. That moment for me occurred as it struck that very balance from Mutter's violin, rendering the steely energy playing off the high E string while simultaneously capturing the resonant bloom from the instrument's body. It's a moment where only the highest-resolution systems need apply.

Spatial relationships and ambience retrieval are its true métier. In its element, so to speak, it defines orchestral layers at will. And part of that is based on the listening perspective it casts. Its sonics are not laid-back or unnaturally relaxed by the way, but the cable's ability to further extend soundstage depth consistently places the listener just a row or two farther away from the front of the stage—an impression heightened by the Universal Speaker cells. Even the Wireworld Platinum and Cardas Clear, which in many respects rival the CTS, don't impart these dimensional aspects. On a recording like the Rutter *Requiem* [Reference] the effect can be spectacular as the full spectrum of choral voices, pipe organ, and harp don't merely play the music—they physically inhabit each clearly indicated position on the soundstage, while ambient harmonic energy can be heard filling the outermost boundaries of the hall. In this regard it's a cable at the vanguard of three-dimensional reproduction.

I spent most of the evaluation with full CTS regalia, but Tungsten (I only had the interconnects on hand) is the real sleeper of the series. It's a bit darker and a touch more forgiving and lacks the extreme ambient qualities of CTS, but in a head-to-head with Tesla Apex, one of Synergistic's premier models in recent years, Tungsten bested Apex in nearly every respect. And it's roughly half the price. Even on a no-holds-barred loudspeaker like the MBL 121 or TAD Evolution One, the Element Tungsten held its own.

The Element Series is a huge step forward for Synergistic Research. It single-handedly covers a wide range of prices and is aggressively competitive in every one. As for the Element CTS I haven't heard a better wire. Also, I'm told by those in the know that Element CTS comes death-defyingly close to Galileo. And Galileo, customized for each buyer, is really out of reach for all but the most extreme systems. For the rest of us Element is Synergistic Research's *pièce de résistance*. tas

Kimber Hero Interconnect

Paul Seydor

Not surprisingly, this is a near-twin to my longstanding reference, Kimber Select KS-1021, yielding by direct comparison only a tiny bit to the latter in ultimate control, top-end transparency, and detailing. To my ears, this has the most accurate-sounding tonal balance of the group, and ties with the Synergistic as the most detailed and transparent. On the Mary Chapin Carpenter, the male background vocal is heard far more clearly and distinctly than on any of the others except the Synergistic, while the Hero's bass is the best in the survey: truly prodigious in amplitude and definition (rather better even than the reference). On the Hahn/Stravinsky, the presentation is exceptionally bold and vivid, with quite ear-opening clarification of textures and rendering of soundstage. Compared to the Integration and the Paris, the Hero is either dead neutral or tilts a notch to the Yang, with dynamics at once powerful yet finely resolved in a grain-free presentation. Add to this clarity and definition an overall sound that is exceptionally natural (especially throughout the midrange), and it's obvious that Ray Kimber once again demonstrates his leadership in designing a superior performer at a reasonable price. tas

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EQUIPMENT REPORT

Analysis Plus Big Silver Oval Speaker Cable

Neil Gader

These cables should come with a warning. Something like, "The Analysis Plus Big Silver Oval is one of the most ruthlessly honest speaker wires available." The BSO won't editorialize, EQ, or otherwise skew the sound of your current system. This caveat emptor is provided as a courtesy to those audiophiles seeking a quick tweak or refreshment of the sonic palette of their existing rig. Ain't gonna happen. Don't even consider begging. What the BSO will do—and in impressive fashion—is let you hear more of what you already have, for better or worse.

A little back story. Audiophiles know Analysis Plus by virtue of its audio and video cables. In fact, the thrust of this company's work has been in the field of computer simulation. Like a high-tech trouble-shooter, Analysis Plus has created advanced models of ICs, engineered prototypes for piezoelectric dental teeth cleaners for a Taiwanese firm (dentistry, who knew?), designed shielding for MRI rooms, and modeled and designed electromagnetic shielding for antilock brake sensors for Ford. It also turns out that AP's Big Silver Oval cable is something of a celebrity. NASA purchased sixty feet of this wire for a specific task where the requirement for rise time could not be fudged—in this instance carrying 120A current pulses at 80V. Not too shabby a credit to have in your resumé. Now, back to audio.

The Big Silver Oval is a nine-gauge cable in a coaxial configuration that features pure silver conductors over a stabilizing strand of oxygen-free copper (OFC). This structure is then woven around a structural dielectric that preserves the hollow-oval conductor geometry. Don't be distracted by the unadorned look of the Big Silver O—it vouches for the fact that AP spends more quality time in the R&D lab tracking performance than chatting up interior designers. Its research has found that the hollow-oval configuration engages the conductor more uniformly and efficiently—a fact borne out by the wire's very low resistance value even at the upper-frequency extremes where increased resistance and sluggish rise-time can roll-off the top end.

Some very expensive cabling was pulled from my system in order to clear a path for the Analysis Plus, but from the very outset of my listening sessions I encountered nothing less than a natural, balanced, musical flow that was virtually undisturbed by treble edginess, harmonic losses, or transient smearing. Its overall sonic character was a relaxed one, exceedingly

> "I've never heard a better cable near this price—and that's the biggest plus of all."

neutral with a hint of warmth and just a very slight transient softening in the treble. In this way the BSO is more akin to Synergistic Research Tesla Apex than Wireworld Platinum, both veteran references of mine. For example, in the opening bars of *The Wasps* Overture by Vaughan Williams played by the LSO under Previn [RCA] it captured the earthy tonality of the ominous doublebass notes, as the string sections morph into a hive of wasps in an intense swirl of rapidly changing amplitudes. Time and again the BSO's very rich and cohesive midrange and well-defined bass proved to be two of its foremost strengths..

Turning to one of my "big gun" direct-to-disc recordings, Copland's *Fanfare for the Common Man* [Crystal Clear], the Atlanta Brass Ensemble was reproduced with lively transient action and dynamic thrust. The smooth top end offered good air and finely grained detail for the winds and cymbals. Bass drum impacts were fearsome in their intensity, while the array of kettledrums across the back of the stage had rock-solid specificity. This is a recording where most of us will run out of loudspeaker before running out of

EQUIPMENT REPORT - Analysis Plus Big Silver Oval Speaker Cable

wire capability.

That is why the appearance of the Wilson Audio Sophia 3 proved so fortuitous. Generally, after I've put in my time evaluating a component I put it aside a while. When I return to that product it's like I've mentally rebooted, and I find myself touching on areas that I might not have fully considered initially. Though I figured I'd gleaned the essence of the Big Silver Oval, the Sophia 3 presented a great opportunity to recheck my findings and further explore the issue of transparency and big-bore dynamics. The full-range nature of the Sophia was like manna from heaven for the Big Silver Oval wires. During *Carmen* the individual sections of the chorus (men, women and children) were well resolved, each occupying specific positions on stage, with the timbral energy and harmonics unique to each—a gravity that seemed to lighten or grow weightier depending on the chorus being featured—clearly reproduced. The imaging of each grouping was spectacular. What isn't always heard in its entirety, however, is the near subliminal low-level backdrop behind these images. It's the sense of the stage, and the hall's back wall that supports the music. Its effect is almost completely atmospheric and yet is essential to creating the reality of a live concert. It requires resolution at all levels to reveal the full extent of space and ambience in this recording. If the BSO didn't take me all the way there, like I perceive the reference Wireworld Platinum does, it got exceedingly close.

With no serious sonic missteps the BSO's subtractions are only of the most modest kind. During Stravinsky's *Pulcinella*, for example, the bell of a trumpet doesn't quite open up fully in the dynamic sense, suggesting a hint of top-end constriction. At the other extreme, a bowed bass viol misses the final bloom of resonance that should appear to surge up from beneath the floorboards like a rising tide. And were the strings of the harp as individuated as possible? Not quite—they were just a little vague on low-level *pianissimos*. So, yes, some flagship wires will buy you even more ambient expression, dynamic explosiveness, and harmonic complexity. But first you have to make sure that all other system variables are just so—something to keep in mind when you wade into high end's heady waters.

> "A natural, balanced, musical flow undisturbed by treble edginess or transient smearing."

The Analysis Plus Big Silver Oval is the kind of wire that touches all the areas that matter to me. Sure, I've heard cables that will better the Big Silver Oval by tiny margins here and there, but I've never heard a better cable near this price. It handily exceeded my expectations. And in my book, that's the biggest plus of all. tas

SPECS & PRICING

Price: $1650/10 ft. pair (8 ft. pair, $1350)

ANALYSIS PLUS, INC.
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EQUIPMENT REPORT

A Mini-Survey of USB Cables

And The Survey Says....!

Alan Taffel

Audiophiles are increasingly aware that USB cables can make an enormous difference in computer-audio sound quality. Consequently, cable manufacturers are rushing new products to market. How do the latest offerings compare with old favorites? To find out, I collected five cables of diverse price and tried them out on three revealing pieces of music.

The first test track I selected was Bruce Cockburn's "The Charity of Night," ripped at 44.1/16 from his CD of the same name. Despite its apparent simplicity, the song works best when timing, dynamics, and timbres are just right, and conversely makes it apparent when any of these are even slightly off. I also used Ravel's lush, aching *Pavane for a Dead Princess* (96/24, from the Classic Records DAD), which similarly depends on a steady pace but in addition thrives on air and timbral density. The piece is also a ready test of depth, since the French horns are well to the back of the stage. Finally, I enlisted Bizet's familiar *Carmen* (176/24, FIM), a more energetic piece whose strings will betray any artificiality (all too common) in the USB chain.

The music flowed over the test cables from my Windows 7 laptop running J. River Media Center to the ever-revealing dCS Debussy DAC and on to my reference system. One of my Goldmund monoblocks was temporarily out of commission, but Bryston heroically came through with a pair of brand-new 7B-SST²s. The loaners proved fully capable of parsing the sometimes-subtle sonic and musical distinctions between these cables. Thank you, Canadian friends!

Belkin Gold Series ($15/1m)

Despite being ridiculously inexpensive, this cable has been my reference for nearly two years—and not for want of alternatives. Rather, I have found it to be more neutral and musical than other available options, regardless of price. This time, though, I put the Belkin up against its toughest competition yet.

The Bruce Cockburn track served as a vivid reminder of why the Belkin has been my reference. Through this cable, the acoustic guitar's pace is steady-as-she-goes, and the change in vocal perspective on the chorus is obvious. Timbres, though not exactly rich, are fleshed out. On *Carmen,* the Belkin brings the orchestra to riveting life, with good differentiation between the string sections and nary a hint of artificiality. Meanwhile, the *Pavane* is suitably stately, with nicely contoured micro-dynamics. I do wish the French horns were deeper in the soundstage. Also, the cable evinces a mild grain structure, but it is subtle enough to be inaudible in normal listening.

The Belkin Gold remains a true high-end product and a downright steal. The things it does right are critically important, while its shortcomings are modest. If you are not yet ready to spend a lot in the brave new frontier of USB cables, the Belkin Gold is the perfect place to start.

Straightwire USB-Link ($42/1m)

The Straightwire USB-Link was released about a year ago and at the time made a significant improvement to RH's then-current computer-audio system. Its reasonable price point will tempt you to spend a bit more than the Belkin to own something from a true audiophile brand. If you do, your reward will be sound that is airier and lusher than the Belkin's, with greater depth.

That said, there is a price to be paid for these improvements. Specifically, though richer, the strings through the Straightwire are also shriller, and some of USB's propensity toward plasticity creeps in. Further, both the Ravel and Cockburn tracks betray the Straightwire's ponderous rhythms, and Cockburn's guitar is neither as clean nor as focused as it is through the Belkin. Voice localization, too, is fuzzy, as is evident when the chorus arrives on "The Charity of Night" and the perspective barely changes.

Despite these shortcomings, the USB-Link is a good cable for its price. Given that there are clear tradeoffs between it and the Belkin, the choice may come down to personal biases. My own preference is for the Belkin. Although its sound is not as fetching as the Straightwire's, it is easier to listen to and better serves the music.

AudioQuest Carbon ($119/1m)

My fellow reviewers have praised AudioQuest's Diamond USB cable, which I have not yet heard. The significantly less expensive Carbon, though, makes a mixed showing here. In fact, the Carbon shares many of the Straightwire's strengths and weaknesses. On one hand, it displays a welcome boost in upper-end energy without being bright. The *Pavane* benefits, with a nice cloud of air around instruments. And, like the Straightwire, the Carbon also improves upon the Belkin's tonality; for example, the clarinet is more convincingly reedy. Further, the Carbon has less grain than either the Belkin or the Straightwire, which allows for greater delicacy in a piece that often calls for it.

However, the AudioQuest also shares the Straightwire's amorphous pace, less-than-solid spatial cues, and plastic-bodied strings. Unique to the Carbon's woes are dynamics with an unrefined, stair-step quality. The Cockburn track confirms the areas in which the Carbon struggles: the guitar lacks individuality (it's a *nice* generic guitar, but still a generic guitar), small

EQUIPMENT REPORT - A Mini-Survey of USB Cables

dynamic changes are lost, and pace is uncertain. Ultimately, despite the Carbon's strengths, its weaknesses have the effect of making music less engaging.

Wireworld Silver Starlight ($299/1m)

Jumping into mid-tier pricing, we find David Salz's thoroughly researched assault on USB's sonic handicaps. At this price point, you expect more advanced technology and higher build-quality, and the Silver Starlight delivers on both counts. Like the entire Starlight range, of which the Silver is the penultimate model, this cable is flat. (I refer to its shape, not its sound.) Wireworld says the design allows the cable to be used in longer runs without degradation. Other Silver Starlight features include six silver-clad OFC conductors, a power conductor that's fully isolated from those for the signal, and aluminum connectors.

How does it sound? Pretty darned good! Compared to the Carbon, the Wireworld is immediately more relaxed, defined, and rhythmically solid. Indeed, the Silver Starlight's presentation is quite similar to that of the Belkin in that it demonstrates unperturbed pacing, clear imaging, and musical lines that are easy to follow. Like the Belkin, the Silver Starlight projects strings without screechiness.

There are differences between the two, of course, several—but not all—of which are in the Wireworld's favor. The Cockburn track is a split decision; the Wireworld better captures the chestiness in Cockburn's voice, but the Belkin more persuasively evokes the subtle swells on the introductory guitar figure. On *Carmen,* the Silver Starlight exhibits fast transient response, superior depth, and good rhythmic drive. Still, the Belkin passes along a bit more of the music's swagger.

The Wireworld Silver Starlight demonstrates just how good a cable can be and still not be definitively superior to the budget Belkin. Nonetheless, the Silver Starlight's virtues are many and its flaws are few. If you are looking for a mid-priced cable with high performance, the Silver Starlight is a solid choice.

Wireworld Platinum Starlight ($599/1m)

The primary differences between the Silver and Platinum Starlights are in the connectors and the conductors. (The Platinum upgrades to carbon-fiber and solid silver.) Personally, I would not have expected these seemingly minor changes to make a major sonic impact, but they manifestly do.

Let's start with *Carmen.* Through the Platinum Starlight, the soundstage is *huge*: wider, taller, and deeper. No other cable in this survey comes close to the Platinum's ability to create scale. Strings sound terrific. They are airy and robust, with a hint of edge (like real violins) but no shrillness or artificiality. Too, this cable makes small tempo shifts highly audible, and its dynamics are superb in every respect—speed (when called for), subtlety (when called for), and smoothness.

The situation is equally positive when playing the Cockburn song. Bass pitch is noticeably better defined than with the other cables, and the complete lack of grain allows listening deep into the track. For example, this is the first time the faint accordion, buried deep in the mix, came through. As with the Silver Starlight, the Platinum fleshes out the lower registers of Cockburn's voice, giving it an extra dollop of realism. Meanwhile, the *Pavane* is ravishing, with rhythms that are not only steady but, for the first time, also set the proper laconic pace. This is also the first time the flutes twinkled and the horns displayed just the right mix of air, brass, and fundamental.

To be sure, the Wireworld Platinum Starlight is in the top tier of USB cable pricing. However, it is likewise in the top tier of sound quality. This cable takes USB audio to a new plane of fidelity. At long last, the still-mighty Belkin has been deposed. The Wireworld Platinum Starlight is my new USB reference cable. Long live the king! tas

EQUIPMENT REPORT

AudioQuest Diamond USB Cable

Robert Harley

The replacement of the S/PDIF interface by USB as the *de facto* standard for transmitting digital audio has been surprisingly rapid. Even more surprising is how variable in sound quality USB can be. No two implementations of the USB interface sound the same, with a huge performance gap between the best and the worst. The good news is that some talented high-end designers are addressing the problem, raising the bar in USB performance. The very best implementations are now very good indeed.

All of these observations about USB also apply to USB cables. There are, in fact, larger sound quality differences between USB cables than between S/PDIF or AES/EBU cables. Generic USB cables designed for connecting computer peripherals are so bad that even a $29 designed-for-audio USB cable offers a huge leap in performance.

So how good can a USB cable get? I discovered the answer when I replaced an excellent $80 USB cable with a 1.5m run of AudioQuest's top-of-the-line Diamond USB ($549 for .75m, $695 for 1.5m) in my music-server system. (I use an iMac running iTunes and Pure Music, a Berkeley Audio Design Alpha USB Interface, and a Berkeley Alpha DAC, later replaced by an Alpha DAC Series 2.) It turned out that the state-of-the-art in USB cables combined with a state-of-the-art USB interface sounds absolutely spectacular. My music server system took a significant leap in sound quality. Diamond USB may be quite expensive, but in the context of my system, it is well worth the price.

The Diamond cable is built from solid silver conductors—what AudioQuest calls "Perfect-Surface Silver" (PSS)—terminated with silver-plated connectors. AudioQuest's 72V Dielectric Bias System (DBS) applies 72V across the dielectric via a battery attached to the cable. A wire attached to the battery's negative terminal runs down the cable's length. The battery's positive terminal is connected to a shield around the conductors. Note that the battery's + and – terminals are not connected together, so no current flows, which is why the battery will last for years. The idea is to saturate and polarize the dielectric so that it performs optimally at all times, and with no break-in required.

AudioQuest's Diamond USB delivers exceptional resolution of detail, but at the same time is relaxed and easy-going. The cable presents a huge amount of information, from very low-level spatial cues, to inner timbral information that conveys the mechanism by which instruments create sound, to micro-dynamic nuances. For example, I've been listening to Rachmaninoff's *Symphonic Dances* in 176.4kHz/24-bit via Reference Recordings' HRx format for two years and know it well. After putting Diamond USB into the system, I heard even more very low-level information, particularly very quiet instruments at the back of the soundstage. This increased density of detail expanded the soundstage, particularly in depth, heightening the sense of a large acoustic replacing the acoustic of my listening room. The increased resolution also made timbres more richly saturated and lifelike.

Concomitantly, the presentation became gentler and smoother. The treble, in particular, was revelatory. Thanks to the elimination of hardness and glare, I could listen at higher volumes without the sound bothering my ears. The presentation became more musically vivid without becoming more sonically vivid—a rare feat that I greatly value. It is this combination of resolution and ease that makes Diamond USB special.

When critics of premium audio cables complain about cable pricing, I suggest that they perform a simple test: Listen to the system for a couple of weeks with the expensive cable installed, and then replace the expensive cable with what they had been using before, or with a lesser-quality cable. They should then ask themselves: "Am I willing to live without the qualities the better cable delivers?"

I suspect that anyone who performs this test with Diamond USB won't want to take it out of his system. tas

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ACCESSORIES

Audience Au24 SE Phono Cable

Quiet Authority

Jacob Heilbrunn

John McDonald is the president of the Audience Company, which produces a variety of products ranging from loudspeakers to power conditioners that have consistently garnered favorable notices over the past fifteen years. But it seems safe to say that the heart of the company is its cable lineup. Unlike some of the behemoth cables out there, Audience's are notable for their sleekness and flexibility. If the aspiration is to have a cable that is as unobtrusive as possible, then

But that is only the start of the story. Audience cables, which I've tried in the past, have always delivered a lot of sound for the money, falling, like Magnepan loudspeakers, into the category of overachievers. So I was more than a mite curious to see what progress Audience had made in the intervening years in seeking to improve its cables. Perhaps there is no better test-subject than a phono cable, where the tiny signal is most sensitive. Audience sent me its latest version of the Au24 SE cable to audition.

To retain as much of the signal as possible, Audience offers three versions of the cable. A "low-Z" version for moving-coil cartridges with an impedance of less than 30 ohms and a "high-Z" one for cartridges exceeding 30 ohms. They also sell another version for moving-magnet cartridges. The cable construction itself is based on the contention that low-eddy-current resistance is essential for good performance and that the optimal material for constructing a cable is continuous-cast high-purity copper. Audience also provides grounding plugs on the cable. Overall build-quality looks excellent.

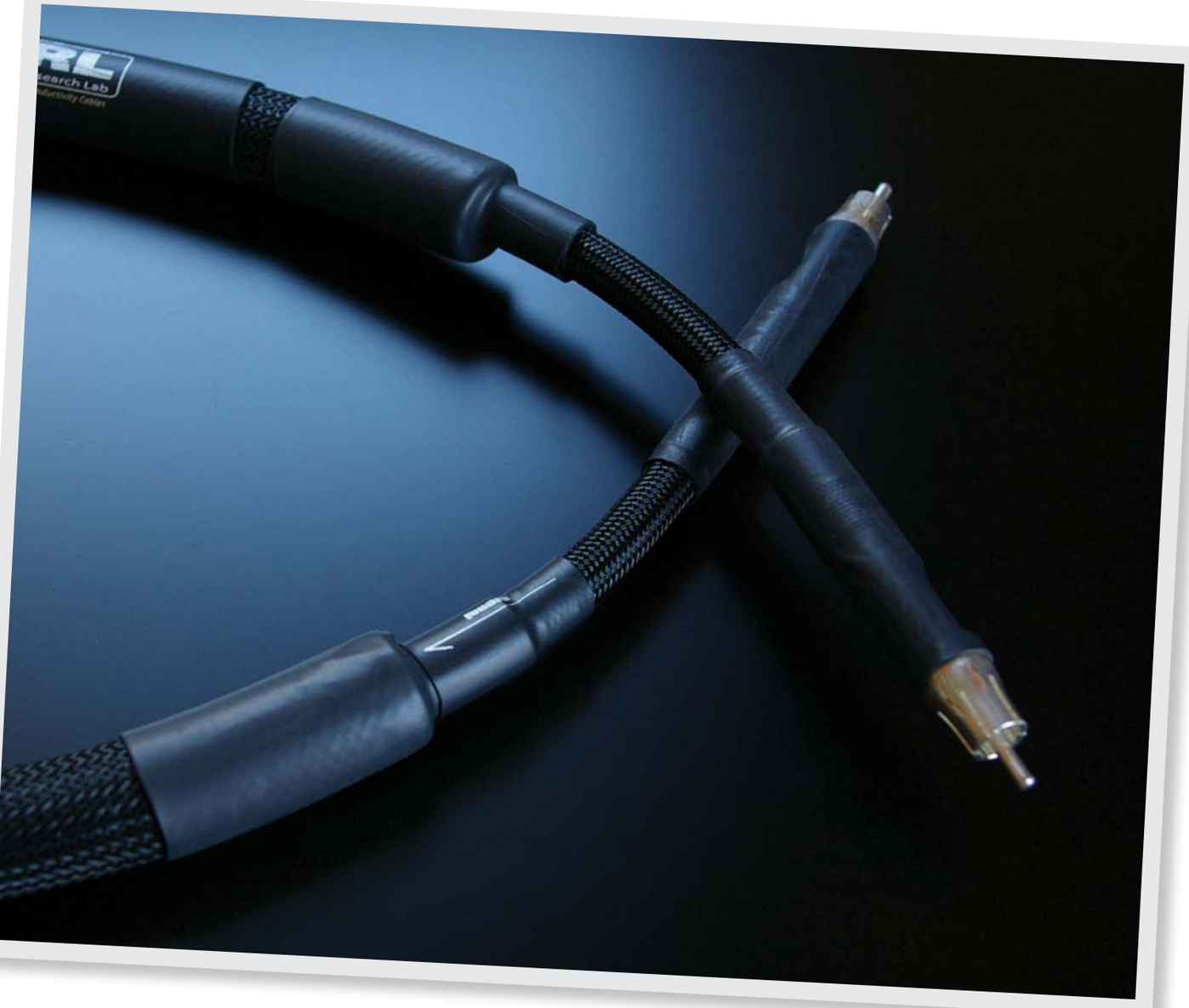
What's the sonic payoff? Previously, Audience cables were smooth and detailed. But for this new SE version Audience has replaced the RCA connectors with new ultra-low-mass RCAs with improved tellurium copper metallurgy. (Owners of Au24 and Au24e cables can upgrade to SE status for $220 per pair.) The result is a dramatic improvement. The dominant characteristic of the new phono cable appears to be a vanishingly low noise floor and an enticing tonal clarity. After pulling an old Angel pressing off the shelves of the famed harpsichordist Igor Kipnis—he used to drive around the country in a van that contained rubber foam and seatbelts to safely hold his instrument—playing Scarlatti sonatas, I was most favorably impressed not simply by the purity of the sound, but by its see-through quality. Any sense of haze is banished by the Au24 SE cable. Similarly, a vivid sense of presence came through on the LP *What's Up* [Steeplechase] with jazz trumpeter Bill Hardman. The Audience provided an airy treble and captured the sound of his straight mute exceedingly well; the overtones, buzz, and rasp come through so audibly that they endow the Hardman sextet's playing with a genuine sense of effervescent propulsion. Nor was there anything lacking in the bass regions. The Audience lands firmly on the side of a tightly defined rather than a plummy bass, but it boasts enough whack to satisfy probably even the most ardent bass nut.

The pellucid character of the Audience translates into a number of bonuses when listening to LPs that you may have listened to frequently. Those small but significant improvements that endow a recording with a greater sense of realism, that move it from mere reproduction to true emotional engagement are amply supplied by the Au24 SE. These are thoughts are prompted by listening to several cuts on the new Acoustic Sounds reissue of *The Weavers 1963 Concert at Carnegie Hall*, a sonic standout that should be in every serious audiophile's collection. On the song "Guantanamera," for example, the Au24 SE captures the way Pete Seeger rolls his "r"s with amazing fidelity. Or Ronnie Gilbert softly chuckling to herself for a split second on "Goodnight, Irene," something I don't believe I have ever heard before. Frankly, the whole combo with the Lyra Atlas, Ypsilon gear, and Wilson XLF's was pretty overwhelming.

All of the Audience's sterling qualities were evident right from the outset. The Audience is an extremely quiet and neutral cable. Its whiplash speed and transparency can become addictive, but it will not appeal to those searching for a cable that supplies additional perceived warmth or body. Instead, it exudes a quiet authority that makes it a very promising candidate for anyone searching for a first-rate phono cable. tas

SPECS & PRICING

AUDIENCE
120 N. Pacific Street #K-9
San Marcos, CA 92069
(760) 471-0202
audience-av.com
Price: $1380, RCA-to-RCA 1.25 meter



Cable Research Lab Silver Speaker Cable and Interconnect

Straight Shooter

Neil Gader

Cable Research Lab may not be as immediately familiar as certain monster-scale wire companies but its designs harken back to the creations of Paul Weitzel and Winston Ma in the late 1990s, when they were known as FIM cables, since they were initially marketed by First Impression Music, Inc (FIM). Since that time the company has transitioned through ownership changes, settling on the CRL name in 2002. In 2006 CRL released a new generation of cables with the design and manufacturing side helmed by Art Almstead, president of Twisted Pair Designs. His team has sought to combine the high-energy-conductivity design of the original FIM cables with its own R&D improvements.

EQUIPMENT REVIEW - Cable Research Lab Silver Speaker Cable and Interconnect

The CRL Silver is the company's mid-line offering. Appropriately serpentine but otherwise reserved in conservative black jacketing, CRL Silver speaker cable uses six solid-core oxygen-free copper (OFC) conductors per leg (plus and minus). Each is isolated with pure polypropylene dielectrics and PVC outer tubing and abrasion-resistant mesh covering. Interconnects are similarly outfitted with OFC conductors but shielded with braided OFC to reduce RFI/EMI. Top-quality Bocchino Audio terminations are used—in this case, heavy compression spades for the speaker cable. CRL Silver is hand-assembled, terminations are compression-crimped (no solder is used), and the connectors are copper material with no nickel underplating.

In character, CRL Silver is honest, detailed, and dynamically responsive—a straight-shooter in every sonic category. While some cables pepper performance with spectral additives that quickly outwear their welcome, CRL Silver doesn't overreach, and by so doing successfully rubs up against the best in this category. With its warmer and rounder balance, the Silver is not a cable that stabs at you; there are no sharp edges, trippy tonal balances, or treble spikes. Its personality has a complimentary way of smoothing the rougher edges from aggressive tweeters without sacrificing resolution. Transient behavior is relaxed and natural, with a sibilance range that renders vocalists articulate but not clinical.

The CRL Silver is big on midrange output. They are tube-like in this way, sending a shudder through my reference system in the mid and upper bass as they laid into the groove from the Police's "Tea in the Sahara" [A&M]. Low bass reproduction through a robust loudspeaker like the Sonus Faber Cremona M proved to be one of the CRL Silver's inarguable strengths. The bass drum impacts and cannon fusillades during the *1812* Overture [Telarc] were as terrifying as they were exciting. As good as the bass response is, it still leaves a bit of control on the table by softly blurring the double pluck of a bass guitar during "Someone Saved My Life Tonight" [Island]. It also lacks the ability of the very best (the Tara Labs Omega, for one) to layer images in space with a holographic dimensionality that makes eyebrows rise. It doesn't quite capture the tightness and pummeling of the opening kick drum during Steely Dan's "Time Out Of Mind" [MCA].

Treble focus and harmonics are where wire differences are most vividly expressed to me. At times, the Silver exhibits a leaner, closed-in character that lessens the sense of immediacy and realism. And versus an *über*-cable like Tara Labs, the Silver's treble extremes didn't exhibit the radiant and otherworldly openness that can be heard during from solo piano or during Jennifer Warnes' rendition of Leonard Cohen's "Song For Bernadette" [Shout].

It's not unreasonable to expect a level of resolution and transparency commensurate with cabling from the usual suspects—Nordost, Tara, Crystal, Synergistic—and CRL Silver measures up. In fact, it gives away little in terms of resolution and dynamic subtlety to cabling even further up the price scale. In comparison, the Synergistic Tesla Precision is a bit more tightly controlled, less forward, but also faster on transients and offers a shade more treble air and dimension. The Crystal Cable Piccolo is fast and ultra-clean but also has, like the Silver, a lighter overall balance and a bit of treble tightness. Finally, the Tara Labs RSC2 Air offers a darker, almost ominous tonality with a similarly enriched midrange and relaxed treble. Alongside much more expensive mega-wires like the Tara Labs Omega or Synergistic Tesla Apex, the CRL Silver's low-level resolution and micro-dynamics within the massive chorus of the *1812* Overture aren't as specific and don't fully express the rippling auras of resonance in the space around the singers. It should be noted, however, that in most cases these differences are relatively subtle, and you'll need to factor in your own system as you digest my conclusions. Thank goodness cables are easy to audition, as I heartily recommend you do.

The CRL Silver exemplifies the kind of balance of audio credentials that one would expect in this price range. It's tonally honest, very well-built, and a worthy heir to the work Weitzel and Ma began nearly two decades ago. It doesn't necessarily break new ground in this range but it honorably joins some much-better-known competitors in helping to complete any audiophile's journey toward the high end. tas

SPECS & PRICING

U.S.

Price: Speaker $1700/2m pr.; Interconnect $1400/meter, $1550/2m RCA; Power cords, MkII amps, Mk IV front both $795/1.5m

CABLE RESEARCH LAB, INC.
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Lauderdale-by-the-Sea,
FL 33308
(954) 491-4705
cableresearchlab.com

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Crystal Cable

Crystal-Speak Micro and Crystal-Connect Micro Interconnect

Neil Gader

Crystal Cable of the Netherlands describes its wire as "micro-sized," and it ain't kidding. Jewel-like, this skinny-mini could be mistaken for piano wire, and if you're not careful it will tangle as easily as a necklace from Cartier or Tiffany.

Preconceptions about physical size aside, the CrystalSpeak Micro plays big and clean. Like a sonic windshield wiper it sweeps the soundstage clear of dust and grime. Orchestral images snap into focus, and the sensation of pace and speed is immediately apparent. Tonally, the Micro combo is midrange-neutral with a little lift in the treble and lag in the bass. It's ultra-swift in transient response with a turbine-like smoothness that rhythmically propels the music forward, as if tempos had been increased. There is no blurring or smearing of notes, even when Evgeny Kissin unleashes a series of lightning-strike piano arpeggios or summons a swirl of harmonics from his Steinway during Glinka's *The Lark* [RCA].

However, there's a region in the treble where the Micro suggests a modest coloration. It can be heard in the harmonic structure of a voice like that of a cappella artist Laurel Massé. A bleached, silver quality overlays the fabric of her vocals; it implies "detail," but unless your speaker is rolled in the treble, the added presence isn't welcome. Also the Micro's not as authoritative in the bass as I'd like, and at the lowest volume levels there's some loss of character in instruments like tympani, bassoon, or acoustic bass.

In soundstage perspective the Micros always sounded as if the microphones were a couple of inches closer to the orchestra or soloist—an impression that slightly diminished the reverberant nature of larger acoustic spaces. Soundstage width was excellent, but, while depth is better than average, I found myself wanting more-complex layering of string sections. On balance, however, the Micros are arguably one of the most transparent cables I've heard to date. tas

SPECS & PRICING

U.S.

Price: CrystalSpeak Micro, $2600/3m ($2725, biwire); CrystalConnect Micro, $599/1m, $1119/2m

CRYSTAL CABLE
29 Sunrise Lane
Upper Saddle River
New Jersey 07458
(201) 785-1055
www.crystalcable.com

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Argentum Acoustics Aureus-2 Speaker Cable and Mythos Interconnect

There's a New Mid-Priced Cable in Town

Neil Gader

Few system upgrades are as popular and easy as a cable swap. And cables between $500 and $1500 are in the most hotly contested price range. Joining the ranks is Argentum Acoustics—a division of the Toronto-based cable giant Ultralink/XLO. The Argentum line comprises Aureus-2 speaker wire, Mythos interconnects, and Proteus power cords.

Aureus-2 is made of eight-conductor, 99.99998% pure, continuous-cast (Ohno) crystal copper in an ultra-low-capacitance DuPont Teflon dielectric.[1] The Mythos interconnect is essentially a two-conductor version of Aureus with an additional shielding of copper foil plus a full-coverage copper braid and mil-spec contacts plated in 24-karat gold.

It only took a few minutes listening to familiar tracks from Dire Straits, Norah Jones, and Joan Baez's latest [Razor & Tie] to hear the "excitement factor" written all over the music. The Argentum was dynamic, alive with swift and spicy transients. It has a strong midrange flavor with the perspective just slightly back of the front couple of rows. In many ways the Argentum reminded me of the slightly darker, midrange-fueled nature of Tara Labs RSC Air Series 2 that I favorably reviewed a few years ago and still reference today. Vocals of all stripes were richly and continuously well defined. On the Baez, images of acoustic guitar, mandolin, and acoustic bass were focused and stable and there was a reasonable amount of air in the soundfield surrounding them. Orchestral works weren't reproduced with quite the unbridled openness of some more expensive designs and the soundstage was flattened a bit, but performance was well within expectation in this price range. The real surprise was bass extension and resolution, which were flat-out state of the art—more than a match for comparably priced

EQUIPMENT REVIEW - Argentum Acoustics Aureus-2 Speaker Cable and Mythos Interconnect

efforts like Crystal Cable Piccolo and Nordost Blue Heaven.

While the Argentum wires share more similarities than differences with competitors, there are two sonic criteria worth discussing—treble resolution and low-level transient/dynamic gradation. A good example is solo piano. I found that during Evgeny Kissen's performance of "The Lark" the harmonic decay of rapid-fire upper-treble arpeggios was less articulate than it should have been. And during BS&T's cover of "And When I Die" [Columbia, SACD] I lost the puff of air hitting the reeds of the solo harmonica during the intro. Also, electric bass, kick drum, and trombone weren't as distinctly layered as they are with top o' the heap wire. What this says to me is that the cable may be muting microdynamics. So, yes the Argentum leaves a shred of transparency on the table but, brother, not much.

At a couple grand, a basic configuration of Aureus-2 and Mythos isn't chump change. But it says a lot about the sheer musicality and overall performance of the Argentum that it can proudly hold its head up against cables two or even three times as much. It also says something else. There's a new midpriced cable in town. tas

[1] Ohno Continuous Casting (OCC) is a process of drawing copper ingots into wire in a way the minimizes the grain structure in the wire. Grain is tiny discontinuities in the copper that adversely affect the audio signal passing through it. OCC copper has about one grain in 700 feet, in contrast to about 1500 grains per foot in standard casting techniques.

SPECS & PRICING

U.S.

Price: Aureus-2 speaker, $1500 /3m pr.; Mythos RCA, $400/1m pr.; Proteus power cord, $900/6', $1050/9'

ARGENTUM ACOUSTICS
1951 South Lynx Ave.
Ontario, CA 91761
(909) 947-6960
argentumacoustics.com

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Shunyata Anaconda Interconnect and Loudspeaker Cable

Technology in the Service of Music

Robert Harley

Shunyata Research, a company known for its leading-edge AC power conditioners, claims to have discovered technology for preventing a common cause of distortion in signal cables. This technology, called (pronounced "Zi-Tron") is incorporated in two new line-level interconnects and two loudspeaker cables, called Python and Anaconda, respectively. Shunyata suggests that these interconnects and cables outperform any interconnect and cable on the market, regardless of price. I received for evaluation several runs of the top-line Anaconda interconnects ($2250 per meter pair) and a 2m run of Anaconda loudspeaker cable ($3995). The Python is priced at $1450 for a meter-pair of interconnects and $2995 for a 2m run of loudspeaker cable. At press time, Shunyata announced the entry-level product in the line, the Cobra interconnect ($995 per meter-pair) and Cobra loudspeaker cable ($1995 for two meters). A line of AC cords using the same technology will be announced at this upcoming CES. Here's the theory behind the technology. It's well-known that a cable's dielectric (the insulating material surrounding the conductors) absorbs and releases energy in response to an alternating current traveling through the conductors. Specifically, the audio signal flowing through the conductor polarizes the dielectric. When the AC signal changes polarity, as it does 1000 times per second when carrying a 1000Hz sinewave, for example, the polarizing charge also changes polarity causing the charge stored in the dielectric to be released. This release of the dielectric charge induces a tiny current in the signal conductor, introducing distortion in the audio signal.

EQUIPMENT REVIEW - Shunyata Anaconda Interconnect and Loudspeaker Cable

Shunyata's solution to this phenomenon, for which it has multiple international patents pending, is to reduce the degree of dielectric polarization by neutralizing the charge between the signal conductor and the dielectric. This is realized by using a second conductor that surrounds the dielectric and then applying an electric signal to that conductor derived from the audio signal. The electric field generated by the conductor and the electric field generated by the shield cancel each other, resulting in virtually no charge in the dielectric. Unlike most shields that are terminated at one end to ground to shield the conductors from electromagnetic interference, the shield in the Anaconda isn't connected to anything except the "electric field compensation circuit," Shunyata's name for its circuit that applies the audio signal to the shield.

In addition to this new technology Python and Anaconda use the highest-purity copper available, called CDA 101. Shunyata is one of the few companies that buys ingots of pure CDA 101 (with certificates of authenticity) for use in its signal cables, AC cords, and AC power products. CDA 101 is the highest-purity copper available (the copper industry uses the CDA designation rather than the number of "9s" after the decimal point, such as 99.9999 pure). Rather than draw the wire in the conventional way that leaves the copper molecules randomly arranged, Shunyata uses a powerful electromagnet of its own design to force the copper to permanently align in a specific orientation while the copper is semi-molten. After the copper is drawn into wire it is cryogenically treated in Shunyata's own computer-controlled cryogenic tanks. The computer controls the slow decrease in temperature to -320 degrees F, and later the slow increase back to room temperature. The atmosphere in the cryo tank is composed of a mix of inert gases developed by Shunyata specifically to enhance the effectiveness of the cryogenic process. This cryogenic process, which takes 72 hours, is performed on all conductors and connectors in every Shunyata product.

Since I installed Anaconda interconnects and loudspeaker cables about six months ago, they haven't left my system except for critical listening comparisons. In that time, I've had the $200,000 "The Sonus faber" loudspeaker, the $78,000 TAD Reference One, and the $90,000 Focal Stella Utopia EM, along with world-class BAlabo and Constellation electronics through my listening room. Although that is lofty company, the Anacondas proved themselves fully up to this level of equipment.

The Anacondas have a wonderful ability to deliver music's transient information fully intact with zip, verve, and life. Although very "fast" sounding, the Anacondas are not the least bit etched. In fact, these cables seem to avoid introducing an artifact on steep leading-edge transients that makes attacks sound glassy and hard. Listen to solo piano music, for example, and you'll hear how the Anacondas reproduce the sudden explosive intensity of the hammers hitting the strings, but without the glare that causes your ears to "tighten up" for protection. Similarly, drums, percussion, acoustic guitar, and other transient-rich instruments are well served by the Anaconda's terrific transient fidelity. Correctly reproducing these instruments' dynamic envelopes goes a long way toward a sense of realism.

The Anacondas are equally adept at portraying large-scale dynamic contrasts. They maintain their outstanding clarity even during the most complex crescendos, and seem to "open up" the music's dynamic window. Overall dynamic range is extremely wide, with tremendous resolution of very fine detail coupled with seemingly limitless peaks. In between, these cables are capable of fine gradations of dynamic expression. Rather than presenting a few discrete levels of dynamics, the Anacondas render dynamics along a continuum that contributes to their overall musical engagement.

In addition to this excellent dynamic performance, the Anacondas have a very vivid and three-dimensional soundstage. They can make other interconnects and cables sound somewhat flat by comparison. These cables breathed life into the soundstage, separating image outlines from each other rather than congealing them, and with that quality came a greater sense of hearing music rather than a hi-fi system. Part of this spatial performance can be attributed to the Anacondas' vivid clarity and "see-through" transparency. That sense of haze overlaying the soundstage that we often hear from reproduced music is completely gone, replaced by a crystalline purity. I would even go so far as to call the Anacondas' clarity and transparency startling.

Tonally, the Anacondas are quite neutral, with a slight tendency toward midrange presence and treble extension. The soundstage starts a little in front of the speakers rather than behind, giving the presentation immediacy and palpability. The top end has a luminance and brilliance that brings out cymbals, the upper harmonics of strings, and a sense of air, all without becoming overly bright. These are not cables and interconnects designed to flatter bright loudspeakers by softening the treble.

Although you could call these interconnects and cables "mid-priced" by today's standards for top-quality cables, they are anything but "mid-performers." Rather, they compete with any cable I've heard regardless of price, although some other cables have their own sets of virtues. Nonetheless, the Anaconda interconnects and loudspeaker cables offer reference-grade performance at a real-world price. tas

SPECS & PRICING

Anaconda interconnect
Terminations: RCA or XLR
Price: $2250 (1m pair)

Anaconda loudspeaker cable
Terminations: Spade lugs
Price: $3995 (2 meter pair)

SHUNYATA RESEARCH
26273 Twelve Trees Lane, Suite D
Poulsbo, WA 98370
(360) 598-9935
www.shunyata.com

EnKlein Amphora Phono Cable

A Promising Debut

Jacob Heilbrunn

Cables, it's commonly agreed, are one of the more mysterious parts of the high end. Designs vary wildly. So do prices. But only the most hardened double-blind-testers would deny that cables can significantly influence the sound of a stereo system, changing everything from bass impact to treble extension, from perceived instrumental detail to timbres. Thus, in recent years, a number of companies have entered the cable marketplace with new designs that promise to deliver on the promise of improved sound.

Into this very crowded field steps EnKlein, a manufacturer that specializes in low-mass cables. EnKlein produces a variety of interconnects and speaker cables. The one the company sent me for review is the Amphora silver phono cable, which boasts the very lowest mass of all its cables, as well as some exceedingly attractive silver WBT connectors. The cable appears to be carefully constructed. Its extreme flexibility means that it would take an effort to stress the connectors or otherwise harm the Amphora.

EnKlein suggests that the significance of low mass is often underestimated by cable manufacturers. The company works to minimize disruptive mechanical vibrations, which can have a deleterious effect upon the signal. Its director David Kleinbeck, who has worked for companies such as Sprint, has some pretty serious engineering chops when it comes to the wireless world. EnKlein's Web site says, "The thin film shield and sacrificial ground of 99.999% oxygen-free copper configuration creates a passive damper for extremely low capacitance and reactance, targeting the preservation of signals from a broad range of cartridges including extremely low-output cartridges."

In plain English, EnKlein is saying, I think, that cables need to have their own version of bodyguards in order to preserve bandwidth and detail. And make no mistake: listening to its cable was a pleasure. The qualities of the Amphora were not difficult to detect. It is fast, precise, and transparent. The bane of silver cables, however, can often be that that speed is accompanied by an etched and fatiguing sound, particularly in the treble. This was not my impression with the Amphora. On the contrary, its felicitous character was a welcome surprise. Take the LP *I Remember Django* [Black Lion Records], which, among other things, features a languorous version of the old standard "Honeysuckle Rose." Both Stephane Grappelli's violin and Barney Kessel's guitar were beautifully rendered with a full body of tone and minute shadings. Particularly noteworthy was the hall ambience conveyed by the Amphora. This quality also came across on vocals: On an LP I recently acquired on Deutsche Grammophon of the baritone Dietrich Fischer-Dieskau singing Richard Strauss *lieder*, the Amphora provides a real sense of the joy and pathos that Fischer-Dieskau imparts to each song.

Perhaps it was the alacrity of the Amphora that was most startling. On *Trinity,* a sensational SteepleChase recording of Boulou Ferre, Elios Ferre, and Niels-Henning Orsted Pederesen (if you're a jazz or guitar fan, or both, snatch up this album if you come across it), the speed and snap of the guitars were almost enough to induce whiplash.

Given the staggering variety of phono cables available, it's important to emphasize that careful matching with a cartridge and 'table is essential. The Amphora is a reasonably priced cable that seeks to combine the speed of silver cables with a more full-bodied tone. If I had my druthers, I would try and add even a little more harmonic richness to the sound. But it's a very promising debut. In a cable world that is already swarming with competitors, and that continues to attract new entrants, EnKlein looks to be a comer. tas

SPECS & PRICING

Type: Phono cable
Price: $3595 (first 1.5 meters)

ENKLEIN
enklein.com

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Furutech Pure Transmission System

Transparency Without Pain

Chris Martens

In 1988 the Japanese firm Furutech began to offer audio cables based on ultra high-purity, single-crystal copper conductors produced via the Ohno Continuous Casting (OCC) process, and ever since has enjoyed a reputation for creating products backed by science—not voodoo. Over the years, Furutech has methodically researched cable conductor and dielectric (insulation) materials, vibration-damped plugs and connectors, specialized grounding techniques, cryogenic/demagnetization treatments, and EMI filtering as they relate to sound quality. Plainly, the firm has an intriguing technology story to tell, but have its many advanced technologies led to cables and power distribution products that actually make systems sound better? To answer that question, we decided to survey a range of Furutech's "Pure Transmission" components.

I began by equipping my system first with Furutech's top-tier Reference III Series cables and then with its mid-tier Evolution Series cables, and comparing results. Although structural differences between the cable families are significant, I found they shared a common sound—a sound that conveys very high levels of transparency and tonal purity, as well as potent and deeply extended bass, yet does so without any discernible adverse side effects. That last phrase is hugely significant because it means that, unlike certain aggressive-sounding "detail-*über-alles*" cables, Furutechs are unfailingly smooth—enough so that some listeners initially perceive them as overly subdued. But I think they're mistaken, because in my view Furutech cables are among the rare few that can provide transparency without pain.

For example, the References did a great job

EQUIPMENT REVIEW - Furutech Pure Transmission System

with the traditional Appalachian song "Darlin' Cory" from the late Chris Jones' *Roadhouses and Automobiles* [Stockfisch, CD]—a superb recording whose rich details are not easy to get right. First, the References let me hear the fundamental warmth of Jones' guitar properly juxtaposed against its bright, sparkling, yet coolly-inflected harmonics—harmonics many cables tend to exaggerate. Next, the Furutechs caught the traditional high lonesome sound of Siard de Jong's mandolin, showing how it adds a touch of melancholy to an otherwise light, fanciful string of notes. Later, when de Jong switches to the fiddle, the Reference cables caught the instrument's inimitable backcountry swagger, as de Jong plays fast-rising bowed swells that almost, but not quite, holler out at the listener. Finally, the cables simply nailed the deep, muscular, commanding sound of Grischka Zepf's electric bass. My point is that the Reference cables invite listeners to explore musical textures and timbres without ever generating overwrought caricatures of authentic detail.

The Reference and Evolution Series cables use high-purity copper conductors that have been given Furutech's signature "Alpha-process" cryogenic and demagnetization conditioning treatments. The main differences between the cable families are that the Reference models provide silver-plated rhodium instead of gold-plated brass connectors, feature better conductor and dielectric materials, and—most significantly—incorporate GC-303 EMI filters (GC-303 is a special EMI absorbent material). Nevertheless, the Evolutions, which cost less than half what the Reference IIIs do, are by any rational standard extremely high-performance cables, though the References do a better job with low-level details very low-frequency bass, and background noise.

I also compared two Furutech power distribution modules: the 6-outlet e-TP609 and 8-outlet e-TP80. The e-TP609 and e-TP80 both feature Alpha-processed chassis panels, high-quality internal wiring, and strategically located blocks of GC-303 for passive EMI filtering. The e-TP609 also has Furutech's vibration-damped "Axial Locking" connectors, while the e-TP80 isolates two outlets for high-wattage components, another two for low(er)-wattage analog components, and provides four with dedicated, active EMI filters. Unlike Furutech's cables, the two power distribution modules have somewhat different sonic signatures. The e-TP609 delivered a smooth, organic sound, while the e-TP80 served up a bigger, more overtly dynamic and detailed sound. Although I appreciated the drama of the e-TP80, I felt the sound of the e-TP609 was more consistent with that of Furutech's cables.

Finally, it came time to try the unorthodox DeMag unit, which looks like a pushbutton-controlled flying saucer with a top deck big enough to accommodate LPs, coiled-up cables, or up to 5 CDs at once. Before the DeMag arrived it wouldn't have occurred to me to demagnetize CDs or LPs, but after listening to a few demagnetized discs I had to concede the DeMag consistently increased detail, enhanced soundstage depth, and minimized background noise and hash.

Furutech's aptly named "Pure Transmission" products improved the sound of my system. If, like me, you appreciate taking many sonic steps forward and no steps backward, you'll want to give these components a try. tas

SPECS & PRICING

Furutech Pure Transmission System

Reference III Interconnect, 1.2m: $1200/£1285 (XLR), $1050/£1125 (RCA)
Reference III Speaker, 3m: $1430/£1530
Reference III Power: $1100/£1200
Evolution Interconnect, 1.2m: $560/£715 (XLR), $490/£625 (RCA)
Evolution Speaker, 3m: $585/£750
Evolution Power: $500/£650
e-TP80: $490/Not Available
e-TP609: $980/Not Available
DeMag: $1800/£1895

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Crystal Cable Absolute Dream Speaker Cable, Interconnect, and Power Cords

Absolutely Wonderful

Jonathan Valin

Nowadays, what I look for in a cable is pretty simple to sum up: higher resolution of those low-level details that bring instruments and vocalists (and the space they are playing in) to life; a neutral tonal balance, which doesn't favor the bass or the treble (i.e, isn't particularly dark, or bright, or both at the same time); high transparency to the sources ahead of and behind the wire so that differences in recording/mastering quality, digital and analog replay, amplification, and transduction are marked; freed-up dynamics with no sense that the wire (or the network box it may be plugged into) is sitting on the energies of the music, either at low levels or high ones; and the complete absence of RFI, hum, and other spurious noises, which some wires seem to tune in like antennae (and others don't). It is also nice—particularly for a reviewer, who is prone to plug and unplug his wires a helluva lot more often than the average civilian—if a wire is both sturdy, relatively light, and highly flexible, rather than fragile, bulky, and stiff. The last thing I need is something I have to wrestle with every time I change review gear—or that begins to break down after a half-dozen or so swaps.

Like I said, what I want in cables and interconnects is easy to summarize; achieving it—all of it—is a different matter. I haven't heard a cable yet that does all of the things I'm looking for equally well, although (sonically, at least) Synergistic Galileo comes closest. And now—with some differences in emphasis that I'll get to by and bye—so does Crystal Cable's Absolute Dream.

Despite my aversion to cable reviewing, I took Crystal Cables' top-line wire and power cords on for two reasons: sentimentality (Siltech, Crystal Cable's partner, was my first indisputable glimpse of "better" in a cable and interconnect) and, well, charm.

The charm part was entirely the work of CEO of Crystal Cable, Gabi van der Kley-Rijnveld. The TAS crew and I had dinner with Gabi and her husband Edwin in Munich last year during the M.O.C. trade show, and in the course of the meal I got to know a good deal more about Ms. vdK-R, whom I'd only met in passing at previous trade shows.

A child prodigy—the first I've ever had the chance to talk to—Gabi spent her youth and young adulthood traveling the world, living the busy life of a professional concert pianist, before retiring to the Netherlands to become a teacher. (One of her first pupils was Siltech founder/CEO Edwin van der Kley-Rijnveld and…well, you can guess the rest of the story.) Though she never intended to become a businessman, life with Edwin and her own musical training (upon which Edwin grew more and more dependent for the voicing of his cables) gradually changed her mind. Crystal Cable was the outcome. While Edwin still does the technical design work, it is Gabi's ear and sense of style that distinguishes Crystal products from Edwin's own Siltech ones.

In my dinner conversation with her, Gabi proved to be as musically knowledgeable a person as I've encountered in the high end. When it comes to the sound of the real thing, a lot of people talk the talk. Gabi not only talks it; she has played it in concert and recital halls all over the world. To make a long story short, by the end of dinner I was thoroughly smitten. Reviewing Absolute Dream from Crystal Cable, the company that Gabi runs and Edwin designs for, was my chance to pay homage to both—to the past and the present.

EQUIPMENT REVIEW - Crystal Cable Cable, Interconnect, & Power Cords

In one respect Crystal Cable Absolute Dream is quite a pleasant departure from what I've grown used to over the past decade. Though complexly engineered by the redoubtable Mr. van der Kley-Rijnveld (about which, more in a moment), Absolute Dream cables and interconnects are not complex-looking. They have none of the bulk or doo-dads that previous cables I've reviewed have come equipped with. There are no "vacuum dielectrics" that end up making cables and interconnects as thick as corn snakes and about as inflexible and prone to snap in two at the connector ends as bread sticks; there are no massive junction boxes with leads so short you have to seat the cable box on a riser behind the speaker or component just to connect it to inputs or outputs; there are no active-biasing boxes that have to be plugged into separate power sources, creating a maze of crisscrossing wires that can, under the right (or would that be, wrong) circumstances, cause ground loops or screaming high-frequency noise or dead shorts. Nope, the Dreams are surprisingly thin (less than the thickness of your little finger) and easily manageable. In the "sturdy, light, and flexible" category they earn an A+.

They also earn an A+ in the looks department, although in this case their beauty is literally more than skin deep. Edwin van der Kley-Rijnveld has a long history with precious-metal cables; indeed, he was a pioneer in this regard. Absolute Dream is the culmination of his decades of research.

Literally at the core of the Dreams is a single conductor made from monocrystal silver—one of the first of its kind in an audio cable. A good deal of research has been done on how the impurities (typically iron) in precious metals create hysteresis effects (phase and time shifts) that subtly alter the signals passing through them. It is also a fact that the inevitable spaces between the molecular crystals in the lattice structures of metals have similar hysteresis effects, which grow worse as those spaces are filled over time with iron oxides caused by corrosion.

For a while, van der Kley-Rijnveld sought to solve both of these problems by using the purest silver metal (which has fewer iron contaminants than copper) for his conductors and filling the spaces between the molecular silver crystals in his wires with gold, which doesn't oxidize. But relatively recently metallurgists developed a way to create metals that are essentially one large crystal with no internal spaces to fill. Unfortunately, the process used to create these monocrystal metals was slow and prohibitively expensive until the development of new, less costly (though nothing like cheap) manufacturing procedures made commercial use feasible. (Technically and sonically, monocrystal metals were always superior; they just cost too much to market.)

In Absolute Dream, the monocrystal silver core conductor is shielded with helically wound Kapton and Teflon dielectrics. (Kapton, of course, is the selfsame stuff that loudspeaker-manufacturers use for voice-coil formers.) The core is further shielded by two braided layers of silver-plated monocrystal copper and gold-plated monocrystal silver. Four of these coaxes are twisted into the dual braided layers of each cable—two signal-bearing coaxes and two for use in Crystal's patented "Bridge technology."

I'll be honest: While I can follow the construction of Absolute Dream this far, its "Bridge system" eludes me. It has something to do with lowering resistance to minimize signal loss, filtering ultra-high-frequency noise to prevent amplifier oscillation, and doubling up the return path of the cable to neutralize ground leakage. Like every other part of Absolute Dream, its purpose is to lower noise, enhance low-level resolution, and improve imaging, but I'd be lying if I said I understood how it does these things.

In keeping with Absolute Dream's all-in construction, the van der Kley-Rijnvelds chose to terminate their cable with extremely expensive Furutech Alpha connectors, which use OCC rhodium-plated conductors housed in a gorgeous carbon-fiber/eutectic (yeah, I had to look it up, too—it means "a material of greatest fusibility, i.e., with a melting point lower than that of any other alloy of the same materials"), non-magnetic-copper housing. All lead connections are made via silver solder and crimping.

As I said earlier, to look at a length of Absolute

SPECS & PRICING

Price: Absolute Dream speaker cable, $28,100/2m pair; interconnect, $13,100/1m pair; power cords, $7200 apiece

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EQUIPMENT REVIEW - Crystal Cable Cable, Interconnect, & Power Cords

Dream cable, interconnect, or power cord (all of which share these same extraordinary parts and construction), one would never guess that it is so rigorously and complexly engineered. It looks more like a strand of gold/silver jewelry than audio wire. But then that was Gabi's intention: to hide the engineering beneath something beautiful to see, exceptionally light and flexible to handle, and sonically without peer.

Let's talk about those sonics.

Here is what Absolute Dream can do: Coupled with the most discerning speakers and electronics (for which see my review of the Audio Research Reference 250 monoblocks, Reference Phono Two SE phonostage, and Reference 5 SE linestage in this issue), it can not only resolve those micro-details that make instruments and performers very nearly visible; it can do this same trick with things the eye *can't* see—it can fill the space of your room, from wall to wall to wall, with the sound of the studio or hall in which the recording was made, all the while making the speakers themselves vanish (in so far as they are capable of vanishing) within this three-dimensional ambient field.

Now, lots of wire can reproduce "ambience." And the Dreams' exceptionalism in this regard depends entirely on what you take that word to mean. If by "ambience" you mean a *consistent* darkening or brightening of the air in your room—a "black" scrim-like curtain, say, hung between your speakers—then the Dreams aren't going to be for you. They don't "color" anything, not even air. Instead, the Dreams reproduce an ambient field the way the best planars often do: not by adding a grainy texture or dark hue to the soundfield but by seemingly expanding the volume of air in your room and charging it with energy (as if a fan were blowing it in your direction), so that in a subtle (but fully audible and unmistakable way) it is still air—colorless, grainless—only no longer the *still* air of your room, but rather the *moving* air of the studio/hall in which the performance was recorded, lit by the energy of instruments and heard by the microphones. It turns the motionlessness of ambient air into motion-filled "miked" air—if that makes sense—while also altering the dimensions of your room by seemingly moving backwalls further back and sidewalls further to the sides in imitation of the volume of the recording venue.

I have no idea if I'm clearly conveying the point I want to make here. But, to put this more simply, Absolute Dream (like Synergistic Galileo) is capable of such colorless neutrality, limpid clarity, and extremely fine resolution of extremely low-level detail (such as the "sound" of air charged with musical energy as heard through microphones) that it is that veritable transparent window on the recording we all claim we're looking for.

Obviously, Absolute Dream is very low in distortion. You hear this in the sheer abundance of detail it reveals at low levels and high ones—the whispery little vibrato that a singer like Melody Gardot adds to the tail ends of certain notes as she runs out of one breath before taking another; the way that *pizzicatos* are passed across the stage from string section to string section during Bartok's *Music For Strings, Percussion and Celesta*, like wind rattling tree limbs; the hilariously explosive *sforzando* crash with which the piano answers that capering trumpet in the last movement of Shostakovich's marvelous First Piano Concerto (and the piano's own great caper, as it breaks into that droll Liszt-like dance right before the close); or, as I note in my ARC review in this issue (there will be other cross-references because, after all, a cable or interconnect is always working in concert with whatever it connects), the way the timbre of Lou Reed's voice on "White Heat/White Light" from *Rock and Roll Animal* is magically transformed from generic Lou Reed to that of a still-very-young man, fueled by the excitement of the moment and the enthusiasm of the crowd and the energy of that great pickup band of his; or, for you transparency freaks, the way miking schemes (close/distant, spare/multi) and engineering (compressed/uncompressed, fiddled-with/pure) markedly change on great recordings from different labels, and the way the characteristic acoustic differences among the halls themselves—the alto note of Kingsway, for instance—are captured by that miking and engineering. It is the Dream's incredibly low noise floor that permits this astonishingly high resolution, dynamic freedom at low levels and high, and clear-as-glass transparency to sources.

But you don't just hear the Absolute Dream's low noise floor in the timbral, dynamic, and spatial details these cables retrieve from every kind of music; you hear it in the dead silences *between* cuts. The Dream's immunity to RFI, EMI, and hum—of which there is a superabundance in my 160-year-old house and RFI-rich neighborhood—is at least as good as that of my reference Synergistic Galileo (and you may recall that Galileo's freedom from hum and noise was one of its most impressive virtues). Even with the volume control left way up after one of my—what is it Paul Seydor says?—"head-banging" sessions with Lou Reed or David Byrne, background silences remain very nearly dead-quiet with Absolute Dream in the system. (And this is with a phono source.)

If you're waiting for the other shoe to drop, you're going to be disappointed. I don't really hear a downside to Absolute Dream. Ergonomically, it is superior to Galileo; sonically, it is fully competitive, although (save for the incredible amount of detail the two retrieve) they do not sound the same.

In timbre, the Absolute Dream is a bit less "bottom-up-sounding," (to quote Raidho's Michael Borresen yet again) than Galileo. Now, the difference I'm talking about is every slight, but it is there to be heard. Maybe it is because the Galileo is a little more generous, bloomy, and deep-reaching in the bottom bass, and the Absolute Dream a little tighter and more controlled—kind of like the difference between tubes and solid-state. I could argue that the Dream is the more neutral and transparent of the pair, but that would be misleading because Galileo is not "colored" sounding and is anything but opaque. I could argue that the Galileo is denser in tone color, but that wouldn't be right, either, as the Dream is capable of swooningly gorgeous string, wind, piano, and vocal timbre (if they're on the recording). Even as a transparency-to-sources kind of listener I don't know which I'd pick.

Happily I don't have to pick. Crystal Cable Absolute Dream cable, interconnect, and power cords (all three of which have exactly the same virtues) now joins Synergistic Research Galileo cable, interconnect, and power cords (ditto) as my references. *That's* how good I think they (all) are. tas

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EQUIPMENT REPORT

The Transparent Opus Cable on the Wilson XLF

Jacob Heilbrunn

As good as the XLF sounded with an array of cables, I found that Transparent Audio's Opus cables elevated their performance even further. Transparent, which has now been in business for over three decades, sent me a full set of Opus MM and Reference MM cables to wire up both the XLF and the two Thor's Hammer subwoofers. It was a lot of wire, both in terms of speaker cable and interconnects. Each wire was specially tuned—as it would be for anyone who purchases the Opus line—for the specific equipment (preamplifier, amplifier, and so on) that it would be plugged into. But Transparent's Brad O'Toole and lead designer Josh Clark insisted that a full set would allow me to hear the virtues of the cable most fully.

They were right. Take out even one interconnect from the subwoofer section and the sound quality dropped a notch. A few months after living with the cables, I had a chance to visit the factory and see first-hand how they are manufactured. It was highly instructive. For one thing, meeting the owners of the company—Karen and Jack Sumner and Carl Smith—made it clear to me that they are deeply committed to listening to both recorded and live music. Carl, for example, has become a notable figure in the jazz world for his private collection of Sonny Rollins performances, a number of which he has himself recorded. Transparent's lead designer Josh Clark is an accomplished trumpeter.

The connections with Wilson also run deep—Transparent uses Wilson loudspeakers and Jack played me several hours worth of Wilson rep and recording engineer Peter McGrath's recordings at his home listening room. Before many of the recordings, Jack spoke briefly about the acoustics of the hall in which Peter had made the recording. Jack's listening room was heavily treated with RPG products. Once again, the purpose and intensity of the folks associated with Transparent can scarcely be stressed enough. This is a serious outfit.

Transparent emphasizes tonal fidelity, spatiality, and rejection of noise in designing its cables. I believe it has more than succeeded. I have not heard a cable that delivered more resolute bass, more timbral accuracy, and more hall ambience than the Opus. It also conveys an amazing physicality. Not having heard it on other loudspeakers, I can only vouch for my experience with it on the XLF. Anyone contemplating a loudspeaker purchase at this level, however, would do well to consider auditioning this superlative cable.

EQUIPMENT REPORT

MIT Oracle MA-X Loudspeaker Cable

Mad MAX?

Alan Sircom

When you contemplate spending over $38,000 on a pair of loudspeaker cables, I would imagine several things pass through your mind. Assuming your purchase is controlled by your heart and head, rather than your gonads, even the wealthiest audiophile is likely to acknowledge that this is an awful lot of money for what are, in effect, two pieces of wire. Which, naturally enough, leads to a contemplation of value. Those of us with more mundane levels of disposable income might question whether the concept of value can even exist at such a price point; some will doubtless assert that it can't—even raising the possibility proves how out of touch the writer is. Obviously.

Well, it can't. Can it?

Context is important, of course, so for the purposes of this review, I assembled a system appropriate to the price of the cables. The front-end was a dCS Paganini 3-box CD/SACD player; amplification courtesy of the new David Berning ZOTL Pre One and ZH230 stereo power amp; loudspeakers were the Focal Scala Utopias. Mains and supports by MusicWorks, interconnects also by MIT, and the MIT Magnum MA loudspeaker cables (around $8999 a pair) for comparison purposes. So here was a system in which a $38k pair of cables would not be an outrageous prospect, albeit the most expensive component in the system by some margin. Perhaps importantly, any meaningful upgrade to any of the source, amplification, or loudspeaker elements in this system would be likely to involve componentry costing upwards of $38,000 in any event, so part of the exercise was to see what

EQUIPMENT REPORT - MIT Oracle MA-X Loudspeaker Cable

might happen if you were to take the less-obvious route and change the speaker cables, rather than any of the boxes.

As a hi-fi system improves, one notices certain things. First, it might be fairly gross changes to things like clarity, openness, soundstaging, and imaging. Then we might expect subtler, but no less important, improvements in dynamics, timing, timbre, and tunefulness. Assuming we can assemble a system which achieves all these things to a decent standard of performance, we've probably put together something which gets most things fairly right, most of the time. Going beyond this, I'd want to hear my music played on better instruments, by more skilful and talented musicians, preferably who are at their very best. These improvements are probably the subtlest of all but the rewards, if your system can deliver, are immeasurably important. Suddenly, music you hadn't previously appreciated becomes a vibrant, vital force and your world is enriched by the pleasure you take from it. And as for the stuff you liked already...

Diana Krall. What's not to like? *One Night in Paris* is probably the lovely Miss Krall at her absolute best. Pick a track, any track. "Deed I do" will indeed do, very nicely. Through the system above it is truly delightful: superb musicianship, exquisite timing with real pace and swing, wonderful atmosphere and mood—oh, to have been there on the night. But here's the thing, substituting the Magnum MA cables with the Oracle MA-X, the previous version is comprehensively outclassed. Suddenly, when Diana Krall sings the line "Do I love you? 'Deed I do," nobody is left in any doubt that 'deed she does. Before, it was just a cute line in a great jazz number; now it's personal. Not only that, but we've moved from any old seat somewhere at the back to the best seat in the house. It's not particularly a spatial thing; any changes to the perception of soundstage dimensions are largely secondary to this effect. This is all about the connection to the music; all the goodness seems to be focussed onto the seat you're in. It's the reason why the best seats in an auditorium often cost half as much again as the second-best seats despite, often, not being closest to the action.

Another live album, this time Sting's *All This Time* and the track "Brand New Day." It's not even my favourite Sting track, but the version on this album has got something. It's the same sort of "something" the Diana Krall album has—great musicians, great music, and a chemistry which just comes together on the night (which is all the more astonishing when you realize it was recorded on the evening of September 11, 2001). With the Oracle MA-X cables in place, the track made me want to get up and dance—not something I'd recommend witnessing—which is a rare phenomenon indeed (I have no illusions about my abilities, so the impulse rarely occurs). Reinstalling the "regular" Magnum MA cables but upgrading the transport to the dCS Scarlatti was very instructive. It was immediately obvious that the Scarlatti is a significant step-up from the Paganini transport: detailed and involving, as if the music is being lit by warm sunshine rather than stage lighting. This was a sound I could covet. It has a degree of self-assurance not matched by the Paganini transport, a grainless, seamless, flawless presentation where everything is in proportion and nothing is overlooked. But, here's an odd thing: With the lesser transport but the better cables, the music was more visceral and communicative—the urge to get up and dance was there in a way which it simply wasn't via the better transport with the lesser cables. Scarlatti + Magnum showed just how well Sting chooses his musicians, Paganini + Oracle showed how well they were playing the music.

Imagine a gorgeous girl with a fine mind and a private income. Now imagine a slightly less gorgeous girl, keep the fine mind but trade the income for a fantastic sense of humour and complementary musical tastes. It's the difference between the one you'd date and the one you'd marry. Unless you're shallow, obviously, but shallow people don't get really passionate about music so even if they buy this magazine, they've probably stopped reading this bit by now, anyway. And it's not a reflection on the Scarlatti transport, either: Scarlatti + Oracle creates the sort of magic most mortal men simply don't deserve. It's like marrying the girl and finding out she's an heiress after all.

As a habitual user of Nordost cables in my regular system and as, in some ways, MIT is the antithesis of the Nordost way of doing things, it would be fair to say that I haven't always found the MIT "house sound" to my personal taste. There is always a need for some mental shifting of gears. That said, whatever is in those boxes can bring about some remarkable benefits in the realms of timing and dynamics, compared to more conventional cables at similar prices, and I know many people (with somewhat saner budgets) who are happy to forego other attributes, such as sweetness or grainlessness, for a taste of what MIT brings to the party. Some criticise MIT's bass as over-exposed or dominant, others point to a lack of sophistication in the higher frequencies. If part of the budget goes into the boxes, there's less left over for the cable itself, they argue. MIT's fans reply that these are hi-fi differences, not musical ones, that a great pianist, playing an indifferent piano, will produce a more captivating performance than an indifferent pianist on even the best piano.

They have a point, and to be fair, by the time you reach the upper reaches of the MIT range, such hi-fi considerations are less perceptible anyway. It might help to think of music as being made up of two elements: information and energy. The information bit tells you which instrument is being played, at what pitch, and for how long. The energy bit isn't just how loud, but also the dynamic shifts, the subtle but deliberate manipulation of timing, the inflections and mannerisms which tell you this is being performed by a person, not some sort of musical automaton. The Oracle MA-X cable seems to manage both information and energy better than anything else I've heard in a system up to now; it simply makes it easier to perceive the amount of effort the musicians put into their playing.

A recent, and valued, addition to my collection is Joanna Macgregor and the Britten Sinfonia's

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Price: Oracle MA-X Rev 2, $34,999; version Rev 2 HD, $37,999 single-wire and $39,999 biwire

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EQUIPMENT REPORT - MIT Oracle MA-X Loudspeaker Cable

Live in Buenos Aires [Warner Classics & Jazz 2564 68475-9]. The first three tracks are the Bach Concerto for keyboard and strings in D minor. We all know versions of Bach keyboard music where the performer plays the piano as if it were a harpsichord or clavier, including some of the great exponents of the oeuvre and, sure, the delicacy of touch and finesse can produce some captivating performances. But to my mind, if it's authenticity you're after, play the music on the instruments it was written for. If you're going to play a modern piano, exploit the capabilities of the instrument; don't pretend it's something else. Joanna Macgregor and the Britten Sinfonia would seem to agree. She plays the piano with a physicality rare in female performers of my experience; her performances clearly involve her shoulders, as well as wrists and elbows. I was reminded of performances by John Ogdon, a man not afraid to apply his considerable mass to his playing.

The interesting thing that came out of this particular Bach performance was not just that the Oracle MA-X cable portrayed the assertiveness of the playing so well, but that when the orchestra played quietly, it was possible to appreciate the "held-back" qualities of their playing; there was a sense of restraint, a pent-up potency which was being deliberately and skilfully kept in check, not merely a bit of quiet playing. If you ever listen to sacred choral music by, say, Poulenc or Fauré, the sound of massed voices singing with barely perceptible loudness is immensely affecting, precisely because of the intensity which such restraint can evoke. Composers and orchestras wouldn't employ large choirs to make a small noise if they could get the same result out of a handful of people. If it just sounds quiet, you've probably missed the point. And it is that point which the Oracles are so good at getting across.

The other side of the same coin is shown by the last track on the same album. A keyboard transcription of Astor Piazolla's *Libertango*, played at full-throttle by Ms Macgregor. Except that, through the Oracles, it isn't. The Magnum MA cable gives a hugely impressive rendition, tight, fast, and dynamic. At the end, the audience erupts into rapturous applause and you are there with them, breathless, amazed, and delighted. Played again through the Oracle MA-X cables, it is suddenly much more apparent that this is no hell-bent, pedal-to-the-metal rendition, but a considered and measured interpretation. There is light and shade, even within the rollicking ride she takes us on, sections which are scarcely less loud, but the energy has nevertheless diminished. And clearly, deliberately so. This ability to discern subtlety where you least expected it—more than that, to have it shown to you when you weren't looking for it—is something I'd not heard in the system before. I'm quite sure the original performance expressed this subtlety and is partly what had the audience so clearly and raucously on their feet. They weren't merely applauding Joanna Macgregor's ability to beat a piano into submission; they were applauding her extraordinary ability to wring out one of those performances of a lifetime, while doing it.

There are hi-fi benefits, most assuredly. Soundstaging is extraordinarily accomplished and convincing: images are wide, deep, stable, and consistent; instruments gain solidity and substance; there is an overall sense of "presence" which eludes many systems, regardless of price. Take the opening track, "Prelude," on the second part of *Aerial* from Kate Bush; its birdsong suddenly gains a sense of place, a feeling that this is truly open-air, real-life birdsong. There is a palpable sense of open space. Most systems create their sense of space from the subtle reverberant cues from the surroundings. Open air spaces are devoid of such cues, so it is all the more remarkable that the Oracle MA-X manages to convey a more perceptible sense of landscape than the Magnum MA.

To describe these attributes in such hi-fi terms, however, risks missing the point. They are important, even vital, effects and the better they are realized, the easier it is for our brains to suspend disbelief and experience the music. So what really makes the Oracle MA-X loudspeaker cables work, for me, is that they allow the system to disappear, and the music to flood out. It is as though, once that part of my brain which is responsible for reconstructing the illusion of music is allowed to relax, it becomes able to discriminate those elements of a performance which it was too busy to appreciate when it was having to sustain the impression of music-making. You might think of it as a reduced requirement for error-correction within the brain. Whatever it is, and however it is achieved, I am in no doubt that the addition of the Oracle MA-X loudspeaker cables takes a system forward to an extent which is entirely consistent with the asking price.

The Oracle MA-X has another trick, and that is its adjustable articulation. The output end of each box carries a pair of rotary switches with five different positions. One is labelled "Bass" the other "Treble," and they permit the user to adjust the level of articulation in the lower or upper frequency ranges, to compensate for differing equipment or just personal taste. The effect is a little like a subtle and particularly well-executed tone control. Increased articulation in the treble brings high-frequency information a little to the fore; decreased articulation in the bass makes the lower registers recede slightly. In the system used for this review, the "flat" midway position was generally preferred, but the overall effect was to allow a level of adjustability to the tonal balance without causing obvious degradation of the signal, or intelligibility of the music, which conventional tone controls tend to introduce.

So, was I convinced? Yes, entirely. I haven't compared the MIT Oracle MA-X against any other *über*-cable; this isn't that sort of review. But I have come away from my time with the Oracle quite sure that this is one extremely important element of a high-end system, and one which pulls its weight, financially. The cost difference between Oracle and a lesser cable is comparable to the cost difference between a top-of-the-range high-end CD source and a mid-range high-end model. Both bring significant benefits to the system, but both do different things. If you can afford either, you can probably afford both, and you almost certainly should. One, without the other, is not complete. Which you give the higher priority to is something you can only answer for yourself, but I freely admit, I was surprised at the extra level of vital, musical communication brought about by the introduction of the Oracle MA-X into a system I'd previously thought of as, pretty much, as good as it gets. tas

EQUIPMENT REPORT - MIT Oracle MA-X Loudspeaker Cable

SO, WHAT'S IN THE BOXES?

MIT cables are distinguished by having boxes fitted in the line of the cable. The least expensive cables, whether interconnects or loudspeaker cables, come equipped with boxes the size of a small bar of chocolate; the more you pay, the bigger the boxes. The Magnum MA loudspeaker cables boast boxes the size (and weight) of a house brick, the Oracle MA-X's boxes are bigger than many monoblock amplifiers. (At least, with MIT, you can see some of what you have paid for.) How the boxes work is something of a trade secret, but various white papers on the MIT Web site do help to explain the rationale behind their use.

In effect, MIT argues that signal propagation down a cable varies with frequency. The "skin effect" of radio-frequency transmissions (which propagate almost entirely down the surface of a conductor) is fairly well-known, but MIT explains that even at audio frequencies the signal uses different thicknesses of the cable at different frequencies. So low bass (which is close to DC) travels down the cable using most of its cross-section, whereas upper treble (which is closer to low-frequency radio transmissions than to DC) penetrates only part way down from the skin of the conductor.

This affects not only the measured resistance of the cable, but also those reactive properties such as inductance and capacitance, and these properties therefore are understood to be frequency-dependent to an extent which is audible. These reactive properties mean that the phase relationship between low and high frequencies is distorted, leading to smear, time domain distortions, and, to use MIT's preferred term, a loss of articulation.

The boxes contain passive networks which compensate for this by "re-timing" the signal so that the low frequencies arrive at their destination properly synchronised with the high frequencies. These networks can be thought of as similar to filter networks, except that, being passive, the signal does not pass through them. Each network, or "pole" of articulation, deals with a particular frequency band. The better the cable, the more poles of articulation and the bigger the box. More poles means each pole can deal with a narrower frequency range and can be more precisely tailored.

In the MA series, MIT has developed networks which also preserve the harmonic structure within tones, so that the normal consonant and dissonant harmonics in a note retain their proper relationships to each other and the amplitudes of any given harmonic more closely resemble those of the original tone. What this means, in effect, is that the tonal differences between, say, an oboe and a cello playing the same note, are down to the interrelationships between the various harmonics which make up the note. MIT argues that most cables affect the amplitude, and subtly adjust the frequencies of these harmonics, to the detriment of the sound. The MA technology is designed to minimise that distortion.

Because the boxes are such a large part of the budget in any MIT product, the price depends rather less on the length of the cable than it does in more conventional interconnects and loudspeaker cables. **AS**

EQUIPMENT REPORT

AudioQuest Wildwood Loudspeaker Cable

Anthony H. Cordesman

I normally avoid reviewing speaker cables and interconnects. This is not because I believe they are unimportant. It is because the sonic nuances that tend to distinguish one good "wire" from another in a given price range are interactive and dependent on the interface between individual components. The electrical qualities of the wire itself—inductance, capacitance, resistance, impedance, materials, termination, etc.—all matter, but when they interact with variations in the same qualities in the things they are connecting, especially between amplifier and speaker, there is no way to be certain that the sonic nuances any given interconnect and speaker cable produce with one set of components will be the same with another.

This is particularly true if you mix and match your "wires," rather than use the same brand and model of cables throughout your system. Mix-and-match can work out quite well, and produce superior sound in some systems, but you don't have to be much of an operations analyst to realize that the wires that produce a synergistic mix in one system may be far less optimal in another system, and the more variables you add, the harder it is to predict the result.

I am particularly cautious about recommending the more expensive options in speaker cables and interconnects. The fact is that prices have risen to almost incredible extremes, and some top-of-the-line products seem designed more to sound different—or support some technical claim or "hype"—rather than to sound better. Sometimes such "wires" seem to be tweaked to have a filtration effect that results in more upper-midrange or upper-octave energy, rather than more musical accuracy. The end result is that you may hear more "detail" than before, but not get more musical realism.

The upshot of trying to make a given wire/cable look more impressive can also be a product that is too thick or too rigid to easily connect to real-world electronics and speakers. I have used enough cables to know that you can get truly excellent sonic results with wires that bend easily, don't lever the speaker terminals or RCA jacks into loosening up or breaking off, and have connectors small enough to fit on any speaker or to plug into the crowded mix of RCA jacks on the back of some preamps.

Rather than recommend a given brand or model, I normally recommend that audiophiles borrow thoroughly broken-in cables from a friend, or work with a dealer who will give out loaners rather than insist on a final sale. If you care enough to make a truly major investment, you need to be able to spend enough time listening to the interconnects and speaker cables you are going to buy to be sure that that their sound character is musically natural by the standard of a live performance and not a sound that is simply new and different, and whose coloration will become apparent once the novelty wears off.

Be warned. You almost always do hear something at least slightly different when you substitute a different cable, and you will hear some "detail" or "nuances" you don't hear with your existing cable. The problem is that once you get over the initial impact of most such differences, they may fall into the "So what?" "Who cares?" or "Why pay more to make the sound worse?" categories. There are great wires out there, but differences don't matter *unless they are both musically realistic and musically significant.*

> "The Wildwoods have an added degree of clarity and better dynamics and air."

I also advise you to listen to cheap cables as a way to make sure you really are hearing the valid differences you are being asked to invest in. You should always perform the zip cord, Radio Shack, or "Best Buy Cheapest Monster Cable" test. Do comparative listening using such cables, your existing set, and a possible upgrade.

Make sure that the more expensive option is really consistently better in every meaningful sonic respect, and don't psych yourself out on the basis of questionable physics or meaningless hype. Above all, *listen* rather than read or look.

EQUIPMENT REPORT - AudioQuest Wildwood Loudspeaker Cable

Different features and more expensive materials and features like silver, Teflon, black boxes at the end of the cable, and fancy plugs or connectors can sometimes make a positive difference. They also can sound worse, not sound better, or lead to absurd prices. Putting cables on expensive little stands, using built in green lights, immersing them in water, demagnetizing non-magnetic materials, and cryogenic cooling have all been used by now-extinct brands that did not survive audiophile experience. In contrast, comparative listening to your existing wires, cheap control wires, and a possible new purchase, will then tell you whether the new, more expensive cable is really better and really worth the cost.

Don't get me wrong. Almost all of the serious audiophiles who follow my advice, and use the cheaper interconnects and speaker cables as controls—and who do treat most advertising hype as nonsensical garbage—still tell me later that they find that some mix of more expensive "wires" from the top manufacturers in the industry sound definitively better. Most upgrade to better and higher-priced cables over time. Patience and common sense will still lead you to invest in better interconnects and speaker cables.

Moreover, I should make it clear that I use some of the most expensive AudioQuest and Kimber cables available, and that I firmly believe they are worth it. They don't produce the ridiculous sonic miracles you read about in some reviews. No interconnect or speaker cable does. The sonic nuances you get for a larger investment are similar to those in active components. They produce diminishing returns with each increase in price; the improvement-per-dollar in the top price cables in a given brand usually is relatively small compared to its more moderately price cables.

Moreover, the sonic differences between alternative brands and models are much smaller than the radical differences in their appearance, features, materials, and literature would indicate. The choices of what is best are also personal, and many of my colleagues and experienced audiophiles make different choices. I've also had excellent results with Cardas, Wireworld, MIT, and a number of other brands, and I can't tell you that you should choose AudioQuest or Kimber. All I can do is tell you that I have.

> "The Wildwoods are one of the few cables I feel are outstanding enough to be worth reviewing."

But, even after taking all of these caveats into consideration, I do want my favorite recordings of classical music—all of which are acoustic and most of which involve minimal mixing and dubbing—to sound as "live" and natural as possible. And sometime—just sometimes—a product does come along that is consistently outstanding in many different systems and deserves special attention in spite of all the problems in predicting how well a given cable will interact in a given system.

This is one reason I've chosen the Kimber Select series, and the AudioQuest interconnects and speaker cables that use its Dielectric Bias System (DBS). AudioQuest has outdone itself with one of its new speaker cables. I've recently acquired a set of the AudioQuest Wildwood speaker cables. They are not cheap, but they have provided consistently exceptional performance when I have switched from radically different amplifiers from Cary, conrad-johnson, McIntosh, Pass, and Quad in my own and in a friend's system. They have been equally exceptional when I have used them with speakers as varied as the Quad 2905s, Vandersteen 5As, a pair of Apogee ribbons, Focal Electra 1007Be's, and Martin Logan Vantages. They also have been outstanding regardless of whether I used them in the bi-wired mode, or hooked them up with a single set of connectors.

They don't sound different; they do, however, have an added degree of clarity and better dynamics and air, and they clean up the top octaves without hardening the midrange and bass. On the bottom, they seem to blend power, low-frequency extension, and detail to the limit of the speaker and amplifier. The soundstage is also a bit better resolved, particularly if the recording has the illusion of layers of depth, or any kind of motion by the performers. Do they lift a thousand veils? Of course not! Are they just that bit more revealing in virtually every way than virtually all of the competition I've heard? Well, yes.

These improvement are also underpinned by design features that actually seem to make a difference. I've long been impressed by the sound of AudioQuest products that use its "Star Quad" and "Earth Feature" series. I've been particularly impressed by the fact they *always* seem to deliver their best, rather than have a sound that changes slightly over time. The Wildwoods, however, gave me better bass depth and control that I have gotten from any other AudioQuest cable to date. They gave me superb detail and natural energy in ways that seemed nearly impervious to speaker load. They really did make enough real-world sonic difference, and revealed enough natural musical detail, to justify their cost.

I can't tell you that this means all of AudioQuest's technical claims are valid. I have found, however, that the discussion of cable theory on the AudioQuest Web site is well worth reading, and that its claims about the Wildwoods' design are borne out by the listening experience.

The Wildwoods' use the same counter-spiral conductor geometry in past top-of-the line AQ cables like Everest and Volcano. The difference

SPECS & PRICING

U.S.

Price: $9100, 6' pair;
$9700, bi-wired 6' pair

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EQUIPMENT REPORT - AudioQuest Wildwood Loudspeaker Cable

is that the Wildwoods are essentially two separate speaker cables in one jacket, allowing for true bi-wire or single-wire use (when the two separate cables within the jacket are wound together to make one full-range speaker cable). The individual conductors are solid core, but are a mix of five different gauge sizes—21AWG, 20AWG, 19AWG, 17AWG, and 16AWG —because AudioQuest feels that every conductor size has its own unique sonic signature. Cumulatively, the overall gauge of Wildwood is 9AWG for each positive and negative leg.

> "The Wildwoods reveal more of the music without altering it."

As for material, I have never found that a given conductor or insulator provides the best or most consistent sound quality. Some of the pure silver cables I have heard have sounded worse than pure copper, and some have sounded better. The same has been true of differences in insulating materials. For the record, the Wildwoods mix both silver and copper. A total of 12 of the 16 conductors are solid Perfect Surface Silver while the other four conductors use AQ's best copper, called "Perfect-Surface Copper."

In contrast, I have been consistently impressed by the sound of the AudioQuests that have a "DBS" feature, and use a battery to polarize the cable. This feature has been upgraded in AudioQuest's more expensive cables by adding a third DBS element within the cable. Instead of having a DBS anode in the center of the cable and a DBS cathode on the outside of the conductor group, these cables now have three DBS elements: two DBS anodes on either side of a DBS cathode.

Let me again stress that I am not a designer or engineer and can't validate the claims of any manufacturer, but AudioQuest does note that, "This intensifies the electrostatic field created across the insulation in a very meaningful way. The DBS field intensity created by using three elements is stronger than if we simply applied 144V (two by 72V DBS batteries) across the insulation....The DBS effect takes about two weeks to fully form once the battery is plugged in during assembly of the cable. If a battery is disconnected, it takes about a day or two for the charge to fully dissipate."

In short, the Wildwoods have design features that may well explain why they do reveal more of the music, do so without altering it, and do so with a remarkably wide range of different amplifiers or speakers. Once again I must stress that no one can tell you which cable is right for you or your particular system. What I can say, however, is that the Wildwoods are one of the very few cables I feel are outstanding enough, consistently enough, to be worth reviewing. I strongly recommend you audition them, if you are willing to invest in the very best. tas

Synergistic Research Galileo Cable and Interconnect

The Whole Nine Yards

Jonathan Valin

Here is a riddle: What has twelve separate, current-bearing, actively shielded "air strings" of copper-silver alloy, pure silver, pure gold, or (if you choose) pure platinum wire, twenty separate LEMO connectors and twenty separate LEMO receptacles, four DC-biasing/electromagnetic-power-conditioning junction boxes (called "Active Mini EM Cells") into and out of which the LEMO-terminated "air strings" are routed, a separate "quantum tunneled" Mini Power Coupler power-supply that provides the DC current for the active shielding and EM power conditioning of all those cells and precious-metal "strings," and costs $25,000 to $40,000 (not counting the TESLA PowerCell 10SE power conditioner into which the Mini Power Couplers are ideally plugged)?

Give up? The answer is *one pair* of Synergistic Research Galileo interconnects ($25,000) or *one pair* of Galileo speaker cables ($40,000).

I've seen expensive, complexly configured wires before, but the Galileo system is mind-boggling.

Before you start turning pages to get to the next review, let me assure you that Galileo is a uniquely interesting product and that its upside is considerable. It won't take a golden ear to hear what it does (although it may take a golden goose to buy it). In a nutshell, the Galileo system is the lowest-noise, highest-resolution, most transparent-to-sources cable and interconnect I or any of my listening panelists or anyone else who has heard it has yet auditioned. Regardless of what it is connected to, tube or transistor, analog source or digital source, Galileo will preserve the signature of the components it conjoins without adding a marked signature of its own. Here you will find none of the bleaching (or excessive sweetening) of tone color, the bungee-cord-like constraint or flagrant over-aggressiveness, the liquid darkness or silvery brightness of other competitive, ultra-expensive, ultra-high-end cables. Galileo simply reflects what is in front of it with less editorialization and higher fidelity than anything else I've yet heard—and it does this primarily by lowering noise, allowing your equipment to show its best.

Galileo will remove fine layers of RFI and EMI you didn't know were there—very-low-level noise added by your AC power grid, by electromagnetic fields generated by the equipment you use, and by the skin effects and reactivity of your cables themselves—revealing fine levels of detail you didn't know were there on just about every source. Just as importantly, Galileo (in concert with the TESLA PowerCell 10 SE and Tesla power cords) will remove layers of noise you *did* know were there—clearly audible hum and RFI, which, in my case, have been driving me half-nuts for almost twenty years.

How many times have I complained in print about hum and RF

EQUIPMENT REVIEW - Synergistic Research Galileo Cable and Interconnect

on my record players and phonostages? Try as I might—and I have tried everything from ferrite beads to Faraday cages to dedicated circuits to true earth grounding with a rod—for two decades I've never been able to completely rid myself of these banes, which is why I call the neighborhood I live in "RFI Valley."

I'd all but given up hope of a cure when Ted Denney arrived three months ago with his new wires. Once my system was hooked up with Galileo and a special (non-actively-shielded) phono cable of Synergistic design—and all components, including the turntable and phonostage, were fitted with actively shielded TESLA IEC power cords and plugged into a Synergistic TESLA PowerCell 10 SE—guess what? No RFI. No hum. For an analog hound like me, this was almost a miracle of nature, like turning water into wine, and I wasn't using matzoh before Mr. Denney came a'calling. I'd almost forgotten how much very-low-level information and large-scale dynamic information gets slightly veiled, darkened, or modulated by RFI and power-line grunge. For this feat alone, the Galileo earns an exalted place in my Audio Hall of Fame. But, this feat *ain't* alone.

However, before I get into the other wonders Galileo hath wrought, let's talk a bit about how it works, because how it works is, uh, different.

The objective of the Galileo project, which cost Synergistic several years and many hundreds of thousands of dollars to perfect, was, in fact, to do precisely what Galileo actually and audibly does—lower noise and increase resolution and transparency. Some of this was accomplished by building on technologies pioneered in Synergistic's previous cables and interconnects and some of it was entirely new to the Galileo system. Of the legacy technologies, the most important are active shielding and what Denny et al. call "quantum tunneling" (apparently, and rather perplexingly, after the quantum mechanical phenomenon where a particle tunnels *through* a barrier that it classically cannot surmount because its total mechanical energy is lower than the potential energy of the barrier).

Active magnetic shielding is not new. It is widely used to reduce powerline fields in laboratories that use electron microscopes and other electron-beam devices. Near as I can tell the theory is that by applying an electromagnetic force that is equal and opposite to that of an existing magnetic field (such as that in a listening room full of electrical equipment surrounded by walls full of current-bearing wires and an atmosphere buzzing with RFI and EMI) you will substantially reduce the force and effect of that electromagnetic field (although you can't completely eliminate it).

Denney claims that he started working on active shielding of cables in 1996, connecting the positive anode of a battery to the signal-bearing cable and the negative anode to the cable's shield. The object of the exercise was to eliminate noise due to signal/cable interactions, EMI, and RFI that could not be gotten rid of by optimizing capacitance, inductance, and resistance via cable geometry and the material composition of wire and dielectric. The initial experiment was only partially successful—while the active shielding increased detail, the positively charged signal-conductor also tended to act like an antenna, increasing noise, EMI, and RFI. Denney then turned to a more sophisticated design—a closed circuit in which the shield carried DC current and separate ground conductors carried the ground signal, with a buffer in between shield and ground. This "closed system" not only improved detail but also lowered noise, and it has been the basis of all subsequent iterations of Synergistic's active shielding, including that in the Galileo.

"Quantum tunneling," which, IMO, is a mighty fancy name for a form of electrocution, involves "applying a two-million-volt signal to a cable at a specific pulse modulation and ultra-high frequency for an exact duration of time." According to Synergistic, this jolt of juice—the selfsame same procedure that brought Frankenstein to life—"transforms the entire cable at a molecular level," lowering the noise floor, expanding the soundfield, and making for more extended and transparent high frequencies. This sort of talk would be laughable, if it weren't the case that Galileo *does* lower the noise floor, expand the soundfield, and make highs more extended and transparent (as well as making lows and mids more extended, transparent, detailed, and incredibly dynamic). Whether riding the lightning really is the cause of this phenomenon, I don't know—on either a molecular level or an "I'm from Earth, Ted" level. But facts is facts, and the stuff does have the qualities that Denney and Co. attribute to taking a seat in Old Sparky.

Galileo also makes use of the electromagnetic cells that Denney developed for his TESLA power conditioners. Where many line conditioners use chokes and transformers in the signal path, limiting current as they "condition" it (and therefore limiting the transient response, low-level resolution, and low-frequency authority of components that use that current), Synergistic developed a device, called an EM Cell, that conditions incoming AC by passing it through an electromagnetic field.

Yeah, I know—I don't fully get it, either (although it sounds like a variant on active shielding). But once again, facts is facts, and the fact is that the Galileo's Mini EM Cells, into which each and every "air string" of Galileo wire is plugged and through which all current is passed from source

SPECS & PRICING

Type: Modular speaker cable and interconnect with precious metal conductors and built-in active shielding and electromagnetic power conditioning

U.S.

Price: $25,000/pair of 1m interconnect; $40,000/pair of 8-foot speaker cable

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EQUIPMENT REVIEW - Synergistic Research Galileo Cable and Interconnect

JV INTERVIEWS SYNERGISTIC RESEARCH'S TED DENNEY

How did you get into the cable and interconnect design and manufacturing business?

Back in the late 80s I was a young audiophile just out of college. I needed some long cable runs to go between my preamp and my power amplifiers but couldn't afford the cables I really wanted, so I designed a few of my own. I was amazed at how different they sounded and surprised that I preferred one of the interconnects with my solid-state amplifier and the other with my tube amplifier. At the time I was working for a big printing outfit in Los Angeles. As fate would have it I was handling an account for a major high-end wire manufacturer, so I got to compare one of its better interconnects with the two I had built and was surprised at how well my designs stacked up against it. This led to an idea—if I could develop different cables for different types of electronics, as opposed to offering progressively higher-end versions of one design, then perhaps I could make cables fund my audio obsession. So I leveraged everything I had, quit my day job in August 1992, rented a small industrial space in Newport Beach, California, and set up shop during a recession. After three years of living and sleeping in the factory I landed my first big account (ListenUp in Denver), moved out of my factory, and the rest is history.

Most cable designers have a "design philosophy." What is Synergistic's general approach?

The simple answer is to design different cables and products to complement different systems. This is the focus of our work—to promote synergy through the harmonious interaction of parts critical to system performance, including AC cords and conditioning, system cabling, and mechanical and acoustic resonances that affect the listening room. For me synergy in a sound system is defined as achieving the sound that is as close to the actual live experience as possible, with a special emphasis on recreating a live soundscape.

What steps led you to Tesla cables and from Tesla to the Galileo design?

After eleven years of driving Synergistic Research I was burned out. It was late 2002, I was turning 40. So I sold my home and purchased a sailboat with the intention of taking five years to single-handedly sail around the world. The first year was great, and I stayed away from the factory for 12 months. By the second year I was still sailing, but thoughts of cables started to re-enter my mind. By the third year I was reading everything I could find on Nikola Tesla, convinced I would find technologies and inspiration for a new line of cables. During that third year I was in constant contact with my right-hand man and lead engineer Eliott, going over ideas for new cable geometries, which he would build and report back on. I flew to the factory several times that year, working with Eliott, putting the finishing touches on the Tesla System interconnects and speaker cables launched in November 2006. Tesla power cords launched at the 2007 RMAF.

That was a big year, 2007; not only did we develop and bring to market a complete new line of power cords, but it was also the year in which I first envisioned the electromagnetic cell as a means of conditioning a signal outside the signal path. For weeks that summer I was obsessed with developing this new thing, first designing then re-designing the EM cell as the circuit evolved in my mind. The finished prototype was built with one week to spare before leaving for RMAF, where the original plywood-chassis PowerCell made its debut.

In early 2009, we began the Galileo Research Program to explore the effects of my electromagnetic cell on line- and current-level signal. It was my goal to not only challenge the Tesla system, but to build the undisputed best audio cables in the world. We started by isolating the effects of different pure elements, experimenting with gold, silver, platinum, copper, rhodium, as well as copper/silver alloys. Next, we developed the world's first actively shielded air dielectric, which has the lowest dielectric constant of any material and hence the highest resolution for our precious metal conductors. I wanted Galileo cables to defy obsolescence, so it was a design mandate that the interconnects be both RCA and XLR; never again would you have to get new cables just because you switched from RCA to XLR. I also wanted the interconnects to be easily voiced by users, to better match their components now and in the future. Special cables ("air to preamp to amp to speakers, quite audibly lower noise, seemingly clarify transient response, increase low-level resolution, and substantially improve low-frequency definition, extension, and impact (to a degree that makes Galileo bass the best I've ever heard—by a wide margin—in my room).

How do I know it is the Mini EM Cells that are having this effect and not something else in the Galileo nebula? Well, I unplugged the Cells' quantum-tunneled Mini Power Couplers (once again, a fancy name for the wall-wart power supplies that plug into and energize each and every Mini EM Cell) and, sure as shootin', noise dramatically increased. The deep—not black, mind you, but deep—background silence of the Galileo system was suddenly filled with a harsh white grain that blunted transients, reduced

LEMO receptacles of the Galileo Mini EM Cell used for speaker cable

EQUIPMENT REVIEW - Synergistic Research Galileo Cable and Interconnect

strings") were developed with pure gold and pure silver, so that end users could mix and match different ratios of gold and silver conductors to best suit their systems now—and be able to synergize with any components they might own in the future (single-ended or XLR, tube or solid-state).

Why does the Galileo System cost as much as it does?
Well, the average "pair" of cables is just that—two cables. Now take the Galileo System interconnects, for example. There are two "pairs" of cables for the actively shielded RCA leads, another two "pairs" of cables for the XLR leads, and six "pairs" of cables for the air strings between the two EM Cells. In case you were not counting, that's 10 pairs of the most difficult to build cables we have ever constructed, made with pure gold and silver. Then there are the four EM Cells per interconnect pair. Each Cell is made from pure gold, silver, platinum, and copper/silver alloy conductors, with 316 hand-soldered terminations. All told, it takes one month to build two pairs of interconnects from precious metals in our California factory.

Will there be spin-offs of Galileo technology at more affordable price points?
Already there. Galileo MPCs for TESLA Active Shielding, and Galileo Universal Speaker and Interconnect Cells, which can be used to dramatically improve any cable from any manufacturer. We also have a new interconnect coming out based on the pure silver air strings. All by itself, this is the highest-performance interconnect we have ever made outside of the full-blown Galileo System interconnect from which it is derived. Of course, performance can be taken higher still when paired with a Galileo Universal Interconnect Cell.

resolution, and muffled the bottom end. While I wish that Synergistic hadn't tarted up the names of several parts of this genuine marvel of transparency, the EM Cells clearly work as advertised—and the electromagnetic fields (or something) inside them are clearly having the effects Synergistic says they have.

BTW, the innards and the outards of the EM cells are quite sophisticated in circuit design and physical construction. The wiring inside each box—and there are some 300 hand-soldered connections in the Galileo system—is a matrix of precious metals from gold to platinum to pure silver and silver-copper alloy—each of which contributes to the uncannily natural "voicing" of the cable and interconnect, from top to bottom. The boxes that house this little Potosi are themselves marvels of CNC milling, using an expensive composite material that is said to be electromagnetically inert and more immune to mechanical vibration than carbon fiber. (The boxes that come with the speaker cable are also fitted with tiny needle-point spikes that further isolate them from floor and airborne vibration.)

Pricey LEMO receptacles are fitted into each of the EM cell boxes—four of them on the "string side" of the box and one-to-three of them on the "connector side" of the box (depending on whether the box is for interconnects or speaker cable). Which brings us to the unique contribution that Galileo makes to Synergistic designs—the "air strings."

Most interconnects and cables—even networked cables—use a single length of wire that, however complex its geometry and material composition, runs between the source component and the destination component. That wire may lead into and out of a gigantic milled metal box where it is subdivided, and it may make use of a variety of metals that are intertwined and bundled together, but it is still effectively a single length.

With Galileo, Synergistic takes a unique approach. Though Denney firmly believes—on the basis of decades of experimentation—that different metals add different worthwhile qualities to the presentation of any cable or interconnect, he also believes that bundling them together in one stiff, often-thick-and-unwieldy amalgam causes more practical and interactive problems than it solves.

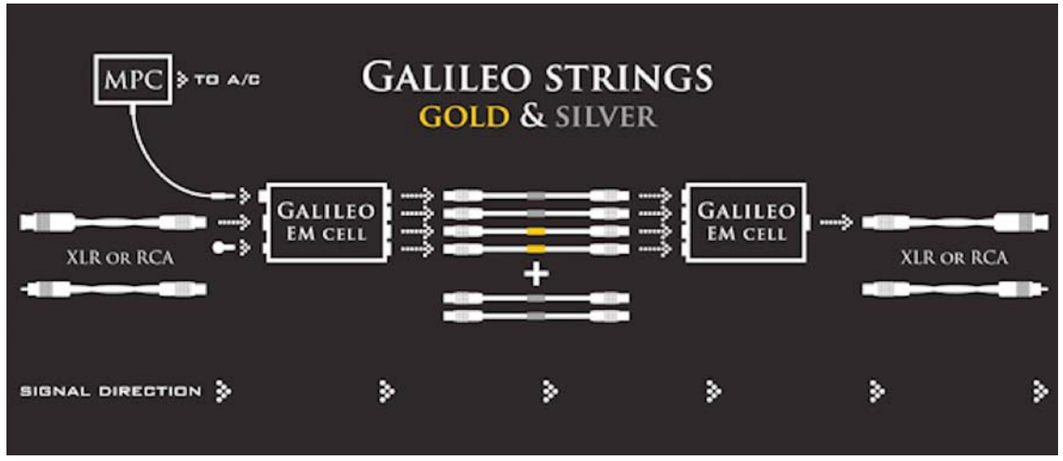
So what do you do if you want to get, say, the speed and extension of pure silver wire without its brightness? The warmth and authority of pure gold wire without its dullness? The current-bearing capabilities of thicker wires without sacrificing the delicacy of detail of thinner ones?

Denney's answer to these questions was fresh and ingenious—as all his answers are: Instead of using a single "bundled" cable, why not take a modular approach? Why not use separate "strings" of wire, each made of different precious metals in different thicknesses?

After a long period of experimentation, Denney settled on the following formula for Galileo interconnects (you may want to look at the exploded view illustration below to help you follow): A single "string" of pure silver wire is equipped with a LEMO connector on one end, which plugs into one of the Mini EM Cells, and terminated with either an RCA plug or an XLR connector on its source end, which plugs into your source component. This single string of wire has a "five-channel" geometry and an air dielectric, and is actively shielded and electromagnetically conditioned by the current piped into the EM Cell from the Mini Power Couplers. (You can easily switch from RCA to XLR connectors, BTW, and back by simply purchasing two source and/or destination "strings" fitted with different connectors).

Four more "strings" of actively shielded, air-dielectric, precious-metal wire, fitted with LEMO connectors on both ends, then run from the LEMO receptacles on the "back side" of the source Mini EM Cell box to the LEMO connectors on the "front side" of a second, destination Mini EM Cell box. Though you can pick and choose whichever metals you want for conductors (and thereby "voice" the interconnect to your taste), the Galileo now comes with three pure silver "strings" and one pure gold one—a combination that Denney considers ideal for resolution, neutrality, and transparency to sources. Two of the four "strings" are thicker for better current transfer; two are thinner for better fine resolution;

EQUIPMENT REVIEW - Synergistic Research Galileo Cable and Interconnect



Exploded view of Galileo System interconnect

none is wider than a Number Two pencil; and yet all of them are constructed with separate ground conductors, DC-biased shields not connected to ground, and return lines for the DC, as well as the signal-bearing precious-metal conductors themselves. In addition to greatly lowering noise, this geometry allows Galileo to transmit both single-ended and balanced signals, depending on the kind of terminations you choose for the source and destination wires.

On the "back side" of the second, destination Mini EM Cell is yet another LEMO receptacle into which you plug a single string of actively shielded, five-channel, air-dielectric, pure silver wire fitted with a LEMO connector on the Cell end and an RCA or XLR connector on the destination-component end. This last "string" is them plugged into whatever component you are connecting to from your source component.

The only substantial difference between Galileo interconnect and speaker cable, aside from price and the greater length of the four strings that run between the two Cells, is that there are three LEMO receptacles on the destination end of the second Mini EM Cell, which allow you to bi-wire or tri-wire your speakers with two or three individual "air strings" of whichever metal you prefer. The speaker cable also comes with absolutely ingenious acrylic wheels with four "string-sized" holes bored in their centers through which the four "strings" that go from the source EM Cell to the destination EM Cell are piped. The wheels elevate these strings off the floor away from floor-borne vibration and keep the four strings elegantly dressed and separated, and because they are wheels they also don't fall over if you accidentally brush against them as conventional cable elevators so often do—they just rotate a bit.

I know this whole thing sounds extremely complicated, and compared to most other cables it is. Indeed, it is so complex you would think—almost immediately—that any cable with this many separate mechanical connections and this many active parts would sound anything but low in noise and high in resolution, but you couldn't be more wrong.

What, then, does Galileo sound like? I'm tempted to say the closest thing to *no cable at all* I've yet heard, but the precise truth is that it sounds like whatever it is connected to. Indeed, it is incredibly revealing of exactly what your electronics and speakers are doing to your source—good and bad. Through the Galileo, for instance, I realized that the ARC 40th Anniversary Edition Reference Preamp is almost as detailed as that paragon of detail and neutrality, the Technical Brain TBC v2—a point, you may recall, that I was unsure of when I wrote my review of the Ref 40 in Issue 209. I also realized that the Ref 40 has even better-defined, more powerful, deeper-reaching bass (standard-setting for a tube preamp, IMO) and even faster, cleaner transient response than I first thought. It also has thunderous large-scale dynamics on fortes and fortissimos to accompany its superb reproduction of piano and pianissimos. In addition, it has a touch of the old ARC upper-midrange light and bloom (a very lifelike brightness) that I hadn't previously detected.

Or take the new Technical Brain TBP Zero EX monoblock power amps. At the RMAF show I thought they had a bit of an antiseptic sound—extraordinarily fast, neutral, and detailed but somewhat deracinated in tone color. But when I put the TBP Zero EX's in my system, hooked up to an all-ARC front end via Synergistic Galileo, I had the uncanny feeling that I wasn't listening to an amp at all. The TBP Zeros didn't sound thin or deracinated; they didn't sound. They simply disappeared as sonic objects, leaving behind the unmistakable signature of the ARC front end and the Walker turntable and Ortofon A90 cartridge, as clearly as I hear it through the ARC 610T amp but with better defined very low bass than the ARC amp, less upper midrange brightness than the ARC amp (i.e., a more neutral tonal palette), audibly lower noise, and finer resolution of low-level detail than the ARC amp. The power, speed, bloom, light, soundstaging, imaging, even the three-dimensionality of the ARC preamps and the source were preserved, unaffected.

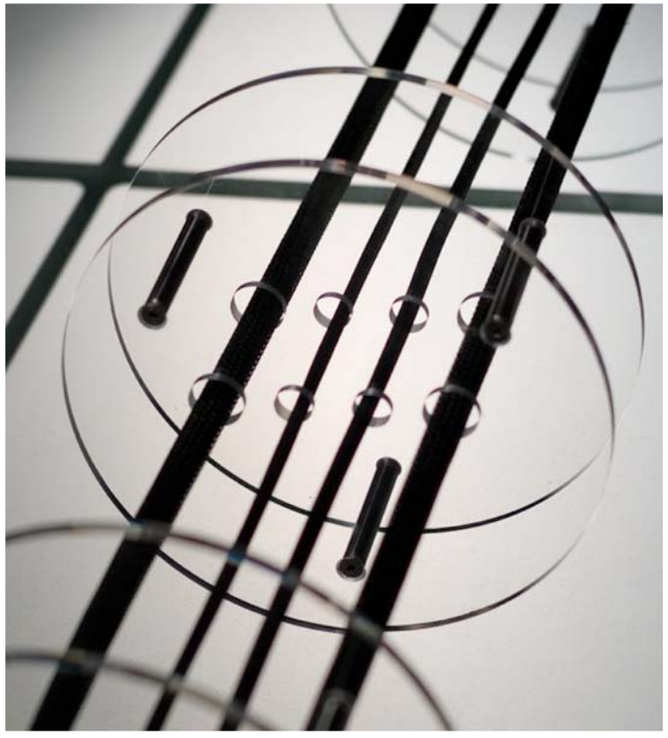
Again, when I put the Technical Brain front end in, the sound changed. Now, I heard no upper midrange brightness—a perfectly neutral tonal palette, albeit with slightly flatter, less bloomy and three-dimensional imaging (though the difference here was considerably smaller than I expected), somewhat tighter image focus (though not razor-cut), somewhat of a less consistently expansive soundstage (or to be more precise, a soundstage whose width, depth, and height fluctuated more obviously with whatever recording I was playing). Noise was audibly lower, resolution of texture and transients higher.

It's not that I hadn't heard many of these differences before through other cables. It's that I hadn't heard them so clearly and unmistakably—with no added colorcast or dynamic constriction.

As with the components it interconnects, so with the sources I played back through it. The thrilling pizzicatos and glissandos, the superheated, sometimes piercing sound of the massed strings

EQUIPMENT REVIEW - Synergistic Research Galileo Cable and Interconnect

in the second movement of Columbia's recording of the string-orchestral version of Berg's *Lyric* Suite with Craft conducting; the chest-thumping thwack of toms and kickdrum, the floor-shaking pulse of bass guitar, and that huge thrilling block of electric guitar at the far right-hand side of the stage towards the end of "Once In A Lifetime" from the Talking Heads' *Stop Making Sense* (which sounds, particularly through the Technical Brain gear, like precisely what it is—a great but coolish, slightly clinical digital recording); Sarah Vaughn's sometimes throaty and almost gargle-like, sometimes nasal, sometimes chesty and resonant coloratura and Oscar Peterson's (always) superb piano accompaniment on their great version of the Gershwins' "How Long Has This Been Going On?" from the Verve album of the same name; the way that miking was changed between the two Greenbriar Boys numbers at the start of the second side of Joan Baez's second album from Vanguard…with the Galileo you hear it all: the performers, the performance, the hall or studio, the kind and number of mikes used, the distance from the mikes to the performers (and the way this changes when performers move around), the potting in of overdubs, edits, overloads. Anything that your source components and electronics allow you to hear, you will hear. And you will hear it without an overlay of color or a profiling of dynamics.



Galileo Acrylic Cable Elevators with Gold and Silver Strings

Yes, the Galileo is more complicated than other cables and interconnects—and that complication can become a complication if you forget to plug those mini power-supplies in snugly (although their fit is very firm and the LEMO connectors are almost literally air-tight). On the other hand, I'm not going to act like other reviewers and make apologies for the complexity of Galileo, because that complexity is precisely what makes it sound so "not there." Nor am I going to make apologies for its cost—and pretend that the differences between it and less-expensive wires are insubstantial. This cable is worth what is being asked for it—indeed, it is one of the very few ultra-expensive cables and interconnects in which you can actually see where some of your money is going: those pricey LEMOs, the pure gold and silver "strings," the ingenious EM boxes filled with gold, silver, copper, and platinum wires hooked together with three-hundred or so other hand-soldered parts, the sheer amount of time it takes to assemble a set of Galileo (which will be measured in months, not hours or days if you order a set—and which involves the painstaking matching of every single parameter of each "string" in a matched pair of cables or interconnects), the tremendous amount of research and experimentation that went into the development of these ingenious devices.

Obviously, the Galileo system isn't meant for you and me. It is meant for *very* rich audiophiles for whom its cost is not an insuperable obstacle. Although Synergistic is already migrating some Galileo technology down to far more affordable (though still not cheap) price points, there is no question that the Galileo system is what I would buy if I could afford to buy it. Although there are several other great wires out there—with considerable virtues of their own—Galileo is, as noted, the closest I've come thus far to "no cable" at all. It is also—quite rightly—the winner of our 2010 Best Price-No-Object Cable and Interconnect of the Year Award. tas

EQUIPMENT REVIEWS

Power Conditioners & Cords

Exclusive Patent-Pending Science

The World's First Dual-Chassis Power Conditioner

Pushing Performance Boundaries Through Design Innovation

BIRTH OF A REFERENCE

Shunyata Research's Hydra Triton power distributor was originally conceived as a reference caliber power distributor that bore no compromise in design scale or performance. As the project evolved, the Triton's size and cost escalated beyond practical limits. The file-cabinet sized prototype was shelved while options were considered to reduce the unit's massive size and projected price. Designer Caelin Gabriel created a solution by splitting the original Triton design into two units. The first chassis would house a stand-alone eight outlet Reference power distributor. The second chassis of equal size and greater weight, plugs into the Triton with a special umbilical cable. This would complete Gabriel's original vision for an ultimate performance power distributor.

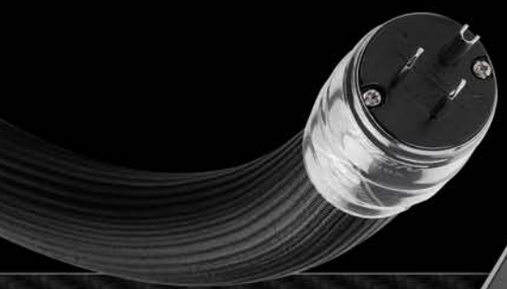
Shortly after its 2011 release, the Hydra Triton became the most critically and professionally endorsed product of its kind, receiving awards and accolades from recording professionals and magazine Editors from around the world. The Hydra Triton's overwhelming success paved the way for the introduction of it's "second-half", the Hydra Typhon. Pushing boundaries of performance through design innovation is what separates Shunyata Research product designs from others in their category. The Hydra Triton/Typhon combination represent the working definition of those ideals.

WHAT IS IN A TYPHON?

Within the Typhon's Triton-size chassis are two massive Noise Isolation Chambers (NIC's). These cylindrical chambers take up the entire space within the Typhon's chassis and account for the majority of the Typhon's 43 pound weight. Each NIC contains an enormous volume of Shunyata's patented ZrCa-2000 compound, which absorbs and dissipates high-frequency noise. Shunyata's hollow-core VTX wiring, culled from ultra-pure CDA-101 copper, runs through the chambers and connects to the IEC at the back of the Typhon. In essence, the Typhon is a purpose-built slave unit for the Hydra Triton.

Once again, Shunyata Research has pioneered an advance in elecrical-system technology that will dramatically improve the listening and viewing experience!

The pinnacle of price and performance.



SHUNYATA RESEARCH • www.shunyata.com • POULSBO, WA USA

**Adding Typhon performance to any Triton is as simple as plugging the Typhon umbilical into any one of the Triton's outlets, or the special Typhon port.

Hydra Stainless Steel Feet — SSF

SHUNYATA RESEARCH • www.shunyata.com • POULSBO, WA USA

EQUIPMENT REPORT

Baker's Dozen

13 Power Cords $500 and Under

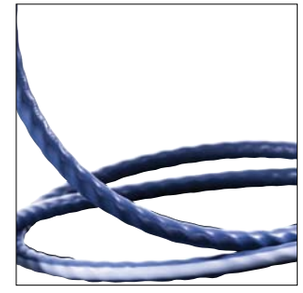
Neil Gader










There is no easier improvement to an audio system than upgrading from the original equipment power cord. Unplug the old, plug in the new, and listen. It's a good reason why this segment of the market is so competitive and why every cable company wants a piece of the action. And why, in my view, power cords were crying out for a listening survey. The premise was: Keep it simple. I'd use a reasonably priced, conventional setup—an integrated amp and CD player—that's two power cords. I'd listen, note the differences, compare to a reference pair of power cords, and then move on to the next pair. The price cutoff was established at $500 or less—which kept the cost within the realm of a reasonable upgrade. I left it to the invited manufacturers to send a pair of cords of their choosing within that price range.

Note that this is not a discussion about power-cord technology or philosophy. Manufacturer claims about the superiority of a given cable geometry or dielectric are set forth at the companies' Web sites for all to read and investigate further. This survey only summarizes my listening conclusions based upon a single reference system. For that reference system, I used the Audio Research CD-5 compact disc player and the Audio Research DSi200 amplifier. Both excellent, high-resolution components that, as you will read, reveal any systemic differences. The power cord reference was the $2600 Synergistic Research Tesla Hologram D for the digital source and the $1800 Precision AC for the amp. I'm intimately familiar with these cords and they've performed at a high level with the finest of associated gear. They are the champs at maintaining a seamless curtain of ambient sound across the stage, and their combination of pace, delicacy, micro-dynamic nuance, and low-level timbral details has always been winning.

Going into this survey my general impressions regarding power cords were that, compared with interconnects and speaker cable, their sonic virtues were less conspicuous and they did not create the same marked differences in tonal balance. These impressions held (relatively) true throughout the survey (although output level was another issue altogether, with various cables showing some remarkable variations). Mostly, the different cords tended to reframe the sonic tableau by either expanding or contracting the boundaries of the soundstage in width, depth, and focus. In essence they tended to speak the same language but with different accents and inflections. The largest single factor that distinguished one cord from another tended to be immersiveness. I'd call it a density factor, an aspect that envelopes the listener in a dimensional soundstage—the sense of music being reproduced as fully saturated dynamically and tonally. I will reference this factor throughout the survey. In alphabetical

EQUIPMENT REPORT - 13 Power Cords Under $500

Acoustic Zen Tsunami

$350

The Tsunami ran smoothly down the middle of this pack in terms of overall performance and sonic character. It possessed a modestly lighter balance, with a forceful midrange that marks it as just a degree or so cooler in presentation. Its strengths were its smooth mids and solid soundstage depth and dimensionality. Its treble range was properly detailed yet just a bit dry, so that during Jennifer Warnes' "Lights of Lousianne" there was a small amount of brightening on the leading edges of the accordion. I thought it could have been a touch sweeter and airier on top, but to be fair none of the cords matched the survey reference in that regard. Bass response was very good although the Tsunami couldn't quite reproduce the full extension or resonant timbre of the talking-drums in Warnes' "Way Down Deep." And there was also an aura of micro-dynamic restraint during violinist Anne-Sophie Mutter's reading of Korngold's Concerto for Violin and Orchestra [DG]. It handled the larger scale of complex symphonic orchestrations with aplomb and very little image congestion. While competitive with most of the other cords, it couldn't quite match the low-level resolving power of the survey reference, and it gave up just a shred of transparency and that immersive density factor to the very best in this survey. Overall and with only minor subtractions, this was a very satisfying power cord—one that established solid benchmarks for the rest of the pack.

Acoustic Zen Tsunami

Conductor: 10 AWG OCC 6N Zero Crystal Copper
Insulation: CL3 rating PE and two center Teflon tubing with air-twisting geometry Teflon tape, copper braided shielding.
Connector: AC plug and IEC plug custom made gold-plated OCC copper
Price: $350 (858) 487-1988 acousticzen.com

Audience powerChords

$482

From note-one it became abundantly clear that in many ways the Audience was nipping at the heels of the survey's reference cord. Music seemed to emerge from a profoundly quiet and orderly soundstage and to take on a more vivid presence and ambience. Imbued with a cleanly defined and deeply dimensional soundstage the Audience also offered the bass clarity, weight, and pitch resolution that placed it at or near the top of the pack. On a track like Rosanne Cash's "God Is In The Roses" there was a sense that the air around images had dissipated somewhat, but it was still close to the survey reference in this regard. The feeling of transient speed and sustain from the guitar during this same track was enormously satisfying. In fact, except for the slight treble congestion and somewhat laid-back overall presentation—a trait that I clocked with many of these cords—there was little deviation from tonal neutrality. I found that only a handful of cords approached the reference in creating black-quiet backgrounds—an element pivotal to revealing music's micro-dynamic charms. In this area especially, the Audience was one of the standouts of the survey.

Audience powerChords

Conductor: 10 AWG high purity stranded OFC
Insulation: Flexible PVC
Connector: Wattgate IEC and plug
Price: $482 (5ft)
(760) 471-0202
audience-av.com

AudioQuest NRG-4

$350

The AudioQuest NRG-4 was impressive in the workmanlike and honest manner it went about its job. Modest in appearance, almost electro-retro with its cloth-like jacketing, it was definitively midrange in balance, like the Tsunami. It's a signature that suffuses a singer's voice, male or female, with tangible tonal richness and physical weight. There was little out of joint here, and only a slightly lighter overall feel tended to lend it much character at all. The NRG-4 had a delicacy and clarity in the lower half of the treble that enlivened piano harmonics and brass ensembles. It began to narrow in the upper-reaches of the treble, but this was a minor subtraction. The NRG-4 had excellent dimensionality with good lateral presentation and an exceedingly well-focused center soundstage. A sense of modest micro-dynamic compression of the deep bass seemed to limit its slam, but this subtraction was more than made up for by a sense of speed and pace that was rhythmically very satisfying. String section layering was smooth and clean, although inner detail of violin *pizzicatos* during the Anne-Sophie Mutter Korngold lacked the finer delineation and decay of the reference. Although it didn't throw a big sonic image, its density factor, soundstaging performance, and dimensionality were very good, indeed. An excellent all-around performer that sweats the smaller stuff.

AudioQuest NRG-4

Conductor: Solid PSC conductors in a self shielding counter-spiral with two RF stoppers filters to block radio frequencies
Price: $350
(949) 585-0111
audioquest.com

EQUIPMENT REPORT - 13 Power Cords Under $500

Harmonic Technology Fantasy AC10SE

$500

Harmonic Technology has produced a high-output cable that seems to magically raise the volume level—a trait that was likely emphasized by its forward-leaning, highly charged presentation. Bass response in general was very tight, perhaps too much so. But, during the Copland *Fanfare*, dynamics and transient attack were nothing short of exhilarating. Although very smooth and extended in the upper registers, the Fantasy's treble never quite opened up completely, diminishing air and harmonics with high-pitched percussion, winds, and strings. The soundstage also didn't have the expansive spread of the survey reference so that during the Anne-Sophie Mutter performance of the Saint-Saëns, the orchestra doesn't have quite the ambient wingspan that I'm use to hearing from this track. And as explosive as the Fantasy is in the macro sense, it doesn't throw as much light into the micro-interiors of the soundstage. Thus during the "North Dakota" duet between Lyle Lovett and Ricki Lee Jones the interplay of their vocals had softer transient edges and a small degree of veiling. While other cords may offer superior low-level refinement, the Fantasy was explosively musical.

Harmonic Technology Fantasy AC10SE
Conductor: 6N copper
Insulation: PE insulation
Connector: Furutech
Price: $500
(858) 486-8386
harmonictech.com

Furutech Absolute Power I8P

$352

The Absolute Power 18P won high marks and virtually matched the reference in output. It always made me consider backing off the volume a dB or so. Output aside, its general character was slightly laid-back, almost easy-going to the point of relaxation—a trait I ascribe to a darker tonal balance and a softening of micro-dynamics. My only reservation was a reduction of back-to-front dimensionality during Yo Yo Ma's "1A"—a characteristic that left soundstage layering just a bit flat and made the three-dimensional acoustic of the venue less enveloping. Similarly the spread across the soundstage for the three instruments (cello, bass, fiddle) narrowed slightly making it a little more difficult to follow the interplay of the musicians. However, its excellent bass and iron-fisted control made following acoustic or electric bass lines and rock rhythm sections a breeze. During Diane Reeves' "One for My Baby," I felt micro-dynamic energy waver and dip a bit in terms of outright immediacy—heard as a modest shortfall of liveliness and transient impact. And during some of the more electric passages from pianist Evgeny Kissin's performance of "The Lark," traces of congestion dampened the piano's notes. A solid performance that still only lands it midpack in this tough field.

Furutech Absolute Power I8P
Conductor: Alpha OCC
Insulation: PE with Teflon
Connector: Furutech, rhodium-plated
Price: $352
(323) 466-9694
www.furutech.com

Kimber Kable PK-10AG

$371

Years ago, Kimber Kable's original PK10 Palladian was a jaw-dropper, with revelatory soundstaging, dimensionality, and openness. The PK-10AG picks up where the mean green Palladian left off but in a more malleable, far less costly package. And once again, it connected with me. Dianne Reeves' cover of "How High The Moon" was reproduced with a very open and detailed signature. The Kimber nicely captured the weight and resonance of Reeves' full-bodied voice in much the same way it reproduced the resonant and throaty timbre of Pieter Wispelwey's cello during Bruch's *Kol Nidre*. On a track like Holly Cole's "Heart of Saturday Night," the Kimber was an exemplar of the heavy-hitting power cord—high output, energy, and dynamics. It had a rich dense midrange with an emphasis on soundstage depth—not unlike Kimber's topflight Palladian, although not as wide-open on vocals as the survey reference. But for bass extension and sustain it is deserving of some of the highest marks in the survey. Thus for rock music, it provided a rich heavy beat, even slightly overripe depending on your system, but nicely detailed and uncompressed. Compared with the reference there were touches of treble peakiness. The PK10 offered an open, colorful, high-density sound that placed it near the top of this survey.

Kimber Kable PK-10AG
Conductor: 10AWG copper/
"spiral lay" or traditional twist
Insulation: Chroma-free TPE
Connector: Wattgate AG connectors, UL approved
Price: $370
(801) 621-5530
kimber.com

Purist Audio Musaeus Praesto

$360

As it turned out the Purist Audio Musaeus Praesto was the first cord plucked out of its box and dropped into the deep end of this survey. It set a standard that was often matched throughout these listening sessions of transparency and delicacy in the midrange, with a lighter overall balance and very good upper-frequency air. At the outset, it didn't exhibit any tonal balance anomalies, but later on I did note a slightly subtractive character when it portrayed Pieter Wispelwey's cello during the *Kol Nidre* with a little less woody resonance, making the instrument not quite as darkly mysterious. During Holly Cole's "Heart of Saturday Night," there was a little hint of midrange presence lift, a characteristic that probably bolstered the impression of enhanced transient speed (transients seemed to burst forth from the accompanying guitar and pedal steel). The Purist didn't seem quite as substantial in orchestral weight and lacked the dramatic depth and ambience retrieval of some of the contenders in this field. Although it didn't quite match the lower-octave bloom and slam of the survey reference during the Copland "Fanfare," this cord won high marks for low-level resolution, dynamic energy, and a general lack of congestion—attributes that kept the Purist Audio in the thick of the running.

Purist Audio Musaeus Presto
Conductor: Stranded 14AWG copper OFC
Geometry: Twisted
Shielding: Aluminized foil layer
Insulation: Polyvinyl chloride
Connector: Wattgate, screw termination, UL approved
Price: $360
(979) 265-5114
puristaudiodesign.com

EQUIPMENT REPORT - 13 Power Cords Under $500

Shunyata Venom3

$95

If there was a ringer in this field, the Venom was it, providing much of the density factor and dimensional qualities of some of the pricier cords. Only a bit of image definition and focus escaped it, and only a hint of image constriction deprived the Venom of the last iota of realism. Tonally it was little darker overall but with a very rich signature—so much so that after much listening I finally had to concede that there wasn't a lean bone in the Venom's slithery body. However, transient attack was a tick slower and Venom didn't quite have the depth of the reference. As a result the Venom3 sounded a bit more forward but its sound also provided an exciting experience that really lit up the low-level dynamics during the Rutter *Requiem* chorale. In this instance the layering was finely graduated and the decaying organ pedal points sustained nicely. Wispelwey's cello was wonderfully resonant while the orchestral sections remained relatively well focused rather than congealing together in soup of timbral generalities. As good as the Venom was, however, I still felt that during Anne-Sophie Mutter's Korngold the cellos and doublebasses were not quite as well defined and darkly forbidding in weight. Inner detail was good if not the final word in refinement. But for less than a hundred bucks, I had to ask myself, is Shunyata on a mission to embarrass everyone?

Shunyata Venom3

Conductor: 12AWG conductors, OFC, twist-link geometry
Insulation: TPE dielectric
Connector: Phosphor bronze contacts, medical-grade AC Connector 100% RFI/EMI shielding, UL approved
Price: $95 (360) 598-9935 shunyata.com

Synergistic Research Precision AC Basik

$250

The kid brother to the survey's reference, the Synergistic Precision AC Basik strode through all genres of music with much of the same panache as the survey reference. Tonally just a bit cooler than its Hologram cousin, its strengths were evidenced in the way it imparted depth to orchestral sections, its retrieval of ambience, and its lively and extended bass response—bigger in fact than that of the Wireworld and Kimber. In many ways Basik veered very close to the survey reference; the critical differences lay in the fact that it didn't sort out inner voices as neatly as the reference, whose greatest strength is a lack of background noise, which allowed instruments to materialize from the authentic acoustic silence of the venue rather than from an electronic glaze overlaying the presentation. The Basik was, indeed, quiet, but like every other cord in this survey couldn't quite match the reference benchmark. Still, in every other way there was no denying the family resemblance of the Precision AC Basik—from its penetrating dynamics, to its finer gradations of low-level detail, to its immersive density factor. There was just a hint of added sibilance during Dianne Reeves' "One For My Baby," but overall I'd have to conclude that, like Shunyata with its Venom 3, the Synergistic team may well have outdone itself on the value side with Basik and, at $250, ended up picking its own pockets.

Synergistic Research Precision AC Basik

Conductor: 14 AWG, quantum-tunneled copper, proprietary geometry, highly shielded
Insulation: Modified PE
Connector: Synergistic G07, quantum-tunneled
Price: $250 (949) 476-0000 synergisticresearch.com

Tara Labs RSC Prime

$500

Don't be fooled by the plain-Jane, black wrapper of the Tara Labs RSC (Rectangular Solid Core) Prime. It may look like a stock OEM power cord but its performance was superb. Both fluid and immersive it delivers a big, dense sound in both timbre and bass definition. Although there's a good amount of midrange warmth, its character in the upper octaves was a bit drier and brighter than the survey reference. Fortunately, it was largely free of upper-frequency peakiness. On Mutter's violin, the RSC's voicing was smooth and refined, with one of the sweetest and most open upper registers in the survey. With its slight forwardness and quick-footed personality, it's a cord that can do rock or classical. Image or soundstage congestion was slight even in the the most complex orchestral passages, but there were some instances where I felt the immediacy factor could be bettered. For example, in the hands of the reference power cord I could follow in detail the rippling air of Mutter's vibrato and nearly feel the brushes along the drumhead of the snare during "One For My Baby." With the Tara (and to a degree all of the survey's power cords), this kind of low-level resolution was difficult to match. All in all, a power cord with no significant weakness.

TARA Labs RSC Prime

Conductor: Rectangular solid core conductors
Insulation: TARA Labs' proprietary Aero-PE
Connector: Wattgate wall plug and IEC
Price: $500
(541) 488-6465
taralabs.com

Wireworld Electra 5.2

$360

Whatever smarts Wireworld uses to brew its speaker wire must've filtered into its power-cord recipe. Like its elite Platinum and mid-line Eclipse cabling, Electra has no tonal dips or peaks. The result is an even and immersive energy that places this cord up with the best in this survey. In fact, its powerful dynamic character, and its composure with thickly layered orchestral material, brought to mind the Kimber Palladian PK10. Images were not as widely spread as I would have wished, but no apologies were needed here either. With a vocalist like Jennifer Warnes the Wireworld offered a velvety warmth and weight that grounded the singer's body to the soundstage. However, I found that in comparison to the survey reference Holly Cole's vocal during "Jersey Girl" was skewed to a slightly cooler temperature, and I noted a very modest veiling on low-level percussion cues. The widely detailed soundstage was very impressive. Although there was little congestion *per se*, the Wireworld seemed at a slight loss, in comparison to the survey reference, when it came to sorting out the full harmonic and imaging complexities of a high-revving orchestra, but on the whole it struck a fluid balance of resolution and natural weight. The Electra's flat physical profile made these power cords among the easiest to handle. Though the Wireworld didn't quite equal the preternatural silence and immersiveness of the survey reference, this is still a cord that struck all

Wireworld Electra 5.2

Conductor: Silver-clad copper-alloy contacts
Insulation: Composilex Connector: Silver-clad brass contacts
Price: $360 (954) 680-3848 wireworldcable.com

EQUIPMENT REPORT - 13 Power Cords Under $500

VooDoo Ultra Wave and Vector Dragon

$375 and $425

Voodoo specifies the Ultra Wave for analog power and the Vector Dragon for digital front ends. Since both were within the survey's price cap and would likely be offered to customers in this configuration, we tried both. The Voodoos were high-output cords with a forward sound and hint of a darker tonality that placed Pieter Wispelwey's cello nearer the edge of the stage than in a mid-stage central pocket. In that vein orchestral layering and soundstage cues were well defined, but I found the soundstage a hint narrower and not quite as immersive or as dimensional as the survey reference. Occasionally on a track like Jennifer Warnes' "If It Be Your Will," bass could sound slightly overripe and the vocal less rooted, but overall this was a very well integrated performer with music always sounding of-a-piece. More impressive was its reproduction of tracks from Clark Terry's *One On One* and the soundtrack to *Good Night and Good Luck* where transient energy and speed are key elements that really pace the percussion and rhythm sections and impart a realism and liveliness to this pure acoustic music. The track "Misty" produced a gorgeous piano sound that was both warm and naturalistic—dynamic rather than hard or icy. The VooDoos captured the player's touch—a feat that made it a near match for the survey reference in micro-dynamics. Add to that a sumptuous low end and the net result was a visceral performance with many satisfying qualities.

VooDoo Cable Ultra Wave

Conductor: 10 AWG silver-plated copper/concentric geometry

Insulation: Teflon and polyethylene dielectric/polyethylene-mesh jacketing

Connector: Wattgate 320i IEC and Hubbell 5266 AC Plug

Price: $375 (510) 535-9464 voodoocable.net

VooDoo Cable Vector Dragon

Conductor: 10 AWG silver-plated copper/helical geometry

Insulation: Teflon and polyethylene dielectric/polyethylene-mesh jacketing

Connector: Wattgate 320i IEC and Hubbell 5266 AC plug

Price: $425 (510) 535-9464 voodoocable.net

Conclusion

My view is that power cords serve the system in much the way speaker cables and interconnects do—by honing and polishing areas of resolution that the owner considers a little soft, dull, sharp, or rough around the edges. That said, in terms of straight-line performance, clearly this was a tightly grouped collection—tighter even than my descriptions allowed. As alluring as it is to anoint a single "Best" in a survey, when it comes to wires so much is dependent on their synergy with associated system components that these impressions will better serve you as a guide to narrowing down your choices to a select two or three for audition. After that, your own ears won't lead you wrong. tas

Audience Au24 powerChord

Alpha Dog

Neil Gader

In all honesty, the AC power cord survey I conducted in Issue 208 turned out to be a kind of mind-blowing experience. I expected differences among these cables but not to the extent that I observed. In that article I referenced a density factor—an enveloping mix of harmonic and dynamic saturation—that each cord conveyed to varying degrees. In my summary I stated that "they [all] tended to speak the same language but with different accents and inflections." Shortly after completion of that piece, Audience offered me its premium Au24 powerChord for review. After my experience with these mid-priced cords, I was intrigued.

The Au24 powerChord is a low-resistance, low-impedance, unshielded design that uses 684 strands of high-purity Ohno mono-crystal copper that equates to 10 AWG for the entire cord. WattGate IEC/plugs are standard equipment, though other connectors are also available. The Au24 is very flexible, which means easy handling and potentially less damage to conductors.

In tonal color, there's a lighter cast to the Audience's balance that gives Shelby Lynne's "Just A Little Lovin'" vocal firm image definition, and a little quicker attack on the steady high-hat transients on this track. The Audience—and this is subtle, mind you—hones in on instruments with a highly discerning focus that tends to resolve images and preserve micro-detail and micro-contrasts more clearly. The Audience shares much in common with my long-time references (my references during the survey as well), the Synergistic Research Tesla Hologram. For example, during Mark Cohn's "Ghost Train," both cords have a smooth open top-end and an effortless flow of energy in the midband. During the Holst Suite No. 2 with the Dallas Wind Symphony [Reference Recordings], the Audience in particular evoked a more forward signature and an immediacy that seemed to "push" wind instruments into the hall. Only in the bottom octave did the Synergistic distance itself from the Audience. It was a shade denser, more extended, and harmonically more complex in the bass during Janis Ian's "In The Winter" from the terrific LP reissue of *Between The Lines* [Boxstar/ABC].

Eugene Kissin's solo piano on *Pictures at an Exhibition* [RCA] was most revealing of the subtle distinctions between the Au24 powerChord and my reference AC cord. It called to mind the contrasting sonorities of pianos manufactured by Böesendorfer, Bechstein, and Steinway—the weightier more somber notes from one, the more brilliantly illuminated voicings from another. Seen in that light the Audience portrayed rapid single note lines with slightly better articulation, crisply struck and succinct. The Synergistic seemed a bit slower, more throaty, and summoned a hint more harmonic bloom, as if the hammers had a bit more felt on them.

The Audience's signature hinges on being a top-down inside player, capturing a breath more air off a baritone sax mouthpiece on *ReVisions* [Chesky], and a little more air when Joni Mitchell soars above the treble clef on *Blue* [Reprise]. In contrast, the reference cord's largely bottom-up macro approach leans more to the seductive, spatial aspects of the performance. Interestingly in soundstage cues the Audience paints a more vivid soundstage in width and image spread, while the Synergistic demonstrates stronger front-to-back dimensionality. It's like looking at the same canvas in an art museum from slightly different perspectives.

The Audience Au24 powerChord is a superb AC cord—an alpha cord in a virtual dead heat with another alpha cord. It was a performance that I could liken to the archery contest in *Robin Hood* where the Sheriff's reigning champion strikes a bullseye followed by our hero who splits the presumptive winning arrow down the middle. Different approaches, yet on balance it really was that close. But, for this audience of one, it was a feat that sure struck a bold chord in me. tas

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AUDIENCE
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audience-av.com
Price: $2200 (6' pr., $150 per foot additional)

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Shunyata Research Hydra Talos and Triton Power Conditioners

Game-Changers

Kirk Midtskog

There is probably no other segment of the specialty audio market that generates more frustration, even disdain, than "power products." We have accepted, however begrudgingly, that some aftermarket upgrades can improve sonic performance: signal cables, audio racks and speaker stands, vibration-control devices, power cords, room-correction products or treatments, etc. Must we also concern ourselves with cleaning up the AC power? Well...it can help. A lot more than I thought.

Considering the high prices of many high-end audio items, the Shunyata Research Talos and Triton power conditioners must justify their asking prices of $2995 and $4995, respectively, on the basis of performance. I know, I know. We are talking about a box that scrubs AC power. As something of a skeptic going in, I was fairly confident that my 20-amp dedicated AC circuits would not really need much help. Besides, my impressions of power conditioners gleaned over several years were similar to that of many other's—*mixed*. The cliché about two steps forward and one step back summed up my experience with units from various manufacturers—including an early version of Shunyata's own Hydra 8.

The current two models represent a significant advancement in Shunyata's approach, according to Caelin Gabriel, the creator of all Shunyata merchandise. I do not know about the technology of previous Hydra models, nor am I an electrical engineer, so I cannot speak to the various differences between the current models and past Shunyata efforts or to the engineering of Shunyata's gear. The whole field of power conidtioners is somewhat plagued with "official explanations" for a product's superiority, which, too often, just end up frustrating consumers. I tend to focus on sonic performance, reliability, and viability rather than a particular topology or design philosophy.

What I can pass on about the design of the Talos and Triton is that Mr. Gabriel has studied for years how to reduce power-line noise without impeding power delivery, and takes a highly systematic approach to solving the problem that involves a great deal of measurement. There are three important features unique to the new Shunyata units. First, they use a tiny encased network (called a Multi-Phase-Differential Array) designed to cancel out (without the use of capacitors) thirty targeted noise products generated by the power supplies of electronic devices on all three power legs—hot, neutral, and ground. Second, all conductive materials that connect to the main "zero-point" buss system are made of the same brass alloy to reduce spurious interactions between different metals. Third, there are three large cylinders, one for each power leg, through which each leg passes and, in so doing, contacts a relatively large amount of a high-frequency noise-reducing compound, ZrCa 2000. Other than offering eight outlets compared to the Talos' six, the Triton has these additional features: larger (and heavier) ZrCa 2000 cylinders; heavier-gauge custom-made VTX (hollow-core) wire; a heavier (double) gauge buss bar; and, finally, two MPDA networks instead of one. The Triton also has a nicer faceplate. Both units have a standard IEC C20 (20-amp) inlet, which requires an IEC C19 power cord. Shunyata supplied a full set of Anaconda power cords and signal cables.

When listening for sonic results, I noticed that the Talos and Triton performed better when left in use for about a day after they have been unplugged for a few days. The pattern emerged in my system and surfaced again at a friend's house. When I left a Talos with him for four days, he commented that he was able to hear much more positive effects after at least a day of use.

EQUIPMENT REPORT - Shunyata Research Power Conditioners

This may handicap the Shunyata units a little bit in quick "shootouts." Mind you, I heard positive things from the Talos and Triton from the start, but they both improved when allowed to run a day or two.

I found the experience with both Shunyata power units to be revelatory. The positive qualities they bring to bear go beyond the minutiae of finer leading edges and truer tone colors and textures brought about by lowering the noise floor. Those things are, in fact, much improved by the Talos and Triton, but the real benefit comes when those attributes, and others, improve the music-playback experience on the whole. To sum up some of the other sonic improvements, the Shunyata units (I will compare the two shortly) seem to allow notes to emerge from a quieter background a bit sooner and continue a bit longer before they decay back into that background. The distinctive character of instruments and voices *in an acoustic space* is more clearly rendered. Subtle shadings of intensity that musicians use to create emotional identification or meaning come though with greater ease. Individual images and the soundstage itself acquire newfound depth and texture. Different musical moods seem to develop more readily and with greater contrast. All this from *merely* cleaning up the AC power quality.

On Tord Gustavsen Trio's *Being There* [ECM], "Draw Near" has some subtle passages that can come across, on certain systems, as dull in a moody, Scandinavian, Third Stream way—an acquired taste, one could say (rather like Aquavit). The music can sound flat, both artistically and dimensionally. Playing the same cut with the Talos on a friend's Ayre K-5xeMP and Rogue Stereo 90 system made the instruments take on greater depth and texture. Gustavsen's touch on the piano created subtle dynamic shadings, which seemed to propel the piece forward with a restrained intensity that made the performance more interesting. That theme of creating greater image density and soundstage depth stayed the same no matter the speakers or electronics (or cabling). My solid-state system sounded more liquid and three-dimensional, acquiring some of the positive attributes of fine tube gear. Edgy CDs sounded more relaxed and less ragged, and truly fine CDs sounded more like SACDs. Good LPs also sounded better than usual. No matter the recording or the gear, the Talos and Triton significantly improved the sonic performance.

Neither unit was dependent on an all-Shunyata setup to perform well. In fact, if I had to choose where to allocate power-related upgrade funds (in a four-device system) between Shunyata Anaconda power cords or a Talos/Triton unit, I would buy a Talos/Triton—at least in the context of the Wegrzyn Copper Slam power cords I have on hand. Both Shunyata units imparted greater sonic improvements than switching from my Wegrzyn 15-amp power cords to all Shunyata Anaconda power cords (without a Talos or Triton). The Anaconda power cords are fantastic, much better than the Wegrzyn, but at about $2000 each Anacondas will add up to an appreciable amount if you need a few of them. The best segment of the power chain in which to place the highest-quality power cord is between the wall and the Talos/Triton, although a $750 Shunyata Black Mamba HC 20-amp cord still delivered a great deal of the Talos/Triton magic. No doubt about it, though, adding the whole Shunyata treatment (all-Anaconda power cords, Anaconda signal cables, and a Talos or Triton) ratchets up performance significantly.

The Triton did not inhibit bass response or restrict dynamic impact. I heard no negatives, here. I played a few heavy bass and dynamically charged cuts with everything plugged into one dedicated circuit, then played the same cuts with the same electronics plugged into the Triton (plugged into the same circuit). No restriction. If I were pressed into a corner about whether the Talos may have differed from the Triton in this regard, I would concede that the Triton had a *slim* edge in bass density over the Talos, but no difference in dynamic impact. I am not convinced that everyone's system would draw attention to this, though.

Other differences are apparent. The Triton comes across as even better at reducing the background haze that affects music playback. By means of greater image solidity and soundstage depth, more venue cues, and subtler sonic details, the Triton allowed my system to sound even more lifelike than the Talos did, with more of a relaxed, non-electronic quality. Both units gave the music the chance to unfold more completely over time (and with more information), revealing more clearly what makes instruments sound like themselves. The Triton has an even greater degree of this calm, free-flowing feeling, which is somewhat similar to the way some people describe the difference between the more up-tempo sound of an unbalanced (RCA) circuit compared to the seemingly more relaxed sound of a fully-balanced (XLR) circuit. The construction differences between the Talos and the Triton amount to significant performance differences, in my view. Caelin Gabriel mentioned that the Talos will deliver about 80% of the Triton's performance. I think that assessment understates the Triton's abilities. I would put the Talos at about 65% of the Triton.

I found the positive impacts of the Talos and Triton to be extensive. Even if you think your system has really hit its stride, you just might be pleasantly surprised by how much more overall performance can be had by adding a Talos or, especially, a Triton. Highly recommended. tas

SPECS & PRICING

Hydra Triton
Outlets: Eight
Power rating: 2400W (125 VAC)
Price: $4995 (requires a C-19 20A power cord)

Hydra Talos
Outlets: Six
Power rating: 2400W (125 VAC)
Price: $2995 (requires a C-19, 20A power cord)

SHUNYATA RESEARCH
26273 Twelve Trees Lane, Suite D
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No Tradeoffs

Synergistic Research Tesla PowerCell 10 SE AC Conditioner

Jacob Heilbrunn

A few years ago at the Rocky Mountain Audio Fest, Synergistic's Ted Denney III ushered Neil Gader and me into a small, dark hotel room that featured his latest Tesla cables, which used active shielding sourced via a complement of different tubes. Different tubes shouldn't have affected the sound, but, of course, they did. After that experience, I went on to try some of Synergistic's REL subwoofer cables, which added to the potency of the RELs, and not by a small margin.

So when the chance came up to try Synergistic's latest power conditioner, I bit. Having tried a fair number of conditioners over the years, I've become less enamored of them the more I've used them. The pluses and minuses almost always seem to balance out in the end. Sure, there's the initial excitement of hearing a few notes that weren't there before or a blacker background. But then reality begins to intrude. Weren't the highs a little more extended before I put conditioner X into my system? And so on. If it was just a matter of tradeoffs, it really didn't seem to be worth the outlay. Recent exposure to the latest conditioners from Audience and PS Audio suggested, however, that matters have begun to change for the better.

The $5000 Tesla PowerCell 10 SE, which is supplied with Synergistic's top-of-the-line Tesla Precision AC cord, thus offered another chance to see if the conditioning field has continued to advance. Unlike many conditioners, it doesn't feature chokes or transformers. The chassis, Synergistic says, is electromagnetically inert, but on the inside it conditions the electricity by subjecting it to various electromagnetic fields. The power cord for the unit also allows for active shielding. The unit is said to be non-current-limiting—which many conditioner manufacturers say, but which often turns out not to be the case—and is lightweight, making it easy to move around.

EQUIPMENT REVIEW - Synergistic Research Tesla PowerCell 10 SE AC Conditioner

Nor does it have an on-off switch. You simply use its locking power cord and plug it into the wall. It's best to have any equipment you intend to use with it turned off before you plug it in. After letting it burn in for two weeks, I inserted it into my system, adding one component at a time.

The difference was surprisingly dramatic. The Einstein preamplifier I've been using recently is quite dynamic, but can be a little astringent at times. The Synergistic PowerCell immediately offered a warmer and more relaxed presentation. It also made the Wilson MAXX 3 loudspeakers sound more elegant, particularly in the highs. By comparison, the sound before I added the PowerCell seemed somewhat disjointed. In addition, the conditioner endowed intricate passages with greater resolution, helping to delineate musical lines more clearly. Overall, the PowerCell had a holistic effect, drawing me further into the music.

One of the Tesla's most palpable improvements was its ability to open up the soundstage. On Simone Dinnerstein's intriguing recording of Bach's *Goldberg* Variations [Telarc], which features a reconditioned Steinway Model D concert grand played in the town council of Hull in Northeast England, it was easier to hear both the reverberations of the piano within the concert hall and its rich, earthy sound, closer almost to a Bösendorfer than a Steinway. The sound of the felt hammer hitting the string was also more articulate. As always, such clarity may be something of a double-edged sword—recordings provide a lens into music-making that a concert hall simply will not offer, further proof, I think, that it's very tricky to compare CDs with live music. But honest to gosh, I almost swear you can hear the aged quality of the wood.

The ability of the PowerCell to help disentangle complicated passages was underscored by a wonderful piece, W.L. Thompson's "There's A Great Day Coming" [Gala], which is played by six trumpeters led by the New York Philharmonic's Philip Smith. There was no suppression of dynamics; if anything the PowerCell conveyed a greater sense of authority and body. The burnished sound of six trumpets popping up seemingly out of nowhere was quite striking. In fact, I would say that it was the closest reproduction of the actual sound of a trumpet that I've heard.

But the most striking improvement rendered by the PowerCell was the ease with which the music unfolded. The presentation simply seemed more relaxed and self-assured. On Angela Hewitt's recording of Bach's *English* Suites [Hyperion SACD], for example, the piano simply sounded less constricted and compressed than it had previously. The graceful, composed nature of her playing emerged more fully.

Was the PowerCell, however, blurring transients? Not to my ear. I can see that not everyone will gravitate to the PowerCell. If your system tends to the warm, lush, rich side, you might not welcome the extra dollop of plushness that the PowerCell provides. But I wouldn't consider my overall system, given the number of tubes in it, on the dry side, even when using solid-state amplification. To my mind, the fuller presentation of the PowerCell was more authentic. What's more, the PowerCell really does seem to be non-current-limiting—it does not choke amplifiers, which, generally, are best run directly into the wall.

Perhaps the performance of the PowerCell shouldn't be surprising. The blunt fact is that the electricity flowing into most homes is pretty wretched. I have gone to some lengths to try and improve it by, among other things, installing a dedicated, active grounding rod, as well as a separate Isoclean breaker box and a number of dedicated lines running from it. Even special wall outlets can make an improvement. But there's always more to be had.

Conditioning makes a lot of sense, but the rub has always been that it often seems to subtract as much as it adds. Still, my sense is that it's hard to go too wrong with the PowerCell 10 SE. It ably improved the performance of a number of components and is simplicity itself to use. No doubt conditioners will continue to improve in coming years, and they seem to represent something of a black art. But the PowerCell represents a startling and welcome advance, suggesting that the inventive mind of Ted Denney continues to seek new ways to enrich musical reproduction. It would be too much to say that the PowerCell 10 SE provides a romantic presentation, but it may well win your heart. tas

SPECS & PRICING

Synergistic Research Tesla PowerCell 10 SE AC Conditioner

Number of outlets: 10

Dimensions: 17" x 5" x 14"

Weight: 18.5 lbs.

U.S.

Price: $4995

SYNERGISTIC RESEARCH, INC.

17401 Armstrong Ave.,
Suite 102
Irvine, CA 92614
(949) 476-0000
synergisticresearch.com

Shunyata Research Founder Caelin Gabriel talks with Robert Harley

Robert Harley: Tell us about your background and how you got started building AC power systems for audio.

Caelin Gabriel: In school my area of study was the physical sciences. Once out of college I was recruited by a military division of the N.S.A. I was trained in the areas of digital data acquisition and encoding, which included the study of electronic power supplies. My work in the military had to do with the development of equipment that could detect and lock onto low-level transmitted signals that were theoretically impossible to resolve at that time. Shortly after leaving the military, my work involved studying the effect sound had on human biology. Later, I worked in the computer industry, primarily with high-speed networking gear like Ethernet devices, routers, bridges, and fiber-channel components.

RH: Did working on low-level signals influence your design of AC power-conditioning systems?

CG: Yes, it became the foundation for my ongoing research into the complex nature of electronic power supplies and how they affect low-level-signal acquisition and resolution. My work in this area had crossover applicability in the role system-generated noise plays in audio recording and playback. Contrary to popular theory and design practice, we learned that the radiated EMI and power-related noise generated within systems of interconnected electronics was a more likely threat to the resolution of detail than noise sources from outside of the system. Addressing the near-field distortions and high-frequency noise generated by the bridge rectifiers, digital architecture, and switching supplies in the system itself brought about the greatest improvement in the resolution and fidelity of reproducing detail.

RH: What are some misconceptions you think that audiophiles have about AC power and power conditioners?

CG: There are quite a number, so I'll address only the most common related to our research and approach to designing power systems.

The primary misconception considers that AC delivery to electronics is a simple, low-frequency process since AC power is only a 50Hz or 60Hz event. This simplistic concept leads directly to products that employ a variety of multi-outlet low-pass filters involving the use of transformers, chokes, or inductive coils. These designs are all based on the premise that protecting electronics from power-grid related spikes, surges, and noise will deliver superior sound and performance from today's best AV systems. On the surface, this seems to make sense and most of these devices work as advertised by redirecting, filtering, or regenerating the incoming AC waveform.

The problem with these concepts is that they do not account for the dynamic way in which power supplies function or the effects of noise generated by and shared within the electronics systems themselves.

Electronic power supplies don't pull current in a linear fashion like a light bulb, fan, or simple motor would. The full-wave bridge rectifiers and digital switching supplies in electronics draw hard on the AC line, pulling instantaneous bursts of current off the highest and lowest peak of the sinewave. This happens within milliseconds in order to fill power supplies' storage capacitors. What this means is that from the perspective of power-supply function, AC transmission is a high-frequency, not a low-frequency event. If electronics are plugged into a low-pass filter or inductive device, this leads to two fundamental problems. One, inductive devices that are in line will slow the charge rate to the power-supply capacitors. From our experience the impedance of instantaneous current flow to power supplies in audio equipment leads to a notable loss of phase and timing accuracy in sound. This is most often heard as a loss of dynamics or immediacy. The second, equally problematic issue is caused by the low-pass-filters that were intended to improve sonic performance. They block external noise by nature of their inductive reactance; however and conversely, they will also prevent system-generated noise from finding an exit path. This aspect will tend to trap power-supply-generated

INTERVIEW - Caelin Gabriel talks with Robert Harley

noise and reflect it back to the component and also contaminate the power line to the other equipment that is connected to the same power conditioner.

The primary design goal for our power distributors is to maximize instantaneous current delivery while minimizing inter-component noise contamination. We use simple-order filters to eliminate adverse power-conditioner reactance, ensuring that our conditioners will perform consistently with the broadest possible range of electronics systems. When the designers of top-performing recording and playback electronics create their power supplies, if they wanted another inductor in line with the primary coil of their transformer, they would have put it there. If they wanted some other type of reactive device that resonates at certain frequencies, it would already be within the design. Manufacturers of today's finest-caliber sound and recording components designed their power supplies to interface with the original AC waveform, not one that has been processed, re-directed, or impeded.

As much as possible, our goal is to follow the Hippocratic principle of doing no harm. Then, if we can do something positive without creating corresponding negatives, that's what we would want to design into our products. These principles are what lead us to develop the first passive power conditioner of its kind in the original Hydra. This is also what has led to the support we receive from the electronics manufacturing community and studio industry.

RH: Why does the last six feet of power cord make any difference when miles of bad wire precede it?

CG: This goes back to the first misconception, which is that power transmission is a simple concept. In actuality when you're connecting multiple devices to the power line, you're essentially connecting them all to the same electrical point, so you're tying them all together. If just one of the components in any connected system is back-loading noise into the power supply and ground, then all of the devices that are connected to that power line are going to be affected by it. In most cases there are several components in each system which generate and transmit enormous amounts of high-frequency noise that no power supply, no matter how well designed, is equipped to manage.

Our power cords are designed to act as sympathetic, noise-isolated extensions of the primary winding within a component's power supply. Seen this way, their function takes on a more prominent and understandable role. They represent the initial outward electrical interface for each piece of electronics in the system. That initial interface can act as an antenna for radiated and ground-borne noise or it can be engineered to isolate the power supply from internal and externally radiated EMI, RFI interference.

Power cords do not represent the last few feet of an AC grid leading to a component; they are the first few feet from the perspective of the component's power supply. The further a potential noise source is from a component, the less impact it will have upon the circuitry within the component.

RH: What are the primary mechanisms by which AC power affects sound quality?

CG: This is almost a misconception in itself and so I'm going to start from the beginning with a statement. It doesn't affect sound quality—it is it. First, you must understand a fundamental principle. In audio we think that the source is the signal that is embedded or encoded on some media, i.e. a record, CD, or tape. The actual source of what we hear is the power as supplied from the wall, rectified and filtered by the power supply into a relatively stable DC source. It is this DC power source that is the fundamental source of everything. It's what moves the coils in a speaker.

RH: The audio signal doesn't get "amplified"; the output transistors modulate the flow of DC from the power supply in a replica of the input signal.

CG: Absolutely right. So the source for the power is the AC that comes from the wall and is manipulated in such a way that it's ideally stable, unaffected, noiseless. But we know this is not the case when we actually build devices. If the power source is unstable or contaminated then the output will be also. If it varies or if there's some other anomaly in the power source you will always hear it. So power is the foundation of reproduced music in audio systems.

Having made that point clear there are two primary mechanisms related to AC power that affect sound quality and still others, which are less quantifiable. Current-delivery plays an obvious role, especially near the power-supply inlet. The conductors are important including the type of metal, gauge, wire geometry, and dielectric type. Quality contacts and reliable terminations are critical to an end result.

The other primary AC-related factors that can affect sound are electromagnetic field effects. These include radiated 50Hz-60Hz AC, radiated rectifier-induced pulses, radio frequency interference from electronic circuits kicked back to the power inlet and power cabling. And of course, all the external sources of RFI such as WiFi, light-dimmers, cell phones, and other electronics.

There's actually a third causative aspect to power system performance. The third one is what most people don't want to talk about. There are many aspects which can be measured and there are those which cannot. When doing research year after year, you will occasionally stumble across something that affects sound quality but is not possible to measure. You can hear the effect, you can repeat it, but you can't find a scientific foundation to attach it to. These things do exist, and if you want to have the best products you have to pay attention. If you just put blinders on and say I'm only going to address the things that I can measure, I don't think you can be at the top of your field—not in this industry. This is why we test everything—not just with spectrum analyzers and oscilloscopes but with listening tests also.

Based on 25 years of research it is clear to us that system-generated, -radiated, and -propagated noise has by far the most profound effect on the performance and resolution of the critical timing, phase, and detail elements in sound. Power cords and power distribution should act as near-field isolation devices to minimize the effects of all these forms of noise. They should accomplish this without interfering with the current flow to, or the performance of the attached electronic equipment.

INTERVIEW - Caelin Gabriel talks with Robert Harley

RH: What is the most effective method of judging the performance of AC power products?
CG: Really, no differently than you would judge electronics or speakers with a few key exceptions. Make sure you apply four to five days of current through to the power cord or power distributor, if it is new. If you are considering replacing stock cords, replace all of them at once and compare. Otherwise a single quality AC cord could merely highlight negatives or have its effects mitigated by all the stock cords in the system. Evaluate stock cord replacements as a system whenever possible. Keep in mind that a power-distribution chain functions ideally as an integrated system and not as a random accumulation of disparate parts.

We design our products to function ideally as a system, so comparing one of our power cords in a mixed system is of little value other than to judge the one cord's synergy with other random products. Do not mix or cascade power conditioners or you will end up with a very reactive and possibly unstable power delivery system. Do not compare power conditioners while another unit is plugged into the same outlet—they interact with one another even if they are off.

RH: What's different about Version 2 of the V-Ray?
CG: Other than more minor updates, the Hydra 8 and Hydra 8 V-Ray had gone unchanged since their inception almost eight years ago. We developed a new version of the noise-reduction compounds that absorb noise and dissipate it as heat within its molecular structure. However, the new compound, that we call ZrCa, proved to be dramatically more transparent and achieved higher levels of resolution compared to the old compound. The new Hydra 8 v2 and Hydra V-Ray both benefited in the areas of ultimate transparency, immediacy, and dynamics from this single change. We have also made refinements to the capacitive filter network, which brought about even greater levels of resolution and clarity.

RH: What's new in the CX Series of power cords?
CG: Our ongoing research into conductor design and technology proved that with our patented Helix geometry, adding conductor mass to the design made dramatic improvements in performance without adding cost to the existing models. Designing the new products with hundreds of individual interlaced conductors as opposed to between 10-20 conductors for the previous generation made a significant difference in performance. We have been very pleased with the response to the new CX models from our dealers, studios, and electronics manufacturers.

RH: Did you approach the V2 products and the CX Series with a goal of achieving a specific sonic result?
CG: No, we never do that. What we do is we are constantly testing and researching anything that catches our interest, and so if we develop a new conductor technology or a new geometry or a new trial process or something that we feel is significant to the sonic results, then we will take that and incorporate it into the next version of the product. We are in a constant state of research, but we don't design with anything specifically in mind. We're always trying to just improve the products in general while trying to drive down the retail cost for the products. This is what has kept us competitive. tas

EQUIPMENT REVIEWS

Accessories

Critical Mass Systems MAXXUM Equipment Stands and Racks

MAXXimum Performance

Jonathan Valin

If you've been to trade shows over the past two or three years in Denver, Vegas, or Munich, you're already aware of the Chicago company Critical Mass Systems. Its equipment stands have been regularly featured in some of the highest of high-end rooms—and its top-line products, the gorgeous MAXXUM rack and stand, have been purchased by several big-time industry players for use in their own homes.

Of course, you have to be made out of money to afford a MAXXUM rack, which (depending on size and finish) retails for between $17k and $40k. However, Critical Mass makes far more competitively priced stands/racks in its PXK and QXK Series and a variety of shelves that incorporate many of the same design elements found in the MAXXUM.

Though I've known Critical Mass Systems' proprietor and chief engineer Joe Lavrencik for nearly ten years, the truth is I that I haven't always been an uncritical fan of his work. In fact, throughout most of the past few decades I haven't unreservedly liked *any* "vibration-suppression" support system, which to my ear didn't just kill resonances but also killed the dynamic life of the equipment sitting on them. With Lavrencik's latest designs I'm happy to say this is no longer the case. Indeed, in his current Critical Mass racks and stands Joe and his gifted engineer son Justin have found a way of stripping away resonance-induced coloration, ringing, grain, and blur without (and this is, uh, critical) any diminishment of the attributes that led you to choose your front-end and electronic components in the first place. On the contrary, their virtues are made plainer and so are their flaws, which, to me, is the very definition of transparency to sources.

For audiophiles who've been around as long as I have, controlling resonances in a hi-fi system has always been a key concern—and how to do this without throwing the musical baby out with the resonant bathwater has always been the key issue. Back in the day, when all of us listened to LPs and turntables, it was obvious that record players were picking up floor-borne and air-borne vibration. Indeed, most of us used to walk on tiptoe when we came near our 'tables, lest a heavy footfall induce record skipping. At that time the only fix seemed to be mass, and it was a rare audiophile who didn't own a thick slab of marble or granite on which he mounted his 'table, although the truth was that marble or granite slabs (even when they were suspended on shelves attached to

EQUIPMENT REVIEW - Critical Mass Systems MAXXUM Stands and Racks

studs in the wall) didn't really damp resonances very well. This was because damping via mass alone wasn't the answer to resonance control—just as damping via mass alone isn't the answer for a loudspeaker enclosure.

For me, the first significant step in resonance control (or resonance dissipation) were Tiptoes—those pointy aluminum cones set beneath a component in a tripod-like pattern (or attached to the component as replacements for existing rubber feet). What Tiptoes seem to do was change the "Q" of whatever was set on top of them, typically turning a long-duration, broadband resonance that muddied up the midbass into a narrower-band, shorter-in-duration resonance that seemed to vacuum that mud away. Although the effect of Tiptoes was dramatic and predictable, it was also less than ideal, in that Tiptoes didn't just reduce the duration, width, and intensity of ringing in the midbass; in the process they also tended to depress the "power range" of 100Hz–400Hz, producing greater clarity in the low end at the price of a leaner-than-life overall tonal balance and a slight accentuation of the upper mids. Still and all, adding narrower "Q" to the resonance-control formula was a great improvement over damping via mass alone.

I'll skip over various cushioning pads, sandboxes, and air-bladder devices since all of them were either overly deadening or overly springy (and none of them worked consistently well) to get to the next big step forward in support systems: Stands and racks that used constrained-layer construction, in which different materials were combined to ensure that mass, stiffness, and damping were addressed simultaneously (and ideally). In theory, constrained-layer technology was *the* significant breakthrough in resonance control. In practice, coming up with just the right formula of mass, stiffness, and damping to dissipate kinetic energy as heat without also draining away the tone color and dynamic life of the product seated upon the stand or rack was a tricky proposition. This was about the time that I first began to listen to Joe Lavrencik's Critical Mass stands, and, as I noted, while they improved clarity his early efforts tended to sit on dynamics, turning an exciting presentation into an overly polite one.

Throughout most of the first decade of this new century, I relied on Lloyd Walker's Proscenium equipment rack (and amplifier stands). Like his 'table, Lloyd's rack used and improved upon some of the better ideas of the past. In combining mass-loaded support struts (filled with lead shot) with thick, beautifully finished rock-maple shelves, and massive Tiptoe-like "Valid Points" seated on lead pucks, Lloyd was effectively making his own version of a constrained-layer-damped support-system, and the stand did indeed lower noise and increase resolution, without touching dynamics or deracinating tone colors, although it didn't kill floor-borne resonances (or it didn't in my loose-floorboard listening room).

At the end of the decade I got the chance to try Peter Bizlewicz's outstanding Symposium Acoustics Isis rack, which, in its pioneering use of aircraft-aluminum cups and tungsten carbide balls, introduced a new element to resonance control—roller bearings. By using constrained-layer-damped shelves in a beautifully machined aluminum rack, with both the shelves themselves and the struts on which the shelves sit separated from one another by roller bearings, Symposium's Isis did not just turn resonant energy more efficiently into heat; it also seemed to more effectively drain that energy away without feeding it (or select parts of it) back into the items sitting on the shelves. I say this because, in the listening, there was a *marked* increase in neutrality and transparency when components were seated on the Symposium stand. It was as if the sonic presentation were "deburred"—little areas of tonal, textural, and dynamic roughness (what I assume were little resonant peaks) were smoothed down into uniformity. The presentation might have been just a touch "politer" dynamically than it was via, oh, the Walker Proscenium rack (although nowhere near as polite as it was with Critical Mass' first stands), but it was also much smoother and more neutral in balance and much more subtly detailed, with absolutely top-notch resolution of very-low-level detail and superior isolation from footfalls. (I still use the Symposium Acoustics Isis rack and recommend it.)

It was soon after my very positive experience with the Symposium Isis rack that I came across Joe's MAXXUM stands at a CES show. It was obvious from looking at these gorgeous objects that Lavrencik's thinking about equipment stands—and his method of constructing them—had greatly advanced. Where Critical Mass' mid-2000s efforts had looked a little "garage-built," the MAXXUMs appeared to be anything but.

Constructed of aerospace aluminum alloys, surgical-grade titanium, and tungsten carbide, the racks and stands use an X-frame architecture. In the MAXXUM multi-level racks, four thick, round, beautifully anodized and gorgeously painted aircraft-grade aluminum struts are vertically coupled to the CNC-milled, horizontal, X-shaped, aircraft-aluminum frames below and above them. The titanium bolts used to attach the struts to the frames (and to each other via openings in the X-frames and precision-tapped screw holes in the struts) are machined to such fine tolerances that unless each X-frame of a multi-layer stand is perfectly leveled, the bolts see stresses that won't allow the struts to couple (or decouple) to each other without sticking. In the single-level MAXXUM stands, no struts are necessary and only a single X-frame is used. All MAXXUM racks and stands use massive constrained-layer Tiptoe-like feet.

In both racks and stands, Critical Mass' shelves are mounted on the X-frames via fixed tungsten-carbide bearings. Inside the shelves is a proprietary "vibration-filtering" system that has been awarded a U.S. patent (U.S. Patent No.

SPECS & PRICING

Type: Constrained-layer-damped multi-level equipment racks and single-level equipment stands
Price: $16,950, MAXXUM three-level rack (one-of-a-kind three-level designs to $40,000); $5650, MAXXUM single-level equipment stand; $10,870 for three-level QXK rack with Black Diamond and Black Sapphire shelves; $4890 for single-level QXK equipment stand with Black Diamond shelf

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EQUIPMENT REVIEW - Critical Mass Systems MAXXUM Stands and Racks

7,290,759). Components are not placed directly on the shelves (or aren't intended to be). Supplied flat metal discs go between the component's feet and the surface of the shelf itself. (No other vibration-control devices, such as Tiptoes, should be placed between a component and the shelf's surface.)

Although the Critical Mass MAXXUM and the Symposium Acoustics Isis share certain design features, the Isis is not built to the same tolerances as the Critical Mass stand. (Of course, it doesn't cost what the MAXXUM costs, either.) Nor is the Isis as sturdy as the MAXXUM, which can bear up to 400 pounds of weight per component-shelf without deformation. Indeed, I ended up trying out the MAXXUM stand because Da Vinci's Peter Brem asked me to use it under his very heavy AAS Gabriel/Da Vinci Mk II turntable. Since Brem is as much of a perfectionist as anyone I know in this industry, the fact that he extolled the MAXXUM impressed me. Plus, to be honest, the thing looked so cool I couldn't resist.

As I noted at the start, it was immediately obvious that the MAXXUM stands were lowering resonant distortions beyond what I was used to with the Walker or the Isis, since it was immediately obvious that the resolution of low-level timbral and textural detail, transients (both starting and stopping), pitches in the bass, image outlines, soundstage depth, width, and height, etc. was greatly improved. Of course, you don't know what you've been missing until you hear something better, but it was as if the myriad tiny details that go into making up sonic facsimiles of instruments and voices suddenly snapped into sharper focus, with a large concomitant increase in realism.

I've used some of these examples before, but the magical clarity with which the Raidho C 1.1s reproduced the teeny, tinkly arpeggios on Bozay's *Improvisations for Zither*, turning what had sounded like a passage that was being played *legato* (the notes blurring slightly together) into a *staccato* performance in which each note was obviously being sounded distinctly and separately, was in no small part owed to the MAXXUM stand upon which the Da Vinci turntable/tonearm was sitting. How do I know this? Because when the MAXXUM stand was taken out and another (excellent) stand substituted, the clarity with which the arpeggio was being reproduced was diminished—and with that loss of clarity and focus came a reduction in realism.

I could say exactly the same thing about the uncannily lifelike violin on Charles Wuorinen's *The Long and the Short*. Through the Raidho C 1.1 (and Constellation electronics that are seated on MAXXUM stands), the Walker Black Diamond Mk III record player and Clearaudio Goldfinger Statement cartridge are capable of making the instrument sound realistic throughout the entire length of the performance. However, take the MAXXUM stands out from under the Constellation Centaur amp and Virgo preamp—as I did—and use excellent but less effective substitutes, and enough of that realism is dissipated to turn a gilt-edged carriage back into a shapely pumpkin.

This may not be a particularly welcome piece of news (given the MAXXUM's price), but it is a demonstrable fact (or at least it has been demonstrated to my satisfaction) that the Critical Mass MAXXUM racks and stands allow the equipment seated on them—be they analog or digital front-end components or preamps and amps—to show their truest colors. And, as I noted before, this goes for their idiosyncrasies as well as their virtues. Pegging the slight textural differences between the C 1.1's ribbon tweeter and ceramic mid/bass or the slightly "bottom-up" balance of the Constellation Performance Series electronics was made much easier because of the MAXXUMs. It's not that you don't hear these things when your sources and electronics are mounted on other stands or racks; their character is just a little more distorted by floorborne-, airborne-, and self-resonances. More importantly, you won't hear details of the music or the performance quite as clearly. Although the improvement the MAXXUMs make isn't as gigantic as, oh, a change in loudspeakers, it is big enough, in this game of inches, to make the difference between gear showing well and gear showing its very best (warts and all), and between music sounding exceptionally good and music sounding like the real thing.

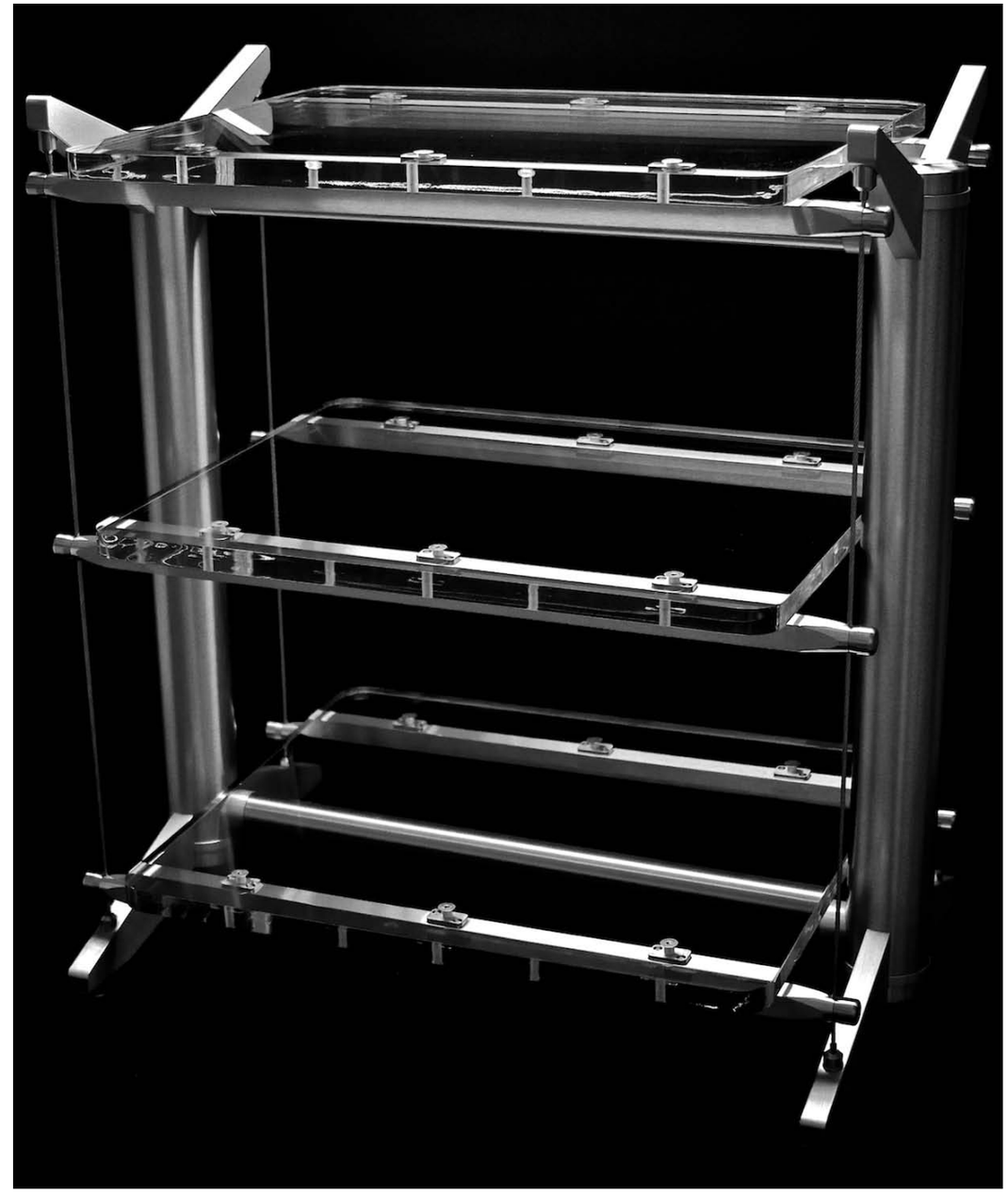
Downsides? Well, first and foremost, the MAXXUMs cost a lot—and they're big. Unless you have the dough and the space, the MAXXUMs will be non-starters. However, I can offer a worthy alternative: the Critical Mass QXK racks and stands with Black Diamond Filters (shelving), which (though not as sturdy or as unbelievably cool-looking) will give you about 70% of the MAXXUMs' sound for about 60% of the money—and are not as large and space-consuming either. (If your equipment isn't *super*-heavy you will definitely want to consider the Symposium Acoustics Isis, too.) Second, the MAXXUM stands do take some breaking/settling-in time. The "filters" built into the shelves need to see some weight on them for a week or two before they start showing their best. Third, those *farchachdat* metal discs that Joe insists be placed under the feet of components sitting on the "filtered" shelves can be royal pains—at least they can if you're a reviewer and in the habit of moving equipment in and out of your system. Unless you're very careful (and even if you are), you can nudge lightish components off the discs simply by swapping interconnects. Fourth, the spacing between shelves in the standard-configuration rack is rather narrow, making for a very tight fit for larger components (and making finding enough clearance to insert those flat metal discs under the components' feet even tougher). Happily, Critical Mass can supply taller struts (at no additional charge) that give you a lot more breathing room between shelves.

Obviously, I highly recommend the Critical Mass MAXXUM stands and racks; indeed, they are my references. For those of you with the dough (and the space), these beautifully made objects are must-auditions. Once you see them you're going to have trouble resisting purchasing them (they're that strikingly good-looking), and once you hear them resistance is likely to be futile. tas

Stillpoints ESS Equipment Rack, Ultra 5 Isolator, LPI LP Isolator

An Old Dog Learns a New Trick

Robert Harley



Until recently, if you had asked me to make a hierarchical list of what matters most in the music-playback chain I would have put loudspeakers, recording quality, and room acoustics at the top, and vibration isolation down toward the bottom along with CD treatments and the like. Although I've improved the sound of my system with isolation products like Tiptoes and Sorbothane feet, those improvements were always marginal at best.

That was until I tried the Stillpoints Ultra SS isolation devices in place of the stock spikes of the Focal Stella Utopia EM loudspeakers. In my review of the Ultra SS in Issue 219, I expressed my surprise at just how big an improvement the Ultra SS made. Low-level resolution increased and the background became blacker, qualities that combined synergistically to preserve more fine detail, reveal previously lost spatial information, and change the way that notes ended in a manner that was more like that of live instruments (i.e., as the higher resolution of fine spatial detail increased the sense of the hall's size and acoustic, reverberation tails became more audible at the lowest levels).

The next step was obvious: Replace my 17-year-old Billy Bags racks with Stillpoints ESS equipment racks. The Billy Bags racks are sturdily built and have been workhorses through more than 350 equipment reviews. I had never considered these racks a limiting factor in my system's performance. But after hearing what the Ultra SS did for my system, I had to wonder if for all these years I'd overlooked an important factor

EQUIPMENT REVIEW - Synergistic Research Tesla PowerCell 10 SE AC Conditioner

in getting great sound. Perhaps it was time for this old dog to learn a new trick.

Description

The ESS racks are modular to some degree, allowing you to configure the rack to your specific needs. Three widths and three heights are available, and you can order any number of clear acrylic shelves for all widths and heights. I received a 26"-wide, 28"-tall rack with three shelves for my analog front end (turntable, turntable motor controller, vacuum control, phonostage, and power conditioner) and one 20"-wide, 42"-tall model with six shelves for the rest of my electronics.

The ESS's design is ingenious. The shelves, which incorporate the Stillpoints vibration-dissipation technology, are suspended on four steel cables that run vertically between support arms at each corner of the rack. Because the shelves are held in place by set-screws, you can position the shelves at any height along the cables.

The ESS racks, and all Stillpoints products, are based on a patented technology that is applied in different ways and at varying levels of implementation among the product family. This patented technology is an intricate structure composed of tiny ceramic spheres that dissipate vibration. Vertical vibration is dissipated by being converted into horizontal motion. This newer technology (which carries the "Ultra" designation) replaces the original Stillpoints design, and is reportedly ten times more effective in vibration isolation. In the ESS racks, the ¾" shelves (1" shelves are optional) are mounted to the cross bars via six of these isolation "pockets." The shelf thus "floats" on the crossbars, which are then suspended on the vertical cables. This arrangement provides isolation in two directions, preventing vibration in the shelf and component on that shelf from getting into the rest of the rack structure through the bars and cable, as well as isolating the shelf from vibration in the rack.

The Ultra SS that so impressed me under loudspeakers is based on one isolation pocket per device, or four per loudspeaker. With six such isolation pockets per shelf, and additional isolation elements in the rack's feet, an ESS rack has much greater potential for vibration isolation.

When fully assembled and loaded with equipment, the ESS rack is extremely attractive and elegant. The skeletal structure and clear acrylic shelves de-emphasize the rack's visual presence and instead make the electronics on it seem to float in space. Moreover, machining quality, fit 'n' finish, and overall execution are first-rate. This is obviously a fully realized product implemented at the highest level of manufacturing quality.

After installing the racks and hearing their effect in my system, Stillpoints sent me a set of its new Ultra 5 isolators, which incorporate five isolation pockets per device. I placed these underneath the Lansche No.7 loudspeakers I have under review.

Listening

The highest praise that reviewers lavish on an accessory is that the accessory's sonic effect was "equal to that of a component upgrade." The Stillpoints ESS racks produced a marked improvement in my system, but that improvement was far different than that rendered by a component upgrade.

When changing, say, a power amplifier, there's nearly always a set of sonic tradeoffs. Both amplifiers can be beautiful, but in different ways. For example, when I had side-by-side the BALabo BP-1 Mk-II and the Constellation Audio Hercules, I found that each has its own set of virtues. The BALabo has extraordinary bass—warm, center-of-the-earth-deep, fully fleshed out, highly textured—along with a liquidity in the upper midrange and treble that is to die for. The Constellation's strengths are its state-of-the-art transparency, extraordinary resolution of detail, clarity and definition in the mids and treble, and sense of openness and extension. The BALabo is richer and smoother, the Constellation livelier, more focused, and better resolved. These two world-class amplifiers are very different sounding, but each has its allure. Switching between them traded one set of virtues and verities for another, different set. I could see how one listener might prefer one amplifier over the other.

Adding the Stillpoints racks to my system was not like changing a component because there were no sonic tradeoffs. The ESS racks don't force you to pay a penalty in one area to get what could be an overall improvement in many others. Rather, the Stillpoints products raise the performance of every aspect of the system and degrade none. No listener in my view would ever prefer the system without Stillpoints. Moreover, if you already like the sound of your system, you'll like it even more; the Stillpoints products provide a platform for your components to reveal more of their intrinsic qualities. Switching to the ESS racks didn't change the character of the components they housed but instead seemed to liberate those components from a low-level murkiness that obscured their personalities. The ESS racks brought a clarity and resolution to the system that threw into sharper relief differences between, for example, digital-to-analog converters or USB cables. It was like hearing more clearly through the playback system and recording chain to what the microphones picked up.

Moving my equipment to the ESS racks catapulted the sound of my system into a completely new realm of excellence. The musical effect was startling. The soundstage was more detached from the loudspeakers, with a greater palpability of instrumental images. I heard a greater sense of air and space around voices and

SPECS & PRICING

ESS Equipment Racks
Rack widths: 20", 26", or 40"
Rack heights: 28", 34", or 42"
Shelf options: 3/4" or 1"
Price: $8450–$12,285

Ultra SS Isolation Devices
Price: $249 each

LPI LP Isolator
Price: $549

Ultra 5 Isolation Devices
Price: $699 each

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EQUIPMENT REVIEW - Stillpoints ESS Equipment Rack, Ultra 5 Isolator, LPI LP Isolator

instruments, giving the presentation a more three-dimensional quality. Images were not just more present spatially, but also texturally by virtue of the greater resolution of very fine information that increases density of tone color. Switching to the ESS racks made the soundstage considerably wider, deeper, and more three-dimensional. The apparent size of the hall increased and, with it, the duration of reverberation times. I could hear down into the very finest spatial details, as though some limit to low-level resolution had been stripped away.

The bass benefited as well, becoming tighter and better defined. Bass lines that had been a little indistinct or muddy were suddenly clearer in both pitch and dynamics. Bass lines also seemed to "bounce" more because the system was revealing greater dynamic contrasts in the leading edges of, for example, plucked acoustic bass. The feeling was one of greater energy and visceral involvement. In fact, music in general sounded "faster" and more upbeat. The superior pitch definition made the bass player's musical contribution more readily apparent, a quality that was particularly rewarding on the new 25th anniversary reissue on 180-gram LP of Paul Simon's *Graceland*. It wasn't just the bass dynamics that improved; dynamic contrasts across the spectrum were wider, with steeper attacks, deeper silences between notes, and a heightened sense of impact.

After living with the ESS racks, I installed Ultra 5 isolators under the outrigger feet of the Lansche No.7 loudspeakers and then a set Ultra SS isolators under the Rowland 725 monoblock power amplifiers. You might think that additional isolation would result in diminishing returns, with subsequent isolation having less effect. But the opposite was true; the additional layers of Stillpoints technology were *more* audible because the system had become that much more transparent and resolving. For example, adding the Ultra SS under the power amplifiers after I had installed the racks better enabled me to hear the effect of the Ultra SS. Adding the next layer, the Ultra 5 under the loudspeakers, let me hear just what the Ultra 5's were doing. Rather than following the law of diminishing returns, adding Stillpoints at each position in the chain produced an unmistakable synergy.

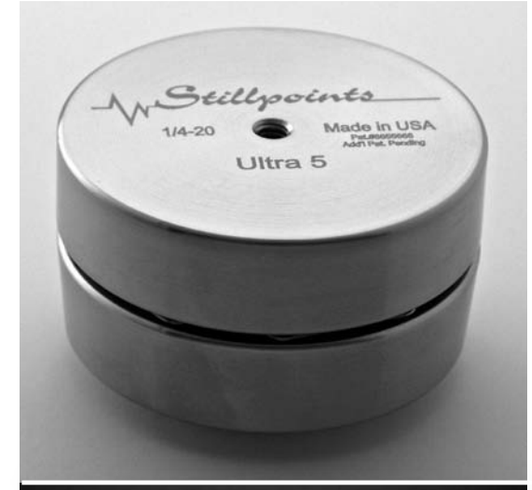
Adding the Ultra 5 devices under the Lansche No.7, after I had installed the ESS racks and Ultra SS under the power amplifiers, was revelatory. All the qualities I've described about the ESS racks were taken to another level. The increase in resolution was mind-boggling. I'm not talking about hi-fi resolution or the presentation becoming more forward or etched, but rather that about hearing much more *musical* information. I was listening to "Back Room Politics" from *Act Your Age* by Gordon Goodwin's Big Phat Band, and the percussion during the second trumpet solo, which had previously sounded like a series of vague transient events, jumped to life. I could hear, for the first time, the sound of a stick hitting wood, and the wood ringing and then decaying. The mechanism by which the sound was created was suddenly obvious and, with it, the percussionist's musical contribution. Later in that same track, the melody that had been played by the sax, trumpet, and trombone sections was played by flutes and piccolos against Goodwin's piano line. Adding the Ultra 5s changed the musical perception of this passage; I could clearly hear the intricate counterpoint between the piano and the flutes, and gained a new appreciation for the composition and performance. Although the presentation was more detailed and resolved, it also had greater ease—qualities that are usually mutually exclusive. The combination of ease and resolution is a recipe for musical involvement, as ease fosters a relaxation that makes you more receptive to nuances of expression.

I'll briefly mention the LPI LP Isolator. This heavy round device replaces a record clamp, and absorbs record vibration through five vibration-isolation pockets on the side that touches the record. I can't use it on a daily basis because it's not compatible with the vacuum hold-down on the Basis Inspiration turntable. But I was able to judge its effect by turning off the vacuum hold-down and comparing it to a conventional record clamp. The LPI's sonic effect was similar to what I hear from the vacuum hold-down system, but not to the same degree. If you have vacuum hold-down you're not missing anything. If you don't, you should certainly audition the LPI—it's the next best thing.

Conclusion

When I heard the Ultra SS under the loudspeakers, I thought I'd heard everything Stillpoints technology had to offer. In fact, I wrote that the Ultra SS was the most effective accessory I'd every tried. Little did I know that the Ultra SS was just the beginning. Fully loading a system with Stillpoints technology—the ESS racks, Ultra SS under the power amplifiers, and, especially, Ultra 5s under the loudspeakers—transformed my system far beyond anything I could have imagined. Whatever the music the change was always the same—hearing more music, more realistically presented, and with vastly deeper involvement. There's simply no going back.

Frankly, I'm a bit chagrined that I've been reviewing for 23 years and it took me this long to discover the benefits of no-holds-barred vibration-isolation technology. It's a new trick that this old dog was thrilled to learn. tas



ACCESSORIES

Stillpoints Ultra

Robert Harley

I'd be a rich man if I had a nickel for every time an accessories manufacturer told me that his product would make a "dramatic" or "jaw-dropping" improvement in my system. Adding accessories usually renders a marginal improvement in sound—an improvement that is not always commensurate with the asking price. In my experience, accessories tinker at the margins rather than fundamentally influence a system's sound.

So it was natural that I regarded the claims of Stillpoints' Bruce Jacobs with a wary—and weary—eye. Jacobs suggested that replacing the spikes beneath my Focal Stella Utopia EM loudspeakers with Stillpoints Ultra feet would result in a "shocking" improvement in sound quality. There's only so much time in a day, but I gave the Stillpoints a try largely because my neighbor, Rick Brown of Hi-Fi One, is so enthusiastic about all Stillpoints products. (Rick sells a few very select lines of esoteric gear, is a great listener, and gets terrific sound at his place.)

The Stillpoints Ultra is a cylindrical metal structure with a threaded insert on one end and a concave surface on the other. The threaded insert accepts an adapter, also made by Stillpoints, that screws into the bottom of your particular loudspeaker in place of the stock spikes. You must specify your loudspeaker so that you get the correct adapters. When the Ultra is placed under components, such as a power amplifier, you simply forego the adapters and allow the component to rest on the Ultra's flat top surface.

The Ultra appears to have two parts: the main cylindrical structure and a loose-fitting "cap" on the end. It is actually composed of ten internal components that form an elaborate vibration-dissipation system. The internal structure includes tiny ceramic bearings that dissipate micro-vibrations. The Ultra is a two-way device, meaning that it dissipates vibration entering from either direction (from the floor or from the component resting on the Ultra). Moreover, there is no vertical path for vibration through the Ultra. This device is the highest implementation of Stillpoints' technology, which is reflected in the price—$900 for a set of four. An aluminum version, identical in every way except for the metal, is $640 for a set of four. According to Stillpoints, stainless-steel more quickly dissipates vibrational energy. Less expensive versions have fewer internal energy-dissipating components. Stillpoints products are designed and made in Wisconsin.

I replaced the hefty stock Focal spikes with Stillpoints Ultras, sat back, and was shocked by what I heard. With the Stillpoints, the soundstage opened up with greater width, depth, and bloom around images. The sound became even more detached from the loudspeakers, with a greater solidity of images between and around the Focals. On the familiar "Diamonds on the Souls of Her Shoes" from Paul Simon's *Graceland*, the spread of voices in the unaccompanied opening passage extended more widely, and the sense of the voices hanging in three-dimensional space increased. The impression of height was more tangible, adding to the increased perception of a three-dimensional soundstage in front of me.

The bass improved to a similar degree. The bottom end became tauter, better defined, and cleaner. The Stillpoints made the midbass a bit leaner, but more articulate. The improved midbass conferred greater clarity in the midrange, as well as in the bottom octave, where very low bass notes were more audible and defined once the midbass was better controlled. Bass dynamics were also improved; notes seemed to start and stop more quickly, giving the presentation greater dynamic agility and conveying more of the musicians' dynamic expression.

Finally, replacing the stock spikes with Stillpoints make the background "blacker" and quieter, allowing greater clarity and resolution of very low-level information. Sounds that had been somewhat undifferentiated with the stock feet became vividly clear. For example, percussion instruments that produce a series of very fine transients (shakers and guiros, for examples) sounded much more real with the reduction in transient blurring. Moreover, it was much easier to identify exactly how the instrument produced its sound. All this added up to a more lifelike reproduction.

At $1800 for a set of eight Ultra Stainless-Steel feet, these devices are not inexpensive. Nonetheless, in the context of a high-end system they provide a huge sonic return on the investment. tas

Audience aR2p/aR12/aR12TS

$695/$4995/$8995

The aR2p, Audience's compact, dual-outlet power conditioner and isolation device is based on the massive twelve-outlet versions of which Audience is rightly proud. Used with a CD player its enhancement of soundstaging, dimensionality, and depth can be profound. With demanding high-current devices such as amplifiers, transients seemed a little soft and an audition is recommended. Further up the Audience food chain are the twelve-outlet heavy-hitters. The aR12p was found to be an extremely effective conditioner, capable of delivering significant improvements in bass definition and depth, overall resolution, and soundstage depth. Its build-quality is nothing short of exemplary. At the top of the hill is the aR-12TS (T for Teflon caps). HP considers the sonic difference the 12TS renders (compared to plugging gear straight into a wall outlet) like that between a Blu-ray disc and a regular DVD. So great was the increase in clarity that it "lifted the Audience aR12TS conditioner into the realm of the rare." AR2p also available in Teflon-cap version for $1600. www.audience-av.com (162, 179, 186)

Silver Circle Audio Pure Power 5.0

$5500

Unlike most devices designed to improve the AC powering of an audio system, the Silver Circle Audio Pure Power 5.0 is an isolation transformer. This beautifully built, heavy-duty product removes grunge on the AC line. It has eight outputs and can easily supply enough current for massive power amplifiers. The sonic result is digital that no longer sounds glassy and brittle in the highs; fundamentals in the midbass acquire definition and punch. www.silvercircleaudio.com (Review pending)

POWER CONDITIONERS

BSG Technologies QOL "Signal Completion Stage" Signal Processor

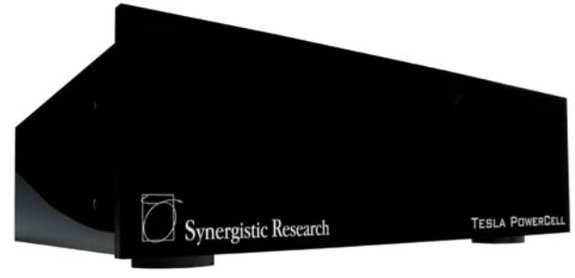
$3995

This unusual device claims to restore the phase relationships present in an original acoustic event. QOL expands the soundstage in all dimensions and makes timbres more lifelike and immediate. The change is not subtle. Pressing the "bypass" switch to turn QOL off results in a strong and immediate sense of loss, along with a pressing need to turn it back on. The all-analog device (no digital conversions) fits between your preamp and power amp, or between your sources and preamp. www.bsgt.com (220)

Shunyata Hydra Talos and Triton

$2995 and $4995

The new Talos and Triton power conditioners come complete with surge protection, A/C noise suppression, and enough receptacles to accommodate most systems (Talos, six; Triton, eight). Shunyata's goal was to substantially reduce your system's noise floor without inhibiting power delivery. KM detected no meaningful reduction in dynamic range or bass power delivery—a problem which often plagues power conditioners—while listening with the Triton. Both units made KM's system sound much cleaner, less "electronic," and more life-like. The Triton, a 2012 Product of the Year, reduces the noise floor even more than the Talos. www.shunyata.com (219)



Synergistic Tesla PowerCell 10 SE MKIII

$5500

As a skeptic about power conditioners, JHb was pleasantly surprised by the improvements in imaging and dynamics rendered by the Synergistic Power Cell. Unlike many of its brethren (no need to mention them by name, the offenders know who they are), the PowerCell did not appear to limit current. Instead, it offers even blacker backgrounds and lowered grit and distortion. Particularly noteworthy were the smoother treble and improved suppleness of musical lines. The PowerCell is pleasingly lightweight and attractive. Synergistic head honcho and lead designer Ted Denney III, it must be said, continues to advance the state of the art when it comes to filtering electricity. As with all conditioners, however, auditioning the Synergistic in your own system is a must, as the quality of electricity varies markedly from home to home. www.synergisticresearch.com (192)

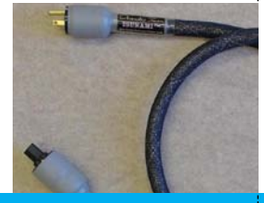
POWER CORDS

Audience powerChords
$482/4'

With the powerChords in a system music seemed to emerge from a profoundly quiet and settled soundstage and take on a more vivid presence and ambience. It also offered superb bass clarity, weight, and sharp pitch distinctions. In fact except for some slight treble congestion and a somewhat laid back overall presentation–a trait noted with many mid and lower priced cords–there was little deviation from tonal neutrality. Audience has built a cord that approaches reference level in creating the depth of black-quiet backgrounds—an element pivotal to revealing music's microdynamic charms. In this area especially, the Audience is a standout. www.audience-av.com (208)

Acoustic Zen Technologies Tsunami II and Gargantua II
$350 and $1488

The Gargantua II is well named. At $1488, it is hardly an accessory, but it surprised SR by revealing in her reference system a new level of its native sweet clarity. SR uses the $350 Tsunami II with less-expensive gear and in her small system. Both cords have the nice habit of clarifying delicate highs, deepening perceived bass, and opening up and airing out the soundstage.
www.acousticzen.com



Crystal Cable Absolute Dream
$6683

Power cables are among the hardest products to review in that they take time to "break in" and, sonically, do not always progress in a straight line. Absolute Dream—the power cords intended to accompany Absolute Dream cable and interconnect (and constructed, like the signal wires, of monocrystal silver)—is such a one. At first, it sounded very close to JV's reference Shunyata/Synergistic Research cords; then it developed a power-range/bottom-end leanness that perplexed JV (as the Absolute Dream cables and interconnects never sounded lean or stinting); and then, after a couple of weeks of use, it rounded back into form, filling out in the lower mids and upper bass and developing considerable wallop in the mid-to-low bass. At this point, the Absolute Dreams are true contenders (alongside Shunyata's Cobra Series and Synergistic Research's Tesla SE Hologram). Delicate, detailed, powerful, spacious, and transparent. www.audioplusservices.com (Review forthcoming)

Audience Au24 powerChord
$2200 (6')

A power cord that touches all the right bases. To be expected are its neutrality, low noise floor, and almost preternatural sense of recorded space and ambience. Beyond that is a stronger micro aspect that hones in on images with incisive focus and seemingly effortless flow and immediacy. Last but not least, the Au24 powerChord is one of the more flexible premium cords available, very handy for angled runs.
www.audience-av.com (219)

Argentum Acoustics Proteus 14
$499

The Proteus 14 offers a ripe and expressive low-end, wonderful low level details in all their specificity, and a fine soundstage which only narrowed slightly in comparison with reference standard power cords. Congestion and dynamic compression are held to a minimum. It conveys very good overall harmonics, a strong density factor, and is neither overly sibilant nor under-done tonally. Compelling performance from a cord that satisfies nearly every criteria. www.argentumacoustics.com

Harmonic Technology Magic Reference II SE
$1699

Designed for use primarily with front-end components, the Reference II SE delivers tremendous clarity, smoothness, and definition across the entire frequency spectrum, and does so without constricting dynamics or softening the treble. Built-in noise filter acts as an AC conditioner to remove line noise.
www.harmonictech.com

Kimber Kable PK-10AG P
$400/6'

The PK-10AG picks up where the mean green original Palladian leaves off but in a more malleable, far less costly package. The Kimber is an exemplar of the heavy hitting power cord–high output, energy and dynamics. It has a richer thicker midrange with an emphasis on soundstage depth not unlike the topflight Palladian although not as wide open on vocals. But for bass extension and sustain it is deserving of some of the highest marks. Nicely detailed and uncompressed with only vague remnants of treble peakiness, the PK-10AG exemplifies an open, colorful, high density sound that places it near the top of any survey. www.kimber.com (208)

Wireworld Electra 5.2
$360

Wireworld's line of power cords breaks with the conventional wisdom that says power cords need to be thick and unwieldy in order to impress. Not true. The mid-priced Electra 5.2s are defiantly flat, lightweight, and competitive with elite power cords costing many times their price. They possess a full-bodied, high-density sound with a rich midrange and naturalistic top end. Their pliability makes them a major advancement for today's well-groomed media rooms. www.wireworldcable.com

POWER CORDS

Shunyata Venom 3
$99

Shunyata's entry-level is a quantum leap over the standard, no-name cord. Flexible and UL-approved, Venom 3 adds transient pop and image stability, opens the soundstage, and peels away the veiling that inhibits transparency and resolution. A bit forward in character, the Venom 3 provides an excitement that really lights up the soundstage. Although low-level dynamics and deep bass could use further refinement, Venom 3 is an audiophile-level product that makes it fun to spend less.
www.shunyata.com (208)

Synergistic Research Precision AC Basik
$250

There's was no denying the family resemblance to Synergistic's flagship Tesla Hologram–from the penetrating dynamics, to the finer gradations of low level resolution. The Precision AC Basik strode through all genres of music with much of the same panache as that reference power cord. Tonally just a bit cooler, its strengths were evidenced in the way it imparted the depth of orchestral section layers, its taste for ambience and its lively and extended bass response. There was just a hint of added sibilance but overall you'd have to conclude that Synergistic may well have outdone itself on the value side and at a mere $250 will end up picking its own pockets. www.synergisticresearch.com

Analysis Plus Big Silver Oval Speaker Cable
$1350/8' pr.

Brimming with resolution, tonal honesty, and dynamic life, constructed of pure silver over a stabilizing strand of OFC woven into AP's patented hollow-oval geometry in an oval-coaxial configuration, this is not a cable you listen to, but rather listen through. Music simply flows; tonality is earthy; harmonics align; images and soundstage conform. No snake oil here—the high end needs more of this level of honest performance at a reasonable price. www.analysis-plus.com (215)

Cable Research Lab Bronze Series Package
$1299

More than mere cable, it's a "bundle" that includes speaker cable (up to 12') and two pairs of interconnects (up to 3m). You choose the terminations, even bi-wire or single wire. Sonically, the Bronze bears a strong resemblance to CRL Silver in richness, smoothness, midrange dynamics, and soundstaging. Low bass has solid extension though it's not as oil-drum-tight as it might be. A slightly cooler signature prevails, and there is a slight, perceptible softening at the extremes. This bundle combines sonics and value that are tough to match. www.cableresearchlab.com (211)

Cable Research Lab Silver Cable and Interconnect
Interconnect: $2149/1m (RCA), $2299/2m (RCA)
Speaker: $2425/8' pr.;
Power cords: $1299/1.5m

Classic cabling that stays out of the way of the signal never goes out of style. In spite of CRL's serpentine look, its construction quality, materials, and terminations are superb. Easy to maneuver, it is also one of the more easygoing and natural sounding cables we've heard, with solid dynamics, soundstaging, and harmonic detailing. A "stealth" cable that deserves serious attention. www.cableresearchlab.com (189)

INTERCONNECTS & SPEAKER CABLES

AudioQuest Columbia/DBS Interconnect and CV-8/DBS Speaker Cable
Interconnect: $495/1m
Speaker: $800/8' pr.

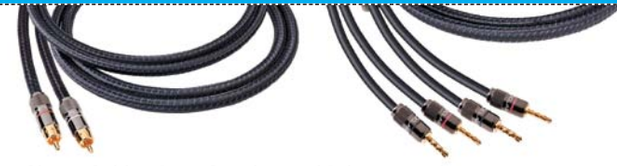
The entry-level interconnect for AudioQuest's battery-powered DBS (dielectric bias system) technology, the Columbia's highs are well-defined yet sweet-sounding; its bass is taut yet possesses plenty of weight, warmth, and three-dimensionality. Though not the last word in transparency, the Columbias do a great job of balancing clarity and smoothness. Likewise, AudioQuest's least-expensive battery-powered speaker cable, the CV-8, offers well-defined and nicely weighted bass, a neutral midrange with a hint of warmth, clear edgeless highs, and truly excellent soundstaging. www.audioquest.com (147)

AudioQuest Wild Blue Yonder and WEL Signature
Interconnects/ Meteor Speaker Cable
$4500/1m; $7500/1m; $5250/8' pr.

AudioQuest's new Wild Blue Yonder and top-of-the-line WEL Signature interconnects feature plugs that are custom-machined from pure copper then silver-plated. The Perfect-Surface Silver conductors are bonded to the plugs using a cold-welding technique. Both interconnects use Teflon Air-Tubes (a low-dielectric absorption design). AudioQuest's 72V Dielectric Bias System keeps the interconnects sounding their best at all times. Meteor is the second from the top of the AudioQuest line, and uses solid Perfect Surface Silver conductors throughout. RH's references. www.audioquest.com

Cardas Clear
Interconnects, $1840/1m; speaker, $4334/2.5m

What makes Clear exceptional is its balance and coherence. Even compared with earlier Cardas efforts Clear conveys a wider band of resolving power and transparency, with greater speed and agility across the transient landscape. Its relaxed character and bass warmth are consonant with symphonic music. Plus the naturalistic midrange lends an agreeable ripeness to orchestral string sections. There remains an almost buttery sweetness in the Clear but also a fluidity that projects the full unbroken acoustic of the symphonic experience. The only caveat: Like many of its premium ilk, Clear is a cable that only fully roars to life on premium gear where the full extent of its talents can be exercised. www.cardas.com (226)



Clarus Cables Aqua Speaker and Interconnect Cables
Interconnect RCA, $500, 1m/pr.;
speaker, $1100, 8'/pr.

Clarus Aqua not only satisfies audio expectations but does so at a reasonable price. It combines innovative conductor technology, ease of handling, and little in the way of sonic sacrifices. With its dead-quiet backgrounds Aqua establishes a sweet, even, honey-soaked midrange, delivered from an ever so slightly forward perspective. Aqua isn't an attention-grabber nor a cable of extremes. But there's a polish to the presentation that's addicting. Further, its deep low-end brilliantly communicates the rich wood resonances of cello and acoustic bass. A cable that opens new frontiers at accessible price levels. www.claruscable.com (224)

INTERCONNECTS & SPEAKER CABLES

Crystal Cable Absolute Dream Interconnect and Speaker Cable

Interconnect, $12,150/1m pr.; speaker cable, $26,125/2m pr.

Since the arrival of Syngergistic Research's marvelous Galileo two years ago, JV hasn't dipped more than a toe into the cable and interconnect market—so satisfied was (and is) he with Ted Denney's truly ingenious masterpieces. But past history (Edwin van der Kley's precious-metal Siltech was the first "high-end" wire that JV really liked), curiosity, and the irresistibly charming Gabi van der Kley (Edwin's lovely wife and the proprietor of Crystal Cable) got the better of him. As it turned out, all this was a very good thing, as Absolute Dream—which features monocrystal silver material not only for the conductor, but also tiny gold-plated monocrystal silver and silver-plated monocrystal copper wires for the shielding—is excellent: dead-quiet even on analog sources, extremely detailed, rich in tone color, and very lifelike on dynamics top to bottom (both low-level and high), with superb staging and imaging and unusually high transparency to sources. Like Galileo, Absolute Dream never "sits" on musical energy the way certain cables have; both are free-flowing and highly responsive to dynamic/harmonic nuances. A little lighter in balance than Galileo, Absolute Dream is one of the highest-fidelity cables and interconnects JV has auditioned. www.audioplusservices.com (Review forthcoming)

EnKlein Amphora Phono Cable

$3595

EnKlein is the new kid on the block in the already crowded cable loudspeaker marketplace. But its new phono cable, based on a sophisticated design to lower, if not eliminate, noise, suggests that it is a comer. The Amphora cable, which is made out of silver, is extremely speedy and transparent. It is also flexible and lightweight, but it delivers excellent dynamic impact. As with all phono cables, however, careful auditioning is a must. The Amphora does not suffer from the etched sound of many silver cables, but perhaps future iterations can allow a bit more tonal weight to emerge. www.enklein.com (Review forthcoming)

Crystal Cable CrystalConnect Micro Interconnect/CrystalSpeak Micro Speaker Cable

Micro interconnect RCA or XLR, $850/1m (add $700/m)
Micro speaker cables spades or bananas, $2500/2m pr. (add $900/m)

Clean, composed and transparent, the jewel-like Crystal Micro cables offer an open soundstage where images snap into focus and music is conveyed with a turbine-like smoothness. Even some softness in the bass and a bit of forwardness in the treble don't diminish one of the most transparent cables NG has heard. Unique splitter rings allows easy change-out of terminations or bi-wire upgrades. www.audioplusservices.com (164)

Furutech Reference III and Evolution Interconnect and Cables

Reference III Interconnect: $1622/1.2m (XLR), $1421/1.2m (RCA)
Reference III Speaker: $1934/3m
Reference III Power: $1488 Evolution Interconnect: $943/1.2m (XLR), $825/1.2m (RCA) Evolution Speaker: $985/3m

Furutech uses cryogenically treated, ultra-high-purity, OCC (Ohno Continuous Casting) single-crystal copper conductors in both its mid-priced Evolution and premium-priced Reference III audio cables. The top models offer better connectors, superior dielectric materials, and passive EMI-absorption filters made from GC-303 (and EMI-absorbent material developed by 3M Company). Furutech's cables have great transparency and purity, plus an uncanny ability to block out noise, hash, and grunge. www.furutech.com (173)

Harmonic Technology Magic Link Two Interconnect

$850/1m (RCA); $900/1m (XLR)

With improved clarity and articulation over Harmonic Tech's more affordable Pro Silway line, the Magic Link Two consistently yields smooth, extended highs, a delightfully full and natural midrange, and solid bass. You may find other pricier interconnects that excel in one specific area or another, but when it comes to overall system synergy, this is one cable you'll be "wearing" like a favorite pair of shoes. www.harmonictech.com

Harmonic Technology Pro-11 + Speaker Cable

$575/8' pr.

The TechPro-11+ is sensual, romantic, and highly present with vocals, with full rich body and a slight forwardness. There's a distinct sweetness in the upper octaves that, once experienced, makes it tough to live without. Soundstage reproduction is also a strong suit, as the full weight and breadth of an orchestra seem to laterally expand with this wire. www.harmonictech.com (146)

Kimber Kable Hero Interconnect/8TC and 12TC Speaker Cable

Interconect: $210/1m

Speaker: 8TC: $416/8' pr.; 12TC: $630/8' pr.

Yielding only a tiny bit in control, top-end transparency, and detailing to PS's reference, Hero's bass lives up to its name, prodigious in amplitude and definition. Dead neutral, with dynamics at once powerful yet finely resolved in an essentially grain-free presentation. The 8TC speaker cable has that elusive ability to remain musical no matter what is happening fore or aft, ideally mediating detail, liveliness, tonal neutrality, and dynamic contrasts within a very realistic, holographic soundstage. www.kimber.com (138, 146)

INTERCONNECTS & SPEAKER CABLES

MIT Oracle Matrix HD 90 Rev.1, SHD 120, MA-X SHD Speaker Cables

$11,999, $23,999, $39,999/8' pair

By means of MIT's new F.A.T. (Fractional Articulation Technology), Oracle Matrix speaker cables improve transient response and resolution with the turn of a built-in switch that engages more "poles of articulation" within their CNC-milled T6 aluminum "network" boxes. In their "High-Definition" position, the Matrices are, indeed, capable of very high resolution and transparency to sources, while also preserving the colorlessly neutral tonal palette that MIT has long been known for. One of a handful of ultra-high-end cables that can tell you precisely what your amp/speaker interface is adding to or subtracting from the source. www.mitcables.com

MIT Oracle Matrix 50 Interconnect

$4999/1m pr.

Making use of technology derived from MIT's top-line Oracle MA-X interconnect, the Oracle Matrix 50 is designed to match the specific input impedance of whatever gear it is connected to via an adjustable three-position impedance switch. When impedance is set properly, the 50 performs exactly as advertised—increasing transparency, neutrality, transient speed, and low-level resolution by optimizing the interconnect/component interface. Lighter in weight than previous Oracle interconnects, the Matrix 50 is the perfect option for those of you looking for MIT MA-X sound quality at a far more affordable price. www.mitcables.com

Siltech Explorer

Interconnect, $500/1m; speaker, $1000/8' pr.

Bringing Siltech quality and cache to an easily affordable price point makes Explorer an excellent upgrade cable for a mid-priced system. Its healthy midrange, good articulation, and low-level reproduction make this a wire that will give many pause before spending much more. Dynamics and bass extension are convincing as they communicate many of the more specific timbral complexities in the lower octaves. It could be a trifle sweeter in the lower treble but few wires challenge it at this tier. Along with some other frugal note-worthies Siltech's latest is redefining cable performance at this price point. www.audioplusservices.com (226)

Rega Couple Interconnect

$195/1m

The Couple offers plenty of upper midrange/treble detail, with fine resolution of textures, yet without exaggerated transients or edginess. Its bass is tight and punchy, and it is wonderfully neutral throughout the midrange. While it doesn't offer the almost "luminous" midrange quality you'll hear in some very expensive cables, its essential neutrality makes a fine substitute for a "pennies-on-the-dollar" price. www.soundorg.com (AVguide.com, 10/2003)

Shunyata Anaconda Interconnects/ Loudspeaker Cables

Interconnects: $2250/1m pr.

Speaker: $4800/2.5m pr.

Don't be fooled by the less-than-stratospheric price of these new interconnects and loudspeaker cables from Shunyata; they compete with, and in many ways exceed, the performance of the world's best cables regardless of price. They have a startling vividness and immediacy without being forward or analytical, tremendous soundstage dimensionality, great timbral liquidity, and the ability to convey very fine recorded details. A reference-quality interconnect and cable at a real-world price. www.shunyata.com (220)

Purist Audio Design Dominus Interconnect and Speaker Cable

Interconnect: $5250/1m Speaker: $10,980/1.5m

The all-silver Dominus is very detailed, very dynamic, very rich. Less open than Nordost Valhalla and darker in balance, it is also quieter, and because of its fluid-damped construction, virtually immune to floorborne and airborne vibration. www.puristaudiodesign.com

Synergistic Research Tesla Series Interconnect and Speaker Cable

Accelerator Interconnect: $1400/1m
Accelerator Speaker: $1700/8' pr.
Precision Reference Interconnect: $2600/1m Precision Reference Speaker: $3800/8' pr.
Apex Interconnect: $3600/1m
Apex Speaker: $6500/8' pr.

Some of the most transparent cable at any price. A splendid balance of detail, romantic richness, and Grand Canyon-like soundstaging that is magnified as you move upward through the line. The top-of-the-line Apex, however, is the real low-level resolution master, mining details and harmonic shadings like few wires NG has heard to date. www.synergisticresearch.com (171)

Synergistic Research Galileo Series Interconnect and Speaker Cable

Speaker Cable: $55,000/11' pair
Interconnect: $33,000/2.5 meter pair

Though Synergistic Research isn't known for marketing expensive *über*-cables, the Galileo Series of interconnect and speaker cable is the exception. Entirely hand-made in the U.S. (each pair of speaker cables takes better than nine days to build and involves several hundred point-to-point hand-soldered connections), Galileo is kind of like an "exploded view" of a typical cable or interconnect. Rather than bundling individual or stranded wires in a single unwieldy, interactive group, Synergistic has suspended individual "strings" of different wire (gold, silver, platinum, and copper/silver alloy), each built in different thicknesses and geometries, between two actively shielded "EM Cells," into which the "strings" are plugged via the gold standard of wiring interfaces—ultra-pricey LEMO connectors. How does Galileo sound? Even by the highest of high-end standards these cables and interconnects are extraordinary: neutral, dynamic, detailed, natural, with truly immense soundstaging and, perhaps, the lowest noise floor of any cable/interconnect JV has auditioned. Top contenders for the state of the art, they are JV's long-time references. www.synergisticresearch.com (208)

INTERCONNECTS & SPEAKER CABLES

Synergistic Research REL-spec Reference Subwoofer Cable

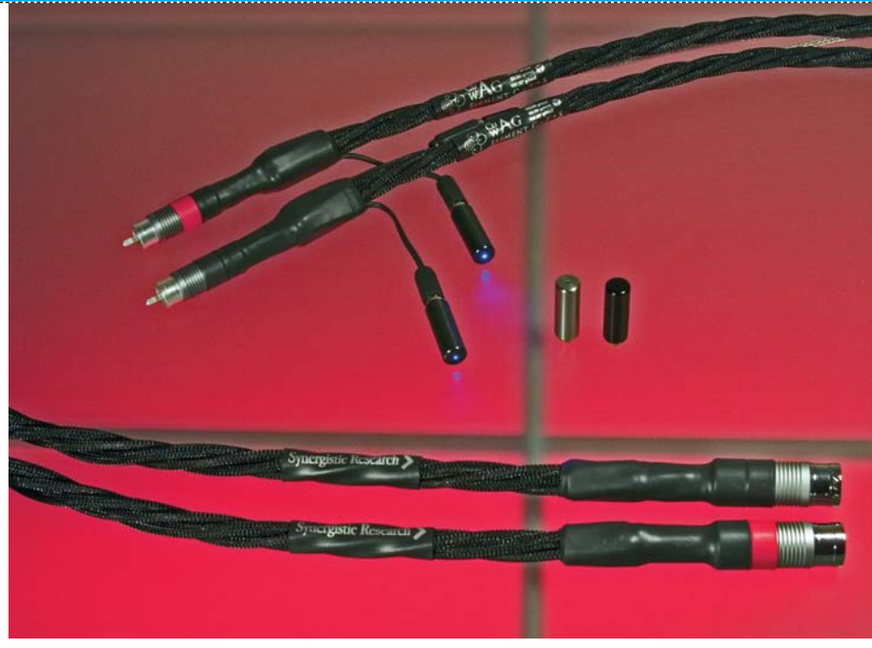
$1320/3m

Pricey but potent, these inspired subwoofers cables are specifically optimized for REL subwoofers and include REL-specified Neutrik connectors. They improved the inherent musicality and pitch precision of the Britannia B3 in every instance—the lowered noise floor yields more detail, an enhanced sense of space, and expanded ambience retrieval. www.synergisticresearch.com (163)

Synergistic Element Series

Interconnect: Element Copper, $1200/1m, Element Tungsten, $2000, Element CTS, $3600. Speaker (8' pr.): Element Copper, $1700; Element Tungsten, $2800. Element CTS, $7500

The Element Series represents Synergistic's innovative and costly Galileo System technology in full trickle-down mode. Tailored to real-world budgets Element comes in three performance levels including the world's first wire to feature pure Tungsten conductors (the real sleeper of the series), an entry-level copper version, and finally the heady CTS, a premier combination of copper/tungsten/silver. In full CTS plumage it's difficult to classify its sound as cool or warm, light or dark. Rather it cues off the recording itself. Spatial relationships and ambience retrieval are its true *métier* and it defines orchestral layers at will. There's an astounding collection of inner contrast as it elicits music's gradations, dynamic, micro-dynamic, timbral, and transient. The backgrounds are silent and black. It can sound purely transparent, even romantic from top-to-bottom but it's also a tough-minded critic and ruthlessly revealing of a recording's failing. Galileo maybe out of reach for the masses, but Element is Synergistic's *pièce de résistance* for the rest of us. www.synergisticresearch.com (226)



INTERCONNECTS & SPEAKER CABLES

Transparent Audio The Link Interconnect, The Wave Speaker Cable, High-Performance Powerlink AC cord, PowerWave 8 AC Conditioner

The Link: $85/meter
The Wave: $200/8' pr.
Performance Powerlink: $125
PowerWave 8: $995

Although we have experience only with Transparent's lower-priced offerings (at the moment), what we've heard has been extremely impressive. The $85 The Link interconnect brings more than a taste of high-end interconnects to an entry-level price. Similarly, the $180 The Wave speaker cable is a bargain, offering superior tonality, wider dynamics, and a more open soundstage. The $105 High-Performance Powerlink AC cable is a vast improvement over stock AC cords, and just might be the most cost-effective upgrade possible in an entry-level system. The PowerWave 8 conditioner is also an extremely cost-effective upgrade, rendering wider dynamics, smoother timbres, and a greater sense of musical involvement. www.transparentcable.com

Transparent Opus MM2 Interconnect and Speaker Cable

Interconnect: (RCA), $11,580/1m; (XLR), $20,000/1m; speaker: $34,735/8' pr.

Transparent Audio's Opus line is a superlative cable, one that can help enrich and enliven the finest loudspeaker systems. It would be difficult to find a cable that has blacker backgrounds, more timbral fidelity, or greater dynamic weight. Each cable builds upon the other. Remove one from the chain and the sound is likely to deteriorate. The build-quality of the Opus line, which features elegant hand-made carbon-fiber boxes that are said to help tame resonances, is beyond reproach. The cable has so many unique features that an opus could be written about the Opus. www.transparentaudio.com (225)

Transparent Reference XL Interconnects and Reference XL Loudspeaker Cable

$4400 and up (interconnect), $12,500 and up (loudspeaker cable)

Transparent's third-from-top-of-the-line interconnects and cables are custom-tuned for your electronics. Just tell Transparent the input and output impedance and they will optimize the cable's network for your gear. If you change a component, Transparent will re-calibrate the cable at no charge—for life. This feature wouldn't mean much unless the Reference XL delivered the goods, and that they do in spades. The Reference XL is characterized by an extremely smooth and engaging treble balance that manages to sound open, extended, and highly detailed without sounding forward or inducing listening fatigue. The bass is full and rich with a wonderful combination of warmth and texture. Best of all is the Reference XL's airy, open, and three-dimensional soundstage that is the antithesis of a flat, cardboard cutout. www.transparentcable.com

Wireworld Platinum Eclipse Interconnects and Speaker Cable

Interconnect: $3000/1m
Speaker $16,400/8' pr.

When Wireworld's David Salz builds a new reference cable it's worth taking note. With Ohno Continuous Cast pure silver conductors, and trick carbon-fiber connector shells sporting silver contacts, sonics are fluid, naturalistic, and exceptionally detailed. So transparent you'll simply forget they're there. www.wireworldcable.com

USB CABLES

AudioQuest Forest
0.75m, $29; 1.5m, $35

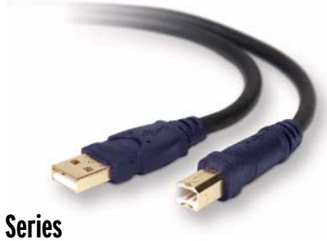
For those on a tight budget, Forest is a large upgrade over a generic USB cable that was never designed for audio. Compared to standard USB cables, Forest offers a larger and more dimensional soundstage, more liquid and lifelike timbres, and greater transparency. www.audioquest.com (Not reviewed)

AudioQuest Carbon
0.75m, $119; 1.5m, $159

One of the go-to USB cables for computer-audio fans and highly recommended by USB pioneer and guru Gordon Rankin of Wavelength Audio, the Carbon is neutral without sounding bleached, dynamic without sounding piercing, detailed without sounding analytical. www.audioquest.com (Review forthcoming)

AudioQuest Diamond
0.75m, $549; 1.5m, $695

This *über*-expensive USB cable is simply revelatory in its combination of ease and refinement on one hand, and resolution and transparency on the other. Although capable of resolving the finest detail, Diamond USB has a relaxed quality that fosters deep musical involvement. RH tried it in his state-of-the-art music server system and it immediately became his reference. Expensive, but worth it in high-end systems. www.audioquest.com (221)



Belkin Gold Series
$15/1m

Despite being ridiculously inexpensive, this cable was AT's reference for nearly two years. Though no longer the best USB cable available, in sonic and musical terms it continues to outperform and embarrass the vast majority of alternatives, regardless of price. A perfect first (and even last) USB cable. www.belkin.com (226)

Straightwire Info-Link AES/EBU or Coaxial Digital Cable
$220/1m, $280/1.5m

This reasonably priced digital cable offers a host of virtues, including high transparency to the source, spacious soundstaging, a treble that is open and detailed without sounding analytical, and wide dynamics. A bargain. www.straightwire.com

Straightwire USB-Link
$50/1m, $60/1.5m

This well-made, great-sounding USB cable is a relative bargain, delivering outstanding dynamics, timbral fidelity, and transparency. www.straightwire.com

Wireworld Silver Starlight
$275/1m

David Salz's thoroughly researched assault on USB's sonic handicaps delivers a relaxed, well-defined, dynamically evocative, and rhythmically taut performance. The Silver Starlight projects strings without screechiness, which cannot be said of most USB cables. For those seeking a mid-priced USB cable with obviously high build-quality and performance, the Silver Starlight is a solid choice. www.wireworldcable.com (226)

Wireworld Platinum Starlight
$599/1m

The seemingly minor differences between Wireworld's Silver and Platinum Starlight models yield a major sonic impact. In AT's experience, the Platinum Starlight has no peer in soundstage size, airiness, tempo tracking, dynamics, bass pitch, timbral realism, and lack of grain. In short, this cable takes USB audio to a new plane of fidelity. AT's new reference. www.wireworldcable.com (226)

ACCESSORIES

AcousTech Electronic Stylus Force Gauge
$99.95
acousticsounds.com
Getting the most out of any turntable requires an accurate vertical tracking force setting—and yes, kids, you can easily hear changes as slight as a tenth of a gram. Not only is AcousTech's new gauge a relative bargain; it is small, has a backlit display, is incredibly easy to use, measures weights from 0.001 to 5.000 grams at the height of an LP's surface, and is said to be accurate to within ± 0.002 grams.

Aesthetix ABCD-1MC Cartridge Demagnetizer
$200
musicalsurroundings.com
This battery-operated device sends a special signal through your moving-coil cartridge, removing stray magnetism in the coils. Used every two weeks or so, the ABCD-1 will restore tone colors and soundstage clarity. For use only on moving coils.

Analogue Productions: The Ultimate Analogue Test LP
$39.99
acousticsounds.com
Amazingly well-conceived as well as manufactured to the highest standards, *The Ultimate Analogue Test LP* is the new reference in test discs. It's loaded with useful test signals that are encoded with high precision, and the record is pressed on 180-gram virgin vinyl.

ASC Tube Traps
$498–$2638
tubetrap.com
Unless you have a professionally designed and treated room, Tube Traps from Acoustic Sciences Corporation are absolutely indispensable to improving your system's sound. They are able to solve a wide range of acoustic problems with strategic placement and orientation. Boomy bass can be cured with a pair of 16" Full Rounds in the corners behind the loudspeakers. Placed along the sidewalls between you and the loudspeakers, Tube Traps kill unwanted sidewall reflections, prevent flutter echo, and aid in diffusion. A single Tube Trap in the center of the wall behind the loudspeakers can expand soundstage depth. There are lots of questionable acoustic products on the market, but Tube Traps are the real deal.

AudioQuest BPW Binding-Post Wrench
$9.99
audioquest.com
AudioQuest's binding-post wrench, featuring durable metal socket-inserts, eliminates the need for a bulky socket set. This compact double-ended nut driver, small enough to slip into a shirt or pants pocket, fits 7/16" and ½" binding posts. Essential for tightening down speaker cables to speakers and amps.

AudioQuest Anti-Static Record Brush
$20
audioquest.com
What's the best way to keep clean records clean without attracting dust particles? One of our favorite methods is to use Audioquest's anti-static record brush, whose bristles are made up of "over a million polished carbon fibers." A swing-down brush guard doubles as a bristle cleaner to prevent dirt build-up.

AudioTools App
$20
studiosixdigital.com
If you've had a desire to test, tweak, optimize, or even build your own music system from scratch, the tests included in the AudioTools App will make your job easier. All this ergonomic elegance can be had at a price that makes stand-alone test gear almost obsolete.

Auralex Acoustics Studiofoam Wedges
Price varies
auralex.com
If you've logged much time in home recording studios, odds are that you've already seen and heard Auralex Studiofoam Wedges in action. Studiofoam is highly absorptive, and therefore can be just the ticket for taming slap echoes or audible comb-filtering effects that can result when listeners are seated too close to the back walls of their listening spaces.

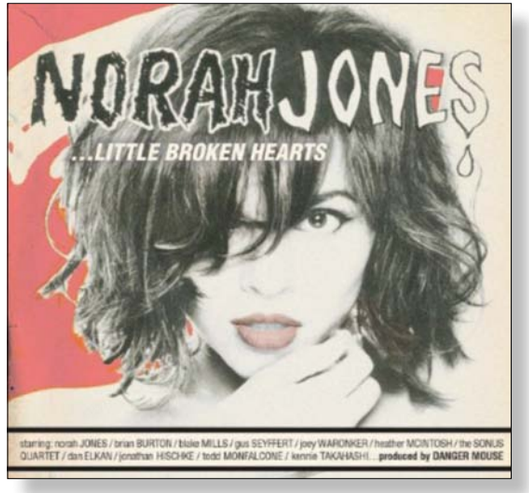
Avid Level 45: 45RPM Adapter and Bubble Level
$100
musicdirect.com
This two-piece kit combines a precision machined-steel 45-rpm adaptor with a high-quality bubble level. The level sits atop the 45rpm-adapter, which together weigh 180 grams—exactly the same as a high quality LP for accurate leveling.

A/V Room Service Ltd. Metu Acoustic Panels and Corner Traps
Price depends on configuration
avroomservice.com
Although the set of Metus that came to JV—and that he now depends on—came in a particularly unattractive Fudgsicle brown, these wall-hanging, cloth-faced, rectangular acoustic panels (mounted to wooden backboards) and cloth-faced corner traps can be precisely color-matched to your paint scheme or be made to look like framed art of any kind (from posters to paintings). Designed by Norman Varney, who did the acoustical treatment of Robert Harley's previous room, they are the real deal—precisely calibrated room treatments that use a patent-pending adjustable diaphragmatic/sound absorptive technology to reliably reduce all sorts of colorations—more effectively than any other wall-mounted room treatment JV has tried.

Blu-Tack Adhesive Putty
$10
The original acoustic putty and adhesive from Bostik of England that damps resonances and mechanically couples a compact speaker to the top plate of its stand. Sonically you'll hear tighter bass and improved image. Considered "a flexible semi-liquid that behaves like a solid" it also offers a safety bonus by preventing a stand-mounted speaker from being inadvertently toppled.

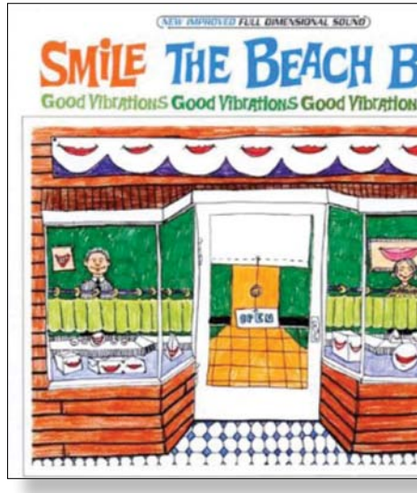
Caig Pro Gold G100L Treatment
$21.99
caig.com
Caig's ProGold G100L has long been the go-to lubricant for cleaning, preserving, and conditioning all electrical connections. Packaged in a handy dispenser bottle with a little applicator-brush built into the cap, it can and should be used for any junction (short of an AC wall socket) where a metal connector (like the male RCA plugs of your interconnects) is plugged into a metal socket (like the female RCA plugs of your preamp, amp, or CD player).

Cardas RCA Caps
$49.99 (set of 12)
cardas.com
Pop these RCA shorting plugs into your preamplifier's unused inputs and you'll hear a blacker background, more micro-dynamic detail, and an overall cleaner sound.


NORAH JONES
...LITTLE BROKEN HEARTS
starring: norah JONES / brian BURTON / blake MILLS / gus SEYFFERT / joey WARONKER / heather MCINTOSH / the SONUS QUARTET / dan ELKAN / jonathan HISCHKE / todd MONFALCONE / kennie TAKAHASHI ... produced by DANGER MOUSE

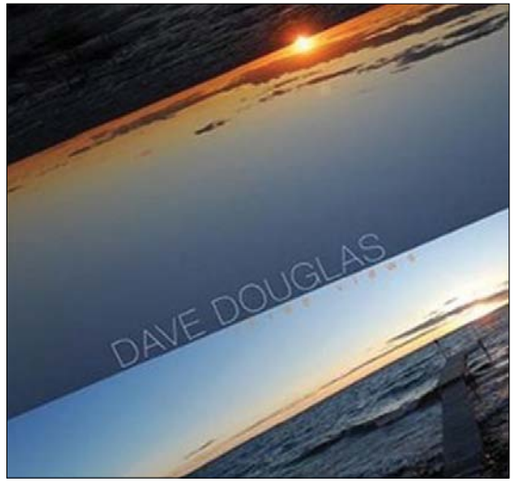

THE ROLLING STONES
Some Girls
DELUXE EDITION


ORIGINAL MASTER RECORDING


SMILE THE BEACH B
Good Vibrations Good Vibrations Good Vibration

Music

Best 2012 New Releases on Compact Disc



Music Sonics

Dave Douglas: *Three Views: GPS Vol. 1-3.* Koch (three CDs).

Trumpeter Dave Douglas, who outpaces most of his contemporaries as a prolific bandleader, project developer, and composer, is now at the vanguard of independent music distribution. While hardly the first prominent jazz figure to form his own label in response to the shortcomings of the majors (Charles Mingus and Max Roach formed Debut in the 1950s), Douglas has expanded indie jazz horizons with his embrace of the cloud and his Greenleaf Portable Series of digital-only albums. At least they were digital-only when Douglas launched GPS last June, but audience demand prompted him to issue the first three GPS volumes as compact disc EPs (about 45 minutes each), packaged as a box set with photos from the sessions.

Three Views is both a boon for listeners who still prefer to put a physical artifact into a playback machine and an excellent sampling of Douglas's recent ventures. Volume 1, *Rare Metals*, features Brass Ecstasy, in which Douglas' trumpet shimmers alongside Vincent Chancey's French horn, Luis Bonilla's trombone, and Marcus Rojas' tuba, with Nasheet Waits on drums. Volume 2, *Orange Afternoons*, captures a stellar quintet with saxophonist Ravi Coltrane, pianist-of-the-moment Vijay Iyer, bassist Linda Oh, and drummer Marcus Gilmore. Volume 3, *Bad Mango*, finds Douglas in his most experimental mood as the players of So Percussion—Eric Beach, Adam Sliwinski, Jason Treuting, and Josh Quillen—unpack a trunkful of familiar and exotic noisemakers such as marimba, synthesizer, glockenspiel, Estey organ, desk bells, musical saw, metronomes, shruti box, vocoder, and miscellaneous drums and toys.

In simple terms, *Orange Afternoons* extends the tradition of the classic acoustic Miles Davis quintets of the 1960s, with brilliant solos spinning out of richly textured ensemble statements of Douglas's heady compositions; *Rare Metals* riffs off the legacy of Lester Bowie's Brass Fantasy, the horns coalescing into gleaming group voices and swathing the solos in glistening arrangements; and *Bad Mango* crosses over into the avant-garde, percussion-driven realm pioneered by John Cage and Steve Reich, and, not unlike clarinetist Don Byron's collaborations with Bang on Can, establishes a sophisticated and entertaining common ground between jazz and new music.

Three things most obviously unite these otherwise divergent dates. First, there's the appealing intelligence of Douglas's writing; complex, but accessible and often songlike, it holds its own against the sole non-original piece in the set, the Billy Strayhorn masterpiece "Lush Life." Then there's his trumpet playing—exquisite in tone, dynamics, and feeling, technically flawless but never fussy or ostentatious—running like a silver thread through all 19 performances. And finally, Geoff Countryman's and Tyler McDiarmid's engineering and mixing give each band an appropriate soundstage, wide or deep where need be, and just the right amount of space between the instruments.

For those familiar with Douglas, *Three Views* is an essential addition to an already bountiful library. For initiates, this variegated set will likely trigger a craving to hear more of Douglas's mercurial horn in the myriad settings he restlessly creates with traditional jazz instruments, turntables, accordion, violin, electric guitar, and more. **Derk Richardson**

Further Listening: Dave Douglas: ***Charms of the Night Sky***; Dave Douglas & Keystone: ***Spark of Being***

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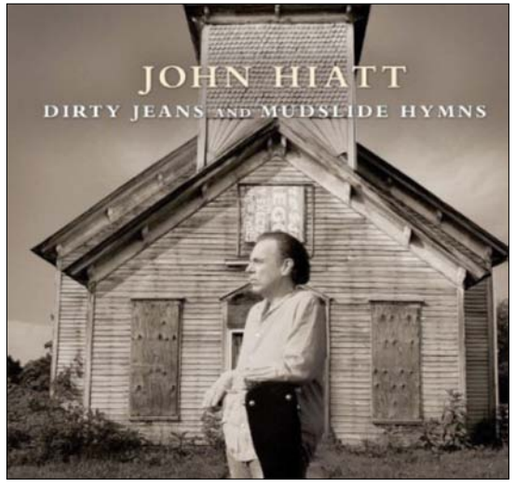

Music Sonics

John Hiatt: *Dirty Jeans and Mudslide Hymns.* New West.

John Hiatt's songs are a rich tapestry of stories and moods, alternately tough and tender. The opening track, "Damn This Town," is a gritty tale of a lost soul trapped by the circumstances of birth and decrying his foul fate. But this album also delivers such plaintive mudslide hymns as "All the Way Under" in a breezy, swaying manner that calls for a dance. And then there's the upbeat pop of "I Love That Girl" and the righteous country of the day-late, dollar-short lament "Don't Want to Leave You Now," which could fit comfortably on Hiatt's 1987 breakthrough album *Bring the Family*. The high-octane blue-collar country-rocker "Detroit Made" keeps the mood rolling along at a brisk pace. By the time you get to the closing track, Hiatt's unexpected and emotionally fraught 9/11 tribute "When New York Had Her Heart Broke," you've experienced both soaring emotional peaks and somber valleys. Sonically, the production ranges from the thundering dread of the opening track's ace rhythm section to the acoustic guitars and delicate ambiance of "Down Around My Place." Another gem from this master of Americana. **Greg Cahill**

Further Listening: John Hiatt: *Slow Turning*; Michael Murphey: *Tall Grass and Cool Water*

Music Sonics

Vijay Iyer Trio: *Accelerando.* ACT.

Pianist Vijay Iyer, bassist Stephan Crump, and drummer Marcus Gilmore trade intricate rhythms like The Flying Karamazov Brothers toss juggling pins back and forth across the stage. The action seems effortless, nearly telepathic, and relies on razor-sharp instincts and infinite trust. On this follow-up to 2009's acclaimed *Historicity*, the three kindred spirits deal in kinetic rhythms and visceral forms in a typically flowing, conversational manner. Following a turbulent overture ("Bode") they settle into a mesmerizing minimalist motif on "Optimism" that slowly builds until erupting into a throbbing Bad Plus-like crescendo. Gilmore's inventive beats behind Rod Temperton's "The Star of a Story" and Michael Jackson's "Human Nature" enliven both tracks. And his supple brushwork deftly underscores the angularity of Herbie Nichols' "Wildflower." Iyer's title track is an experiment in accelerating pulse while the frantic "Action Speak" is a whirlwind of shifting time signatures and arpeggios that culminates in a dazzling drum solo by Gilmore. The trio also has a knack for boiling down large-scale arrangements, as on Henry Threadgill's dense "Little Pocket Size Demons" and Duke Ellington's "The Village of the Virgins," a moving section from his 1970 ballet, *The River*, that closes the album on a peaceful note. **Bill Milkowski**

Further Listening: Iyer: *Historicity*; Bad Plus: *Never Stop;* Invocation: *Suno Suno*

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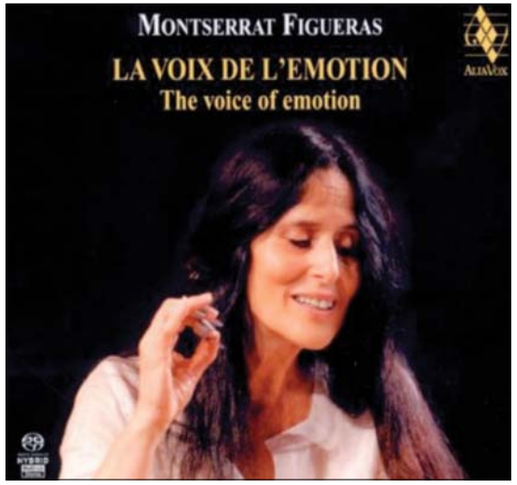

Music Sonics

Montserrat Figueras: *The Voice of Emotion.* Alia Vox (2 SACDs).

This two-SACD set honors Montserrat Figueras, who died last November at the age of 69. Figueras was undoubtedly one of the greatest singers of the recording era, as "important" as Nellie Melba, Maria Callas, or Kirsten Flagstad. Her technique was unassailable: when she sang Monteverdi, the trills and rapid figurations were on a par with anyone's. The critic Alex Ross wrote that "her smoky, penetrating, flatly expressive voice falls somewhere between grand opera and rural folk singing, and combines the best aspects of both." But many vocal performance aficionados remain unaware of her gifts because she chose to devote her career to Early Music, even now a specialized corner of the classical spectrum.

As a young woman, Figueras was attracted to this material—to call it "repertoire" would imply that it was already a well-established genre—and sang with Early Music groups in Barcelona, the city she was born in. It was at the Conservatory there she met Jordi Savall, who would later become the most celebrated gamba player on the planet, and her husband and dependable collaborator for almost 45 years. With Savall, Figueras formed Hespèrion XX (now Hespèrion XXI) and made her first recording with this group in 1975. Figueras and Savall subsequently started two other important ensembles, La Capella Reial de Catalunya and Le Concert des Nations and, in 1997, launched the Alia Vox record label.

All the music on this two-and-a-half hour program is taken from Alia Vox releases. Many were SACDs; all were beautifully recorded. We hear Figueras in works by some of the best-known Renaissance composers—Monteverdi, Victoria, Caccini—as well as Spanish composers of that era that she helped to recover—Juan Hildago, José Marín, Tarquinio Merula, Lope de Vega, and others. She investigated much as well by composers whose names have been lost to history—anonymous *villancico*s or the much earlier Canto de la Sibila (a liturgical drama melody concerned with end-of-the-world prophecy). She recorded songs from Jewish and Arab traditions, and Christian sacred music in a way that transcended mere scholarship. There are successful forays into later eras also, including works by Sor, Mussorgsky, and Arvo Pärt, among others. Figueras had a special affinity for traditional Catalan music and *The Voice of Emotion* programs "El Fill del rei," a strophic narrative as poignant as the best Schubert songs. Another of her specialties was the lullaby and this collection gives us two, one by the obscure Classical-era composer Johann Friedrich Reichardt and one by Manuel de Falla.

Figueras' artistry is perhaps best remembered with music that is serious, somber, and emotionally acute, such as Monteverdi's famous *lamento* "Amor dov'è la fe" or the stunning 12th century "Invocation" from *Medea*. But she could be equally effective with smirking innuendo, as with the *villancico* "Isabel, perdiste la tu faxa" ("Isabel, you have lost your girdle") by Alonso Mudarra (1510-1580). She is supported by many leading Early Music instrumentalists—players such as Hopkinson Smith, Andrew Lawrence-King, Ton Koopman, Rolf Lislevand and, of course, Jordi Savall. There may be no better introduction to the universe of Early Music than Montserrat Figueras, and no better introduction to the artist than this glorious commemorative release. **Andrew Quint**

Further Listening: Monteverdi: *Arie e Lamenti* (SACD); *Ninna Nanna* (Figueras)

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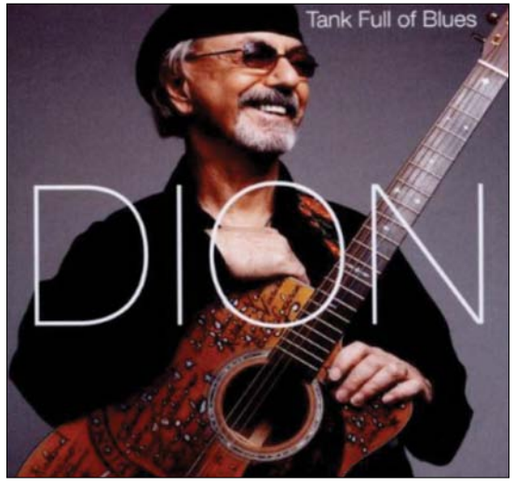

Music Sonics

Dion: *Tank Full Of Blues*. Blue Horizon.

What's an Italian-American boy from the Bronx doing singing the blues? Telling the tales of his life, and reinvigorating a career that never really ended. Dion DiMucci started in 50s doo-wop with the Belmonts, and scored more than a dozen Top 40 hits, including "A Teenager in Love." The group was part of the 1959 Winter Dance Party, that fateful tour where Buddy Holly, the Big Bopper, and Richie Valens died in a plane crash. Dion turned down the chance to fly that night, because it would have cost him $36—a whole month's rent—and Valens took his seat instead. He went solo in 1960 and struck gold with "Runaround Sue" and "The Wanderer." Doo-wop fell victim to the British Invasion, and Dion disappeared from the charts for a while. He made a brief comeback in the 70s with more easy listening, contemplative ballads like "Abraham, Martin and John."

That's the Dion you probably remember: the famous 50s singer whose tunes and harmonies influenced musicians like Bruce Springsteen and Paul Simon. But there's more to his story. Struggles with record companies kept him from succeeding with the records he wanted to make. He got clean from heroin addiction and recorded a series of gospel albums, including 1985's Grammy-nominated *I Put Away My Idols*. The Rock and Roll Hall of Fame inducted him in 1989. Still he's never stopped writing, recording, or performing the music he loved: the blues. His last couple of blues albums brought him back into the spotlight once again, and he earned another Grammy nomination for his 2006 album *Bronx in Blue*, an acoustic tribute to the genre and its famous players.

Tank Full of Blues contains mostly original songs, written in the traditional blues style with lots of three-chord walking grooves and sexy, slightly raunchy "Hoochie Coochie Man" songs. While Dion's voice has weathered slightly over his 72 years, it's perfect for this music. His guitar playing will simply blow you away, not because it's fast or showy, but because it's just right, every time. Throughout the album, the sound is very natural with minimal overdubs, allowing plenty of space for his gritty, stinging, slightly distorted guitar riffs and the nimble yet rock-solid bass and drums.

Clearly, Dion is haunted by blues music and the musicians both obscure and famous who created it. Yet his best tracks don't follow the standard blues formulas. "I Read It (In The Rolling Stone)" is more low down and dirty, with lyrics about a man who simultaneously desires, disdains, and fears fame. It's a tale of someone who's had it, lost it, wants it back but knows he'd best steer clear. "Ride's Blues (For Robert Johnson)" conjures up an imaginary conversation between the singer and Johnson—two bluesmen talking about their hard times across the decades. "Two Train" is a medley that incorporates Muddy Waters' "Still A Fool" and Robert Johnson's "Ramblin' on My Mind." The album's final track, "Bronx Poem," is a spoken word semi-rap that, in lesser hands, could have turned far too sentimental, but Dion makes it a prayer of remembrance and gratitude. All told, *Tank Full of Blues* is an eloquent and moving tribute to the roots music he so dearly loves. **Sherri Lehman**

Further Listening: Dion: ***Bronx In Blue***; Robert Johnson: ***Complete Recordings***

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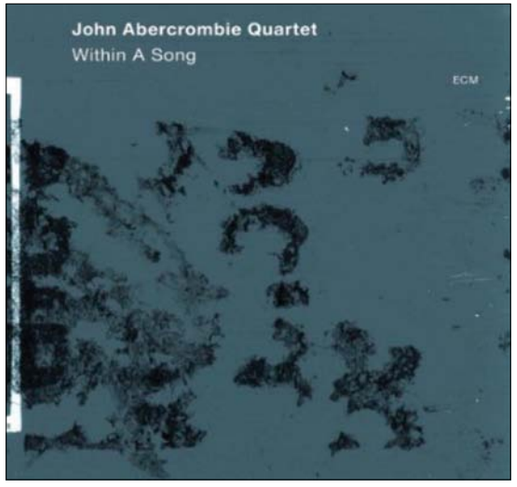

Music Sonics

John Abercrombie: *Within A Song.* ECM.

Within A Song is a guitarist's homage to the 60s albums that shaped his musical sensibility. One such is Sonny Rollins' hugely influential *The Bridge*, which featured remarkable interplay between tenor titan Rollins and guitarist Jim Hall. In that same spirit, Abercrombie joins with tenor saxophonist Joe Lovano in renditions alternately sublime and swinging, underscored by the stellar rhythm tandem of bassist Drew Gress and drummer Joey Baron. The luminous balladic opener "Where Are You" and the buoyant "Without a Song" are both paeans to *The Bridge*, while their hauntingly beautiful rendering of "Flamenco Sketches" honors Miles Davis' *Kind of Blue*. Also here are blues-tinged readings of Bill Evans' "Interplay" (title track of his 1962 album) and Ornette Coleman's "Blues Connotation" (from 1961's *This Is Our Music*). *Within A Song* not only shows off Abercrombie's ethereal six-string signature, it also features some of the best blowing on record by Lovano, who's particularly compelling on John Coltrane's somber "Wise One" (from 1964's *Crescent*). Producer Manfred Eicher's well-known penchant for miking cymbals and drums allows us to hear every nuance of Baron's myriad choices with sticks, brushes, and mallets, in pristine detail. This is gorgeously played and gorgeously recorded jazz. **Bill Milkowski**

Further Listening: JA: *Open Land;* Joe Lovano: *Landmarks*

Music Sonics

Norah Jones: *Little Broken Hearts.* Blue Note.

Sonically sparse and emotionally raw, the twelve ballads on *Little Broken Hearts* drift through a stark-blue landscape strewn with heartache, disappointment, and despair. Teaming up with producer Danger Mouse (Black Keys, Gnarls Barkley), singer and songwriter Norah Jones has spent three years crafting a complex song cycle that, while challenging, is fiercely honest. Backed at times by little more than a murmur of twangy guitars and a wisp of ethereal synth or strings, Jones caresses these lyrics as she takes the listener through her fall from grace with some invisible lovers. These songs don't seethe with anger, but rather often drift with a sense of resignation, echoing a sense that "here I go again," as she sighs in "Say Goodbye." This haunting album isn't easy listening, especially if you're expecting the promise of Jones' "Come Away with Me." But a decade after that song spurred multi-platinum, multi-Grammy success, the beautiful despair of *Little Broken Hearts* finds that Jones has slipped through the looking glass and come back with a clear-eyed view of the sometimes painful vagaries of love. **Greg Cahill**

Further Listening: *The Little Willies;* Rickie Lee Jones: *The Evening of My Best Day*

Best 2012 New Releases on Compact Disc

Music Sonics

Fred Hersch Trio: *Alive at the Vanguard.* Palmetto (2 CDs).

The designation "at the Village Vanguard" carries incomparable weight in the history of live jazz recordings. Hugely significant albums bear the stamps "at Massey Hall," "at the Plugged Nickel," and "at the Philharmonic," but the Vanguard is jazz's Mount Rushmore, times ten, when it comes to the giants whose live sets later became landmark albums. With the release of *Alive at the Vanguard*, pianist Fred Hersch inscribes his name for the third time on a ledger that includes Sonny Rollins, John Coltrane, Art Pepper, Wynton Marsalis, Joe Lovano, and too many others to name. And these performances, recorded with bassist John Hébert and drummer Eric McPherson last February, are monumental in their own right.

The one comparison that can't be avoided is with the late pianist Bill Evans, who played five celebrated sets at the Vanguard on June 25, 1961, with Scott LaFaro on bass and Paul Motian on drums. Hersch acknowledged his pianistic debt to the master on 1990's *Evanessence: A Tribute to Bill Evans*. But Hersch is a modernist of his own making, having honed a distinct style while playing with saxophonists Stan Getz, Lee Konitz, and Joe Henderson, among others. That style—distinguished by a delicate melodicism, a way with unexpected harmonic turns, and a touch that ranges from feather-light to punchy and forceful—is especially suited to the trio format. This trio first recorded together on 2010's *Whirl* (which I reviewed in TAS 206) and is his most telepathic to date. And this live setting is the most conducive to extended and unfettered flights of imagination.

The program, divided into eight tracks on disc one and seven on disc two, includes romantic standards such as "Softly as in a Morning Sunrise," "I Fall in Love too Easily," and "The Song Is You"; renditions of jazz classics by Charlie Parker, Ornette Coleman, Miles Davis, Sonny Rollins, and Thelonious Monk; and Hersch originals, including dedications to Coleman, Paul Motian, and current trio drummer McPherson. I would single out the two-song medleys—Coleman's "Lonely Woman" and Davis's "Nardis," Hammerstein and Kern's "The Song Is You" and Monk's "Played Twice," and the exquisite pairing of Russ Freeman's "The Wind" with Alec Wilder's "Moon and Sand" (both associated with Chet Baker)—but it's truly impossible to pick favorites. There may be only two hours of music on these CDs, but you could play them every day for a week and still be surprised on the next listen by some new brilliant moment.

Like Bill Evans, Hersch, now 56 years old, excels at any tempo and can dazzle you equally with colorful chords and single-note runs. Hébert and McPherson, perhaps because they were idiosyncratic pianist Andrew Hill's last rhythm section before he died, throw all sorts of unusual angles and accents at Hersch, and never does anything sound out of place. Close-to-perfect recording, mixing, and mastering allow you to focus on any player, any note, or any sound and yet always hear the all-important connections that tie everything together. The album's title, *Alive at the Vanguard*, carries a poignant subtext: Hersch's recovery from AIDS-related dementia and a two-month-long coma in 2008. But more directly it references the buoyant, flourishing spirit of the music. **Derk Richardson**

Further Listening: Fred Hersch Trio: *Live at the Village Vanguard;* Bill Evans: *The Complete Village Vanguard Recordings 1961*

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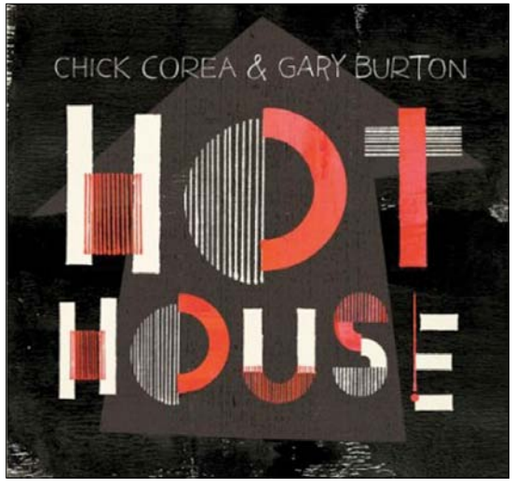
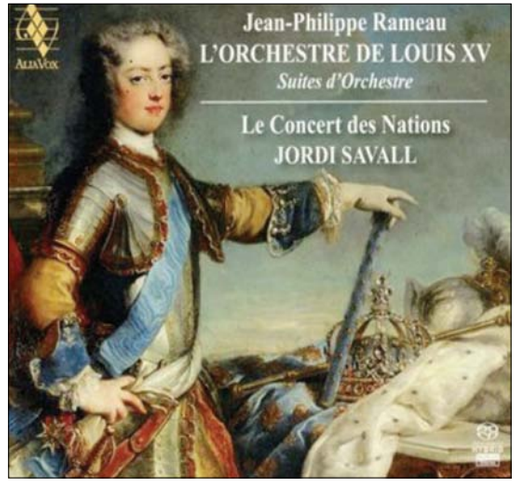


Music Sonics

Chick Corea & Gary Burton: *Hot House*. Concord.

Reprising their longstanding chemistry (which commenced with 1972's *Crystal Silence*), pianist Chick Corea and vibraphonist Gary Burton got together in Corea's home studio to further explore their remarkable telepathy on a collection of eight tunes by some of their favorite composers. From a jauntily swinging, stride-flavored take on the 1930 Broadway show tune "Can't We Be Friends" to a dark, rhythmically-charged interpretation of Paul McCartney's "Eleanor Rigby" to a bristling rendition of Jobim's "Chega de Saudade," the two virtuosos perfectly complement each other. They breathe new life into Dave Brubeck's "Strange Meadow Lark" and Thelonious Monk's "Light Blue." Their bebop roots come to the fore on an uptempo romp through Tadd Dameron's "Hot House" that's brimming with rapid-fire call-and-response solo runs. They also turn in sublime renditions of Bill Evans' "Time Remembered" and Kurt Weill's "My Ship," an achingly beautiful number introduced to the jazz world on the first Miles Davis-Gil Evans collaboration, 1957's *Miles Ahead*. The intimate encounter closes with a Corea original, "Mozart Goes Dancing," performed with the Harlem String Quartet. The tunes are cleverly tweaked, courtesy of Corea's over-active mind, and the improvisations from track to track are magisterial. **Bill Milkowski**

Further Listening: *The New Crystal Silence;* Native Sense: *The New Duets*



Music Sonics

Rameau: *Suites d'Orchestre*. Le Concert des Nations, Savall. Alia Vox (2 SACDs).

The almost suspiciously prolific Jordi Savall has delivered another brilliant program of some of the most interesting Baroque music ever written, four suites from Rameau's ballets and operas. It's raucous, it swings, it woos, it brays, it marches, and it laughs. Rameau's writing flashes like Vivaldi in a lightning storm, and sometimes spoofs the entire Renaissance period. Toward the beginning of *Les Indes Galantes*, you'll swear the Chieftains made an appearance, and another part sounds like an escapade from Offenbach's *Gaite Parisienne*. Harmonies behave badly, tempos and moods change like the weather, and there's off-beat playing that brings to mind head-banging with a powdered wig. Who knew there was this much humor and dottiness underneath all those solemn Baroque ruffles? There's little polyphony, too—nary a fugue in sight. It may not wear quite as well as Bach's *Brandenburgs*, but it's a hoot! The surround encoding is especially realistic and involving, making the whole shebang that much more entertaining. (The harpsichord continuo is very light—it's meant to be heard more by the orchestra, for ensemble's sake). The booklet has about 90 pages of excellent notes, too. **Stephen Estep**

Further Listening: Il Giardino Armonico play Biber, Locke, Zelenka (Teldec)

Best 2012 New Releases on Compact Disc

Music  Sonics 

Piano Music of Earl Wild. Xiayin Wang. Chandos.

The late Earl Wild, one of America's greatest pianists, wrote three major pieces based on Gershwin's music: *Grand Fantasy on Porgy and Bess*, *Improvisation on Someone to Watch over Me*, and *Seven Virtuoso Etudes*. They are of respectable length—and depth. Wild was a virtuoso, and there is plenty of flash, but after a few hearings you begin to notice the thoughtful writing that puts it in context. There are no empty arpeggios here. The *Grand Fantasy* is a half hour spent with dear but enviably witty and gorgeous friends. The *Improvisation* has a part where the right hand's repeated notes sound much like a mandolin. Wild's own Sonata, from 2000, is substantial. There's a bit of Prokofiev in the polished spikiness, and a little jazz—honest, not facile. The lovely Adagio has a relaxed humor to it. The last movement, "Toccata a la Ricky Martin," is a knucklebuster with a melody that Wang plays quite sensuously. Somehow, Wild can combine all these influences without once sounding tacky. It's a tribute to his compositional skill that another pianist has recorded his works (and Wang's playing is rich, colorful, and completely idiomatic). The sonics top nearly any other piano recording I've got.
Stephen Estep

Further Listening: *20th & 21st Century Piano Sonatas* (Wild/Ivory Classics)

Best 2012 Reissued Releases on Compact Disc

Music Sonics

Lou Donaldson: *Sunnyside Up*

Music Sonics

Freddie Hubbard: *Hub Cap*

Music Sonics

Hank Mobley: *Workout*

Music Sonics

Jimmy Smith: *Midnight Special*

Music Sonics

Stanley Turrentine: *Up At Minton's*

Analogue Productions is on a roll. In our recent analogue-centric issue I mentioned titles on LP coming from the company's new QRP (Quality Record Pressings) facility, but the Kansas-based company is also setting the pace with its SACD releases. Check out the store at acousticsounds.com to see the scope of titles both available and coming soon. For now, we'll focus on a quintet of Blue Note SACD reissues. All were mastered by Kevin Gray and Steve Hoffman, and are also available as double-slab 45rpm LPs.

As the title suggests, Lou Donaldson's *Sunnyside Up* (from 1960) is a collection of mostly upbeat tunes. Even the usually sultry "The Man I Love," after a slow start, rockets off into a string of jaunty solos. This is a good if not great Blue Note session. The players are all fine—Donaldson (alto sax), Bill Hardman (trumpet), Horace Parlan (piano), Laymon Jackson (bass), and Al Harewood (drums)—and the record is enjoyable enough. But except for the free-spirited "It's You Or No One," and "Softly As In A Morning Sunrise, it's not particularly memorable. Sonically this is solid RVG. Good tonality, clarity, and dynamics, nice presence, decent air, but not stellar.

Whether as side or front man, trumpeter Freddie Hubbard was a yeoman of the Blue Note team. His round, earthy tone and freewheeling style couldn't be farther from the cool, cerebral Miles Davis. 1961's *Hub Cap* has plenty of fierce bop attitude, but lovely ballads such as "Cry Me Not" show off Hubbard's lyrical side. With terrific playing from Jimmy Heath (tenor), Julian Priester (trombone), Cedar Walton (piano), Larry Ridley (bass), and Philly Joe Jones on the drum throne, the melodically moody "Luana" is another highlight, as is the sassy "Osie Mae." The sound is excellent—full-throated, soaring horns, well-rooted bass, crisp, impactful drums, excellent air, and terrific presence.

Hank Mobley was a highly accomplished tenor player who had the misfortune not to be either Sonny Rollins or John Coltrane. With a round, meaty tone, and a fine melodic and improvisational sense, his roadhouse blues style is fully evident in *Workout*, a 1962 date that finds him blowing alongside fellow and past Miles Davis band members Wynton Kelly (piano), Paul Chambers (bass), Philly Joe Jones (drums), with the addition of Grant Green on guitar. The title track is based on alternating two-bar phrases, and jumps out of the gate with a verve that defines this set. Mobley's solo shows Charlie Parker's influence; the rhythm section, of course, displays the rapport you'd expect, and recent St. Louis transplant Green meshes so beautifully that it's no wonder he gained instant acceptance into the New York scene. The recording is quite good, nicely holographic, full of dynamic life and harmonic richness, solidly "there," involving.

From 1961, Jimmy Smith's *Midnight Special* features the remarkably synergistic quartet of Smith on Hammond B3, Stanley Turrentine (tenor sax), Kenny Burrell (guitar), and the lesser-known but excellent Donald Bailey on drums. The title track is a smoldering blues, which introduces the Hammond's unmistakable, smoothly rolling, throaty voice before Turrentine takes the first solo turn, deliberately pausing, almost winking, between each mere three- to six-note phrase. Smith then takes off on a lovely, un-showy solo full of feeling and musical expression. Burrell follows with an equally subtle and lovely turn, slowly and seemingly casually building from one phrase to the next as if building a paragraph from a string of perfectly phrased sentences. Turrentine returns to bookend this brilliant opening number. Turrentine's "A Subtle One" is a rollicking track that allows his tenor, and the entire band, to swing with gusto. The sound is equally fine, dynamically lively, harmonically rich, detailed, dimensional, and alive. "Jumpin' The Blues," "Why Was I Born," and "One O'Clock Jump" are all terrific as well. But why go on when by now I hope you've put this review down to order this terrific release?

Up At Minton's finds Turrentine in a decidedly funkier mood. Recorded live at Minton's Playhouse, the Harlem birthplace of bebop, the tenor player is joined by Grant Green (guitar), Horace Parlan (piano), George Tucker (bass), and Al Harewood (drums) in sessions that were originally released in '61 as two separate LPs. The rhythm section and Turrentine knew each other well, and producer Alfred Lion used the opportunity to fold newcomer Grant Green into the mix. The tunes are mostly standards—"But Not For Me," "Love For Sale," Come Rain Or Come Shine," "Summertime"—with each musician taking his turn in the spotlight. Except for a few rough moments where the tape is clearly overloaded, the recording nicely captures the club's atmosphere, and the balance is remarkably good. Turrentine's tenor is meaty and bright, the drums snap, bass and piano are punchy, and Green's guitar bluesy, raw, or elegant, depending on the number. **Wayne Garcia**

Further Listening: Grant Green: *Green Street*; Hank Mobley: *No Room For Squares* (both Analogue Productions SACD)

Best 2012 Reissued Releases on Compact Disc

Music ■■■■■ Sonics ■■■■□

Stevie Ray Vaughan and Double Trouble: *The Sky Is Crying.* Mobile Fidelity (SACD).

The Sky Is Crying gathers ten previously unreleased tracks that Stevie Ray Vaughan and Double Trouble recorded between 1984's *Couldn't Stand The Weather* and 1989's *In Step*, their final album before Vaughan died in a helicopter crash. Mobile Fidelity has released five recordings, including their debut, *Texas Flood*, on outstanding SACDs (Analogue Productions has the vinyl covered). Though each of these recordings displays Vaughan's jaw-dropping talent, *The Sky Is Crying* most reveals the many styles he soaked up like a musical sponge. Check out Vaughan's jazz chops on Kenny Burrell's "Chitlins Con Carne," and Hendrix's "Little Wing," arguably this collection's most staggering achievement, alternately whisper-sweet and screamingly fierce. Other tips of the hat are to Muddy Waters, Lonnie Mack ("Wham"), Elmore James, and Albert King (the title track), yet each song is pure, unleashed SRV. The sound is big, bold, up front, and clean as a whistle. Vaughan's different tonal shadings—from warmly purring, to raggedly distorted, to wasp-tailed sting, plus a rare acoustic turn on the gorgeous closer, "Life By The Drop"—are all superbly captured, and the drums and bass have plenty of clarity and wallop. A brilliant musical document…if a sad reminder. **Wayne Garcia**

Further Listening: SRV: *Couldn't Stand The Weather;* Kenny Burrell: *Midnight Blue*

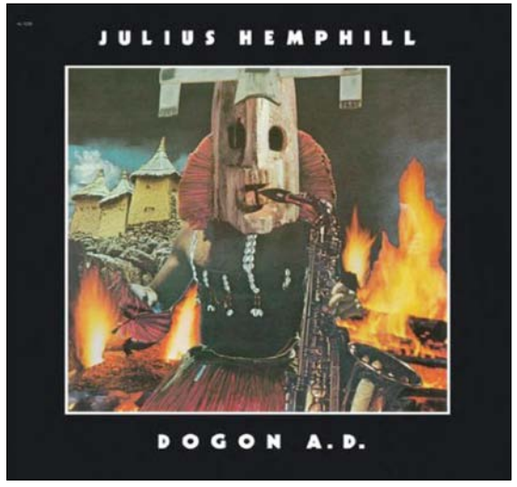
Music ■■■■■ Sonics ■■■■■

Pink Floyd: *Wish You Were Here.* EMI (SACD).

Multichannel treatments of older rock recordings that truly serve the musical essence of the original are rare. Here's one that does. The "You" of *Wish You Were Here,* Pink Floyd's ninth studio album, is Syd Barrett, a founding member of the band and superb vocalist and guitarist who left the group because of a psychological unraveling, possibly drug-induced. Recorded at Abbey Road over six months in 1975, *Wish You Were Here* has an elegiac quality throughout. It's best experienced in a straight-through, 45-minute sitting. The two big sections of "Shine On You Crazy Diamond"—both with long instrumental sections—frame three other songs that touch on the record's other theme, a harsh indictment of the music business. "And did we tell you the name of the game, boy? We call it riding the Gravy Train," sings the record company executive. James Guthrie's 5.1 mix generates a vast sound space. Surround effects are imaginative—at one point, all the action collapses into the right rear speaker—but bass, drums, and lead vocals are firmly anchored in front. Guitar and synthesizer sonorities are complex and rich; baritone sax is exquisitely textured. The mechanical pulsing that begins "Welcome to the Machine" is harrowing in its visceral acuity. **Andrew Quint**

Further Listening: Pink Floyd: *Dark Side of the Moon* (SACD); Roxy Music: *Avalon* (SACD)

Best 2012 Reissued Releases on Compact Disc



Music Sonics

Julius Hemphill: *Dogon A. D.* Arista Freedom.

Alto saxophonist/flutist Julius Hemphill moved to St. Louis from Texas in 1968, and immediately threw himself into the very active creative music scene there. Nothing he would produce later had the raw power of his early work, which combined an avant garde sensibility with a feeling for blues playing as deep as any Texas saxophonist from Arnett Cobb to Ornette Coleman. As the title of this debut recording indicates, Hemphill also drew inspiration from Mother Africa. His most effective musical partner in this evocation of ancient musical roots was, curiously enough, cellist Abdul Wadud, who could make his axe combine the functions of a jazz bass and a Mississippi Delta guitarist. Drummer Philip Wilson and trumpeter Baikida Carroll fit in perfectly, with the horns blowing long but strongly-rooted solos over Wadud's insistent bass figures and Wilson's spare commentary. But there are also passages of very complex counterpoint. For the last track, "The Hard Blues," baritone saxophonist Hamiet Bluiett is added, and it's amazing how much fuller the ensemble sounds. This track did not appear on the original and, incredibly, this is the first time this masterpiece has ever been issued on CD, and hence the first time all the material has been assembled on one release. **Duck Baker**

Further Listening: Julius Hemphill: *Coon Bid'ness; Live In New York*

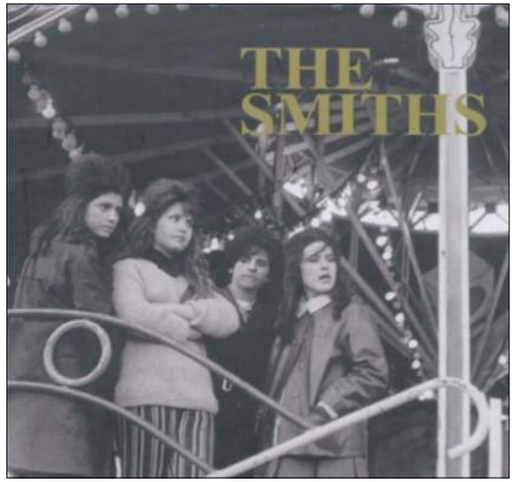
Music Sonics

Rolling Stones: *Some Girls.* ABKCO.

This newly reissued 1978 album is a sexy, snarling, cosmopolitan affair steeped in the decadence of the times—the Stones seldom sounded tougher than on "When the Whip Comes Down" or "Shattered." But many of the 12 outtakes on this expanded edition strike a different tone—forget Manhattan, this is the roadhouse Stones who came into full bloom on 1969's "Country Honk." The country-flavored disc of bonus material—perhaps a warm-up for the country-western song "Faraway Eyes," which did make the original album's final cut—kicks off with the Jerry Lee Lewis send-up "Claudine." "Do You Think I Really Care," with Ron Wood on pedal steel, has a slick Southern-rock vibe. The mood shifts on the gritty blues "When You're Gone," one of the disc's highlights. And the tender ballad "We Had It All," with Keith Richards on vocals and Sugar Blue on harp, runs counter to *Some Girl*'s misogynist themes. The rockabilly vibe returns on the rave-up "Tallahasee Lassie," one of three covers on the album. Jagger's plaintive rendition of the Hank Williams classic "You Win Again" clinches the country connection. The beauty of these additional tracks, no matter the style, is how seamlessly they fit together. A revelatory addition to the Stones' legacy. **Greg Cahill**

Further Listening: Rolling Stones: *Beggar's Banquet*

Best 2012 Reissued Releases on Compact Disc



Music Sonics

The Smiths: *Complete.* Rhino (8-CD box set).

One step in becoming a great band is believing you're great, and The Smiths had no problem with that. Before playing a single note together Morrissey and Johnny Marr were convinced their music would have an impact, and their audience quickly took The Smiths as seriously as the band did. Few groups have had such a simple or perfect chemistry. Bassist Andy Rourke and drummer Mike Joyce played every rhythm with authority, including the tight rockabilly beats that were part of the Smiths' sound from the beginning. Johnny Marr played acoustic guitar as well as anyone in rock music, and he was equally impressive on the electric. Along with being unusually gifted at devising music to bring out the emotion behind the lyrics, Marr was the band member who holed up in the studio, layering guitar tracks in order to create a full, symphonic sound that owed much to Phil Spector. Lyric writer and vocalist Morrisey had less patience with the recording process, but it didn't matter: a few takes was all he needed to convey the angst, irony, and bizarre sense of humor that marked his lyrics.

The Smiths' reign was brief—1983 to 1987—with their output limited to four studio albums, a posthumous live release, an EP, and 25 singles. During those same years the band also put out three compilations: *Hatful of Hollow, The World Won't Listen,* and *Louder than Bombs.* That sounds simple enough, almost, but completists have had a heck of a time putting together a definitive Smiths collection. Among their struggles: back in the vinyl days US and UK releases differed, there were US- and UK-only releases, their record company altered an LP that had already been released, and there were alternate mixes to hunt down. The dawn of the CD was hardly a panacea, as Smiths fans complained about sound quality and a surplus of pointless compilations. Surely listeners must have fantasized about one release that would contain everything the band had ever recorded so they could finally be done with the matter (and hopefully it would sound good, too).

In spite of its title, the eight-CD *Complete* doesn't quite contain every official release by The Smiths (sorry). It does, however, include every full-length album that originally came out on vinyl, and even though there's lots of redundancy, *Complete* covers enough ground that even some sticklers might say: close enough—especially because the sonics are considerably improved. Like many Smiths fans, Johnny Marr was unsatisfied with earlier CD mixes, and *Complete* is the fruit of the legal battle he fought and won to finally re-master the music of the Smiths. Ultimately the project involved more subtraction than addition in an effort to make the music sound more natural (and closer to the original records). The artificially boosted high end has been removed, and the compression that marred previous CDs has been reduced. Although I haven't heard it, there's also a vinyl version of *Complete,* plus a deluxe edition featuring everything on LP and CD along with all the singles. Such luxuries would only appeal to fanatics—but hearing that the line for a recent general admission Morrissey concert began two days before showtime leads me to suspect they're still out there. (Sadly, the show was postponed.) **Jeff Wilson**

Further Listening: The Cribs: ***Ignore the Ignorant;*** Morrisey: ***Bona Drag***

Best 2012 Reissued Releases on Compact Disc

Music Sonics

Roxy Music: *The Complete Studio Recordings 1972–1982.* Virgin/EMI (10 CDs).

In 1973 the LA band Sparks relocated to England because their offbeat music, which failed to elicit much interest in the US, caught on in the UK, where music fans more quickly embraced bands that broke the mold. (Tellingly, when I first saw Sparks on televison I assumed they were Brits.) Some groups from that side of the Atlantic were zany or frivolous (at least on the surface) or deeply profound (or pretended to be), but they made American music sound tame in comparison.

As much as any band, Roxy Music characterized that restless, undefined, anything-goes period. Glam rock, prog rock, and art rock are among the terms used to describe Roxy's music; sometimes beneath their mod veneer there seemed to lurk a gang of 50s rockers. Band members included the charismatic and largely untrained Eno on keyboards and effects for the first two records, replaced on the next three by Eddie Jobson, who doubled on violin; guitarist Phil Manzanera, who could be both colorful and gutsy; and saxophonist Andy Mackay, who sometimes added oboe to the mix. Lead singer Bryan Ferry's lounge lizard persona was an enigma, and pundits still debate whether he was parodying or embracing the upper-class toff he portrayed.

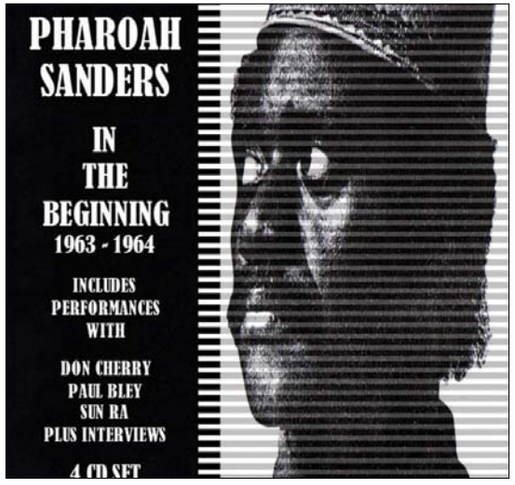
At the final tally, Roxy released eight albums in ten years. While it's almost *de rigueur* for bands to go downhill eventually, Virgin/EMI's remastered and modestly-priced 10-CD box set *The Complete Studio Recordings 1972–1982* is unusually consistent. In fact, the longest dry spells appear on the two CDs of remixes, B-sides and non-album singles; however, those discs contain essential cuts missing from the studio albums, such as the singles "Virginia Plain," "Pyjamarama," and a cover of John Lennon's "Jealous Guy."

Of the first five studio albums that made up the first and more experimental phase of Roxy, the highlights include "If There is Something," "In Every Dream Home a Heartache," "The Thrill of It All," "Out of the Blue," "Love is the Drug," and "Both Ends Burning." Perhaps the best of the bunch is "Do the Strand," a theme song as bizarre as it is catchy. Aside from "the mashed potato schmaltz," all the musical styles Ferry pans were far too antiquated to be a market threat to Roxy or any other band from that period, and while the lyrics are playful, Manzanera's guitar solo that leaps out in the middle of the track is a passionate burst of pop music magic that stands as a ringing endorsement of "the new way."

After a long break Roxy returned with a slicker sound that, in spite of some good material, suggested they were struggling to find their place in the pop music wasteland—that is, until their swan song. Emotionally *Avalon* was so powerful it forced one to reconsider early Roxy: was it possible that all along an arch-romantic lay buried beneath the world-weary pessimist? Sonically *Avalon* also marked a new high for the band. In spite of their refined air the earliest Roxy sounded muddy. Engineered and mixed by Bob Clearmountain, *Avalon* was pristine and painstakingly precise without sacrificing the angst at the heart of it all. **Jeff Wilson**

Further Listening: Sparks: *Kimono My House;* T. Rex: *The Slider*

Best 2012 Reissued Releases on Compact Disc

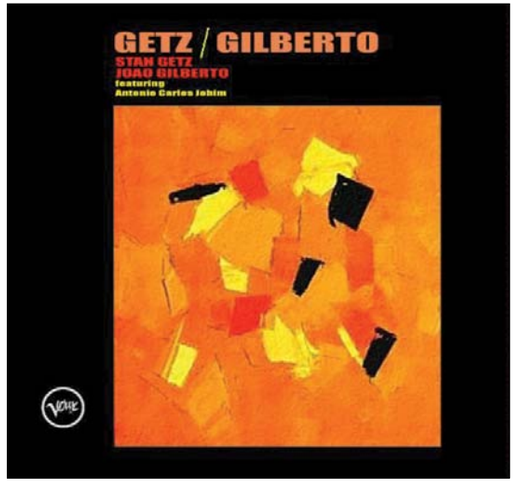


Music Sonics

Pharoah Sanders: *In the Beginning, 1963-1964.* ESP-Disk (4-CD set).

Most jazz fans know only one Pharoah Sanders record that predates his association with John Coltrane in 1965-67, the 1964 Quintet date he made for ESP-Disk. Now the same company has packaged that record with two great previously-unreleased Quintet sessions and more music recorded live during Sanders' brief sojourn in Sun Ra's Arkestra that same year. Though a fairly mortal supporting cast caused the original Quintet record to get mixed reviews, Sanders' fantastic playing should not be missed. The inclusion of the Sun Ra material might be questioned, as our protagonist isn't featured much, but it's still excellent stuff from one of Ra's greatest periods, and the sonics are reasonably hi-fi. The real interest, however, is in the two dates led by Don Cherry and Paul Bley. Pharoah played on two of Cherry's classic records later in the decade, so it's especially revealing to hear them together here. The Bley date sounds like a warm-up for the pianist's wild *Barrage* date for ESP, and he and Sanders complement each other surprising well. Listeners who don't already own the already available material should jump at this, and even those who do should consider it. **Duck Baker**

Further Listening: John Coltrane: ***Live At The Village Vanguard Again;*** Don Cherry: ***Where is Brooklyn***



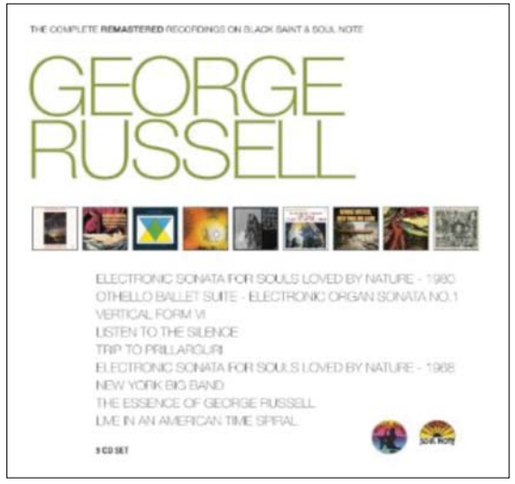
Music Sonics

Getz/Gilberto. Analogue Productions (SACD).

Stan Getz is at least partially responsible for the Bossa Nova craze that hit the U.S. in the early-to-mid 60s. For 1963's *Getz/Gilberto* the tenor saxophonist teamed with two of Brazil's leading practitioners, the singer/songwriter/guitarist Joao Gilberto and the composer/arranger Antonio Carlos Jobim. Interestingly, both cite Getz's mellow, intimate, melodic playing style as an influence on their work. And though there seems to be some dispute about how Gilberto's wife, Astrud, sat in on these sessions, what's indisputable is that their recording of Jobim's "The Girl From Ipanema" remains one of the most popular—and, despite overexposure—charming songs of the past half-century. Astrud Gilberto's presence on that track as well as "Corcovado" makes it easy to overlook her husband's and Jobim's contributions, but the breezy warmth of *Getz/Gilberto* shows just how perfect a collaboration this was. Though I haven't heard what I would venture to guess is a superb 45rpm edition from Analogue Productions, the SACD is excellent. It retains the warmth, intimacy, air, and texture of my original Verve pressing, while opening up the soundstage, and revealing subtle details in Gilberto's guitar work, Getz' tenor, the vocals, as well as improving on the dynamic ebb and flow of this fine reissue. **Wayne Garcia**

Further Listening: ***Getz Au Go Go***; SG & Charlie Byrd: ***Jazz Samba***

Best 2012 Reissued Releases on Compact Disc

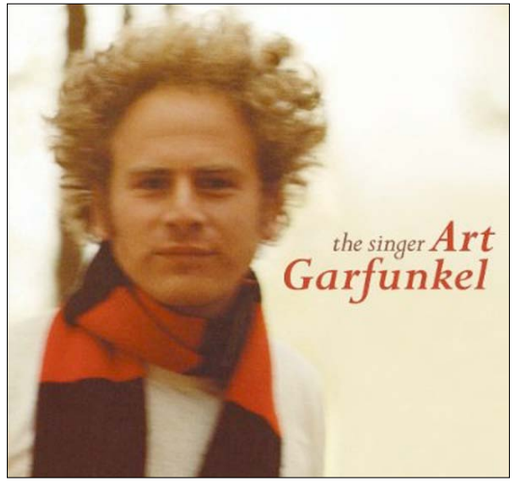


Music Sonics

George Russell. Black Saint/Soul Note.

George Russell's contribution to jazz theory is so formidable that his own recordings seem to lag behind in recognition, which makes this nine-CD set of mid-career material from 1968 to 1982 all the more welcome. Russell was already an established artist with a string of ground-breaking albums behind him when, in the late 60s and early 70s, he stirred things up with some young and as-yet unknown European musicians—saxophonist Jan Garbarek and guitarist Terje Rypdal among them—whose role in shaping a strong musical identity for Scandinavian jazz began under Russell's tutelage. This collection documents that period as well as his return to teach at the New England Conservatory of Music. The centerpiece here is the three live recordings of the ground-breaking "Electric Sonata for Souls Loved by Nature." Other highlights include the brooding *Othello Ballet Suite*, a scorching version of Ornette Coleman's "Man on the Moon" with a wonderfully bizarre solo by Rypdal, and "Cubano Be, Cubano Bop," which Russell wrote and Dizzy Gillespie in recorded 1947. When Russell yelled "Play like Trane!" at his sidemen he was referring not to technique but to their intensity level, and there's plenty of evidence here that his protégés paid heed. **Jeff Wilson**

Further Listening: George Russell: ***Ezz-thetics; The Stratus Seekers***



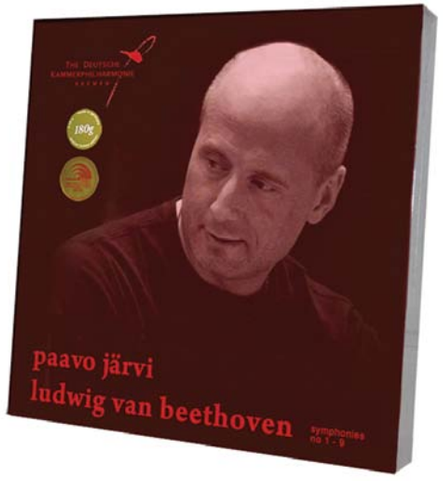
Music Sonics

Art Garfunkel: *The Singer.* Legacy (two CDs).

Finally, finally…the man behind the ampersand gets his due in a collection covering his nearly 50 years as a vocalist. *The Singer* is a collection of 34 hits hand-selected by Art Garfunkel from his storied body of work with Paul Simon, from solo albums packed with Jimmy Webb tunes, and from numerous collaborations with other artists, including Graham Nash, David Crosby, and James Taylor. It's fascinating to see what tunes (and performances) he identified for inclusion in this package. The set list begins with pop masterpiece "Bridge Over Troubled Water," then weaves back and forth in time through other Simon & Garfunkel classics ("Kathy's Song," "The Sound Of Silence," "April Come She Will"), the recurring themes of love and loss in his solo hits ("All I Know," "Breakaway"), and reverently rendered pop standards ("Two Sleepy People," "Some Enchanted Evening," and "I've Grown Accustomed To Her Face"). Also included are two new releases, "Lena" and "Long Way Home," which he recorded earlier this year after a two-year bout with vocal cord paresis. Equally interesting is Garfunkel's erudite, poetic, song-by-song annotation. Sonics are good, convincingly presenting the singer's wonderfully clear and ethereal yet powerful voice. **Sherri Lehman**

Further Listening: Art Garfunkel: ***Some Enchanted Evening; Best of S & G***

Best 2012 New Releases on Vinyl



Music Sonics

Beethoven: The Nine Symphonies. Deutsche Kammerphilharmonie Bremen, Paavo Järvi. Impex (nine LPs).

Though I don't usually care for chamber-sized Beethoven, Paavo Järvi's exciting new cycle with the forty-some strong Deutsche Kammerphilharmonie Bremen gave me much pleasure. The playing is sensational: alert, responsive, virtuosic—a good thing too, since Järvi usually tries to observe Beethoven's controversially fast metronome directions. Although the approach here derives from period-instrument practice, the Bremen's are modern instruments, excepting only the valveless trumpets; yet Järvi indulges little vibrato, the *sec* sonorities lean, clean, mean. Using the new Bärenreiter edition (like David Zinman in his similarly conceived 1999 Arte Nova set), Järvi is fully in the modern mode: little "expression" as such, tempos held once set. The readings are energetic, often thrilling, usually thoughtful, yet also driving, objective, "classical," rarely deep or probing, never "romantic."

Although these digital recordings were originally released in SACD on RCA, this vinyl set is a separate mix taken from the DSD masters. (It appears some members of the orchestra, audiophiles who love the format, lobbied for it.) The sound of both the SACDs and the LPs is superb of its kind: clean, transparent, dynamic, brilliant and clear, with little or no warmth and richness, like the orchestra itself. Is the vinyl better? The presentation appears a little more open, integrated, and well ventilated, and is somewhat livelier, the SACD smoother, a bit darker, more "contained." Since both processing and mix are different, who can say the SACDs wouldn't exhibit traits similar to the vinyl if given the equivalent TLC treatment? Dally not, however, if it's the LPs you want, as the ($350) edition—deluxe all the way, 180-gram pressings, mastered in Germany, classy red slipcase, full-sized booklet—is limited to 999 numbered copies worldwide (available in the US from elusivedisc.com).

First up was the Fourth, that little wonder between two giants, the first and last movements taken at an astonishing lick (the way the horns sound out in the former's coda absolutely thrilling). The Eighth, another little wonder, gets similar but fiercer treatment. Despite the chamber-sized forces, Järvi's exquisitely shaded dynamics and driving rhythms make the piece sound gigantic. He plays the Seventh with no pause between movements, an idiosyncrasy for which I can find no precedent. The *Vivace* chugs along vigorously with little abandon, while the relentlessly fast *Allegretto* almost becomes a forced march, which gives it a bizarre effectiveness. Järvi's differentiation between the outer parts of the *Presto* (fleet and quicksilver) and the *Trio* (powerful and grand) is outstanding. His whirlwind *Allegro*—possibly the fastest I've heard—is a *tour de force* of speed, control, and articulation, withholding full power until he goes into overdrive for the recapitulation and coda, where I was lifted out of my seat.

The *Eroica's Allegro* is thrustful *con brio*, care over dynamics meticulous without being fussy (listen to the chords near the beginning); the *Marcia funebre*, strong and assertive, is more triumphal than tragic (greater weight of tone would be nice); the *Presto* apportions delicacy and boisterousness in ideal measure. Perhaps because Järvi has been so attentive to scale and dynamics before the *Finale,* its variations don't come as a letdown (glorious coda, spectacular horns). Like the Seventh's, this is an involving, thoughtful interpretation that doesn't reveal its full logic until the very end.

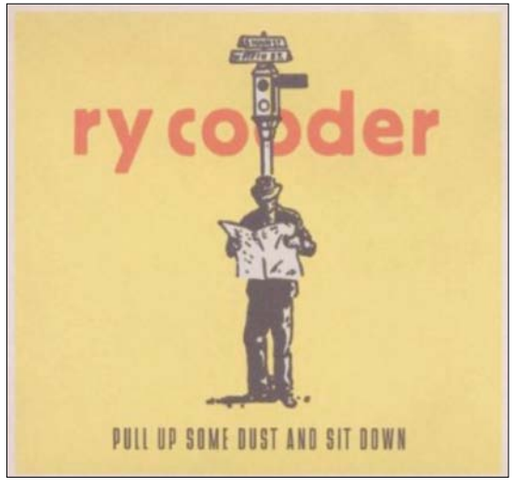
For me Järvi's approach works least well in the first two movements of the *Pastoral,* textures insufficiently rich, phrasing insufficiently lambent. The brook scene is gentle, smooth, undulating, but it's still seen in blacks, whites, and grays. Not until the peasants' merrymaking does the performance spring to life; then does it ever! How Järvi relishes all those chirping, cavorting winds, the slashing strings and piercing brass in the thunderstorm. Surprise of surprises, the "Hymn of Thanksgiving" is beautifully, expansively plangent.

Those famous "unbuttoned" chords in the First are disappointingly po-faced; otherwise, it's a well-articulated performance (listen to the melody of the second movement or the way the opening of the last movement is phrased, how the pauses are timed). The Second's *Allegro* is breathtakingly energetic, only the slight *ritard* at the very end disappointing (I wish Järvi had driven straight through). He plays the *Adagio*'s lovely melody with considerable involvement, but here of all places a little extra juice from the strings wouldn't have hurt. The Fifth gets us back on track with a powerfully dramatic performance: the famous motif implacable, the *Andante*'s shifting moods splendidly modulated, the *Scherzo* muscular, the last movement triumphant with no bogus rhetoric.

Which bring us to the Ninth. The first movement eschews mystery in favor of elemental objectivity (the central climax immense, tympani cutting through to scary effect); the *Scherzo* is so infectiously pointed it sounds almost dancelike, making those famous off-the-beat tympani thwacks all the more antic; the *Trio* is light, spirited, delicate. The *Adagio* is neither *molto* nor *cantabile*, but it does flow. The *Finale* begins with clangorous urgency, as called for, yet the overall feel of the rest, despite the fast tempos (the Turkish march breathlessly so), is surprisingly extrovert and joyous. The soloists all have light voices, as befits the chamber approach, the choir similarly sized and excellent, though recorded perhaps a bit distant. Like the *Eroica* and Seventh, this is a highly individual reading carried to the hilt, and it sweeps the cycle to a finish at once swift and rousing. **Paul Seydor**

Further Listening: Beethoven Symphonies: Zinman/Tonhalle; Bernstein/Vienna

Best 2012 New Releases on Vinyl



Music Sonics

Ry Cooder: *Pull Up Some Dust and Sit Down*. Nonesuch (CD and LP).

In the 1970s, when musicians mining America's rich musical history were a much rarer breed, Ry Cooder was a pivotal figure. If initially I was wary of artists plunging into roots music from bygone days, it wasn't that I disliked the source. In the wrong hands, though, "historical authenticity" translates into dry or academic. Musicologists should write about music, but they should never play it.

Well, Ry Cooder ain't no musicologist as I discovered the first time I dropped a needle on *Paradise and Lunch*. The sheer joy of music-making jumped right out of those grooves. On this record and all his early efforts it was easy to imagine someone with a huge and somewhat eccentric 78 collection who somehow distilled the essence of different musical styles that were currently out of vogue while adding his own touch. Later, a focus on world music proved commercially rewarding due to the surprise success of *Buena Vista Social Club*. His more recent California trilogy featured more self-penned songs while directing attention to social injustices that are part of the golden state's history.

With *Pull Up Some Dust and Sit Down* Ry Cooder adds 49 other states to his list of concerns and brings us up to the present. Politically he pulls no punches, which may anger you or inspire you, but even if you agree with every line the euphoria of hearing someone speak your mind wears off eventually. Springsteen's *The Rising* and Neil Young's *Living with War* seized the moment and stayed there. Will *Pull Up* quickly become a historical document?

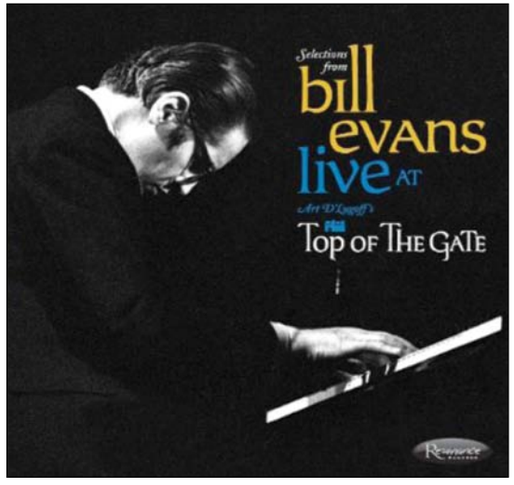
Surely not. The songs are too durable for that, with many features that grace classic old Ry Cooder records, including his slide guitar and mandolin work, those wonderful gospel-sounding harmony vocals, and more fine accordion work courtesy of Flaco Jiminez. The opening cut, "No Banker Left Behind," is a catchy number that sets the tone for much of the record with its deceptively breezy veneer but serious undercurrent; it so much evokes Depression Era lefty songwriting that it will have people checking the credits (all the songs are originals). "If There's a God" rails against religious hypocrisy, but it's perfectly danceable at the same time that it lets off steam. Both "Lord Tell Me Why" and "I Want My Crown" feature sludgy grooves and agitated vocals that call to mind Tom Waits circa *Mule Variations*.

What continually saves *Pull Up* from feeling like a pamphlet is its sense of humor, as when Ry channels a deceased blues master aspiring to America's highest office on "John Lee Hooker for President." "El Corrido de Jesse James" finds the famous outlaw comically powerless against forces too large for one man to battle, which seems to be how Ry feels at this point.

The record is also graced by storytelling that delves deeply into its characters. Full of longing and regret, "Dirty Chateau" and "Dreamer" are particularly effective in presenting the smaller picture. Rather than stand alone as anomalies on a record where subtlety often takes a back seat to big statements, these bittersweet songs deepen the sense of pathos overall. You can say that everyday people matter in your lyrics, or you can make us feel it—and *Pull Up* is a stronger record because Ry convincingly does the latter. **Jeff Wilson**

Further Listening: Ry Cooder: ***Paradise and Lunch*; *Get Rhythm***

Best 2012 New Releases on Vinyl

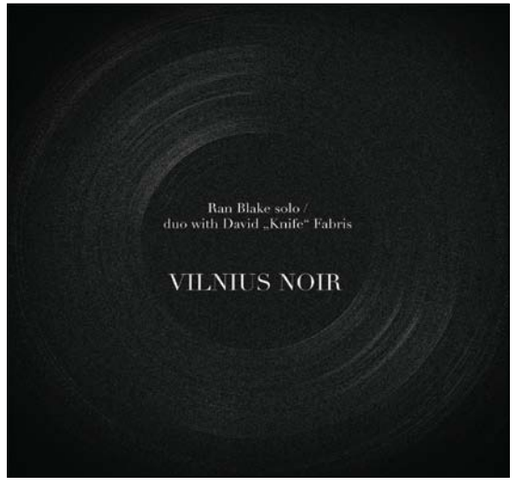


Music Sonics

Bill Evans: *Live at Art D'Lugoff's Top of the Gate*. Resonance (two CDs and three LPs).

Earlier this year Resonance released a previously unheard collection by Wes Montgomery, which I noted might be the "rediscovered" jazz record of the year. This new Bill Evans release may provide the strongest competition. *Live at Art D'Lugoff's Top of The Gate* is even more lavishly packaged than its predecessor and has the clear edge in sound quality. In fact it's possibly the best of the many live recordings the iconic pianist made, captured by George Klabin, an engineer and director of jazz programming at WKCR radio. That was late 1968, when Evans was breaking in a new trio with Eddie Gomez on bass and Marty Morell on drums. Klabin's close miking gives us great presence; I can't think of another record where one hears the interplay between Evans and the long-serving Gomez so clearly, and while we might wish for more than one original tune, jazz, as the pianist said, is a "how," not a "what," and he was among the greatest interpreters of standards in the music's history. Available as a deluxe two-CD set or three 45rpm 180-gram LPs. State-of-the-art production, timeless music. **Duck Baker**

Further Listening: Bill Evans: *Sunday at the Village Vanguard*; *The Tokyo Concert*



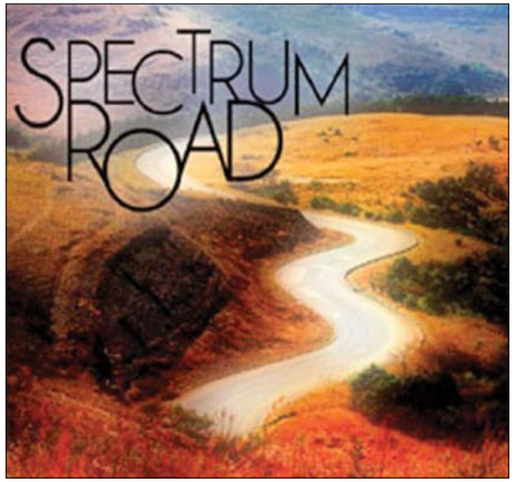
Music Sonics

Ran Blake and David "Knife" Fabris: *Vilnius Noir*. NoBusiness (LP).

Although pianist Ran Blake has made memorable recordings ranging from solo performances to collaborations with symphony orchestras, since his debut in 1962 much of his oeuvre has been devoted to duets, where his accomplishments place him in elite jazz company. Lately Blake has been working one-on-one with female vocalists, but *Vilnius Noir* pairs him with electric guitarist David "Knife" Fabris, whose dark tone, use of space, and playful spirit make him a perfect foil for his long-term teacher. Blake is miserly with notes—but that doesn't mean he can't plunk down dissonant chords when you least expect it and then offset those with lyrical passages. A mix of duets and solos recorded in St. Catherine's church in Vilnius, *Vilnuis Noir* features originals and standards, including Jobim's "Desafinado," Stevie Wonder's "My Cherie Amour," and Fabris' stunningly original reading of Ellington's "Mood Indigo." This vinyl-only release is from NoBusiness Records, a Lithuanian jazz label that's already put out dozens of vinyl LPs (and CDs too). Fortunately *Vilnius Noir* is graced with a quiet pressing and absolutely superb, closely-miked, intimate sonics. **Jeff Wilson**

Further Listening: RB Quartet: *Short Life of Barbara Monk;* Bill Evans and Jim Hall: *Undercurrent*

Best 2012 New Releases on Vinyl



Music Sonics

Spectrum Road. **Palmetto (CD and LP).**

Jack Bruce knows something about being in a supergroup, having been a member of what many consider the original: Cream. Now, more than four decades after the supergroup dawn of Blind Faith, Crosby, Stills, Nash & Young, and others, the 69-year-old Bruce is playing bass and singing in another brilliantly credentialed coalition. In Spectrum Road, he's joined by electric guitarist Vernon Reid (Living Colour), keyboardist John Medeski (Medeski Martin & Wood), and drummer/vocalist Cindy Blackman Santana (Lenny Kravitz, Santana)—and the musical results are thrilling.

The quartet came together in 2009 as the Tony Williams Lifetime Tribute to play the music of the late drummer who, in 1969, formed the pioneering jazz-rock trio Lifetime (with guitarist John McLaughlin and organist Larry Young). A second tour, in 2011, convinced the players that their chemistry transcended homage, so they took a new name (from the Williams-McLaughlin composition "Via the Spectrum Road") and continued as a working—and recording—band.

Bruce played in the 1970 edition of Lifetime, and eight of the ten pieces on *Spectrum Road* come from the Lifetime albums *Emergency!*, *Turn It Over*, *Ego*, *Believe It*, and *The Joy of Flying*. But this quartet forges its own path. On the album opener, "Vuelta Abajo," each musician establishes an individual voice—Reid's warp-speed, note-blurring guitar lines, Blackman Santana's elegantly thunderous drum rolls, Bruce's woofer-challenging, full-bodied bass notes and melodic runs, and Medeski's spacy, sci-fi organ and mellotron—and locks it into a unified ensemble identity.

When Spectrum Road opened a San Francisco concert this past summer with "Vuelta Abajo," a few patrons headed for the exits, stunned into submission by the audacity and volume. This is not polite jazz. The ferocious (yet nuanced) recorded performance throws down a gauntlet, as well, and clears the decks of any expectations listeners might bring to the experience. Those who hang in are rewarded with less confrontational explorations of mood and texture: Bruce's unmistakable vocals on "There Comes a Time," the upward-modulating "One Word," and the psychedelicized traditional Scottish tune "An T-Eilan Muileach"; the unexpectedly hummable guitar melodies on "Coming Back Home" and "Blues for Tillman"; a panoply of precision drum-and-cymbal polyrhythms; and a dizzying array of analog keyboard atmospherics and voluminous swells. For anyone with a soft spot for the icons of prog-rock and jazz-fusion—King Crimson, Yes, the Jeff Beck Group, Mahavishnu Orchestra, Return to Forever—Spectrum Road is musical manna from heaven. On vinyl, the deep and wide soundstage grows even deeper and wider, and the space between keenly delineated instruments is filled with warmth that must have radiated from the musicians in the studio.

Supergroups were something of a joke by the time the 1980s coughed up the likes of Asia and The Firm. And fusion became disposable in the 1970s when it morphed into bland jazz-pop. Spectrum Road brings renewed credibility to both categories through jaw-dropping individual technique, cosmic group improvisation, and the integrity that comes with playing music for the pure joy of it. *Emergency!* marked the advent of electric jazz-rock: The double-LP was released six months before Miles Davis' *Bitches Brew*. The genre never died out, but *Spectrum Road* signals a welcome return to glory. **Derk Richardson**

Further Listening: **Larry Young: *Lawrence of Newark*: Henry Kaiser & Wadada Leo Smith: *Yo Miles!***

Best 2012 New Releases on Vinyl

Music Sonics

Tchaikovsky: Serenade. Nielsen: Suite. Trondheim Soloists. (downloads, LP, and Blu-ray) 2L.

Perhaps Morten Lindberg was out to make a point about progress in audio technology when he decided that his label's new program, *Souvenir Part I* from the Trondheim Soloists, would be released as 24/96 stereo, 24/192 stereo, 24/352 stereo, and 24/96 multichannel downloads (www.2l.no/hires/index.html), 180-gram vinyl, and Blu-ray. I requested both downloads and vinyl and, within 24 hours, was familiar with the considerable sonic and musical strengths of the former. The LP arrived from Norway about a week later, via snail mail. *So* 2002.

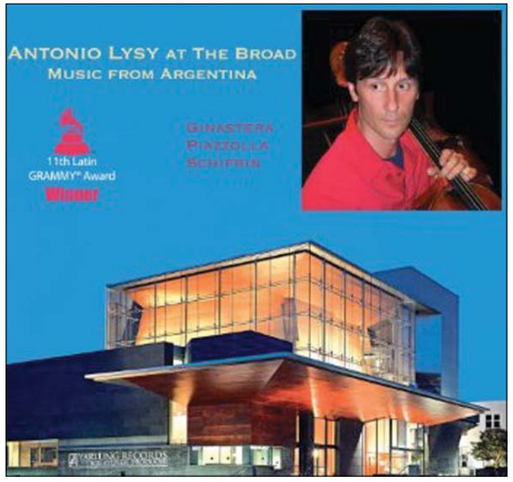
Souvenir is a terrific program with which to demonstrate the virtues of multichannel, especially multichannel of the more "immersive"—some would say "aggressive"—variety. There's plenty of direct sound in the rear channels, yet one still gets the impression of experiencing a performance in a real space, in this case a small, stone parish church with a capacity of 400. The listener is located in a very different place than usual, namely onstage with the players. This is especially involving if you have any history, however distant, of playing in an orchestra yourself: there's a sense of *participation* that connects one viscerally to the music. You'll want to listen *loud*. Additionally, 2L's DXD encoding (32-bit "floating point" at 352kHz) shows us how far digital recording has come, taking on what may be classical music's toughest sonic nut to crack, the sound of massed strings. There's the same resiny texture heard with the best analog recordings, plus we can appreciate that the violin sections are made up of many non-identical instruments.

Typical for 2L, two weeks were allotted to record 90 minutes of music (a second *Souvenir* release will be forthcoming). Further deconstructing the usual paradigm for recording an orchestra is that the players are not sitting in standard "sections"—first violins, second violins, violas, etc.—but instead are mixed together. Yet the coherence of the performances is in no way compromised, a tribute to the players who truly function as chamber musicians. The reading of Tchaikovsky's Serenade for Strings captures both the sunny lyricism of that piece—listen to the soaring cello line beginning at 2:03 in the last movement—as well as its contrapuntal exuberance. The opening of the first movement is significantly less turgid than is often the case: We feel the triple meter clearly even at a slow tempo. The less familiar Nielsen work—the composer's Opus 1—employs a similar harmonic language to the Tchaikovsky, but it's a bit more serious in tone, more "Northern" in outlook. Still, the conclusion is upbeat and we leave refreshed.

Interestingly, to produce the vinyl version, 2L utilizes the main center microphone as the primary source, with right and left front adding width. (This also facilitates the "monofication" required below 300Hz to cut a vinyl groove, Lindberg explained to me.) The stereo download programs derive mostly from the right and left main mikes, with the center providing "stability and substance." The effect of going from the download stereo to vinyl stereo is of moving back ten rows in the church. Not in the sense of there being more of the room, but in that the ensemble's image is more compact, with less specific placement of instruments. It's not better or worse—just different. **Andrew Quint**

Further Listening: ***Divertimenti*** **(Trondheim Soloists/2L Blu-ray); Dvorák: Sextet (Tacet/LP)**

Best 2012 New Releases on Vinyl



Music ■■■■■ Sonics ■■■■■

Music from Argentina. **Antonio Lysy, Bryan Pezzone.** Yarlung (LP).

The vast dusty plains and the urban nightscapes of Argentina are evoked in five pieces for cello and piano on this stunning new all-analog LP from Yarlung Records. Alberto Ginastera's *Second Pampeana* is rhapsodic and earthy, its long cello solos and calm nocturnal mysteries set off by fast, exciting bravura episodes depicting the gauchos galloping after their cattle and celebrating with muscular fiesta dances. His haunting *Triste*, a quiet elegy, puts a sad cello song beneath slow chords and delicate chimings in the piano. Lalo Schifrin's *Pampas* is moody and sumptuous, the emotion more distilled than raw. Two tango-fantasies by Astor Piazzola complete the program, adding a bassist to make a dark-hued trio. In them we hear the sounds of Argentina's cities: swaying, insinuating, urbane but sentimental.

Cellist Antonio Lysy and pianist Bryan Pezzone play gorgeously and are gorgeously recorded. Sonics are holographic in clarity and presence, rich in tonal splendor, and revealing of the venue (Santa Monica's The Broad Stage). Just listen to the deeply resonant cello pizzicatos that reverberate into silence at the end Schifrin's *Pampas*. This is one of the most realistic and beautiful recordings I've heard—ever. **Mark Lehman**

Further Listening: Brahms: Violin Sonata 1 (Wilson LP); Gerhard: *Libra* (Decca LP)

Music ■■■■■ Sonics ■■■■■

Melody Gardot: ***The Absence.*** Verve/Decca (LP and CD).

Melody Gardot's best songs have the half-festive, half-mordant air of a New Orleans funeral march. On blues from her superb 2009 album, *My One and Only Thrill*, her voice even sounds vaguely New Orleanian. On ballads, however, she can be as mainstream-lyrical as Norah Jones, then strut and scat like Sassy. All of which is to say that 26-year-old Ms. Gardot is a work in progress, still making all styles of jazz/pop her own. In her newest album, *The Absence*, Gardot dons the music of Brazil like a second skin. The album is dreamy, exotic, often lovely, but, ultimately, a bit ersatz, like one of Paul Simon's toe-dips into world music. (Though sonically impressive, with terrific bass, it's also overproduced by Gardot's collaborator, Brazilian composer and guitarist Heitor Pereira.) That's OK. The kid is savvy enough to have penned several cuts ("If I Tell You That I Love You I'm Lying" and "Goodbye," for examples) that have that wry, unblinking honesty I think of as distinctively Gardot, plus a couple of "Brazilian" numbers (such as "Yemanja") with more than a touch of the same gift. If *The Absence* isn't a complete success, it doesn't alter my opinion that Ms. Gardot is the finest young singer/songwriter around. **Jonathan Valin**

Further Listening: MG: ***Worrisome Heart***; ***My One and Only Thrill***

Best 2012 New Releases on Vinyl

Music Sonics

Kate Bush: *50 Words for Snow.* Fish People/EMI (CD and LP).

The muses are often fickle, and continually wooing them back has perplexed even the most gifted pop musicians. Nonstop touring can stifle creativity, but so can long periods away from the star-maker machinery—and that would seem to be the hurdle facing Kate Bush. Twelve years passed before she released *Aerial* in 2005, and six more preceded *The Director's Cut,* where she gave a new sound to old songs. The results were mixed, with some renditions paling in comparison to the originals, and fans may have wondered if Bush was biding time until the muses returned.

Well, worry not. Released just months later, *50 Words for Snow* is quite simply the work of a major artist who remains at the height of her powers. Lyrics evoking myths or dreams still abound, with strange occurrences happening in snowy, far-off places, but the sonics are mostly more down-to-earth and intimate than on previous records. And on the first half of the record Kate Bush explores musical territory that's as new as her cast of snowbound characters.

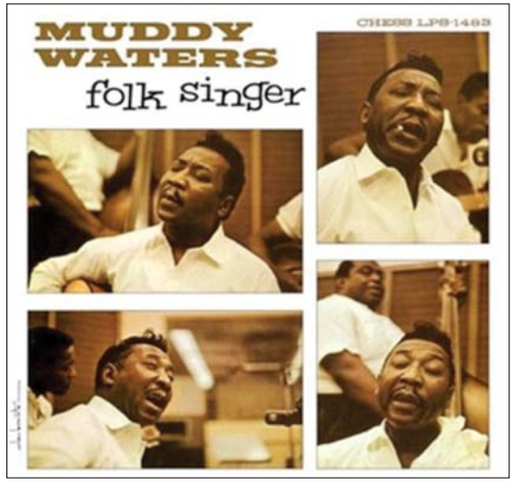
The three long, slow, brooding cuts that open the record feel like a 34-minute suite where acoustic piano and undoctored vocals take center stage regardless of what other instruments (strings, mostly) flit in or out of the soundscape. Here we have the opposite of the heavily overdubbed, sonically treated sound of some of her earlier records, but the sorcery remains. Near the beginning of "Lake Tahoe," when she sings softly and slowly, "And you might see a woman down there/They say some days, up she comes, up she rises, as if out of nowhere," the suspension of disbelief comes easily.

Like the other long opening cuts, "Lake Tahoe" builds at a glacial pace and shows remarkable restraint. At such low volume and with such sparse accompaniment even the softest touches resonate, as when castanets click or when, after the band drops out for a fraction of a second, Bush sighs into the microphone. As Steve Gadd's crisp and cleanly-recorded drums get underneath "Misty," the music begins to feel like a drawn-out tease, with Bush taking her own sweet time to deliver some lines. When her voice finally does take flight, as you know it will, the effect is stunning.

Elsewhere we get superb pop songcraft in the form of a powerful leadoff single, "Wild Man," and the perfectly silly title track, on which a supposed Prof. Joseph Yupik lists highly questionable pseudonyms for snow while Bush goads him on with lyrics like, "Come on Joe, you've got 32 to go." "Among Angels" closes the record in the same reflective mood that opened it. My only reservations about *50 Words for Snow* concerns two vocal collaborations. A bit twee, her duet with Elton John is a far cry from "Don't Give Up," her 1980s hit with Peter Gabriel. And though conceptually it makes sense for her son to sing lead on the opening track, I'd rather hear a vocalist who'd cause goose bumps if she sang the phonebook and who, as she's often proven, can conjure up any character she wants. **Jeff Wilson**

Further Listening: Laura Nyro: *New York Tenderberry;* Joanna Newsom: *Have One on Me*

Best 2012 Reissued Releases on Vinyl



Music Sonics

Muddy Waters: *Folk Singer*. Analogue Productions (SACD and two 45rpm 180-gram LPs).

Muddy Waters' *Folk Singer* is no stranger to the reissue circuit. From MoFi in the early 90s to Classic Records' more recent vinyl release, this is a perennial audiophile favorite. So what could justify another edition? Well, how about a 45rpm set from Analogue Productions' recently launched Quality Record Pressings Facility, mastered by Bernie Grundman, in a beautiful gatefold jacket with extra sessions shots? It's been ages since I've heard LP surfaces this quiet—as in *dead* quiet. The expense and effort that Chad Kassem and company put into this venture are immediately obvious. The air, dynamic range, harmonic complexity, instrumental texture, verve in Waters' voice, and sheer sense of four guys making music together bring this recording to life as never before. It's by far the best sounding and most engaging version yet. The SACD, while certainly excellent, sounds somewhat glossed over, not as dynamically explosive or rhythmically driving. Compare the brushed snare thwacks during "My Home Is In The Delta." On SACD they sound pretty much the same; on vinyl each one is clearly hit with a different amount of impact. Digital fans won't be disappointed, but analog lovers will be in hog heaven. **Wayne Garcia**

Further Listening: ***Muddy Waters At Newport 1960; Led Zeppelin***

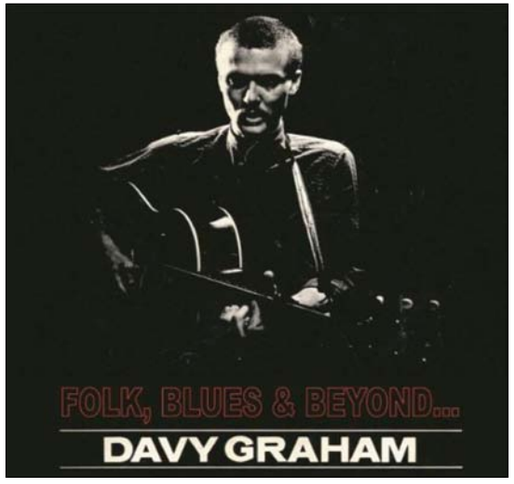
Music Sonics

The Grateful Dead: *Live Dead*. Mobile Fidelity (two 180-gram LPs).

Deadheads rejoice! The band's seemingly bottomless archival treasure chest keeps on giving. Last summer, the band's Web site quickly sold out of *Europe '72: The Complete Recordings*, a 72-CD, $450 behemoth devoted to what many consider to be the Dead's finest tour ever. I reviewed an earlier and excellent 180-gram LP box containing the band's first five studio albums (Issue 209), and now Mobile Fidelity has released *Skull and Roses*, *Wake of the Flood*, *Mars Hotel*, *In the Dark*, and *Live Dead*. Always fastidious, the MoFi mastering team lavished their attention on this set—four lacquers were cut before they were satisfied—and it shows. From the opening of "Dark Star" the sound is clearly superior to my original Warner pressing. The stage is larger, airier, deeper, and better focused. Phil Lesh's bass lines seem to plumb another octave, with greater detail and richness of tone. The music's dynamic ebb and flow are more clearly and naturally rendered. Garcia's voice sounds more present yet farther back, and with a greater nimbus of hazy air surrounding it. His guitar lines are tighter and more precise, and the drums come through with a new sense of wallop and weight. Great stuff. **Wayne Garcia**

Further Listening: Grateful Dead: ***Europe '72; Fillmore West 1969***

Best 2012 Reissued Releases on Vinyl

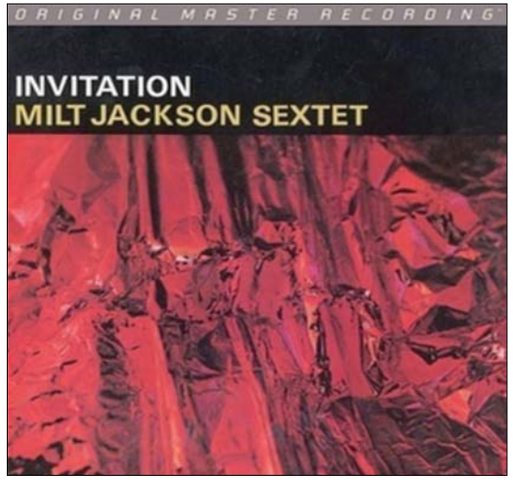


Music Sonics

Davy Graham: *Folk, Blues & Beyond*. Les Cousins (LP).

There's almost nothing in the music of Pentangle, Steeleye Span, Fairport Convention, or any of the members of those groups that wasn't directly inspired by one larger-than-life guitarist named Davy Graham. As the young man at the center of London's burgeoning folk and blues scenes, Davy was chosen by the producer Ray Horricks to be promoted for stardom. Horricks apparently believed that Graham's erratic behavior was attributable to youthful high spirits (we were decades away from the word "autistic," a bit of which surely affected the London-based genius), and he stuck with his choice even after Davy refused to sing a note on his first record date. The resulting *The Guitar Player* remains the record that John Renbourn, the late Bert Jansch, and dozens of other guitarists have named as their favorite, but it has never had a wide audience. Told the next year (1964) to either sing or find another producer, Davy demonstrated considerable vocal ability on *Folk, Blues and Beyond*, delivering a mix of blues, jazz, pop, and traditional material with authority, but what elevates it to the level of classic is that breathtaking guitar style. British folk rock and "folk Baroque" all starts here. Lovingly reissued on 180-gram vinyl. **Duck Baker**

Further Listening: DG: *The Guitar Player*; *After Hours*



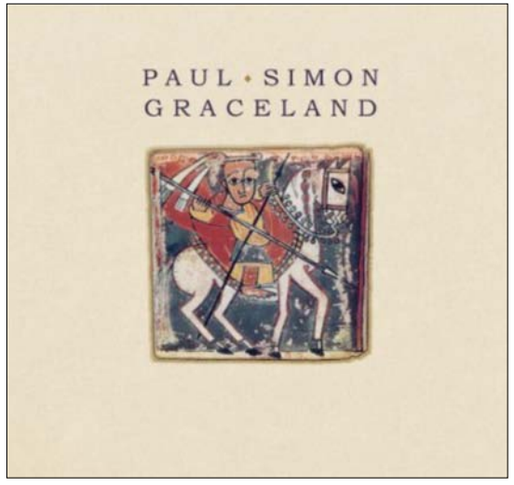
Music Sonics

Milt Jackson Sextet: *Invitation*. Mobile Fidelity (LP).

Once in while, an audiophile reissue can make the listener realize that what seemed like a good, solid record is better than that. If I had been asked to evaluate *Invitation* before hearing this release, I would've said it was a fairly typical early-60s hard-bop record, led by the great vibraphonist Milt Jackson. I might have added that it suffers from neither the overly careful approach that plagued much of the Modern Jazz Quartet's output, nor from the opposite extreme, of simply blowing long solos on overly familiar standards, something Jackson has done more than enough of in his time. The success of *Invitation* owes on both counts to the presence of trumpeter Kenny Dorham and alto saxophonist Jimmy Heath. Each contributes not only fine solos, but a couple of nifty arrangements. But what this listener had not fully appreciated from earlier releases is the fantastically subtle interplay of the rhythm section: Tommy Flanagan, piano, Ron Carter, bass, and Connie Kay on drums. On this remastered LP, one hears every nuance with delicious clarity, from the crackle of Kay's cymbals to the big, fat sound of Carter's walking lines. Rarely have Jackson's uniquely swinging vibes been heard in a more sympathetic setting. **Duck Baker**

Further Listening: Milt Jackson: *Plenty, Plenty Soul; Bags' Opus*

Best 2012 Reissued Releases on Vinyl



Music Sonics

Paul Simon: *Graceland*. Legacy (LP and 4-disc box).

A sense of wonder still emanates from the graceful South African rhythms heard on this controversial, Grammy-winning 1986 album, newly reissued as a 180-gram LP and a four-disc 25th anniversary deluxe-edition box set. It's impossible to separate the music from the politics from which *Graceland* emerged amid criticism that Simon broke a UN boycott against musicians traveling to a nation in which a white minority controlled the black majority through brutal segregation. The politics and making of the landmark album are detailed in an excellent documentary in the box set, which also contains a remastered version of the original album, a CD of demos and outtakes, and a DVD of a recent *Graceland* reunion concert. The box set also has an essay, lyric sheets, and collectible poster. The quiet-as-a-whisper LP includes a poster and a code for downloading an MP3 version of the entire album, plus three bonus tracks. Either way, the tribal rhythms, percolating guitar lines, midrange thump of Baghiti Khumalo's fretless bass, and haunting vocal incantations of Ladysmith Black Mambazo are as fresh today as when first introduced to mainstream audiences. **Greg Cahill**

Further Listening: Ladysmith Black Mambazo: *Ulwandle Oluncgwele*

Music Sonics

Priscilla Ahn: *A Good Day*. Mobile Fidelity (LP).

Recently more recordings have started showing up on audiophile vinyl within a few years of their initial release, including albums originally only available as CDs or downloads. Such is the case with Priscilla Ahn's *A Good Day,* which came out on Blue Note in 2008 and has already resurfaced as a MoFi Original Master Recording. Musically *A Good Day* deserves such top-shelf treatment: Consisting of well-crafted pop songs with a sunny sound and sudden twists, it's an unusually mature debut album. Acoustically, too, it's a treat, combining warm, natural sonics with studiocraft that becomes more intricate as the songs unfold. MoFi does a fine job of revealing the details of the recordings while concealing the artifice. It doesn't hurt that Korean-American Priscilla Ahn has a lovely voice and that her lyrics manage to evoke a childlike view of the world without seeming coy or cute. It's almost disarming, frankly, to hear someone celebrate simple pleasures without a hint of irony; but hey, sometimes it's good to be disarmed. I'm happy to report that Ahn's sophomore effort, *When You Grow Up,* is as good as her debut or better, and was recorded on ready-for-vinyl analog tape. That said, if you haven't heard her yet, start here. **Jeff Wilson**

Further Listening: Sharon Van Etten: *Epic;* Inara George: *An Invitation*

Best 2012 Reissued Releases on Vinyl

Music Sonics

Bob Dylan & the Band: *The Basement Tapes*. Mobile Fidelity (two LPs).

Dylan fans have waited a decade for an audiophile edition of *The Basement Tapes*, two discs of demos recorded in 1967 in the cellar of the Band's upstate New York ranch house, but excluded from Columbia's 2003 hybrid SACD reissues of Dylan's catalogue. These relaxed, acoustic-oriented demo sessions, widely bootlegged but unreleased until 1975, were recorded on a Revox A-77 tape machine in a cinder-block cellar with a churning furnace, clanging pipes, and oil-stained concrete floor. The tracks evoke what Dylan biographer Greil Marcus has called "that weird old America" and are a window into one of the most productive collaborations in pop-music history. This 180-gram double LP—a forthcoming SACD wasn't yet available at review time—is the first in Mobile Fidelity's Dylan reissue series. It bodes well for audiophiles. MoFi's remastering has scrubbed the sonic crud from the aggressive Red Book CD (on which the Band sounds like a garage band) and delivers a warm, nuanced, intimate performance (listen to the rich tones on the percussion). The result is stunning: it feels like you're standing at the top of the basement stairs listening to Bob and the boys spin their magic. Justice at last for these culturally important tapes. **Greg Cahill**

Further Listening: The Band: *Music from Big Pink*

Music Sonics

***Ellington Indigos*. Impex (LP).**

First released in 1962, *Ellington Indigos* finds the maestro and his impeccable orchestra in a low-key, nocturnal mood. "Solitude" begins with Ellington's quietly introspective solo, but when his band jumps in a huge grin will cross your face as this Kevin Gray-mastered platter from Impex bursts to life with a sound as enveloping as a warm bath. Okay, the piano is a bit tinny, but the brass is so creamy and seductive it doesn't matter. Each tune allows different players to shine: Paul Gonsalves' tenor, rightly described as "vaporous" in the liner notes, takes center stage in "Where or When"; Shorty Baker's muted trumpet is spotlighted in "Mood Indigo," while Ray Nance's violin and vocalist Ozzie Bailey share the stage for "Autumn Leaves." The classy set-list continues with the unmistakable Johnny Hodges on alto for "Prelude to a Kiss," and concludes with "Willow Weep for Me," "Tenderly," and "Dancing in the Dark." There isn't a filler in the bunch. I have no original for comparison, but Gray's work is as good as it gets, and whatever limitations are evident here—a large but mostly shallow stage and the piano are about it—hardly interfere with this musical treasure. **Wayne Garcia**

Further Listening: Duke Ellington: *Anatomy of a Murder;* Thelonious Monk: *Plays Duke Ellington*

Best 2012 Reissued Releases on Vinyl

Music Sonics

Janis Ian: *Between The Lines.* Boxstar (CD and LP).

Janis Ian first appeared on the music scene as a preternaturally mature thirteen-year-old singing "Society's Child," a tale of an inter-racial romance that was swiftly banned on radio stations due to its perceived incendiary content. During the 1970s Ian gained iconic status for "At Seventeen," a teen coming-of-age story told from the perspective of the high-school "ugly duckling" outsider, and its album *Between The Lines* struck gold and Grammy accolades in 1975. It's an extraordinary achievement. Ian not only wrote the music and lyrics, she arranged and scored many of the tracks. The songs are moody and reflective, casting light and shadows on themes of desire, hard knocks, and reconciliation. Highlights besides the title track include the longing and lingering mistrust of "The Come On" and the epilog of a breakup of "In the Winter." *Between the Lines* has been tenderly remastered for LP and gold CD by Kevin Gray. The 180-gram vinyl reissue is very good; there's some predictable lower-treble zip on vocals but the analog recording is recognizably of the era and not plagued by the hyperbolic processing yet to come. A quiet treasure of an LP. **Neil Gader**

Further Listening: Mary Chapin-Carpenter: *Come On, Come On*; Shawn Colvin: *A Few Small Repairs*

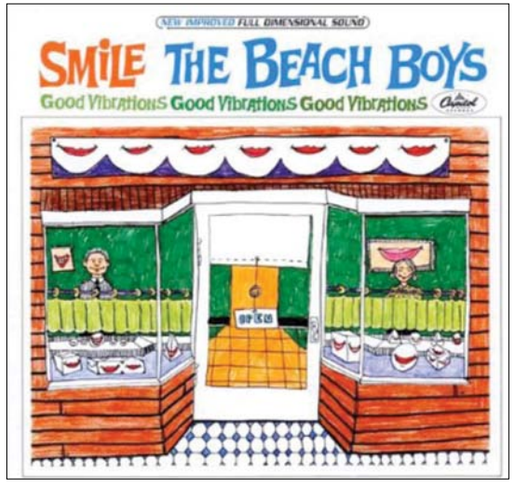
Music Sonics

Stan Getz: *The 1953-54 Norgran Sessions.* Mosaic (4 LPs).

By the time Stan Getz was 25, he was a rising star of the tenor sax and an acknowledged leader of the "cool" school of modern jazz, with a string of successful records under his belt. In April of 1953 Getz signed with impresario Norman Granz's Norgran label, and brought his new quintet featuring Bob Brookmeyer into the studio for the first of five sessions spread over the next year and a half. The music they recorded forms the bulk of what's collected on this great set, and while the group is not so celebrated as some other Getz lineups, no jazz fan can fail to respond to it. Brookmeyer's sunny valve trombone soloing and flair for spontaneous counterpoint behind the leader are great strengths of this group, but of course it's Getz who makes the deepest impression. For a famously inconsistent human being, he was certainly a consistent musician, as throughout this collection: tremendous swing, the facility to make it all seem easy, a sound you can drown in, and the rare ability to made every note count—who could ask for more? Especially with several previously-unissued tracks and the very best production values. **Duck Baker**

Further Listening: *Stan Getz at Storyville; Getz/Gilberto*

Best 2012 Reissued Releases on Vinyl

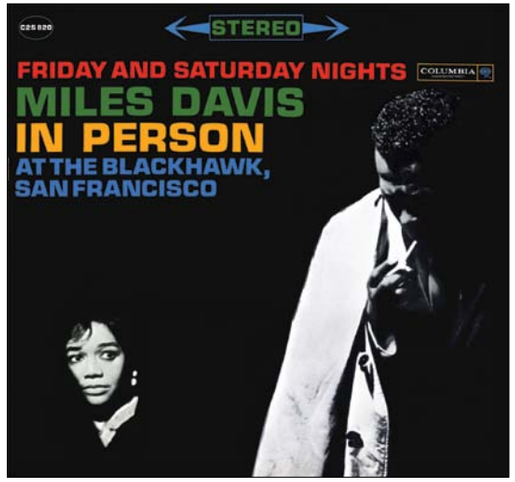


Music Sonics

Beach Boys: *The Smile Sessions.* Capitol (LP and CD).

Recorded in 1966 and '67, and guided by songwriters Brian Wilson and Van Dyke Parks, the unfinished *Smile* album is often considered just as innovative as the Beatles' 1967 game changer *Sgt. Peppers Lonely Hearts Club Band* (which it pre-dated). Wilson called it "a teenage symphony to God." It's one of rock's great "lost" monuments. The album is built around dreamy, joyous tracks that abandoned typical pop form, including the previously unreleased "Surf's Up" suite, and features songs devoted to the four elements (fire, air, water, and earth). But despite its brilliance the ambitious *Smile* project collapsed beneath Wilson's LSD-fueled nervous breakdown. Portions of the sessions were salvaged for 67's *Smiley Smile,* most notably the hit single "Good Vibrations." Over the years, outtakes have popped up on various bootlegs and official anthologies. This newly remastered assemblage of *The Smile Sessions* is sequenced in accordance with Wilson's re-imagined 2004 version, and includes a lengthy book and vinyl singles; both the LP and CD versions offer bonus tracks loaded with studio chatter. The two-LP version is recorded in mono, but includes one side of stereo mixes. The remastering perfectly complements the angelic vocal harmonies and sonic experimentation, and the vinyl version sounds especially good. **Greg Cahill**

Further Listening: *Brian Wilson Presents Smile*; Beach Boys: *Pet Sounds*



Music Sonics

Miles Davis: *Friday and Saturday Nights.* Impex (two LPs).

In Person Friday and Saturday Nights at the Blackhawk is an anomaly. Whereas even acoustic Miles generally recorded live albums in larger and more formal venues, these 1961 performances took place in a nightclub. On the heels of *Kind of Blue* and *Sketches of Spain,* the music here swings surprisingly hard: no brooding ballads, no ground-breaking experimentation, no walking on eggshells. Because Miles favored stable personnel over the wayfaring common in jazz circles and had reservations about this short-lived lineup, it's surprising a recording crew showed up at this engagement, but fortunately it did. Seldom will you hear the great tenor saxophonist Hank Mobley, who led and graced dozens of classic Blue Note sessions, blow harder—or for that matter Miles; pianist Wynton Kelly is equally animated as a soloist and sometimes frisky accompanist. Mastered by Kevin Grey, this 180-gram two-LP set from Impex boasts remarkable clarity and a quiet pressing. As the owner of 3½ copies of the original Columbia release, I've found that some pressings are better than others, and since a clean original will probably cost you at least much, you may want to snatch one of these limited-release issues before they're gone. **Jeff Wilson**

Further Listening: Hank Mobley: *Soul Station;* Wynton Kelly: *Kelly Blue*

Best 2012 Reissued Releases on Vinyl

Music Sonics

Marianne Faithfull: *Strange Weather.* ORG (two 45rpm LPs).

I recently heard Marianne Faithfull in an intimate venue with great acoustics, and was mesmerized from start to finish. Not only by that one-of-a-kind, sandpaper-and-velvet voice but also by what she put into every song, each syllable, whether she wrote the tune or was covering someone else's. For 1987's *Strange Weather*, Faithfull, accompanied by a superb band anchored by guitarist Bill Frisell, elected to sing only covers, mostly ballads, from a variety of eras. From a slower rendition of Jagger/Richards' "As Tears Go By," which made her a star at 18, to the superb title track, written for her by Tom Waits and Kathleen Brennan, Faithfull is a singer who owns everything she sings. Other highlights: "Boulevard of Broken Dreams," an unaccompanied take of Lead Belly's "I Ain't Goin' Down To The Well No More," "Sign Of Judgment," Dylan's "I'll Keep It With Mine," Dr. John's "Hello Stranger," Jerome Kern's "Yesterdays," and Jason and Burton's "Penthouse Serenade." ORG's 45rpm reissue sounds very good, though the original recording is somewhat uneven. Most critically, Faithfull's vocals are consistently well captured, and there's air and ambience, with natural instrumental tones and rich textures. **Wayne Garcia**

Further Listening: Faithfull: *Blazing Away*; Dinah Washington: *Sings Bessie Smith*

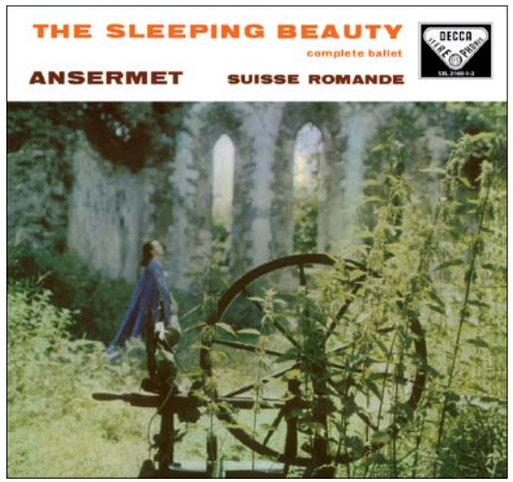
Music Sonics

Weather Report: *Heavy Weather.* ORG (two 45rpm LPs).

Where some album titles seem like an afterthought, *Heavy Weather* and its surreal cover art match the music perfectly. Less groove-oriented and more atmospheric than previous Weather Report records, it sounds like the soundtrack to a movie where, to borrow the first words of an otherwise-forgotten novel, it was a dark and stormy night. As such, it makes sense that the mix is dense and even, at times, deliberately cluttered. With its decision to remaster and reissue this classic on 180-gram 45rpm vinyl, ORG clearly took on a project where artifice wins out over a more natural sound. Though the original recording retains its own appeal, the ORG is decidedly better, and—this is no small thing—the improvements are in the spirit of the original. The highs are clearer, the bass more natural, and the music has more room to breathe. The difference is especially pronounced on "Havona," where the weather is more turbulent than ever; the interplay among the musicians (and there's a whole lot of it) is much sharper, and you can feel the excitement of a band that suddenly experiences a new burst of energy. **Jeff Wilson**

Further Listening: Passport: *Infinity Machine*; Return to Forever: *Romantic Warrior*

Best 2012 Reissued Releases on Vinyl



Music Sonics

Tchaikovsky: *The Sleeping Beauty*. Suisse Romande, Ansermet. Speakers Corner (three 200-gram LPs).

This *Sleeping Beauty*, arguably the finest of Tchaikovsky's ballets, was recorded in 1959 with Ernest Ansermet on the podium leading L'Orchestre de la Suisse Romande. These meticulously manufactured Speakers Corner LPs demonstrate well what Kenneth Wilkin-son and colleagues achieved with their famed "Decca tree" stereo microphone array. The sound represents the best of the *ffss* era. Strings are beautifully textured, always a plus in Tchaikovsky when violins and cellos soar in unison a couple of octaves apart. The brass section has a crisp bite and woodwinds are truthfully represented, both the pleasant woodiness of the clarinets and the not-so-pleasant tartness of the 1959 OSR's oboes. The harp is tactile, and small percussion instruments are easily heard over an orchestral tutti as they are in life. Ansermet had a gift for bringing this sort of music to life. Complete ballet scores on disc or in concert can get repetitive—that's why there are so many ballet suites—but the conductor here takes full responsibility for presenting a cogent narrative. Tempo choices are perfect. **Andrew Quint**

Further Listening: Stravinsky: Ballets (Dorati); Hérold-Lanchbery: *La Fille Mal Gardée* (ORG)