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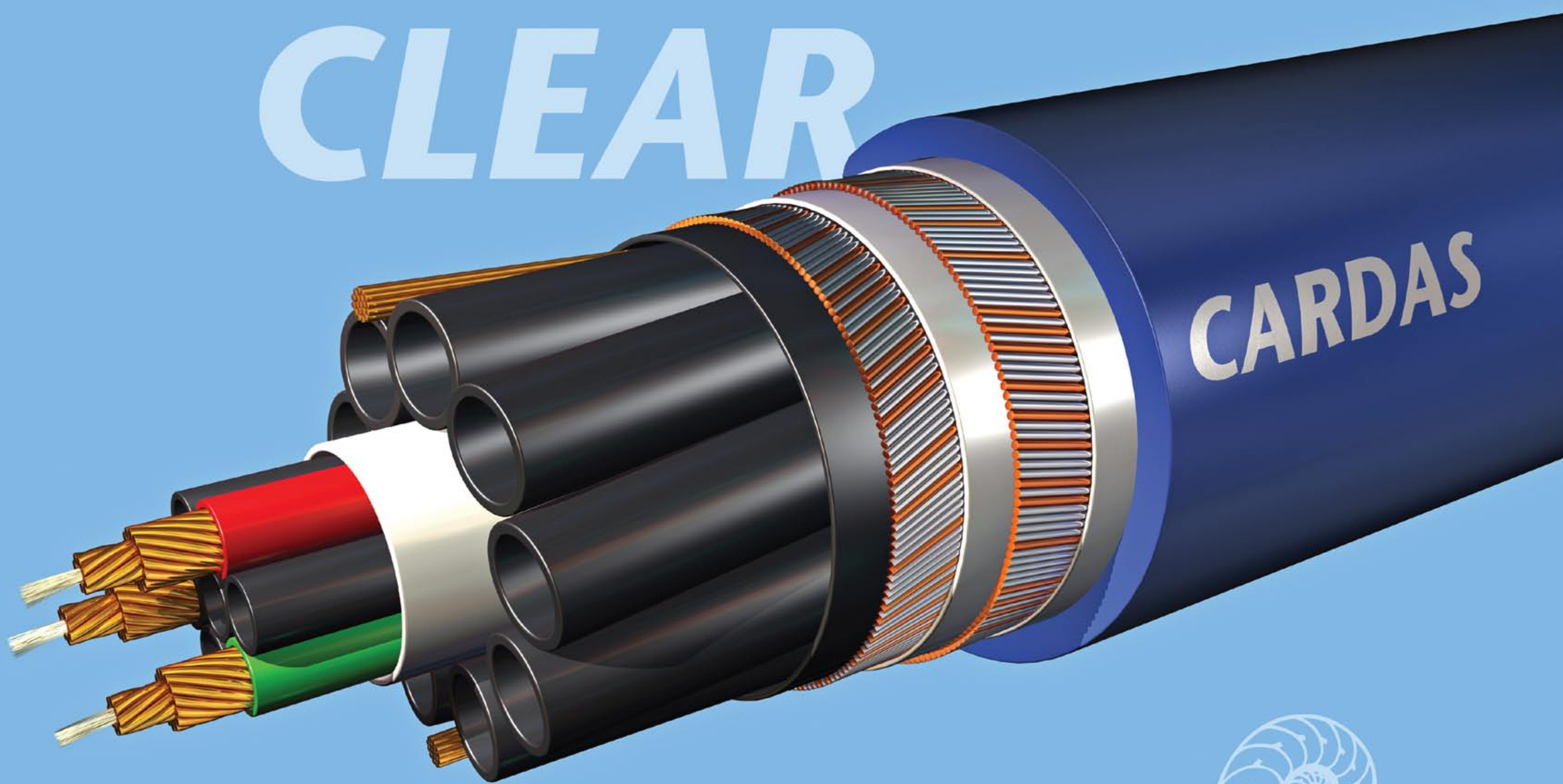
**hi-fi+**

GUIDE TO

# CABLES, POWER PRODUCTS, ACCESSORIES, AND MUSIC

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# CLEAR



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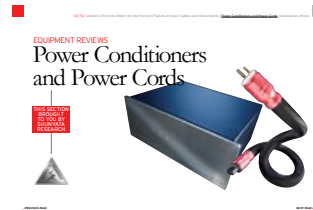
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Now the digital sun has come out. Possibly the best quality consumer audio ever available, on planet Earth anyway, has finally appeared in the form of 24/96 and 24/192 audio files, transferred through USB to a new generation of superb DAC's (Digital Audio Converters), whether built into today's best receivers and amps, or stand alone components.

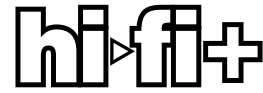
To ensure that your favorite music is transferred with minimal corruption (jitter), AudioQuest offers 5 models of USB cable, featuring better metals, better geometry, Dielectric-Bias System, Noise-Dissipation System ... all of AudioQuest's expertise and proven techniques for delivering superior digital audio, whether through coax (RCA or BNC plug), balanced cable (XLR plug), HDMI, 1394 (FireWire®), Ethernet (RJ45), Toslink ... and now USB.

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the absolute sound®



GUIDE TO

# CABLES, POWER PRODUCTS, ACCESSORIES, AND MUSIC

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# FROM THE Editor

**W**elcome to our latest free Buyer's Guide, brought to you by *The Absolute Sound* and *Hi-Fi Plus*. This Buyer's Guide is devoted to the all-important but often underestimated category of cables, interconnects, and power conditioners. This Guide also includes the very best music we've reviewed in the past year, along with some feature articles on what goes on behind the scenes in making a great-sounding music release.

In this issue you'll find a wide range of reviews, all the way from affordable entry-level cables, interconnects, and power cords to elaborate state-of-the-art products. Don't be overwhelmed by the vast array of choices; finding just the right cable for your system and budget is easier than you might think. A good place to start is the series of feature articles that kick off this Buyer's Guide—"Cable and Interconnect Glossary" defines all the jargon associated with cables, "How to Choose Cables and Interconnects" guides you through the cable-selection process, and "What to Listen For in Cables and Interconnects" explains the specific sonic qualities between good and poor cables.

If your system is hooked up with generic cables, hardware-store "speaker wire," and stock black power cords, your system is performing far below its potential. Any audio system can immediately sound better by improving the quality of the cables. Although I've listened to literally hundreds of different cables and interconnects in my own system, a recent simple demonstration hit home just how important cables are in realizing a system's musical potential. The demonstration was in Transparent Audio's listening room, and the system included entry-level Rotel electronics and B&W 685 loudspeakers (\$650 per pair). We first listened with stock interconnects and speaker cables, and then replaced those with Transparent's The Link interconnects (\$85 per meter pair) and The Wave speaker cable (\$200 per 8' pair). The system suddenly became

much more musically communicative and engaging. I was in for a second surprise; we replaced the stock power cords with Transparent's High-Performance Powerlink (\$125 each) and the system took another step up in sound quality.

This experience drives home three important points. First, replacing stock interconnects, speaker cables, and power cords can render a significant improvement in system performance. Second, even entry-level cables and power cords are a huge upgrade over stock units. Third, even a modest system can benefit from specialty cables.

Although most of you already know the value of quality cables and interconnects, if you haven't replaced your power cords and invested in a good AC conditioner, you're in for a pleasant surprise. Clean AC power is the foundation on which the rest of your system should be built. A good AC system will render blacker backgrounds, greater resolution of detail, a more spacious soundstage, and smoother textures. For an in-depth technical discussion of why AC power is so important in audio, be sure to read my interview with Shunyata Research founder Caelin Gabriel.

**Good listening.  
Robert Harley**

*Click here to turn the page.*

## ON THE HORIZON

# A Sneak Preview of Cables and Power Products Coming Your Way

Neil Gader



### Alpha Design Labs

Alpha Design Labs (ADL), a newly formed division of Furutech, is producing a line of quality products built with Furutech's Pure Transmission Engineering expertise at surprisingly affordable prices. ADL's second product release is Formula 2, a high-performance, cost-effective USB cable for computer-based DAC systems like Alpha Design Labs' own GT40 24/96 USB DAC/Analog Recorder. Formula 2 offers high levels of resolution, openness, and musicality from computer files, CD Red Book 16-bit/44.1kHz, and especially 24-bit/96kHz files. Pure Transmission Engineering features silver-plated  $\alpha$  (Alpha) OFC conductors and special-grade high-density polyethylene insulation/dielectrics. Formula 2 also sports three-layer shielding and elegant, beautifully engineered 24k gold-plated USB 2.0 connectors.

**Price: \$43/0.6m to \$102/5m.**

[adl-av.com](http://adl-av.com)

### Audience

Audience has begun shipping upgraded adeptResponse aR2-TS, aR6-TS, and aR12-TS high-resolution power conditioners. These models now incorporate Teflon capacitors with mono-crystal copper wire leads, and a large ground plane with all wiring secured by heavy-duty welded—rather than inferior mechanically fastened—connectors in a star-ground configuration. A capacitor's dielectric acts as an insulator of an electric charge; most materials cannot match the excellent insulating capability of Teflon, or sound as refined. Also, the newly added ground plane used in the Teflon-equipped adeptResponse PCs (also included in standard non-Teflon aR conditioners) provides additional sonic benefits. Owners of a previous aR6 or aR6-T can have their power conditioners upgraded to include the new ground plane for \$450, and \$650 for the aR12 or aR12-T.

**Price: aR2-TS, \$4100; aR6-TS, \$5000; aR12-TS, \$8600.**  
[audience-av.com](http://audience-av.com)





## ON THE HORIZON - Cables and Power Conditioners



### AudioQuest

A revolution in digital music playback is underway with the use of the personal computer as a music server. Some of the best-quality consumer audio ever available has appeared in the form of 24/88.2, 24/96, 24/176.4, and 24/192 audio files, transferred through USB to a new generation of superb DACs. To ensure digital music transfer with minimal corruption (jitter) AudioQuest offers five models of USB cable, featuring better metals, better geometry, and its Dielectric-Bias System and Noise-Dissipation System—proven techniques for delivering superior digital audio through coax (RCA/BNC), balanced (XLR) digital, HDMI, 1394 (FireWire), Ethernet, and TosLink cables—provide a demonstrably audible improvement over “standard equipment” USB cables.

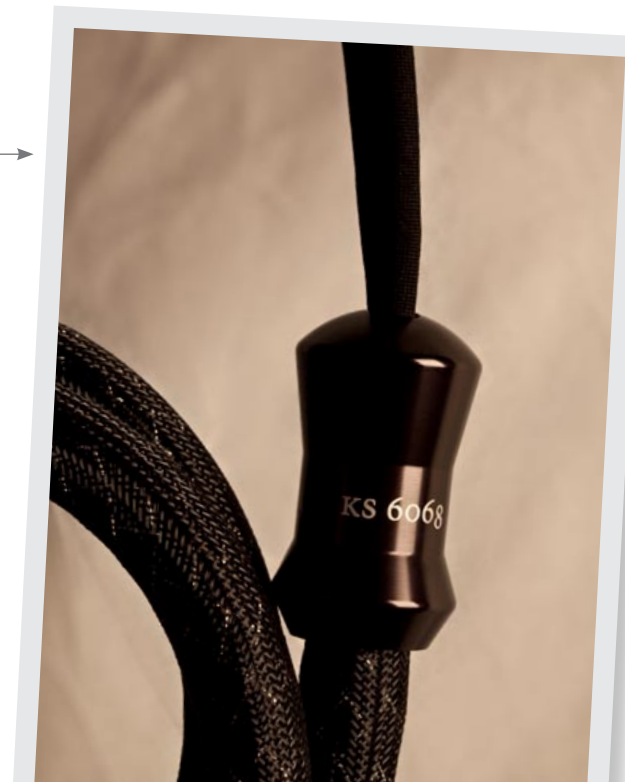
**Price:** 0.75m length Forest USB, \$25; Cinnamon USB, \$49; Carbon USB, \$109; Coffee USB, \$259; Diamond USB, \$495 (also available in 1.5m, 3m, and 5m lengths).  
[audioquest.com](http://audioquest.com)

### Kimber Kable

Kimber Kable Select Series is the summation of the company’s cutting-edge efforts in cable theory and design. And the recently released KS6000 Select Series speaker cables are the most advanced and highly resolved cables in the company’s long and storied history. Except for the conductor composition the three versions that make up the KS6000 series are essentially identical in every specification. They incorporate Kimber’s unique blend of solid-core and varistrand conductors in a multi-layered-matrix geometry around the X38R central core. The dielectric is pigment-free and terminations use WBT NextGen connectors.

**Price:** KS6063 (copper conductors) \$4400/8” pr.; 6065 copper / silver hybrid, \$8000/8”pr.; 6068, silver \$18,800/8”pr.

[kimber.com](http://kimber.com)



### Cable Research Lab Introduces Gold LP Reference Series Cables

This new innovative design from Cable Research Lab is providing superb sonic quality in a more user-friendly cable. Gold LP Reference interconnects and speaker cables are smaller and less cumbersome than the previous Gold Series. The key is utilizing solid-core OCC copper wires terminated with silver- and/or platinum-plated copper Bocchino Audio connectors. Originally inspired by the company’s founder Winston Ma, the Gold LP Reference Series is designed and built by audio engineer Art Almstead, and represents Cable Research Lab’s finest work to date. Each is handmade in the United States and will officially be released at T.H.E. Show 2011 in Las Vegas, Nevada.

**Price:** \$5000/ 6” pr., speaker; \$5000/1m pr., interconnects.  
[cableresearchlab.com](http://cableresearchlab.com)

## ON THE HORIZON - Cables and Power Conditioners

**MIT**

The MIT Z Powerbar AC power conditioner uses patented parallel-noise-filtration circuits, removing AC line noise you can hear and, on your high-definition display, see. To do this it employs 24 multiple, patented, parallel-tuned filters operating over the widest bandwidth. And unlike series filters, the Z Powerbar will not limit current or dynamics. It's equipped with six hospital-grade, audiophile-type, duplex outlets (grey) with patented Stabilizer circuitry, plus two hospital-grade, duplex, unswitched outlets (red) and two isolated digital outlet (orange) to keep digital components away from analog components and further eliminate digital noise insertion from a connected component such as a CD or DVD player. Works to lower insertion noise from other components whether on-line-coupled or field-coupled, and includes a 15-amp breaker with reset switch and satellite/cable/telephone protection circuits.

**Price: \$1699.**  
[mitcables.com](http://mitcables.com)



### Transparent Audio

Due to the latest HDMI high-speed performance specs for 1080p 60Hz and 3-D video and future formats like 4K x 2K, Transparent developed Active HDMI Technology for longer lengths of its two performance levels of HDMI cables. (Lengths of standard Transparent Performance HDMI under 30 feet and High Performance HDMI under 40 feet already meet high-speed video requirements.) Active HDMI consists of a network that is built into longer lengths of Transparent HDMI cables. The network is specifically compensated for the length and electrical characteristics of the cable, thereby providing a degree of precision unmatched in the industry. Customers with remote televisions or projectors can now enjoy video quality in all the latest formats with a level of quality that matches systems connected with much shorter Transparent HDMI cables.

**Price: Performance HDMI start at \$100/1m; Active HDMI Performance HDMI cables start at 30" for \$420. High Performance HDMI cables start at \$250/1m. Active HDMI High Performance HDMI cables start at 40" for \$950. Additional lengths are available.**

[transparentcable.com](http://transparentcable.com)



## ON THE HORIZON - Cables and Power Conditioners



### Ultralink/XLO

Ultralink/XLO Product's new Purple Reigns Series features the Purple Rush Power Cord, a low-noise, low-loss, high-speed design that was awarded five separate patents. Purple Rush employs continuous-cast/multi-gauge/multi-shaped conductors designed to overcome AC transmission-line problems. Among its unique technologies is construction of 6 AWG PC-OCC copper in multiple gauges and shapes; fine gauge PC-OCC conductors are used for the highs, one massive solid flat PC-OCC conductor for the midrange; and finally multiple gauges of large-diameter, individually-insulated, solid-core PC-OCC conductors are bundled together for the bass. Other features include quad-shielding of the silver-clad copper braid, and advanced cold-crimping and hot spot-welding construction techniques. Connectors are 24k-gold-plated over nonmagnetic and machined solid-billet copper pins and blades.

**Price: \$5000/5' (available in 7', 9', and 10' lengths).**  
[xloelectric.com](http://xloelectric.com)



### Wireworld Audio

Two new high-end models, Platinum Starlight USB and Silver Starlight USB cables, feature Wireworld's proprietary DNA Helix conductor geometry and custom-engineered carbon-fiber and aluminum connectors. The DNA Helix conductor design uses six signal conductors—twice as many as other USB cables—arranged in an innovative symmetrical geometry that provides a precisely balanced 90-ohm impedance that far exceeds the official USB specification. This design maximizes transmission speed while minimizing noise, thus reducing digital jitter to provide substantial sonic improvements. Another feature of the cables is a power conductor that is fully isolated from the signal conductors to preserve signal purity. The flagship Platinum Starlight USB sports molded carbon-fiber connectors and solid-silver conductors, while Silver Starlight USB offers aluminum connectors and silver-clad OFC conductors for superior value and performance.

**Price: Platinum Starlight, \$599/1m; Silver Starlight, \$299/1m.**  
[wireworldcable.com](http://wireworldcable.com)

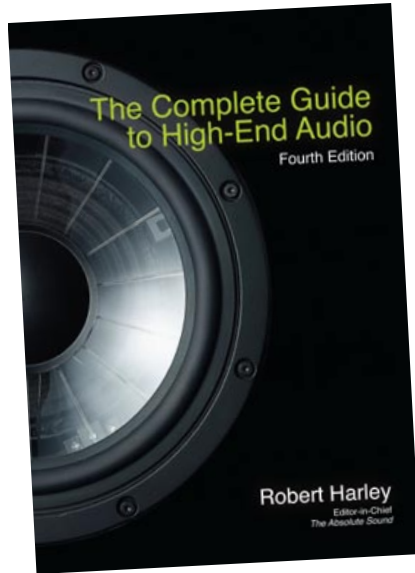


### VooDoo Cable

The VooDoo Black Diamond Dragon power cord represents a new era in the Dragon Series design. It's been revised with a blend of Cryo-Alloy conductors that have been treated in VooDoo's proprietary cold-fusion cryogenic process at -315 degrees Fahrenheit to structurally align and fuse the metallurgical structure of the conductive alloys for optimal sonic performance, and then wound in a proprietary geometry. Each strand within the lay of the conductors is insulated in Teflon dielectric to suppress line noise, and the conductors are insulated in a three-layer composite of polyethylene dielectric to avert electromagnetic interference. The power-cord body is sheathed with double layers of abrasion-resistant mesh sleeve and is terminated with cryo-treated gold-plated Blue Star Audio Grade Wattgate 350i IEC Connector and Wattgate 330i AC Plug. The cord is especially suitable for power amps and power conditioners, where high capacitance, neutral tonal balance, and harmonic complexity are essential.

**Price: \$1000/6".**  
[voodoocable.net](http://voodoocable.net)





# Cable and Interconnect Glossary

Robert Harley

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**Cable:** Often used to describe any wire in an audio system, “cable” more properly refers to the conductors between a power amplifier and a loudspeaker. Loudspeaker cables carry a high-current signal from the power amplifier to the loudspeaker.

**Interconnect:** Interconnects are the conductors that connect line-level signals in an audio system. The connection between source components (turntable, CD player, tuner) and the preamplifier, and between the preamplifier and power amplifier, are made by interconnects.

**Unbalanced Interconnect:** An unbalanced interconnect has two conductors and is usually terminated with RCA plugs. Also called a single-ended interconnect.

**Balanced Interconnect:** A balanced interconnect has three conductors instead of two, and is terminated with 3-pin XLR connectors.

Balanced interconnects are used only between components having balanced inputs and outputs.

**Digital Interconnect:** A single interconnect that carries a stereo digital audio signal in the S/PDIF format, usually from a CD transport, music server, or other digital source to a DAC.

**USB Cable:** A single cable that carries digital audio from a computer-based music server to a USB-capable DAC.

**FireWire Cable:** Also called IEEE1394, FireWire is a bi-directional interface that can carry high-resolution digital audio.

**Bi-wiring:** Bi-wiring is a method of connecting a power amplifier to a loudspeaker with two runs of cable instead of one.

**RCA Plug and Jack:** RCA plugs and jacks are

the most common connection termination for unbalanced signals. Virtually all audio equipment has RCA jacks to accept the RCA plugs that terminate unbalanced interconnects. RCA jacks are mounted on the audio component’s chassis.

**XLR Plug and Jack:** XLR plugs are three-pin connectors terminating a balanced interconnect. XLR jacks are chassis-mounted connectors that accept XLR plugs.

**Binding Post:** Binding posts are terminations on power amplifiers and loudspeakers that provide connection points for loudspeaker cables.

**Five-way Binding Post:** A type of binding post that can accept bare wire, spade lugs, or banana plugs. Five-way posts are found on most power amplifiers and loudspeakers.

**Spade Lug:** A flat, pronged termination for loudspeaker cables. Spade lugs fit around

power-amplifier and loudspeaker binding posts. The most popular kind of loudspeaker cable termination.

**Banana Plug and Jack:** Banana plugs are sometimes found on loudspeaker cables in place of spade lugs. Banana plugs will fit into five-way binding posts or banana jacks. Many European products use banana jacks on power amplifiers for loudspeaker connection.

**AWG:** American Wire Gauge: a measure of conductor thickness, usually in loudspeaker cables. The lower the AWG number, the thicker the wire. Lamp cord has an AWG of 18, usually referred to as “18 gauge.”

**HDMI:** An acronym for High-Definition Digital Multimedia Interface, HDMI was developed for home theater to carry high-definition video along with high-resolution digital audio in the same cable. **tas**



Red Wolf Pack by Carole LaRoche

Wild

**Wild is natural. Wild is beautiful. Wild is dangerous.**

For half the price of some luxury brands, AudioQuest's series of WEL Signature cables has become well established as the ne-plus-ultra of high-performance audio cabling.

At the other end of the spectrum, speaker cables such as Type 4 and Rocket 88, HDMI and USB models such as Cinnamon and Carbon, AC power cables such as NRG-1 and NRG-4, demonstrate AudioQuest's basic fundamental value system of incredibly good performance at very real-world prices.

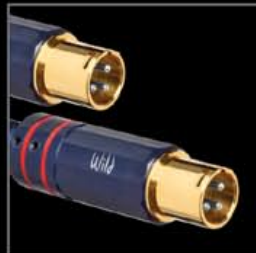
Wild is the perfect no-compromise compromise. Wild cables use every cost-efficient technique in my large bag of tricks, everything I've learned in 30 years of designing cable, to provide almost all the performance of the WEL Signature cables at dramatically lower prices. All AQ cables, when used in the appropriate system, are the least expensive way to make the most difference.

Wild take-no-prisoners performance ... natural, beautiful and dangerous for the other guys.

WEL



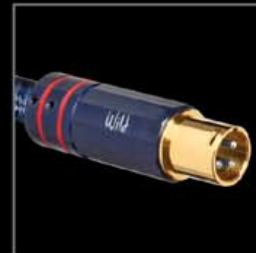
Audio Interconnect - RCA



Audio Interconnect - XLR



Digital Coax Cable



Digital Balanced Cable



Tonearm Cable



AC Power Cable



Speaker Cable



# How to Choose Cables and Interconnects

Robert Harley

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**I**deally, every component in the system—including cables and interconnects—should be absolutely neutral and impose no sonic signature on the music. As this is never the case, we are forced to select cables and interconnects with colorations that counteract the rest of the system’s colorations.

For example, if your system is a little on the bright and analytical side, mellow-sounding interconnects and cables can take the edge off the treble and let you enjoy the music more. If the bass is overpowering and fat, lean- and tight-sounding interconnects and cables can firm up and lean out the bass. A system lacking palpability and presence in the midrange can benefit from a forward-sounding cable.

Selecting cables and interconnects for their musical compatibility should be viewed as the final touch to your system. A furniture maker who has been using saws, planers, and rasps will finish his work with steel wool or very fine sandpaper. Treat cables and interconnects the same way—as the last tweak to nudge your system in the right direction, not as a Band-Aid

for poorly chosen components.

Cables and interconnects won’t correct fundamental musical or electrical incompatibilities. For example, if you have a high-output-impedance power amplifier driving current-hungry loudspeakers, the bass will probably be soft and the dynamics constricted. Loudspeaker cables won’t fix this problem. You might be able to ameliorate the soft bass with the right cable, but it’s far better to fix the problem at the source—a better amplifier/loudspeaker match.

Good cables merely allow the system’s components to perform at their highest level; they won’t make a poor system or bad component match sound good. Start with a high-quality, well-chosen system and select cables and



## FEATURE ARTICLES - How to Choose Cables and Interconnects

interconnects that allow that system to achieve its highest musical performance. Remember, a cable or interconnect can't actually effect an absolute improvement in the sound; the good ones merely do less harm.

A typical hi-fi system will need one pair of loudspeaker cables (two pairs for bi-wiring), one long pair of interconnects between the preamplifier and power amplifier, and several short interconnect pairs for connections between source components (such as a turntable or CD player) and the preamplifier.

If the power amplifier is located near the loudspeakers, the loudspeaker cables will be short and the interconnects between the preamplifier and power amplifier will be long. Conversely, if the power amplifier is near the source components and preamplifier, the interconnects will be short and the loudspeaker cables long. There is no consensus among the experts about which method is preferable, but I use long interconnects and short loudspeaker cables. Ideally, interconnects and loudspeaker cables should be short, but that often isn't practical.

Once you've got a feel for how your system is—or will be—configured, make a list of the interconnects and cables you'll need, and their lengths. Keep all lengths as short as possible, but allow some flexibility for moving loudspeakers, putting your preamp in a different space in the rack, or other possible changes. Although we want to keep the cables and interconnects short for the best sound, there's nothing worse than having interconnects 6" too short. After you've found the minimum length, add half a meter for flexibility.

Interconnects are often made in standard lengths of 1, 1.5, and 2 meters. These are long enough for source-to-preamplifier connections, but too short for many preamplifier-to-power-amplifier runs. These long runs are usually custom-made to a specific length. Similarly, loudspeaker cables are typically supplied in 8' or 10' pairs, but custom lengths are readily available. It's best to have the cable manufacturer terminate the cables (put spade lugs or banana plugs on loudspeaker cables, and RCA or XLR plugs on interconnects) rather than trying to do it yourself.

Concentrate your cable budget on the cables that matter most. The priority should be given to the sources you listen to most. For example, you may not care as much about the sound of your tuner as you do your DAC. Consequently, you should spend more on interconnects between the DAC and preamplifier than between the tuner and preamp. And because all your sources are connected to the power amplifier through the interconnect between the preamplifier and power amplifier, this link must be given a high priority. But any component—even an iPod's analog output—will benefit from good interconnects.

Should all your interconnects and loudspeaker cables be made by the same manufacturer? Or is it better to mix and match brands? There are two schools of thought on this issue. The first holds that an entire system with one brand of cable and interconnect is the best route. If one interconnect works well in your system, use it throughout. This argument also suggests that the cable designer made his interconnects and loudspeaker cables to work together to achieve the best possible sound.

The second school of thought holds that

different brands are best. Because each cable or interconnect affects the sound in a certain way, using the same interconnect and cable throughout the system will only reinforce the cable's sonic signature. By using cables and interconnects from different manufacturers, the characteristic sonic signature of a cable won't be superimposed on the music by every interconnect.

This second theory has an analog in the recording world. Engineers will record through one brand of recording console, then mix the record through a different brand of console. They don't want to hear the console's sound in the final product, so they don't subject the signal to the same sonic signature twice.

My experience suggests that the only way to determine the best cable or interconnect for your system is to experiment and listen. In some cases, the best results will be achieved with all the interconnects and cables made by the same manufacturer. In others, a mix of different interconnects will work best. It's impossible to predict which cables will sound best in your system.

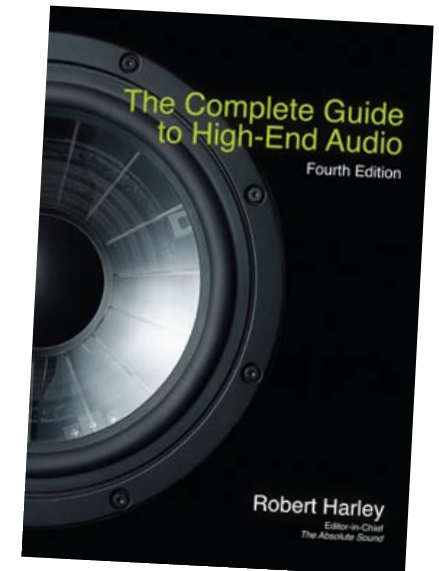
Most dealers will let you take home several cables at once to try in your system. Take advantage of these offers. Some mail-order companies will send you many cables to try: you keep the ones you want to buy—if any—and return the others. Compare inexpensive cables with expensive ones—sometimes manufacturers have superb cables that sell for a fraction of the price of their top-of-the-line products.

If you're starting a system from scratch, selecting cables is more difficult than replacing one length in your system. Because different combinations of cables will produce different

results, the possibilities are greatly increased. Moreover, you don't have a baseline reference against which to judge how good or bad a cable is. In this situation, the best way of getting the ideal cables for your system is your dealer's advice. Try the cables and interconnects he suggests, along with two other brands or models for comparison. **tas**

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# What to Listen For in Cables and Interconnects

Robert Harley

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**C**ables are best evaluated in the playback system in which they will be used. Not only is the sound of a cable partially system-dependent, but the sonic characteristics of a specific cable will work better musically in some systems than in others. Personal auditioning is the only way to evaluate cables and interconnects. Never be swayed by technical jargon about why one cable is better than another. Much of this is pure marketing hype, with little or no relevance to how the cable will perform musically in your system. Trust your ears.

Fortunately, evaluating cables and interconnects is relatively simple; the levels are automatically matched between cables, and you don't have to be concerned about absolute-polarity reversal. One pitfall, however, is that cables and interconnects need time to break in before they sound their best. Before break-in, a cable often sounds bright, hard, fatiguing, congested, and lacking in soundstage depth. These characteristics often disappear after several hours' use, with days or weeks of use required for full break-in. You can't be sure, however, if the cable is inherently bright-and hard-sounding, or if it just needs breaking-in. Note that break-in wears off over time. Even if a cable has had significant use, after a long period of not being used it may not sound its best until you've put music through it for a few days.

With those cautions in mind, you're ready to evaluate cables and interconnects. Listen to the first interconnect for 15 minutes to half an hour, then replace it with the next candidate. One way of choosing between them is merely to ask yourself which interconnect allows you to enjoy the music more. You don't need to analyze what you're hearing; just pick the interconnect that makes you feel better.

The other method is to scrutinize what you're hearing from each interconnect and catalog the strengths and weaknesses. You'll often hear trade-offs between interconnects: one may have smoother treble and finer resolution than another, but less soundstage focus and transparency. Another common trade-off is between smoothness and resolution of detail: The smooth



cable may lose some musical information, but the high-resolution cable can sound analytical and bright. Again, careful auditioning in your own system is the only way to select the right cables and interconnects. Keep in mind, however, that a better cable can sometimes reveal flaws in the rest of your system. You should also know that cables and interconnects sound better after they have "settled in" for a few days.

Cables and interconnects can add some annoying distortions to the music. I've listed the most common sonic problems of cables and interconnects.

- **Grainy and hashy treble:** Many cables overlay the treble with a coarse texture. The sound is rough rather than smooth and liquid.
- **Bright and metallic treble:** Cymbals sound like bursts of white noise rather than a brass-like shimmer. They also tend to splash across the soundstage rather than sounding like compact images. Sibilants (s and sh sounds on vocals) are emphasized, making the treble sound spitty. It's a bad sign if you suddenly notice more sibilance. The opposite condition is a dark

## FEATURE ARTICLES - What to Listen For in Cables and Interconnects

and closed-in treble. The cable should sound open, airy, and extended in the treble without sounding overly bright, etched, or analytical.

- **Hard textures and lack of liquidity:** Listen for a glassy glare on solo piano in the upper registers. Similarly, massed voices can sound glazed and hard rather than liquid and richly textured.

- **Listening fatigue:** A poor cable will quickly cause listening fatigue. The symptoms of listening fatigue are headache, a feeling of relief when the music is turned down or stopped, the need to do something other than listen to music, and the feeling that your ears are tightening up. This last condition is absolutely the worst thing any audio component can do. Good cables (in a good system) will let you listen at higher levels for longer periods of time. If a cable or interconnect causes listening fatigue, avoid it no matter what its other attributes.

- **Lack of space and depth:** Using a recording with lots of natural depth and ambiance, listen for how the cable affects soundstage depth and the sense of instruments hanging in three-dimensional space. Cables also influence on the sense of image focus. Poor cables can also make the soundstage less transparent.

- **Low resolution:** Some cables and interconnects sound smooth, but they obscure the music's fine detail. Listen for low-level information and an instrument's inner detail. The opposite of smoothness is a cable that's "ruthlessly revealing" of every detail in the music,

but in an unnatural way. Musical detail should be audible, but not hyped or exaggerated. The cable or interconnect should strike a balance between resolution of information and a sense of ease and smoothness.

- **Mushy bass or poor pitch definition:** A poor-quality cable or interconnect can make the bass slow, mushy, and lacking in pitch definition. With such a cable, the bottom end is soggy and fat rather than taut and articulate. Low-frequency pitches are obscured, making the bass sound like a roar instead of being composed of individual notes.

- **Constricted dynamics:** Listen for the cable or interconnect's ability to portray the music's dynamic structure, on both small and large scales. For example, a guitar string's transient attack should be quick, with a dynamic edge. On a larger scale, orchestral climaxes should be powerful and have a sense of physical impact (if the rest of your system can portray this aspect of music).

I must reiterate that putting a highly colored cable or interconnect in your system to correct a problem in another component (a dark-sounding cable on a bright loudspeaker) isn't the best solution. Instead, use the money you would have spent on new cables toward better loudspeakers—then go cable shopping. Cables and interconnects shouldn't be Band-Aids; instead, cables should be the finishing touch to let the rest of your components perform at their highest level. **tas**

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### TRANSPARENT THE LINK AND THE WAVE

"For the cabling assignment (in a \$1927 system) let's go with Transparent Audio's The Wave speaker cable and The Link interconnect — wire that doesn't seem to care that it's embarrassing the entire cable industry with its value and performance."

— TAS, *Recommended Systems*, Issue 208

**The Link:** "The \$85 The Link interconnect brings more than a taste of high-end interconnects to an entry-level price."

**The Wave:** "Similarly, the \$200 The Wave speaker cable is a bargain, offering superior tonality, wider dynamics, and a more open stage."

— TAS, *2011 High End Audio Buyer's Guide*, Issue 207

[CLICK HERE](#) to find out more about Transparent The Link and The Wave.

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## EQUIPMENT REVIEWS

# Cables and Interconnects



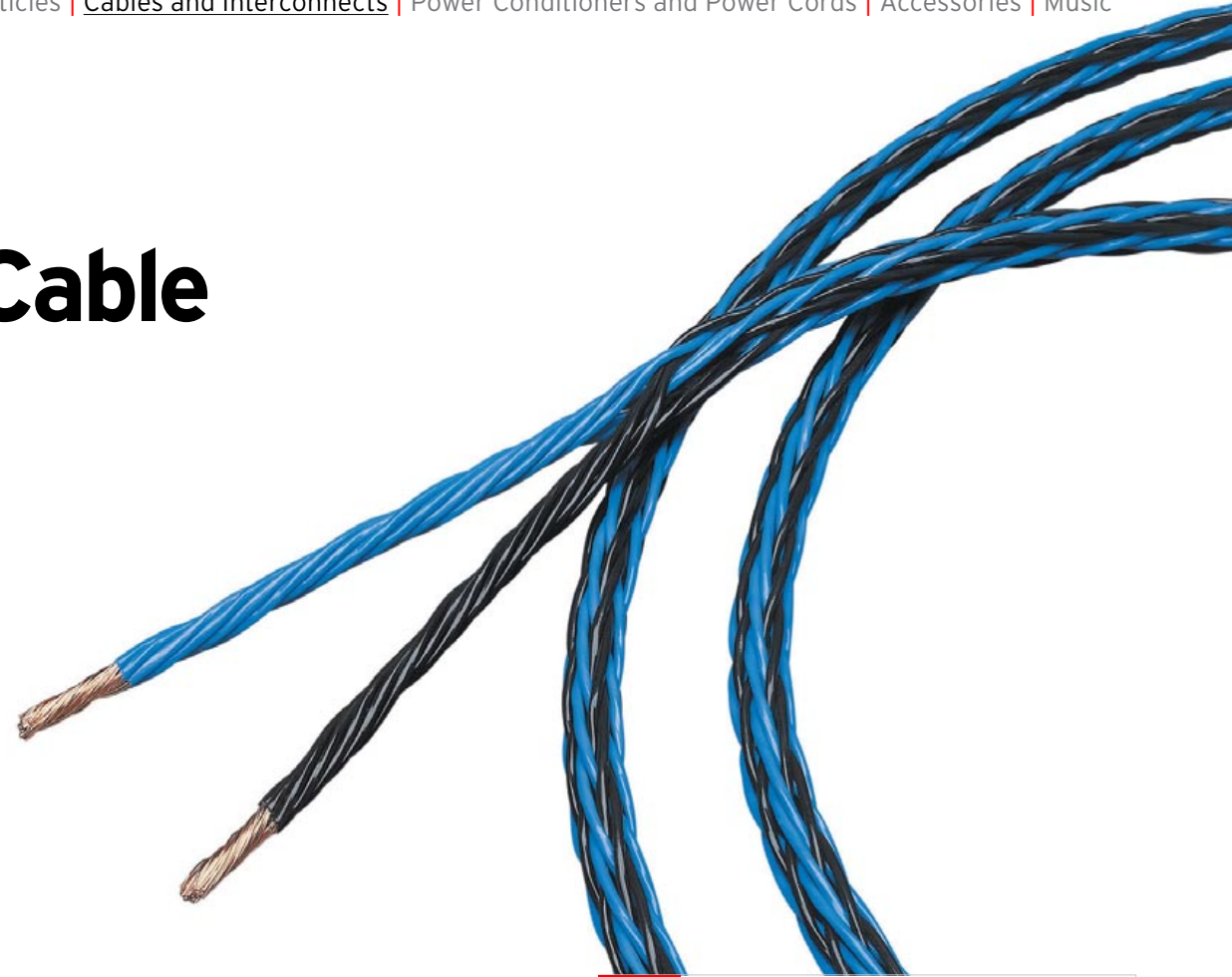


# Kimber 8TC Loudspeaker Cable

## 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

#### U.K.

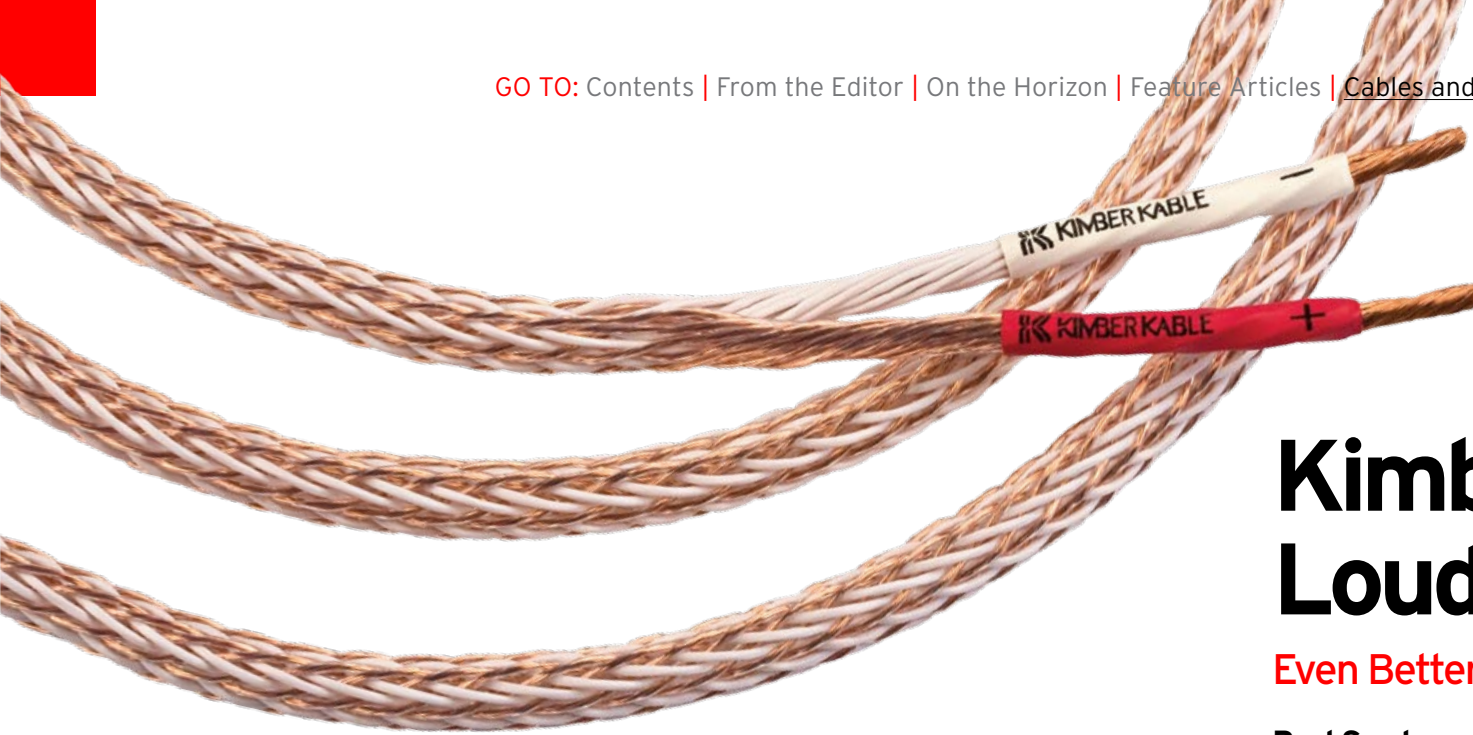
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# Kimber Kable 12TC Loudspeaker Cable

Even Better

Paul Seydor

**12**TC 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

#### KIMBER KABLE

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

### U.K.

Price: £648 (2.5m pair)

Note: 12TC is known as  
Crystal 24 in the UK

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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**



# 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



## SPECS & PRICING

### U.S.

Price: \$150

#### KIMBER KABLE

2752 S. 1900 W., Ogden, Utah 84401  
800-223-4039  
kimber.com

### U.K.

Price: £130

#### RUSS ANDREWS LTD

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# Straight Shooter

Cable Research Lab Silver Speaker

Cable and Interconnect

Neil Gader

**C**able 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.

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.

## EQUIPMENT REVIEW - Cable Research Lab Silver Speaker Cable and Interconnect

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 megawires 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

#### U.K.

Not distributed in the UK

#### CABLE RESEARCH LAB, INC.

4344 E. Tradewinds Ave.  
Lauderdale-by-the-Sea,  
FL 33308  
(954) 491-4705  
cableresearchlab.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

**F**ew 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.<sup>1</sup> 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 efforts like Crystal



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

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 Kissin'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**

<sup>1</sup> Ohno Continuous Casting (OCC) is a process of drawing copper ingots into wire in a way that 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'

#### U.K.

Not distributed in the UK

#### ARGENTUM ACOUSTICS

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

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25 Guide to Cables, Power Products, Accessories, and Music

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# Transparency Without Pain

## Furutech Pure Transmission System

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 with the traditional Appalachian song "Darlin' Cory" from the late Chris Jones' *Roadhouses*





## EQUIPMENT REVIEW - Furutech Pure Transmission System

*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

#### U.S.

##### ALPHA DESIGN LABS

8399 E. Garvey  
Rosemead, CA 91770  
(626) 571-5333  
furutech.com

#### U.K.

##### SOUND FOWNDTATIONS

25 New Road, Blackwater  
Hampshire GU17 9AY  
+44 (0) 1276 501392  
soundfoundations.co.uk

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# Crystal Cable

## Crystal-Speak Micro and Crystal-Connect Micro Interconnect

Neil Gader

**C**rystal 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

## EQUIPMENT REVIEW - Crystal-Speak Micro and Crystal-Connect Micro Interconnect

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  
crystalcable-usa.com

#### U.K.

**Price:** CrystalSpeak Micro, £1744/2m; CrystalConnect Micro, £633/1m

#### ABSOLUTE SOUNDS

58 Durham Road,  
London  
SW20 OTW  
+44 (0)20 8971 3909  
absolutesounds.com

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# Cardas Clear Cables

Alan Sircom

**C**ardas is not a cable company that comes out with a new product every few months. And it certainly doesn't add a new layer of cables on the top of its portfolio regularly. So, when Cardas Clear was first seen at the CES last year, there was a bit of a stir.

The thick, blue cable represents George Cardas' crowning achievement, and takes all the company's patented technologies found on Cardas already-well-respected ranges of Litz-design cables to new levels. In essence, Clear takes the tried and trusted geometry of the Golden Reference cable; including 'Golden Section', multi-gauge stranding in a symmetrical, helical tri-axial design and 'Constant-Q' construction, which places the smallest strands of the cable at the centre of the conductor to reduce stored energy and conductor resonance. Cable resonance is further reduced with what Cardas terms 'controlled propagation' and 'crossfield' construction, which means matching conductor to dielectric characteristics by using carefully computed strand layering.

What this means in simple terms is Cardas slowly builds up strand-upon-strand of increasingly larger low-eddy copper wire, until the inside of each conductor looks like a little copper nautilus shell in cross-section. This is then thrice-shielded and coated in its own dielectric and these conductors then form their own Golden Section layout, alongside Teflon pipes creating a useful dielectric of air.

Clear takes this already demanding construction to obsessive-compulsive levels. The geometry has been improved still further, to produce an ultra-fine tubular construction. It still retains the basic Cardas DNA, copper conductors, Teflon and air dielectric, rhodium-based connectors, but each and every aspect of the cable have been modified in the process.

Nothing is left to chance at Cardas. For the record, some companies buy



cable off the shelf, some 'roll their own', but Cardas takes the long route. The cables are actually drawn and annealed from copper rod using the company's own equipment — because most commercially available copper was not of sufficient quality to make it to high-end cables. Let's face it, any company so determined that it buys its own foundry to make its own cables, is going the distance; even Jamie Oliver doesn't go as far as owning his own farms. Even this wasn't enough for Clear though. George Cardas went back to first principles, discovering new insights into metallurgy and the relationship

between conductor and dielectric in the process.

Here's what we mean. Cardas traditionally uses its Eutectic Solder to connect the loudspeaker cable to the spade lug. Not so with Clear; instead, there's a new forging process, which means Cardas forges the spade lug directly, joins the lug to the cable by further compression forging, which crimps metal on metal so powerfully it's almost impossible to think in terms of separate pieces of metal. Of course, this does make the spade lugs difficult to use in some quarters — they don't like WBT terminals, for example — but the connection is as good as it

## EQUIPMENT REVIEW - Cardas Clear Cables

gets. The quality of connection in both the phono and air-sealed XLR plugs — all custom designs — is similarly uncompromising.

There's a high degree of consistency in Clear. The balanced and single-ended interconnects and the loudspeaker cable are functionally identical in sound. But that doesn't mean a 'family' or 'house' sound; instead Clear sounds as close as you can get to having no sound.

That might sit almost uncomfortably for Cardas fans, at least at first. The cable range starts warm and entertaining, with an expansive soundstage, but not so strong in detail resolution, top end clarity and dynamic range. As you climb the

“George Cardas went back to first principles, discovering new insights into metallurgy and the relationship between conductor and dielectric in the process.”

Cardas ladder, so you get more of the good bits and less of the bad bits, but some have felt that even up the top end of the range, there's a bloom to the bass and upper mids that — while immensely attractive — deviate from absolute accuracy and do perceptibly slow the sound. Previously, even at the breathless end of the Cardas range, the cables traded pace for space; a big, luxuriant and sublime soundstage, but at the expense of the

sort of pace that would make the product appeal to Naim owners, for example.

Clear redraws the map. Although still musically insightful and expansive, this is a cable that is as neutral as they come. No more upper-mid softening, no more bass bloom, but a lot more dynamics and energy. This might come as a bit of shock for owners of top-end Cardas cables. It's a lot more accurate — still as entertaining as ever, but less warm. If you built a system with a lot of top-end energy and used Cardas' slight softening effect to compensate, Clear will expose that energy in full effect. In fairness, at the level where you'd use cables of Clear's status, you shouldn't be thinking of using cables as filters.

Clear also helps increase the perceived speed of the overall sound, too. There are some cables that make a big thing of transients, making leading edge transients appear so filled with attack they almost make the music sound like it's a couple of beats per minute faster. Of course, this isn't the case, but it's a common audible illusion, all the same. Cardas is not known for its speedy transients, but Clear redresses the balance. This is a faster cable than usually heard from Cardas, with leading edge delivery that might even endear Clear to those who normally shy away from Cardas designs. I still maintain the Cardas/Naim connection is an unlikely one (in the past, Litz-construction speaker cables and Naim amps were a distinct no-no), but this has far more pace than previous Cardas cables.

But, perhaps the biggest demonstration of Clear's superiority happens when you take the cable out of the system. Other cables sound contrived by comparison; perhaps brighter treble,

seemingly deeper bass or a faster overall sound. But these seem like sounds imposed upon the system; Clear genuinely sounds like there's no such imposition. Especially in bass depth

“The biggest demonstration of Clear's superiority happens when you take the cable out of the system.”

everything else either makes the system sound slightly light or slightly 'tweaked' by comparison. Here, bass depth and definition is absolutely state of the art. Interestingly, Clear seems to make other cables seem 'noisy' by comparison, but when comparing side by side with lesser cables, pin-pointing the source or nature of that noise is functionally impossible. Nevertheless, when played to people with no vested interest in the matter, they talk (without prompting) about noise levels between Clear and other cables.

In the early days of hi-fi, cables simply didn't matter. Then they did. When people began to recognise the difference cables made, the guidelines at the time were to spend something between five and fifteen per cent of the total cost of the system on ancillaries like cables. Recently, all hell broke loose, and you can get a £20,000 system sporting £35,000-worth of cables. Cardas Clear makes a good case for moving back to that five-to-fifteen per cent rule.

Here's why, if you have a good, but not expensive system and slot in Cardas Clear, the performance

will improve, but only up to a point. You'll come away impressed, but not mind-boggled. Put the same cable into a system where it's appropriately balanced and there will be at least a 75 per cent increase in bogging.

A good analogy here is HD television. If you sign up to a HDTV service and play the picture through a HD-ready 15" TV screen, you'll see a small difference, but wonder what all the fuss is about. Replace that baby screen with a whopping great 50" plasma, and the difference between standard and high-definition pictures are easy to spot and even easier to justify.

If you are going through a radical series of upgrades, moving from a high-end to a very, very high-end system, Clear could be your first 'super-serious' purchase. It's like setting a neutral point of reference in the wiring, ticking off one of the many boxes in advance of the next series of big purchases. I'd guess Clear is unlikely to be many people's first cable; they will have risen through the ranks. If so, there is a high likelihood that people will have had some experience with Cardas cables before. Clear represents the best of Cardas, so if you are already impressed with Cardas but want more, Clear could be the first, 'last' upgrade you make, sure in the knowledge that however high up the audiophile ladder you climb, Clear will be there, waiting for you to catch up. Little wonder that George Cardas considers this his "most enduring statement." And it is — the level of uncompromising engineering that goes into this cable commands a lot of respect, even from the most cynical of cable sceptics.

But, there's more; there's Clear Beyond. That's a double-strength (eight conductors instead of

## EQUIPMENT REVIEW - Cardas Clear Cables

four) speaker cable designed for bi-wiring, or serious shot-gunning, for the absolute pinnacle of performance. But more about that in the next review. +

### SPECS & PRICING

#### Cardas Clear Interconnect

**Outside Diameter:** 10.2mm  
**Dielectric Type:** Teflon, Air  
**RCA Capacitance:** 16pf/ft  
**XLR Capacitance:** 8pf/ft  
**Cable AWG:** 25.5  
**Shield Type:** 100% spiral x 2 and Teflon graphite composite  
**Conductor Type:** Matched Propagation, Golden Ratio, Constant Q, Crossfield, Pure Copper, Litz  
**Connectors:** Cardas custom SRCA or XLRs

#### Cardas Clear speaker cable

**Outside Diameter:** 15.2mm  
**Dielectric Type:** Teflon®  
**Inductance:** .0176uh/ft/loop  
**Capacitance:** 278pf/ft  
**Bi Wire Option:** No  
**Cable AWG:** 8  
**Conductor Type:** Perfect Mirror Quadaxial  
**Connectors:** Forged spade lugs compression die forged to cable

#### U.S.

**Price:** \$4334/8' pair

#### CARDAS AUDIO, LTD

480 11th Street, SE  
Bandon, OR 97411  
541-347-2484  
cardas.com

#### U.K.

**PRICE:** Clear (RCA) £1,650 for 1m pair  
Clear (XLR) £1,950 for 1m pair  
Clear loudspeaker cable £3,550 for 2x2m terminated pair

**CARDAS AUDIO** (Manufacturer)  
cardas.com

**AUDIOFREAKS LTD** (Distributor)  
audiofreaks.co.uk  
+44 (0)208 948 4153

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Galileo Universal Speaker Cell in bi-wire configuration

# Before Galileo The World of Audio Was Flat

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Galileo Universal Cable Cells can handle up to tri-wire speakers



# Cardas Clear Beyond Loudspeaker Cables

Alan Sircom

**C**ardas Clear is an excellent loudspeaker cable. But if you want to bi-wire your loudspeakers – forget it! The ‘Perfect Mirror Quadaxial’ litz construction of the standard Clear speaker cable cannot be configured that way. Which is where Clear Beyond comes in.

In simple terms, Clear Beyond is two Clears up one sleeve. Unfortunately, the simple terms are basically, wrong. To make Beyond, George Cardas had to redesign the layout yet again, coming up with an Octoaxial version of the Perfect Mirror design. Beyond features eight conductors, placed in mirror image bundles of four. Each bundle comprises nine inner and two outer layers of high-purity copper wires, separated by a Teflon dielectric. As befits a litz design, each one of these strands is individually varnished, to limit oxidization and cut down on any naughty strand-to-strand action. With all that varnish to strip, making up Beyond is not easy.

As with Clear before it, the compression-die-forged spades are beautifully finished and will last forever, but are slightly narrow. They work well with WBT connectors and most US terminals, though.

Clear Beyond doesn’t just lie in bringing bi-wiring to the Clear range. Beyond ‘shotgunned’ (single-wired, with four conductors per side) is a very real option. This is how we decided to use it.

This is big boy stuff, designed for those lucky few to raise an already high-stakes game. If your system isn’t at the bleeding edge of what audio can do, there’s no point going Clear. But

if your system has no works in progress and everything is as good as it gets, at that point, Beyond kicks in. It gives you the sublime, extended top end, completely neutral midrange and sonorous, natural hours-in-front-of-the-system magic of the Clears, but extends it further. A broader and deeper soundstage, smoother tops and more integrated bottom octaves.

Paradoxically, the differences between Clear and Clear Beyond are hard to detect until you have a system that is good enough to resolve them. At which point, they become patently obvious. In part, that is Beyond ‘getting out of the way’ even more than Clear. But there’s also something else — Beyond, like Clear before it, bestows on a system a sense of sonic beauty that isn’t fake, just really lovely sounding. It manages to make things sound ‘better’ without making them sound ‘fake’, and Beyond does that best of all.

Clear offers an almost impossible task for Beyond — how do you improve on something that good? And in most systems, the difference between Clear and Clear Beyond will be masked by the limits of the system. But for those lucky few who have systems that impose next to no constraints...phew!+



## SPECS & PRICING

External diameter: 23.7mm  
Dielectric Type: Teflon®, air  
Inductance: 0.01uH/ft/loop  
Capacitance: 446pF/ft  
Biwireable: Yes  
Effective cable AWG: 5-gauge  
Conductor Type: Perfect Mirror Octoaxial

### U.S.

Price: \$8668/8' pair

#### CARDAS AUDIO, LTD

480 11th Street, SE  
Bandon, OR 97411  
541-347-2484  
cardas.com

### U.K.

Price: £9,300

#### CARDAS AUDIO

(Manufacturer)  
cardas.com

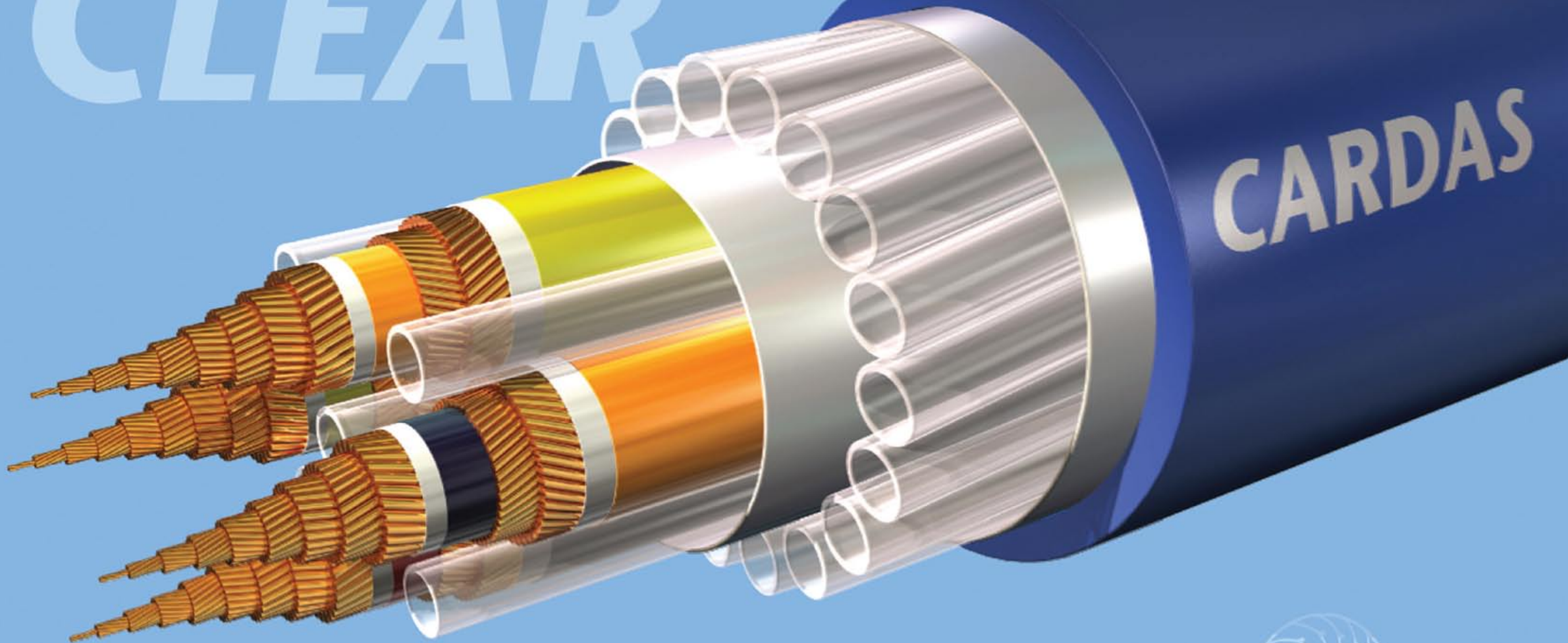
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# CLEAR



CARDAS



[cardas.com/clear](https://cardas.com/clear)

# AudioQuest Wildwood Loudspeaker Cable

Well Worthwhile

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 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





## EQUIPMENT REVIEW - AudioQuest Wildwood Loudspeaker Cable

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*.

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. 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.

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

### SPECS & PRICING

#### U.S.

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

#### AUDIOQUEST

2621 White Road  
Irvine, CA 92614  
(949) 585-0111  
audioquest.com

#### U.K.

Price: £10919, 2.5m pair  
£11454, bi-wired 2.5m pair

#### THE MULTI-ROOM CO

Unit B Herrick Way  
Staverton Technology  
Park  
Cheltenham GL51 6TQ  
+44(0)1452 858260  
multi-room.com

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[www.theabsolutesound.com](http://www.theabsolutesound.com)

## EQUIPMENT REVIEW - AudioQuest Wildwood Loudspeaker Cable

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 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.

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**

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# 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.

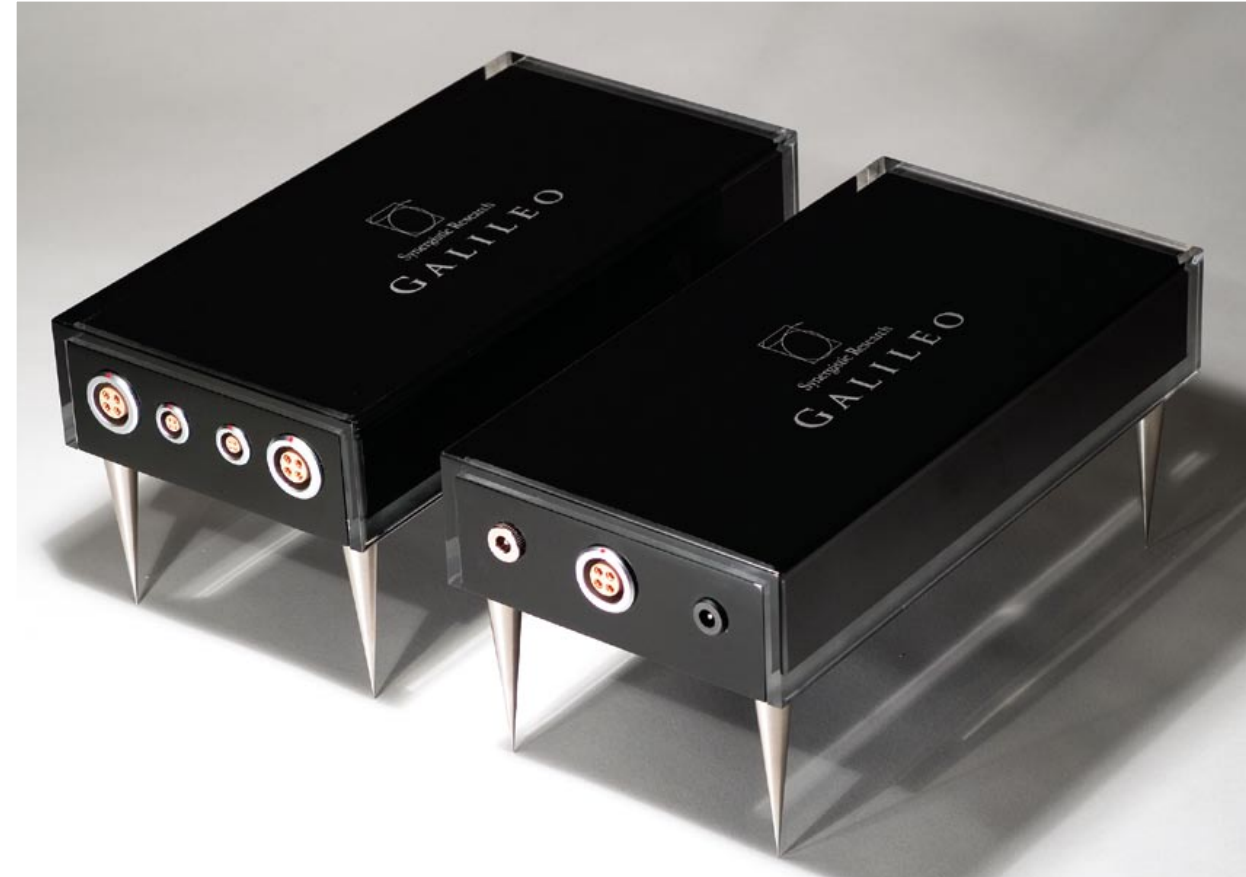
Before you start turning pages to get to the next review, let me assure you that Galileo is a uniquely interesting product and that its upside is considerable. It won’t take a golden ear to hear what it does (although it may take a golden goose to buy it). In a nutshell, the Galileo system is the lowest-noise, 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 to preamp to amp to speakers, quite audibly lower noise, seemingly clarify transient response, increase low-level resolution, and substantially

### 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

#### SYNERGISTIC RESEARCH

17401 Armstrong Ave., Suite 102  
Irvine, CA 92614  
(800) 578-6489  
synergisticresearch.com

#### U.K.

**Price:** £20000/pair of 1m interconnect; £30000/pair of 3m 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 Elliott, 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 Elliott, 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 strings")

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 resolution, and muffled the bottom end. While I wish that Synergistic hadn't tarted up the names of several parts of this genuine marvel



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

## EQUIPMENT REVIEW - Synergistic Research Galileo Cable and Interconnect

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.

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?

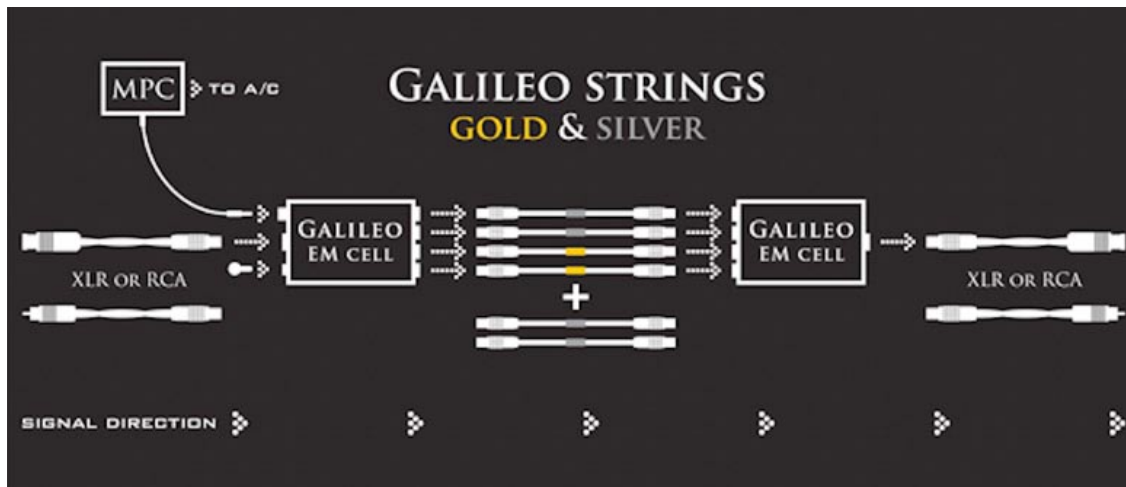
Denney’s answer to these questions was fresh and ingenious—as all his answers are: Instead of using a single “bundled” cable, why not take a modular approach? Why not use separate “strings” of wire, each made of different precious metals in different thicknesses?

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; 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



## EQUIPMENT REVIEW - Synergistic Research Galileo Cable and Interconnect



Exploded view of Galileo System interconnect

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 in the second movement of Columbia’s recording of the string-orchestral version of Berg’s *Lyrical Suite* with Craft conducting; the chest-thumping

## EQUIPMENT REVIEW - Synergistic Research Galileo Cable and Interconnect

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

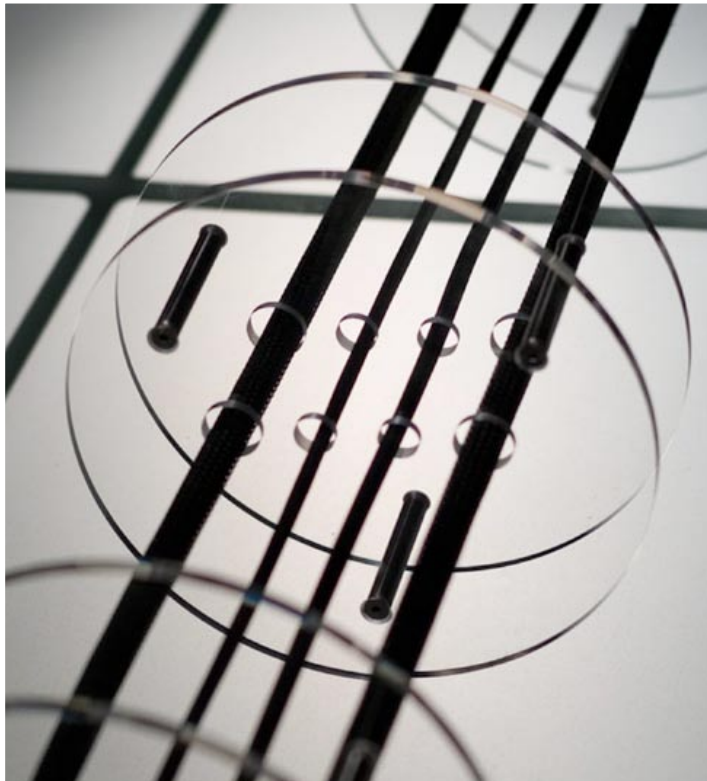
gargle-like, sometimes nasal, sometimes chesty and resonant coloratura and Oscar Peterson’s (always) superb piano accompaniment on their great version of the Gershwin’s “How Long Has This Been Going On?” from the Verve album of the same name; the way that miking was changed between the two Greenbriar 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.

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**



Galileo Acrylic Cable Elevators with Gold and Silver Strings

EQUIPMENT REVIEWS

# Power Conditioners and Power Cords

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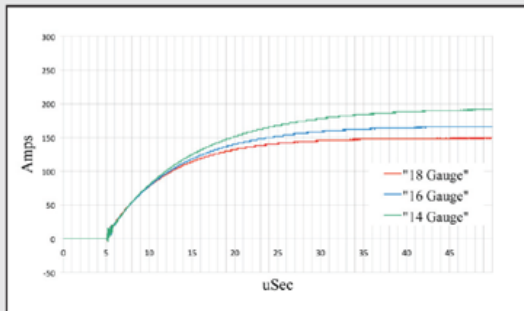


# Power cord measurements...

# ...there's more to performance than wire gauge.

The *Shunyata Research* DTCD Analyzer is the first and only power analyzer designed specifically to measure the differences between AC power cables, wires and connections. Previously published DTCD measurements revealed dramatic peak-current and voltage delivery advantages when substituting a quality 12-gauge power cord (*Shunyata's* Venom-3) for any stock power cord. Some might assume these differences are related only to the wire gauge. Years of testing at *Shunyata Research* have confirmed that wire gauge influences measured performance, but is far from the only design parameter that affects impulse current delivery to AV, Recording and Mastering systems. The tests that follow illustrate just some of the many parameters that affect power cord performance.

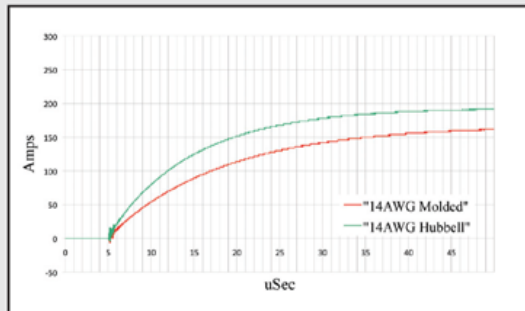
Some observers may be surprised or confounded by the following graphs, which show that wire gauge is far from the only contributing factor in achieving optimal impulse current delivery between the wall and AV components.



### WIRE GAUGE COMPARISON

This graph plots the differences between power cables of different wire gauge size. These measurements were generated by the DTCD Analyzer from actual stock power cords. Notice the progressive improvement in instantaneous power delivery as the wire gauge is increased from 18 to 16 to 14 gauge\*.

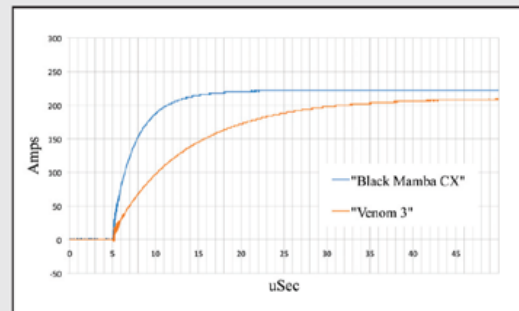
\*Wire gauge is inversely proportional to the number — 18 is smallest and 14 is largest



### CONNECTOR COMPARISON

DTCD measurements also reveal differences between connectors and connection methods. The first cable labeled "Molded" is a standard cable with crimped and molded connectors. The second cable is identical except the molded connectors have been cut off and replaced with high quality Hubbell connectors. Notice that the DTCD Analyzer clearly shows a significant increase in current delivery.

(NOTE: Both cables measure identically using conventional volt/current meters)



### GEOMETRY COMPARISON

The DTCD Analyzer is the only device that measurably demonstrates the difference between cable geometries. The Venom-3 and Black Mamba CX are both 12-gauge power cables. The Venom-3 cable uses a simple 3-wire twisted geometry while the Black Mamba CX uses 140 conductors in a complex Helix geometry. Notice the Black Mamba's dramatic improvement in current response! Then, consider that this difference in current response is repeated 120 times per second in a typical AV power supply.

## a final analysis...

These tests and others to follow using DTCD measurement clearly define the importance not only of quality-made power cords, but every aspect of their design. It is not just gauge that matters, but also the quality of the terminations, connectors and wire geometry. The measurements prove that combining quality design elements can objectively improve current-delivery performance to electronics.

Better peak current and voltage delivery means AV electronics have improved access to current and voltage. In lab and listening tests, the correlation to AV system performance is easy to hear and see. *We suggest you take the time, gain the experience and discover the obvious benefit better quality power cords can offer.*





# Baker's Dozen

## 13 Power Cords \$500 and Under

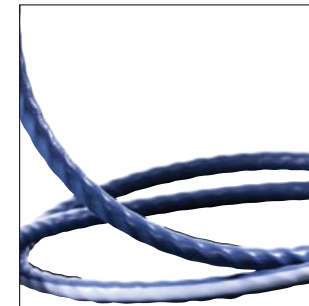
Neil Gader

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



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dynamically and tonally. I will reference this factor throughout the survey. In alphabetical order, let's begin.

### 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 Louisiana" 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.

### 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.

### 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.

### Argentum Acoustics Proteus 14

**\$499**

A few bars of Dianne Reeves' "One For My Baby" was all it took to summarize the strengths of this power cord. The intro to this track is solo acoustic bass, rich with soundboard resonance and decay. The Proteus 14 nailed this cue, offering a ripe and expressive low end—not only in this instance, but throughout my listening sessions. As the other instruments joined in—vamping cymbal and high-hat, brushed snare, and piano—I heard the lowest level details in all their specificity, a fine soundstage that only narrowed slightly in comparison with the reference, with a warmer

overall signature. Congestion during large dynamic swings of a symphony orchestra was minimal. The density factor was very good, closing in just short of the Audience and Wireworld, but in a dead heat with the Synergistic, Shunyata, and Tara. When all was said and done with this survey, the word that came to mind to describe the Argentum Proteus 14 was undetectable. There wasn't a single criteria that it didn't satisfy, and none that it hit out of the ballpark either. It conveyed very good overall harmonics, a strong density factor, and was neither overly sibilant nor under-done tonally. At the outset it might've been flying under the radar, but ultimately this was a very compelling performance.

### Furutech Absolute Power 18P

**\$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



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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.

### 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.

### 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.

### 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.

### 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?

### 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

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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.

### 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

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.

### 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

## SPECS & PRICING

### 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  
**U.S. Price:** \$350; **U.K. Price:** Not Available  
 (858) 487-1988, acousticzen.com

### Argentum Acoustics Proteus 14

**Conductor/Geometry:** 14 AWG Multi-Conductor, UP-OCC-Ultra-Pure Ohio Continuous Cast, Mono-Crystal Copper cryogenically-treated  
**Insulation:** Low capacitance cross-link PE dielectric insulation; UL Approved PVC outer jacket  
**Connector:** Furutech Alpha Pure Copper 3-Prong (NEMA) AC plugs and premium Furutech Alpha Pure Copper IEC connectors  
**U.S. Price:** \$499; **U.K. Price:** Not Available  
 (909) 947-6960, argentumacoustics.com

### Audience powerChords

**Conductor:** 10 AWG high purity stranded OFC  
**Insulation:** Flexible PVC  
**Connector:** Wattgate IEC and plug  
**U.S. Price:** \$482 (5ft); **U.K. Price:** £500  
 (760) 471-0202, audience-av.com

### Audioquest NRG-4

**Conductor:** Solid PSC conductors in a self shielding counter-spiral with two RF stoppers filters to block radio frequencies  
**U.S. Price:** \$350; **U.K. Price:** £200  
 (949) 585-0111, audioquest.com

### Furutech Absolute Power I8P

**Conductor:** Alpha OCC  
**Insulation:** PE with Teflon  
**Connector:** Furutech, rhodium-plated  
**U.S. Price:** \$352; **U.K. Price:** Not Available  
 (323) 466-9694, eliteavdist.com

### Harmonic Technology Fantasy AC10SE

**Conductor:** 6N copper  
**Insulation:** PE insulation  
**Connector:** Furutech  
**U.S. Price:** \$500; **U.K. Price:** £415  
 (858) 486-8386, harmonictech.com

### Kimber Kable PK-10AG

**Conductor:** 10AWG copper/"spiral lay" or traditional twist  
**Insulation:** Chroma-free TPE  
**Connector:** Wattgate AG connectors, UL approved  
**U.S. Price:** \$370; **U.K. Price:** £165  
 (801) 621-5530, kimber.com

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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.

### 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 series of 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 *p0er 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 the weight

of authentic music in live space. Though purists might balk at the Electra’s flat physical profile, it’s worth noting that these power cords were 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 the right notes.

### 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**

## SPECS & PRICING

### Purist Audio Musaeus Presto

**Conductor:** Stranded 14AWG copper OFC

**Geometry:** Twisted

**Shielding:** Aluminized foil layer

**Insulation:** Polyvinyl chloride

**Connector:** Wattgate, screw termination, UL approved

**U.S. Price:** \$360; **U.K. Price:** Not available

(979) 265-5114, [puristaudiodesign.com](http://puristaudiodesign.com)

### 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

**U.S. Price:** \$95; **U.K. Price:** Not Available

(360) 598-9935, [shunyata.com](http://shunyata.com)

### Synergistic Research Precision AC Basik

**Conductor:** 14 AWG, quantum-tunneled copper, proprietary geometry, highly shielded

**Insulation:** Modified PE

**Connector:** Synergistic G07, quantum-tunneled

**U.S. Price:** \$250; **U.K. Price:** Not available

(949) 476-0000, [synergisticresearch.com](http://synergisticresearch.com)

### TARA Labs RSC Prime

**Conductor:** Rectangular solid core conductors

**Insulation:** TARA Labs’ proprietary Aero-PE

**Connector:** Wattgate wall plug and IEC

**U.S. Price:** \$500; **U.K. Price:** Not Available

(541) 488-6465, [taralabs.com](http://taralabs.com)

### 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

**U.S. Price:** \$375; **U.K. Price:** Not Available

(510) 535-9464, [voodocable.net](http://voodocable.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

**U.S. Price:** \$425; **U.K. Price:** Not Available

(510) 535-9464, [voodocable.net](http://voodocable.net)

### Wireworld Electra 5.2

**Conductor:** Silver-clad copper-alloy contacts

**Insulation:** Composilex

**Connector:** Silver-clad brass contacts

**U.S. Price:** \$360; **U.K. Price:** £420

(954) 680-3848, [wireworldcable.com](http://wireworldcable.com)

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[www.theabsolutesound.com](http://www.theabsolutesound.com)



# Furman IT-Reference 16E i Power Conditioner

Alan Sircom

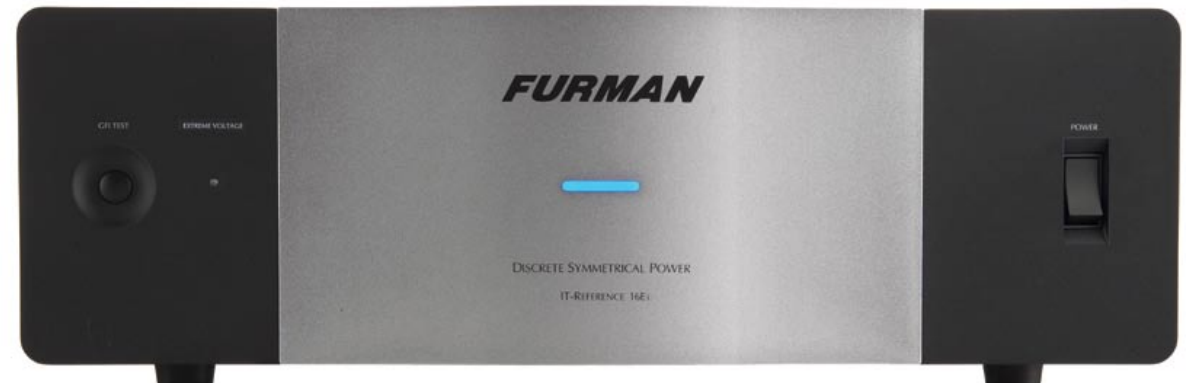
The Furman IT-Reference 16E i is called a 'discrete symmetrical AC power source'. It has eight isolated IEC sockets for low-level analogue, digital or video sources, four high current isolated sockets (three 10A, one 16A) for power amps and eight connectors for satellite or radio sources. And inside the box is enough dual-screen transformer action to make the damn thing weigh so much.

The IT-Reference 16E i has a soft-start. If your lights dim when powering up, you need one. Also, if you have anything with transformer hum (like using a product designed for 220v in the UK, where 240v is commonplace), the IT-Reference 16E i power conditioner is often an effective cure.

It doesn't undermine the performance of connected equipment. There's no sense of music sounding weedy and breathless in dynamic passages, although there is a small amount of the sound being slightly 'pumped up' when playing quiet passages. But, given the alternative is the quiet passages battling a less quiet noise floor, the times when the IT-Reference 16E i is called for, it's a useful addition. At its best (or rather, when it's most needed), it gives the midrange more freedom, the bass more impact and the treble less grit; not significantly, not like the difference

from swapping from one pair of speakers to another, but enough to make its presence felt.

Living in suburban London though, the power conditioner did significantly improve the mains during key early evening moments (where every neighbour was watching TV, on that t'internet, listening to music or cooking) and that was a significant bonus. Even here, some products (mid-priced solid state electronics) needed the firm hand of the Furman more than others (valve amplifiers). And then, during those two heady days of high summer, we got some short on-again, off-again short, spiky power cuts (using semi-skilled mole people to attempt to fix Victorian water mains makes these brown outs irregular, but annual local events). With the Furman in place, no fuses blew in the system, and both light circuits tripped. The same thing happened a few months earlier. Both light circuits also tripped



## SPECS & PRICING

### AC Current Capacity

**Input:** 16 Amp AC current-capacity required

**Output:** 8-16 Amp RMS

**Outlets:** 8 symmetrical balanced 10A IEC outlets; 4 outlets (3x 10A IEC, 1x 16A IEC); 4 pairs satellite protector sockets

**Transient Voltage Surge Suppression:** 230V AC Line (Series Multi-Stage Protection, non-sacrificial, 376V peak clamping @ 6000V 3000A input)

**Shutdown Range:** 275 VAC  $\pm$ 5 VAC

**Linear Noise Attenuation:** Transverse (Differential)

**Mode:**  $>20$  dB, 1kHz-2kHz  $>40$  dB, 2kHz-100 kHz;  $>80$  dB, 100kHz-1GHz. Linear attenuation curve from 0.05 - 100 ohms line impedance

**Common Mode:**  $>95$  dB, 10Hz - 50 kHz;  $>40$  dB 50kHz - 1MHz.

**Dimensions (WxHxD):** 432x152x413mm

**Weight:** 40 kg.

**Power Consumption:** 8.5 Watts for display and control circuits independent of actual load

### U.S.

**Price:** \$2900 (this is a 220-240V product)

### FURMAN SOUND, LLC

1690 Corporate Circle  
Petaluma, CA 94954  
877-486-4738  
furmansound.com

### U.K.

**Price:** £2,225

### FURMAN SOUND LLC

(Manufacturer)  
furmansound.com

### ANDERS+KERN LTD

(Distributed)  
anders-kern.co.uk  
+44(0)1638 510900

then, and two fuses blew in a very similar system. Anecdotal, of course... but that does suggest the Furman is adding a level of protection to products under its very heavy wing.

The Furman IT-Reference 16E i power conditioner might just be the real-world antidote to 'foo' mains products. When you need it, it does what it's supposed to; when you don't, it doesn't get in the way. There are a lot of products that claim more and deliver less. +

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# Audience adeptResponse aR8 Power Conditioner

Alan Sircom

Oh dear. This product marks my transition to the Dark Side. I've joined the ranks of the audiophools now, and the problem is... I just don't care. I'm listening to, and thoroughly enjoying, the sound of music played through the Audience adeptResponse aR8 power conditioner, and that's me marked for the rubber room by hi-fi's pragmatist quarter.

Audience is the brainchild of John McDonald and the late Richard Smith (who's soldering iron has now been passed on to designer Roger Sheker). The Californian company made its name with high-res Auricap capacitors, but is also known for its cables, power conditioners and 'auric illuminator' disc treatment (it also makes loudspeakers, and an amp system is waiting in the wings). Although some of its products have a distinctly left-field stance, Audience is considered one of the good guys delivering an honest product, born out of actually wanting things to sound better. And John McDonald is reputed to have some of the best ears in the business.

The adeptResponse aR8 conditioner is built in a very robust box (in business-like matt black or almost Jeff Rowland-like brushed silver). We 240V UK types get two versions; the four socket aR4 (at a cool £1,999) and the eight-socket aR8 (for a grand more). Both are designed to sit in a

conventional hi-fi rack, but the bigger aR8 comes with a big magnetic power breaker throw switch and a red voltage LED read-out on the front panel. The smaller one just has the carved logo. If you are prepared to put up with Schuko sockets (as in not the three-pin 13A sockets used in the UK), the two boxes accept six (aR6) and a dozen (aR12) components respectively. Both come with a six foot length of the company's powerChord e mains lead as standard; the downside is this is terminated with a Neutrik PowerCon socket at the conditioner end, so comparisons are difficult to say the least.

The conditioner is designed to strike at what Audience feels are the three biggest problems with power as it reaches your system; power factor correction, filtering and transient suppression. Isolation is also a key issue that's addressed in the aR8. Power factor correction means the aR8 tries to bring the mains current and voltage into phase,





## EQUIPMENT REVIEW - Audience adeptResponse aR8 Power Conditioner

which means better power transfer.

Transient suppression is an interesting aside. Dynamics in most power conditioners are actually held back by the use of a metal oxide varistor as a clamp, grounding high voltage transients. Problem with MOV devices is they are said to degrade and act more like a capacitor, and a noisy one at that. The adeptResponse design features a unique (and highly proprietary) no-wear system instead, so one audible distortion is effectively eliminated. The filtering mechanism used by Audience is also proprietary, but it filters each output and double filters the outputs from one another to help isolate them.

Open the aR8 up and inside is the grand master of passive conditioning packages. As you might expect, the aR8 is packed with the company's Auricap capacitors inside. There's some cryo-treatment, too. These components are specially designed to produce no significant series resistance, and thus a low impedance path to the electronics. A special hot rodded version is available in the US, which replaces the standard caps with Audience's Teflon designs, at pretty much double the cost. Rumour has it, the aR12T raises the bar still further. If so, it must be something truly magical, because the standard aR8/aR12 is one of the most significant upgrades you can make. But only after a lengthy run-in.

Dropping into Gloria Gaynor mode for a moment, at first I was afraid. I was petrified. Kept thinking why do people love this piece of crap that's by my side. But then it spent so many hours just running in to prove me wrong. It grew strong. And we learned how to get along.

Enough with the disco paraphrasing. It sounds OK at first (even if 'crap' scans better) but

transforms significantly over the next 100 hours or more. In fairness, I don't know whether this is a slow improvement or major change somewhere along the continuum, as I was out at shows for almost the whole run-in period. I just heard something sounding OK one day, went away, came back to find the same thing sound remarkable. This is capacitor conditioning. Remove the aR8 from the juice for a few days, discharge those caps and you are back where you started, apparently.

**"But then it spent so many hours just running in to prove me wrong. It grew strong. And we learned how to get along."**

The great thing about the Audience aR8 is that once you get past those first hours, it makes a big and obvious change. That can lead to absurd reviewer-only systems that no-one in reality would ever consider — who else would use a £3,000 power conditioner to healthy up a £350 Cambridge Azur

650A amplifier? — but it means the aR8 is one of the most immediately understandable mains conditioners out there. Valve amps? No worries. Apparently, Audience is one of the few mains conditioner purveyors that even gains friends among the Naim fraternity (in the US at least), which is high praise indeed. And yes, because of its passive nature, you can use it with a bunch of other power products if you want.

The usual mains effect of lowering the noise floor is in full effect, but without the dynamic compression or softening of transients that accompanies most mains conditioners. In fact, instead of compromising these two key elements of the sound, in many cases, it improves them. A lot.

This is at once a subtle change and an obvious change; that sounds contrary, but it's the only way I can describe what happens here. The subtle change is the way it gets all your audio ducks in a row, making the sound more dynamic, more encompassing, filling out the bass notes and the image depth, making the coherence between instruments and the phrasing of those individual instruments stand together well, giving the sound a sense of organic flow, increasing detail, lowering coloration and all the rest. The obvious change is it does this so powerfully, that you feel like your system has been running at half-power prior to inserting the aR8.

What happens next is surprising. It makes the sound as if the amp and speakers were upgraded. Sibilant, spitchy vocals and too-splashy cymbal sounds are given special treatment, opening up unheard levels of detail and articulation (my

### SPECS & PRICING

**Audience adeptResponse aR8 power conditioner**  
**Current/Voltage:** 15A or 20A/120V, 220V, 230V, 240V  
**Power Outlets:** eight high conductivity power receptacles  
**Satellite/Cable TV:** Ground loop isolation transformer for hum reduction  
**Indicator:** Front panel digital LED incoming voltage readout  
**Chassis:** Heavy duty, rack-mountable  
**Dimensions (WxHxD):** 48.3x12.7x22.9cm  
**Weight:** 7.45kg including powerChord  
**Finish:** Grained and satin anodized aluminium Silver or Black

#### U.S.

**Price:** \$3100, aR6;  
 \$4600, aR 12 (the aR8 is a UK-only model)  
**AUDIENCE LLC**  
 120 N. Pacific Street,  
 K#9  
 San Marcos, CA 92069  
 800-565-4390  
 audience-av.com

#### U.K.

**Price:** £2,999  
**AUDIENCE**  
 (Manufacturer)  
 audience-av.com  
**HIGH END CABLE**  
 (Distributor)  
 highendcable.co.uk  
 +44(0)1775 761880

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## EQUIPMENT REVIEW - Audience adeptResponse aR8 Power Conditioner

German is extremely limited — I can ask for directions to bar, brothel and hospital and not much else — but I found myself following along to Rammstein as if I'd just spent a month under a fraulein). This happened almost regardless of musical genre; it brought you closer to Miles Davis' mute, conveyed Ashkenazy's virtuosity when playing Mozart with more verve and made Ray LaMontagne's breathing patterns all the more noticeable (and yet, not uncomfortably so). It also stops you considering music as background; this makes you play more music at a single sitting and focuses your attention on the music playing, not the shopping list, the state of shoe design in the 21st Century or whether QPR deserved to win last week. All that from a power product... surprising!

*"My German is extremely limited... but I found myself following along to Rammstein as if I'd just spent a month under a fraulein."*

The acid test of a product in many cases is what happens to your system when it is removed. Here, the aR8 proved its mettle and showed what it was really doing. The sound became less seamless and less dynamic. Transients were blunted, and the bass line was significantly less timely. Vocals may have been more distinct and extended and separate from the backline, but this robbed the sound of its 'PRaT'. Albums returned to being just a motley collection of tracks, instead of being a

distinct whole that you wanted to play from end to end. That underpinning threat level of Slipknot was lost, too. You get a handle on why the Naim guys approve of the Audience when you plug it back in; it's more rhythmically cogent and, although not every Naim-ite is a headbanger, the aR8 unlocks more of the volume dial without removing the smile factor in the process.

No product is perfect, but the aR8 gets damn close. On very high-res and exceptionally neutral equipment, the sound took on a mild boost in the lower part of a tenor's register, while the bat-eared part of the treble was smoothed off and rounded down. But on most products it improved audio across the board — from the insanely cheap, to the sort of products likely well-matched to a conditioner of this magnitude and on up to the insanely expensive. The level of improvement in most cases was good enough to make you draw breath.

It's strange; if a change this large is laid at the door of a CD player, preamp or power amp, few quibble. Even saying changing the interconnect cables produced this big a difference might be accepted with scant question, but to attribute these sort of improvements to a power product is always viewed quizzically. The fact remains that the Audience adeptResponse aR8 makes a big, important difference to the sound, every bit in line with three-grand upgrades to electronics further up the food chain. So, set aside your preconceptions and prejudices and listen. +

# Reference Audio Cables. Handmade in the United States.



# The Well-Dressed System

## Audience adeptResponse aR1p Line Conditioner

Neil Gader

The way I see it AC line conditioning is a key building block for any high-end audio system. However, it would likely be the last item on my checklist of purchases—not because it matters least, but rather because of its system-wide impact. Just like you wouldn’t place a maraschino cherry in a bowl *before* the banana split, you’d want to fully assess your entire system’s performance—weaknesses as well as strengths—to better put yourself in a position to identify a line conditioner’s impact.

That said, I welcomed the opportunity to listen to the Audience adeptResponse aR1p—a compact, single-outlet transient suppressor and RF/EMI filter based on the twelve-outlet flagship technology of the Adept aR12. It can be used alone or with a power strip for multiple components. In the latter case, however, it won’t provide isolation between components, like the heavy-duty aR12. It’s a sturdy little box (roughly 6” high and 2” deep) designed for wall, floor, or ceiling outlets, and is supplied with a ceiling-mount bracket. It has a footer at the opposite end of its hospital-grade plug for stability. It’s been designed for individual components like a receiver, CD player, integrated amplifier, power amplifier, or video monitor. And its small size allows it to be used in custom-install situations—a ceiling outlet for a video projector, for example.

When it was used with a superb CD player like the Simaudio Moon Super Nova or the Sony DVP-

9000ES (for SACD), the results were interesting and, at times, impressive. The Audience doesn’t change a system’s inherent tonality. But it does impart a sweeter character to the sound and smoothes its edges slightly in an almost analog-like way. However, it primarily concentrates its strengths in the realm of soundstaging and most particularly in the enhancement of dimensionality and depth. On a great orchestral recording like the finale of Anne-Sophie Mutter’s performance of the Tchaikovsky Violin Concerto [DG-SACD], it seems to peer more deeply into the orchestra’s interior, revealing details and increasing transparency. The unit seems to extend the back wall of the hall even farther back. And then it fills this new space with an extra helping of reverberant air. Norah Jones’ “Sinking Fast” [*Not Too Late*, Blue Note] is a song that gives up inner details grudgingly. But the resolving power of the Audience unit clearly digs deep to expose the lowest-level information about

the tapped percussion and the nearly buried-in-the-mix, flat-picked mandolin. The widely panned backup voices are more bloom-filled, and their separation on the stage is widened. And then there’s Billy Joel’s penny-whistle soloing during “Rosalinda’s Eyes” [*52nd Street*, Columbia]. With the AdeptResponse aR1p I was better able to follow this delicate filigree right into the song’s fade-out. In the past I’ve lost track of it altogether.

I’m less sanguine about running a current-hungry device like the Plinius 9100 integrated amplifier with this particular adeptResponse conditioner. Generally, I felt that transients were not as quick or responsive, and dynamics, like the attack off of Mutter’s bow during the Tchaikovsky, failed to surprise my ear as they often do when I’m running power straight from the outlet.

However, remember this is an easy product to audition. I recommend you do so. And gauge your results by using it during the high-demand

heat of the day and during the evening when power usage in your home and neighborhood goes down. Diminutive in stature, the Audience adeptResponse aR1p is a product to be taken seriously and selectively. It’s a great accessory to have on hand for any well-dressed system.



### SPECS & PRICING

#### U.S.

Price: \$495

#### AUDIENCE LLC

120 North Pacific Street  
#K-9  
San Marcos, CA 92069  
(800) 565-4390  
audience-av.com

#### U.K.

Not available in UK

#### HIGH END CABLE

highendcable.co.uk  
+44(0)1775 761880

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[www.theabsolutesound.com](#)



# Running Springs Audio Jaco Power Conditioner

Alan Sircom

**“Oh!” That’s your first and abiding impression of what the Running Springs Audio Jaco does to your system. You see, power conditioners are supposed not to make a Big Difference in the Big City. They are designed to make people far from the nearest power station help keep up with us Big City Folk and our clean power. They certainly aren’t supposed to do any good after midnight, when the juice is flowing sweetly. If anything, a power conditioner only gets in the way, suppressing dynamics.**

These are largely historic statements about power conditioning. It’s not like that anymore. People like Audience, IsoTek, Isol-8, Quantum and Nordost have shown there’s more to power conditioning than you might think, and the latest conditioners don’t hinder any more. Even so, the RSA Jaco — named after bass legend Jaco Pastorius — still comes as a bit of a shock.

Perhaps the first part of the shock comes when you sit in front of a block so devoid of things to play with. No lights, displays, switches, buttons to press or things to stare at. No feet either, which is a strange omission as the Jaco is deceptively heavy and that’s a bad combination for scratching tables. It just sits there, 20A socket in one corner, four 13 amp power

sockets (eight in US models) along the slanted back panel and a big 20A fuse. It’s capable of passing up to 1850W (it’s 2.4kW in the US because it comes with 20A sockets, but UK domestic circuits don’t exceed 15A) before it begins to struggle, so unless you are hooking up bi-amped flagship monoblocks, nothing’s going to faze the Jaco.

Each of those 13A sockets has its own isolation. Behind that is some impressive and proprietary passive voltage regulation and filtering. RSA builds some of the best-known capacitors in the business (you’ll find them in big-name products) and they’re put to good effect here. Having access to the keys to the component building factory means Running Springs can spec devices specifically for the Jaco,



## EQUIPMENT REVIEW - Running Springs Audio Jaco Power Conditioner

instead of building the product around off-the-shelf components. This helps give the Jaco the “Oh!” factor.

You begin to understand why the Jaco exists when you speak to the designer Dan Babineau. A music-loving physicist by training and electronics engineer by trade, his love of music was being hampered by the mediocre sound he was getting from his good audio equipment, which he attributed to the power. He decided to concentrate on voltage regulation, noise cancellation, and protection and — six product generations later — the products finally turn up on UK shores. Whoever said we were behind the curve?

“Having the keys to the component building factory means Running Springs can spec devices specifically for the Jaco.”

Every aspect of the design is uncompromising, from the hand-wound inductors to the carbon-fibre resonance control, the Cardas internal wiring and the heavy non-ferrous chassis. It’s all hardcore, and bloody heavy to boot. RSA supply two grades of power cable too; Cardas-derived Mongoose, or the HZ Crown Jewel power cable. Audiofreaks supplied the latter cable, which is impressive, but adding almost half the cost again to the Jaco, so it should be. Audiofreaks also supplied a more humble Cardas TwinLink to compare and contrast.

The ‘Oh!’ kicks in the moment you put it into

the system. It’s like the noise floor just fell away. It’s not ‘quieter’, it’s nonexistent on solid-state, surprisingly silent on tubes and significantly more dynamic on both.

Now that’s strange. Most modern mains conditioners are at best neutral on dynamic range, and a few still squash the dynamic range of the sound. This one actually improves the dynamic range, and by no small margin too.

One thing I noticed on extraction that I didn’t ‘get’ on insertion was just how important the Jaco was in letting you play at ‘natural’ listening levels. I used the volume control more frequently with the Jaco in place; not because the sound was hard or harsh but because the amp could be played a little louder. Which means you get the second, gradual ‘Oh!’ of realisation over the course of first week when you begin to play music with more range and with more frequency (as in, how often you play music, nothing to do with kilohertz) and as you feel confident to play music both louder and quieter than you would normally dare to try. Then finally you get a third ‘Oh!’ when you take the Jaco out of the system... this time an ‘Oh!’ of disappointment.

Back when I reviewed the Audience aR8, I commented that the adeptResponse sounded like a component has been upgraded. Through the Jaco it sounds like all the components in the chain have been improved. That doesn’t leave the adeptResponse out in the cold, but it does give it some very stiff competition.

The strange thing I didn’t expect here was the consistency. Put the Jaco in the system and it seems to do the same thing wherever you use it. It doesn’t get in the way, makes the background quieter and the dynamics more potent. It gets rid

of the audiophile ‘bad hair day’. Not in a small way, either.

Lastly, the Crown Jewel snake, next to the little Cardas mains cable. The HZ Crown Jewel is a 60 strand affair with fancy Furutech plugs and sockets and damping carbon fibre end caps said to filter RFI. At the moment, it’s UK price is to be confirmed, but sums around the £1,500 mark have been bandied around. And yes, it did offer a distinct improvement over the Cardas Twinlink cable. It was almost like someone slugged the tweeter with a small capacitor across its terminals. The Cardas was not exactly a tone control, but a step backwards in performance, which I suppose is only to be expected given the price differential.

I confess to being thoroughly confused by the sort of improvement that’s going on with the Running Springs Audio Jaco. The idea that changes of this magnitude can happen simply because the power gets treated seems absurd. But it happens, time and again.

“Oh!” indeed. +

### SPECS & PRICING

#### Running Springs Jaco power conditioner

Sockets: 4x 13A UK model

Max Power: 2.4kW (20A) non-magnetic aluminium chassis, Proprietary passive components built to +/- 1% tolerance

Dimensions (HxWxD): 15.2 x 33 x 26.7cm

Weight: 22.2kg

#### U.S.

Price: \$3000 (U.S. equivalent)

#### RUNNING SPRINGS AUDIO

26571 Guadiana

Mission Viejo, CA 92691

714-765-8246

runningspringsaudio.com

#### U.K.

Price: £2,995

#### RUNNING SPRINGS

AUDIO (Manufacturer)

runningspringsaudio.com

#### AUDIOFREAKS UK LTD

(Distributor)

audiofreaks.co.uk

+44(0) 208 948 4153

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# Furutech Daytona 303 Power Conditioner and Flux-Series Cables

Chris Martens

More often than not, *The Absolute Sound* elects to review power conditioners and power-distribution products as separate entities from signal-bearing cables, and under normal circumstances this approach makes perfect sense. In the case of Furutech's new Daytona 303 power conditioner and Flux Series interconnect, speaker, and power cables, however, I would like to break with standard practice and treat Furutech's components as a complete system. Why? The answer in a nutshell is that, in my practical experience, these components work much better (and much more synergistically) when used as a coherent power/signal-delivery package, rather than as piecemeal solutions. Let me begin by providing some technical background on each of the system elements.

The Daytona 303 is most ambitious and versatile power-conditioner/power-distribution box that Furutech has offered to date. Like almost all of the firm's power-delivery products, the Daytona 303 takes a "first do no harm" approach to its job. In practical terms, this means the Furutech uses ultra-high-quality, high-purity components throughout (and by "components" I mean everything from chassis metalwork to power outlets to internal wiring), and provides a baseline of 5250 joules of surge protection, plus a passive noise-absorption system implemented through liberal application of 3M's EMI-absorptive GC-303 material in the Daytona's interior. What words

can't adequately described is Furutech's almost fanatical attention to even the smallest and most seemingly insignificant construction details. For example, all internal conductors in the 303 have been subjected to Furutech's proprietary "alpha process" cryogenic and demagnetization treatments, and are, says Furutech, "insulated with resonance-absorbing tubing."

Four of the Daytona 303's ten AC-outlets (grouped as two banks of two outlets each) are geared for use with analog audio components (preamps, power amps, phonostages, and the like). Accordingly, those four outlets are—apart from the passive noise-absorption system—





## EQUIPMENT REVIEW - Furutech Daytona 303 Power Conditioner and Flux-Series Cables

otherwise unfiltered. The six remaining AC outlets (again grouped as three banks of two outlets each) are reserved for digital components (disc players, digital transports, DACs, or—for home-theater types—TVs, projectors, cable/satellite boxes, etc.), and provide both passive noise absorption and active digital noise filtration. Finally, as convenience touches, the 303 provides three pairs of surge-protected coax connections (75-ohm type), three sets of surge-protected phone line connections (one in, two out), front and rear XLR-type connections for an included plug-in LED lamp, a sequencing switch, 12V control connections, a way cool front-panel display that continuously shows voltage and current while providing go/no-go monitoring lights to indicate any abnormal conditions that might arise.

Collectively, Furutech's Flux Series cables are the most sophisticated the company has ever produced, and are designed and built in keeping with what Furutech terms its "pure transmission" philosophy. Again, strict attention to detail is the order of the day. Accordingly, the LineFlux interconnect cables uses solid alpha-process

OCC copper conductors housed inside double shields, with special polyethylene insulators/vibration dampers. The cables are terminated with robust sets of mechanically non-resonant RCA or XLR connectors wrapped in six layers of carbon fiber and equipped with burly, rhodium-plated, stainless-steel connector pins. The SpeakerFlux speaker cables, in turn, offer similar construction details, but are terminated with non-magnetic, rhodium-plated, high-purity copper spade lugs or banana plugs.

Finally, the PowerFlux power cables use alpha-process pure copper conductors, polyethylene insulators housed within PVC vibration-damping sheaths, Furutech's innovative FI-50 piezo-ceramic AC inlet and outlet plugs, and a patent-pending system of metal cable clamps and pressure plates to help reduce "mechanically and electrically induced noise."

Frankly, dry technical details, while interesting to some, really don't do much to convey what makes the Furutech system special. So, permit me to cut to the chase.

Furutech's Flux Series cables, when backed up



### SPECS & PRICING

#### Furutech Daytona 303 Power Distribution/Conditioning Module

**AC Outlets:** Ten, four unfiltered with passive noise absorption only (for use with analog components), six with passive noise absorption plus active digital noise filters (for use with digital components).

**Other inputs/outputs:** Three pairs of 75-ohm type coax

connections with surge suppression, three phone connections (one in, two out) with surge suppression, sequencing switch, front and rear connections for included LED lamp, front-panel displays for voltage and current with monitor lights to indicate abnormal conditions (if any).

**Surge suppression:** 5250 joules.

#### U.S.

##### Furutech Daytona 303 Power Distribution/Conditioning Module

**Price:** 414 mm x 265 mm x 149mm: \$2940

##### Furutech LineFlux Interconnect Cables

**Price:** 1.2M RCA: \$2135

**Price:** 1.2M XLR: \$2433

##### Furutech SpeakerFlux Speaker Cables

**Price:** 3M: \$3395

##### Furutech PowerFlux Power Cables

**Price:** 1.8M: \$2380

#### FURUTECH COMPANY LTD.

(Manufacturer)

[furutech.com](http://furutech.com)

#### ELITE AUDIO VIDEO DISTRIBUTION

(Distributor)

(323) 466-9694 x22

[eliteavdist.com](http://eliteavdist.com)

#### U.K.

##### Furutech Daytona 303 Power Distribution/Conditioning Module

**Price:** Not distributed in the UK

##### Furutech LineFlux Interconnect Cables

**Price:** 1.2M RCA: £1,720

**Price:** 1.2M XLR: £1950

##### Furutech SpeakerFlux Speaker Cables

**Price:** 3M: £2735

##### Furutech PowerFlux Power Cables

**Price:** 1.8M: £1800

#### FURUTECH COMPANY LTD.

(Manufacturer)

[furutech.com](http://furutech.com)

#### SOUND FOWNDATIONS (Distributor)

+44 (0) 1276 501 392

[soundfowndations.co.uk](http://soundfowndations.co.uk)



## EQUIPMENT REVIEW - Furutech Daytona 303 Power Conditioner and Flux-Series Cables

by the Daytona 303 and PowerFlux power cables, are—by a country mile—the most revealing cables Furutech has ever made, and among the most revealing I’ve yet heard, regardless of price. (The Flux Series cables go far beyond what the Furutech’s former flagship Reference Series models could do, which is saying a mouthful given that the References are no slouches when it comes to performance).

As is often the case with ultra-revealing products, there are some caveats in order. The Daytona 303/Flux cable package will represent a positive step forward in some systems, but not in all. As near as I can tell, the 303/Flux package “syncs” particularly well with associated components that offer the desirable (and indeed, almost “magical”) combination of ultra-high resolution and inherent smoothness—a combination offered by products such as YG Acoustics’ Carmel loudspeakers, for example. But under other circumstances the 303/Flux package can and sometimes does tell you things about associated system components that you might prefer not to know. Where this is the case, a better option might be to use Furutech’s also excellent but just slightly more forgiving Evolution II Series cables, which I have also sampled of late.

When matched with components that can make full use of its strengths, the 303/Flux system offers six key benefits that are simply addictive:

- Unusually quiet backgrounds (perhaps especially attributable to the Daytona 303 and the PowerFlux power cords).
- Resolution sufficient to convey tons of low-level sonic detail.
- Blazing transient speeds without apparent

overshoot or ringing.

- Superb high-frequency “air” and extension (though this is an area where some might find the Flux cables a little too good for their own good).
- Clean, taut, articulate bass.
- Genuine neutrality—meaning, however, that the Furutech package provides absolutely *no* suppression of unpleasant treble artifacts that might be introduced by other system components.

To see how this plays out in real-world performance, let me give some illustrations based on experiences I had when switching over to the Furutech system while working on my recent review of the YG Acoustics Carmel speaker. Before the Furutech package arrived, the Carmels sounded great in my system, offering near full-range sound, plenty of resolution, exceptional soundstage width and very good (though perhaps not absolutely class-leading) front-to-back stage depth. I tried adding the various Furutech components on a piecemeal basis with mixed results, but when I brought all the Furutech elements together at once, the sound of the Carmels really took off.

Bass, already one of the Carmel’s strengths, tightened up just a bit while pitch definition got better. Mids opened up in a subtle but very meaningful way, letting voices sound more nuanced and real, while the both the leading and trailing edges of notes became more detailed and more believable. In particular, hall reverberations as captured on good recordings, seemed to gel in a more palpable, plausible way (a good example would be the rich reverberations heard in the

excerpt of Tavener’s *Icons of Eros* as captured on the Reference Recordings 30th Anniversary Sampler HDCD). But the biggest jump in performance came in the area of soundstaging, where both stage width and, especially, depth improved markedly—I think because the Furutech package allowed very low-level soundstage cues to be reproduced cleanly and clearly, rather than getting lost beneath the noise floor. Overall, my sense was that the Furutech system let me hear

how incredibly good the YG Carmels (and the Rega Isis/Osiris components driving them) really could be. And that really is the whole point.

When matched with the right associated components, Furutech’s flagship power/signal-distribution package can supply the perfect finishing touch—one that lifts system sound quality from the “extremely good” level on up into the space where sonic greatness lives. **tas**





# 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. Nor does it have an on-off switch. You simply use



## EQUIPMENT REVIEW - Synergistic Research Tesla PowerCell 10 SE AC Conditioner

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

**U.K.**

Price: £4200

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# Shunyata Research V-Ray V2 Power Conditioner and CX Series AC Cords

Advancing the Art

Robert Harley

**T**he field of AC power conditioning for audio systems has undergone a radical transformation since the first AC conditioners appeared about 20 years ago. Those early products were developed largely through trial and error, and often did as much harm as good. (Does anyone remember the Tice Power Block?) AC conditioner design was a “black art,” with the designers of the day not fully understanding the phenomena by which AC power affected sound quality.

Today, however, a few very bright and dedicated engineers have conducted fundamental research into AC power for audio systems. They have garnered a much deeper understanding of the role AC power plays in achieving good sound, and consequently, have developed products that are vastly better in every way than the crude attempts of a decade or so ago. The best of these new conditioners are not only much more effective, they also avoid the sonic shortcomings of earlier designs. This isn't to say that all of today's conditioners are worth owning. Although most of today's conditioners are better than their

predecessors, only a very few rise to the top as contenders for the state of the art.

Two of those contenders are the Shunyata V-Ray V2 and its associated CX Series power cords. They were developed by Shunyata founder Caelin Gabriel, a man who has certainly done his homework on the subject (see my accompanying interview). Since I first tried Shunyata's AC conditioning system and power cords more than four years ago, they have become indispensable parts of my audio system. The combination was easily the best-sounding AC package I'd heard, rendering greater overall clarity, resolution, ease,

and naturalness of timbre. The Shunyata system was so impressive it won our 2006 Product of the Year Award.

That system included the Hydra-8 conditioner for the front-end components and a pair of Hydra-2 conditioners, one for each power amplifier. Since those first products, Shunyata has been busy refining its core designs. The new V-Ray V2 is based on the original Hydra platform, but with some improvements, including a new noise-damping material that encases the critical circuits. Similarly, the new CX Series power cords represent an evolutionary step from the company's

earlier cords (see the sidebar for details).

I had the opportunity to replace my original Shunyata system with the V-Ray V2 along with a complete system of CX cords (King Cobra CX, Anaconda CX, and Python CX). I treated the Shunyata products as one system, listening to the complete older system and then comparing it to the complete new system. I then lived with the V-Ray V2 and CX Series cords in my reference system before I moved (Wilson X-2 Alexandria and Sasha loudspeakers, Spectral SDR-4000 Pro CD player, Spectral DMA-360SS preamplifier, Spectral DMA-360 power amplifiers,





## EQUIPMENT REVIEW - Shunyata Research V-Ray V2 Power Conditioner and CX Series AC Cords

### CONSTRUCTION

The V-Ray V2 offers eight AC outlets, each individually filtered and each custom-made to Shunyata's specs. The total power rating is 2400W, with a maximum current of 20A continuous and 50A peak. The all-aluminum chassis houses an aluminum subchassis that contains the 14-element noise filters as well as the buss bars that distribute power to each of the outlets. These buss bars are made from CDA-101 copper, the highest-purity copper available. Each batch of CDA-101 is supplied with papers certifying its purity. This raw CDA-101 copper is cast into the massive seven-pound buss bars, and then machined to the final shape. The subchassis containing the filters and buss bars are filled with a compound called "ZrCa-2000" (this compound was newly developed for the Version 2 products). This flake-like material absorbs and dissipates

high-frequency noise, isolating the filters and buss bars from radiated noise. Internal wiring is Shunyata's own 12AWG wire. All the AC-carrying components are cryogenically treated in-house in Shunyata's Washington state factory.

The top-of-the-line King Cobra CX features 600 CDA-101 copper conductors (equivalent to 5AWG) wound in a dual counter-rotating helix geometry. Anaconda uses 450 conductors (7AWG equivalent), and Python 280 conductors. These three cords are encased in flexible tubes. The two lower-priced cables in the CX series, the \$600 Black Mamba CX and \$750 Black Mamba CX HC (high-current) use the identical cryogenically treated CDA-101 copper and dual counter-rotating helix geometry and are also in flexible tubes.

Pass Labs XP20 preamp, Pass Labs XA100.5 power amplifiers, Berkeley Audio Design Alpha DAC, dCS Puccini CD player with U-Clock, a PC-based music server for high-resolution playback, an Aesthetix Rhea Signature phonostage, and a Basis 2800 Signature turntable with a Vector 4 tonearm and Air Tight PC-1 Supreme cartridge) and have been using the Shunyata package in my new listening room for the past five months (see Associated Equipment). A complete package of a V-Ray V2 and several CX cords represents a considerable investment. In fact, this is one of the more expensive power-conditioning packages

on the market. (Shunyata also makes an entire range of less expensive conditioners and power cords, starting with the \$495 Guardian Pro Model 2 conditioner and the amazing \$95 Venom3 cord. If you want some insight into the sonic benefits of AC cords, the Venom3 will give you more than a taste.) But in the context of a very high-quality system such as the ones in which I've auditioned it, the big Shunyata system's cost is not unreasonable. Moreover, I could make a good argument that the V-Ray V2 and CX power cords are among the most cost-effective upgrades you could buy.

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Venom 3 Black Mamba CX Black Mamba CX/HC Python CX Anaconda CX King Cobra CX Hydra V-Ray II

"With the V-Ray V2 and CX Series power cords, Shunyata has elevated what was an outstanding AC power system to what is, in my experience, the state of the art. The Shunyata system is now firmly ensconced as an integral component of my reference system."

—Robert Harley, *The Absolute Sound*, January 2011

"If there was a ringer in this field, The Shunyata Venom 3 was it...for less than a hundred bucks, I had to ask myself, is Shunyata on a mission to embarrass everyone?"

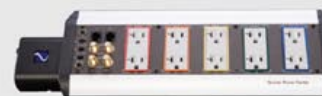
—Neil Gader, *The Absolute Sound*, December 2010

### Power Plant Premier: Was \$2,195, Now only \$1,495 (SAVE \$700)



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Teflon \$5,000 (Silver or Black)

"This is a remarkable product. And, in my experience, audibly superior to every other 'conditioner' I have tried. The Audience lets you hear more ambient information, more definition and articulation of the musical images!"

—Harry Pearson, Founder, *The Absolute Sound*, Golden Ear Award Winner

### Running Springs Dmitri



\$4,699/\$5,299/\$6,299  
(power cord dependent)

"The Dmitri delivers world-class sonic improvements in the areas in which AC power conditioners have traditionally excelled—smoother textures, greater dimensionality, and increased transparency. It took what was a great sounding system and made it even better in every respect."

—Robert Harley, *The Absolute Sound*, January 2009



## EQUIPMENT REVIEW - Shunyata Research V-Ray V2 Power Conditioner and CX Series AC Cords

Having experience with the Shunyata AC system along with such an extensive array of products gave me deeper insight into the Shunyata system in particular, and into the benefits of high-level AC conditioning in general. Specifically, what the V-Ray V2 and CX Series power cords do, above all else, is remove a gray pall beneath and behind the music. One doesn't hear this grayness until it is gone, and when it disappears, everything suddenly becomes vivid and clear, with a transparency that will make you not want to go back. This grayness is manifested in several ways, one of which is obscuring music's fine dynamic structure. Without the Shunyata system (stock black AC cords plugged directly into the wall) there was a floor below which the system didn't resolve micro-transient detail. Removing the Shunyata system was like very lightly rubbing an eraser over a picture drawn in chalk; fine detail was obliterated and the "picture" had less contrast. The more experience I have with today's best equipment, the more I've come to recognize that what distinguishes a great system from a spectacular one is in this portrayal of extremely fine information. It's not something one hears overtly as detail, but rather it is perceived as a greater realism of timbre, a fuller and more complete sonic "picture," and a richer and denser portrayal of the sounds of instruments and the spaces in which they are playing. By dropping the noise floor, the very finest layer of information is resolved, and with it, a rich panorama of musical expression unfolds. This heightened resolution extends beyond timbres to the delicate spatial cues that create the soundstage. Connect the Shunyata system and the soundstage opens up with greater dimensionality, depth, air, bloom,

and sense of an instrument "lighting up" the surrounding acoustic.

Listen, for example, to the cymbals in the superb Analogue Productions LP of Sonny Rollins' *Way Out West*. With the Shunyata system installed, the cymbals are much more vivid and tangible, and seem to hang in space in front of a black background. By vivid I don't mean bright, but rather palpable and immediate. With the Shunyata system the cymbals are *right there* in the room with me. Similarly, the tremendous sense of presence from Rollins' sax is heightened by the Shunyata products.

To really grasp just how deeply the Shunyata system lets you hear into the music, you need to audition it with first-rate LP or high-resolution digital sources. Although good CD playback is greatly improved, it lacks sufficient resolution to reveal the extent of the Shunyata's effect. In my comparisons using Reference Recordings 176.4kHz/24-bit HRx files played from my music server into the Berkeley Alpha DAC, the Shunyata allows the system to reveal the incredible wealth of fine detail encoded on these files. The tiny timbral cues, the subtle spatial information that allows the brain to construct a three-dimensional representation of instruments in an acoustic, and fine micro-transient detail, are all better resolved, allowing me to hear these spectacular recordings in their full glory. Taking out the Shunyata system dilutes the sense of realism and musical engagement.

I have the impression that the Shunyata system has less of its own "flavor" than any other AC systems I've tried. Rather, it seems to allow the intrinsic sounds of the components it is powering to express themselves. Some AC conditioners

and power cords impose a "sameness" to the system's sound regardless of the components in the chain. When switching between digital sources (the Meridian 808.3, dCS Puccini/U-Clock, Berkeley Alpha DAC) for example, I can hear more of each component's relative strengths with the Shunyata products in the system. In my view, any change to an audio system that results in hearing a greater change between recordings or source components represents an improvement; the system must be more transparent and true-to-the-source to reveal those upstream changes.

So how do the V-Ray V2 and CX-cords stack up against their predecessors? These new products are incremental improvements over what was already a great system. The fundamental sonic benefits of the Hydra 8 remain, but are taken to a higher level. The lowering of the noise floor and the concomitant increase in resolution of timbral and spatial detail described above are more pronounced with the V-Ray and CX Series AC cords. But the area of greatest improvement with the new products is in bass extension, power, and bottom-end dynamics. The presentation is weightier in the bass and midbass. The greater bass heft didn't manifest itself as increased tonal warmth, but rather in greater dynamic impact. In experimenting with different cords and conditioners, I attribute the improvements in the bass and dynamics more to the new CX cords than to the V-Ray V2, but both the V-Ray V2 and the CX cords contribute to all the areas described. I should add that you get many of the benefits I've described with the Python and Anaconda cords; the King Cobra is incrementally better, but the one-third-the-price Python gets you much of the way there.

### CONCLUSION

With the V-Ray V2 and CX Series power cords, Shunyata has elevated what was an outstanding AC power system to what is, in my experience, the state of the art. Their predecessors were already the standard-setters in clarity, resolution, and timbral realism, but now those qualities have been taken to a higher level. Of greater importance, however, is the significant improvement in bass extension and dynamic impact rendered by these new products. Unlike many AC conditioners, the V-Ray V2 and CX Series power cords have no shortcomings that detract from their spectacular improvements in transparency and resolution. The Shunyata system is now firmly ensconced as

### SPECS & PRICING

#### V-RAY VERSION 2

Outlets: 8  
Power rating: 2400W  
Price: \$5000 (requires a C-19 20A power cord)

#### SHUNYATA RESEARCH

Poulsbo, WA 98370  
(360) 598-9935  
shunyata.com

#### KING COBRA CX POWER CORD

Price: \$3500

NOT AVAILABLE IN UK

#### ANACONDA CX POWER CORD

Price: \$2000

#### PYTHON CX POWER CORD

Price: \$1200

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## EQUIPMENT REVIEW - Shunyata Research V-Ray V2 Power Conditioner and CX Series AC Cords

### HOW I DISCOVERED DIFFERENCES IN POWER CORDS

I discovered audible differences in AC power cords through Steve McCormack, inventor of Tiptoes, behind-the-scenes contributing designer to some famous products, founder of The Mod Squad, and creator of McCormack Audio and SMC Audio. I was reviewing his first manufactured product, the McCormack DNA-1 power amplifier back in 1990 or 1991. I had been listening to the DNA-1 and comparing it with a similarly priced amplifier when Steve visited to hear the system. I had a good handle on the sound of both amplifiers before Steve arrived, and our listening confirmed the sonic impressions I had of both amplifiers. Steve seemed puzzled, looked behind the amplifiers, and swapped the power cords—Amplifier A got

Amplifier B's cord, and vice versa. I couldn't believe what I heard; sonic characteristics I had ascribed to each amplifier were actually characteristics of the AC cords connecting them to the wall. I had not paid attention to which power cord came with each amplifier, and inadvertently switched them when setting up the pair for comparisons. It simply never occurred to me that power cords were important—particularly two stock black cords. None of this was a surprise to Steve, who had selected the power cord supplied with his amplifier by his own listening. Needless to say, that was the last time I ignored the role of power cords in an audio system. **RH**

an integral component of my reference system. I should warn you, however, that if you audition the V-Ray V2 and CX cords in your own system, there's no going back. **tas**

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# 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 sine wave. 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.

**RH: What is the most effective method of judging**

## INTERVIEW - Caelin Gabriel talks with Robert Harley

### 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?

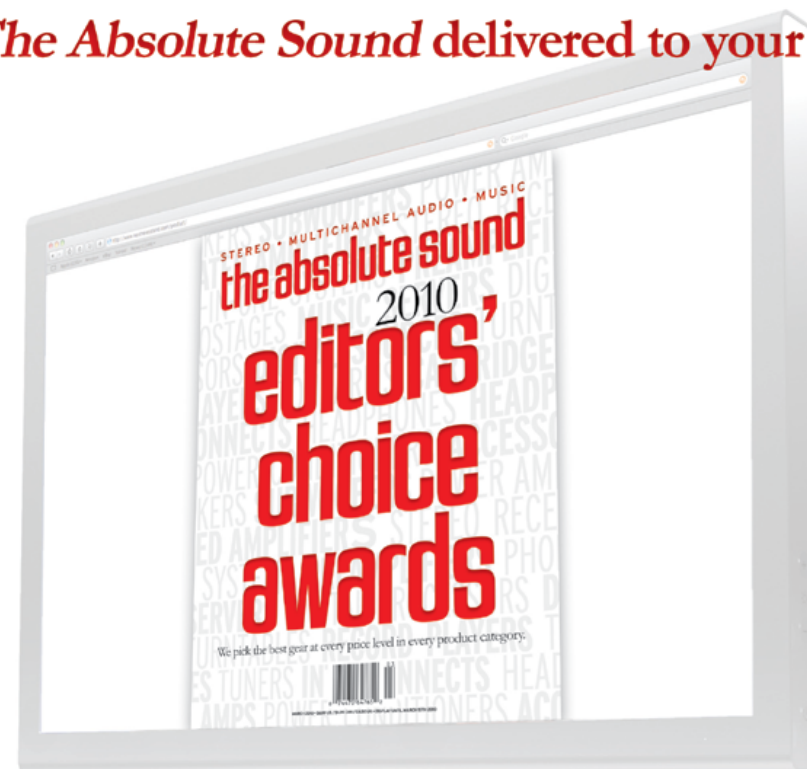
**CG:** Our ongoing research into conductor design and technology proved that with our patented Helix geometry, adding conductor mass to the design made dramatic improvements in performance without adding cost to the existing models. Designing the new products with hundreds of individual interlaced conductors 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**

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## EQUIPMENT REVIEWS

# Accessories







### Reference Plus

#### High Definition Links

Your speakers will love you. Removes ultra-high frequencies and noise. Allows the pure music signal to pass through unaffected.



### Talisman Magnetic Optimizer

You won't believe this until you try it. Dissipates magnetic fields and static electricity from LPs, audio and video discs, cables and speakers.



### Valid Points Resonance Control

Resonance and vibration are the enemy. Valid Points isolate, stabilize and control these in components, speakers, shelves and stands.

*"...the very stuff that dreams are made of."*

### Proscenium Black Diamond II Turntable



*J.Valin/TAS June/July 2010  
Twice TAS Analog Product of the Year,  
plus 16 other awards including PFO Brutus,  
TAS Golden Ear and Editor's Choice.*

### Silent Source Audio Cables



### E-SST Super Silver Treatment

A true contact enhancer. Dramatically improves sound and/or video of any system. New brush makes it easier than ever to apply.

### Velocitor SS Power Line Enhancer

Expect major improvements in dynamics and soundstaging. Hear a more natural presentation filled with detail you never noticed before. With video, see a more realistic picture with richer colors and more depth perspective. Uses cryogenics and Tesla-treated IECs and outlets.



# WALKER AUDIO

610-666-6087

[www.walkeraudio.com](http://www.walkeraudio.com)

[lloydwalkeraudio@aol.com](mailto:lloydwalkeraudio@aol.com)



### Prelude Quartet Record Cleaning Kit

Bring your LPs to life. You haven't heard your music at its best until you've cleaned your LPs. Hear more of the music you love.



# Our Top Picks in 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 up and down 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  $\pm 0.002$  grams.

## Acoustic Room Systems (now part of Cinema Tech)

**\$20,000–\$50,000**

[mycinematech.com](#)

Money spent on real acoustic treatments is, in RH's experience, the most effective allocation of your hi-fi budget. RH has lived with different acoustic products, but none has been as effective as, nor blended into the décor like the Acoustic Room Systems package does. The ARS system greatly improves bass tautness and definition, allows the hi-fi system to better resolve spatial cues, and adds to the music's sense of palpability and realism.

## Aesthetix ABCD-1MC Cartridge Demagnetizer

**\$199**

[musicalsurrroundings.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.

## 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 1/2" 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.

## 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-adaptor, 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 (but affordable)**

[avroomservice.com](#)

Although the set of Metus that came to JV—and that he now depends on—came in a particularly



## EQUIPMENT REVIEW - Accessories

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 Jim Varney, who did the acoustical treatment of Robert Harley's 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) are plugged into 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.

### Cen-tech SPL Meter

**\$40**

An indispensable and fun sound-intensity meter for confirming channel balance (especially helpful for hi-res multichannel), adjusting subwoofers, checking peak settings, optimizing EQ settings, or just verifying that you're endangering your hearing. With seven SPL ranges, A and C weightings, slow- and fast-response peak measurements, and average noise levels.

### Clearaudio Spirit Level

**\$60**

*musicalsurroundings.com*

Turntables sound their best when they are level—something careful listeners will want to check at set-up time and verify periodically. (Remember: Furniture and floors sometimes settle a bit over time.) Use a good multi-axis spirit level such as this one from Clearaudio to keep your 'table on the level.

### Clearaudio Strobe-disc and Strobe Light

**\$60 and \$180**

*musicalsurroundings.com*

Featuring grooves that create the additional



musicdirect.com  
800.449.8333

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MoFi Accessories also sold separately:

- Inner Sleeves (50pk) \$20
- LP Brush \$20
- Super Record Wash \$25

VPI 16.5 Basic Bundle \$550 (\$90 worth of accessories for FREE)

#### Analog Accessories



Audio Additives Digital Stylus Force Gauge \$79.99



Aesthetix Cartridge Demagnetizer \$199



Analogue Productions: The Ultimate Analogue Test LP \$39.99



AudioQuest Anti-Static Record Brush \$25



Avid Level 45: 45RPM Adapter and Bubble Level \$100



Audio Additives RCA Caps 12 pack/\$20



Cable Elevators Special: 8 for \$99



Feickert Universal Protractor \$250



Fozgometer \$250



Furutech LP Flatteners \$1628



Furutech DeMag \$2250



In the Groove Record Brush \$19.99

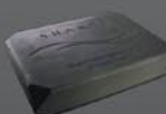
#### Other Accessories



Optrix CD Cleaner \$16.99



PS Audio Power Port Premier \$99



Shakti Electro-Magnetic Stabilizer Stone \$199



Shunyata Dark Field Cable Elevators \$110/4pk • \$295/12pk Mini: \$95/12pk



Shunyata Diamondback Platinum \$99/each, 3 or more/\$75 each



Spin Clean Record Cleaner \$79.99



Stillpoints Vibration Control Cones (3pk) \$299



UltraBit Platinum Disc Treatment \$79.99



Vibrapods \$5.99 each



Zerodust Stylus Cleaner \$69



MoFi Sonic Connect Contact Cleaner/Enhancer \$49.99



## EQUIPMENT REVIEW - Accessories

stylus drag necessary to accurately measure your turntable's speed—while at the same time doubling as a cartridge break-in device—Clearaudio's Strobe-disc and Strobe Light are great tools for the serious vinyl junkie.

### Composite Products Carbon-Fiber Cones

**\$75 (3-Pack)**

Made from layers of carbon-fiber cloth bonded into a solid with epoxy, the Composite Products Carbon-Fiber Cones are extremely stiff and well damped. Place a set under a component to reduce and damp vibrations.

### Echo Busters

**\$175 and up**

[echobusters.com](#)

The cool thing about Echo Busters, as well as most other room treatment, is you don't have to buy the whole shebang at once. SK recommends starting off with a couple of Bass Busters or maybe just a set of Corner Busters. The effect is dramatic and cumulative, and you can add on as your budget allows.

### Feickert Adjust+

**\$350**

[feickert.com](#)

If you've ever wondered whether you've gotten your cartridge's azimuth just right and, thereby, maximized channel separation, here's a solution that doesn't entail an oscilloscope or guesses by mirror. Dr. Feickert—he who makes that fabulous cartridge-alignment protractor—has come up with a nifty bit of software (PC-only) that will tell you when azimuth is dead on (and all sorts of other useful things about your cartridge, turntable, and

phonostage, including 'table speed).

### Feickert Universal Protractor

**\$250**

[feickert.com](#)

Feickert's invaluable protractor includes a white disc with markings on each side—for Baerwald and Lofgren geometries and 50 and 60Hz strobe patterns—an impressively machined aluminum measuring device that turns accurately measuring stylus to pivot distances from hair-pulling frustration to child's play, and a step-by-step instruction booklet that makes fine-tuning your cartridge's geometry a remarkably easy procedure.

### Fozgometer Azimuth Range Meter

**\$250**

Correctly adjusting cartridge azimuth (axial tilt) is the bane of an audiophile's beleaguered eyeballs. However, the Fozgometer, Jim Fosgate's ingenious and fairly priced Azimuth Range Meter, is designed for even the most astigmatic among us. Used in conjunction with the Ultimate Analog Test Disc LP [Analogue Productions AAPT-1], it diagnoses azimuth irregularities by accurately reading channel separation and channel balance, as well as signal direction. Nicely finished with a large readable meter, it incorporates operating principles similar to Fosgate's own surround-processor logic-steering circuits. Operation is a snap.

### Furutech LP Flattener

**\$1890**

[furutech.com](#)

Expensive, but worth it if you have a large LP

collection. Just put a slightly warped LP into the Flattener and the gentle heating and pressing action restores an LP to perfect flatness. Review forthcoming

### Furutech deMag

**\$2150**

[furutech.com](#)

What's that you say, demagnetize vinyl—a plastic? Yes, it seems that the pigment added to the plastic contains small amounts of ferrous material that magnetizes vinyl LPs. A quick 20-second zap to each side of an LP results in audible improvements to noise floor, dynamic range, and perceived resolution. The same goes for optical media, including DVDs, and evidently cables and power cords, too.

### Gryphon Exorcist Demagnetizer

**\$230**

[acousticsounds.com](#)

These nifty devices are designed to do the same thing—one system-wide, the other for phono cartridges—rid audio gear of magnetic build-up. The size of a remote control, the Exorcist hooks up to your preamp's aux or line input, while you plug your arm leads into the Black Exorcist. Audible results include less glare and hash, tighter bass, and greater perceived detail and musical integration.

### Hannl Aragon

**\$3995**

[eliteavdist.com](#)

Though pricey, this German-made LP cleaner has a small footprint, is relatively cool-looking, and features an infinitely variable-speed platter,

which allows you to choose a faster speed for fluid application and scrubbing, and a very slow speed for the vacuum process, and a platter that rotates both directions, which is useful with LPs that need a thorough scrubbing.

### Lyra SPT Stylus Cleaner

**\$45**

[immediasound.com](#)

Mission accomplished. Puts the fluid where it belongs. Lyra's formulation scrubs each precious stylus clean without globing on and ultimately reducing the compliance of the cantilever. A tiny angled brush is included.



### Marigo White 3mm Tuning Dots

**\$35 (set of 12)**

These tiny, adhesive, constrained-layer resonance-control "dots" provide an effective bit of damping to tubes or signal connectors that may see airborne or floorborne vibration, even if isolated on stands. Also useful on the headshells of tonearms or, judiciously applied, on the top of phono cartridges.

## EQUIPMENT REVIEW - Accessories

### Mobile Fidelity Rice Inner Sleeves

**\$20 (50-pack)**

*musicdirect.com*

A precious collection of LPs is only as good as its scratch-free surfaces. Offered for decades, Mobile Fidelity's familiar rice-paper-style inner sleeves are renowned for their anti-static properties that avoid drawing dust and grit into the delicate grooves. They remain the archival sleeves to beat.

### Mye Sound Stands

**Price varies with model**

*myesound.com*

These aftermarket stand/braces designed for Maggie dipole loudspeakers have no downside, according to reviewer Jacob Heilbrunn—only up. Punchier, tauter bass, quieter backgrounds, cleaner mids and highs, increased snap and speed, less smearing and fuzziness are just a few of the benefits.

### Precision Audio Cable Elevators Plus

**\$160 (set of eight); \$20 each**

*musicdirect.com*

Cable Elevators are porcelain cradles designed to lift cables and interconnects off the floor, shielding them from vibration. The salubrious effect they can have on just about every aspect of sound is hard to believe (though, like tiptoes, they can also thin tone colors out a bit).

### RPG Diffusor Systems B.A.D. (Binary Amplitude Diffusor) Panels

**Price varies**

*rpginc.com*

RPG's B.A.D. panels are thin absorptive diffuser

panels that can help tame problem room acoustics without quashing dynamics or swallowing midrange and high-frequency details. The design of B.A.D. panels is deceptively simple, but their effects can be remarkable. In rooms treated with B.A.D. panels, speakers often exhibit lower coloration, more focused imaging, and deeper soundstages.

### Sanus SF26 Steel Foundation Speaker Stands

**\$170/pair**

*sanus.com*

Sanus' thoughtfully designed and beautifully executed SF series speaker stands do everything you could want a good set of stands to do, and at a price that makes sense. Strong, rigid, and resonance-free, they include provisions for installing sand or lead-shot damping, and are easy to assemble.

### Shakti Electro-Magnetic Stabilizer Stone

**\$199**

*shakti.com*

Ben Piazza's Shakti Stones employ "proprietary noise reduction circuitry to absorb and dissipate electromagnetic interference (EMI) and radio frequency interference (RFI)." In other words, nobody's quite sure how they work, but work they do when placed over the transformers of amps, preamps, and other electronics, reducing noise and enriching timbre.

### Shakti Hallographs

**\$1195/pair**

*shakti.com*

Master of the inexplicable, Shakti's Ben Piazza has followed up on his magic "Shakti stones"

with yet another impossible-to-explain-but-effective-as-claimed item, the Hallographs. With direct-radiating or omni speakers, these large, rotatable, free-standing, tuning-fork-shaped items work some kind of voodoo when placed in the corners of a room (behind the speakers), masking chaotic wall reflections and "clarifying" the soundfield (just as Shakti says they do).

### Shelter Carbon-Fiber Cartridge Screws

**\$190 (8mm x 2mm in sets of two);**

**\$200(10mm)**

*axissaudio.com*

Precision is the name of the game when it comes to cartridge setup. The carbon-fiber cartridge screws from Shelter are not only low in resonance but the rigid precision threading means they're less likely to strip a headshell or cartridge. Cheap insurance for that extra special rig. Includes two polycarbonate nuts.

### Shunyata Dark Field Cable Elevators

**\$129 (4-Pack) or \$295 for a set of 12**

**(Mini Elevators are \$99 for a set of 12)**

*shunyata.com*

Most people agree that elevating interconnects, cables, and power cords off the floor (and away from vibration and each other) is a good idea, but Shunyata argues that using an electrical insulator to do this creates a relative static charge differential between the cable and floor. When an electrical signal is sent through the cable, the signal can become distorted or inter-modulated by this static charge. The materials used in Shunyata's elevators prevent this static buildup. The net result is an audibly cleaner signal.

### Shure SFG-2 Stylus Force Gauge

**\$20**

*shure.com*

Although ultimately not accurate as the best digital gauges, the classic "teeter-totter" Shure is simple to use, cheap, and does the trick very nicely.

### Spin-Clean Record Cleaning System

**\$80**

The Spin Clean System is a pure manual design—nothing to plug in. A little elbow grease and fresh air do all the work. Fill the taxicab-yellow basin with distilled water, add a capful of the cleaning solution, and spin the record between the brushes. Ambient air and a couple of swirls with the supplied lint-free cotton cloths do the rest. It's also a truly green product—totally off the grid. And the results speak for themselves—clean surfaces mean less noise and more fully resolved music. For lighter duty LP-cleaning, it's tough to beat.

### Stillpoints Vibration Control Cones (3-Pack)

**\$300**

*stillpoints.us*

Under components these sturdy ball-bearing equipped cones, which actually use two layers of ball-bearings—and a large ceramic bearing and a second tier of balls inside the cone that the ceramic bearing sits on—convert vertical motion into horizontal motion and resonant energy into heat.

### Symposium Acoustics Fat Padz

**\$119**

*symposiumusa.com*

Kind of like Rollerblock Jr.'s in a single unit, Symposium's Fat Padz employ constrained-layer damping to turn resonant energy into heat. Ideal

## EQUIPMENT REVIEW - Accessories

for supporting lightweight equipment like preamps and CD players.

### Symposium Acoustics Rollerblock Jr.

**\$225 (set of 4)**

[symposiumusa.com](http://symposiumusa.com)

A set of Rollerblock Jr. gives you four top and bottom units and four tungsten-steel ball-bearings, which are then combined to make “Double Stacked” isolator/coupler sandwiches. Ingeniously combing tectonic and constrained-layer damping, the Rollerblocks are highly effective resonance-control devices.



### Townshend Seismic Sinks

**\$400-\$900 (depending on weight capacity)**

[townshendaudio.com](http://townshendaudio.com)

Townshend Seismic Sinks are air-bladder-suspended isolation platforms. Because the Sinks act as filters (around 2–4Hz), they isolate far better than cones. The Sinks are exceptionally effective with non-suspended turntables.

### Tributaries T12 power strip

**\$120**

[tributariescable.com](http://tributariescable.com)

The T12 is the perfect power manager for the low current demands of a nest of transformers and peripherals. Equipped with three rows of four outlets, most rotate 90 degrees so that plugs can lie flat along the floor. Offering plenty of surge suppression and noise filtering for AC power as well as signal-line protection for telecomm, network, and cable, it's a bargain for its segment. Various cords included.

### UltraBit Platinum Disc Treatment

**\$65**

[ultrabitplatinum.com](http://ultrabitplatinum.com)

A spritz of UltraBit Platinum on a CD renders a surprising increase in smoothness, resolution, and soundstage size.

### Vibrapods

**\$5.99 each**

[vibrapod.com](http://vibrapod.com)

Vibrapods are small, flexible vinyl pucks numbered by their weight-bearing loads: Put them under speakers and electronics and hear bass extension and smoother highs. At four for \$25, who says great tweaks have to be expensive? Just out, Vibrapod Cones—use them as standalone footers or combine with Vibrapods to get even more out of your system.

### VPI 16.5 Record Cleaner Bundle w/Fluids, Brushes and Sleeves

**\$550**

[vpiindustries.com](http://vpiindustries.com)

All vinyl lovers need a record-cleaning machine,

and there's no greater “bang for the buck” in cleaners than VPI's classic 16.5. Simple to use and highly effective, the 16.5 produces quieter surfaces from even heavily soiled LPs. The Bundle adds two bottles of Mobile Fidelity cleaning fluid, a Mobile Fidelity Record Brush, and 100 inner sleeves for just \$10 more than the 16.5.

### VPI Typhoon Record Cleaner

**\$2200**

[vpiindustries.com](http://vpiindustries.com)

A good record cleaner is a vital tool for any good record collection. The Typhoon is the best combination of price, convenience, and effective cleaning AHC has yet found. Noise levels have been reduced since the early production runs, fluid control is excellent, operation is quick and reliable, and it is a pleasure to use.

### Walker Audio Prelude Quartet Record Cleaning System

**\$185**

[walkeraudio.com](http://walkeraudio.com)

There are many excellent record-cleaning solutions out there, but this one, developed by analog guru Lloyd Walker, is superb. Designed to work in conjunction with most record-cleaning machines, the four-step Prelude system (which involves the manual application of two enzyme-based cleaning solutions and two ultra-pure rinses, each followed by machine vacuuming) really does reveal details that have gone unheard beneath layers of dust and wear.

### Walker Audio Silver Speaker Jumpers

**\$250 (set of four conductors)**

[walkeraudio.com](http://walkeraudio.com)

These 6” solid silver conductors (with ¼” solid silver spades) are perfect for two-piece speaker systems that require a jumper between a bass module and a mid/treble “head” unit.

### Walker Audio Valid Points

**\$525**

[walkeraudio.com](http://walkeraudio.com)

Valid Points, Walker's massive version of tiptoes, are sensationally effective under most components, particularly when used with Walker Resonance Control discs, which, themselves, can have a salubrious effect on components under or on top of which they are placed.

### Xtreme AV Quicksilver Contact Enhancer

**\$90**

This 100% silver contact enhancer has been cryogenically treated to produce the optimum conductive surfaces for audio signal connections. Works on RCA jacks, tube sockets, AC cords, and cartridge pins. Comes with a complete kit of cleaning tools.

### Zerodust Stylus Cleaner

**\$69**

Not a fluid or brush-based stylus cleaner, the Zerodust uses a polymer bubble that gathers stylus dust and debris onto its ultra-soft surface. A winning alternative for those concerned with overusing liquid cleaners that can leave residues and build up over time. Zerodust can be cleaned with tap water and a magnifier is included.



# Music

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# Ten Best New Releases from 2010 on Compact Disc



**Gershwin By Grofé.** Lincoln Mayorga, piano; Harmonie Ensemble, Steven Richman. Harmonia Mundi.

Steven Richman and Harmonie Ensemble/New York have been a fixture on New York's musical scene for three decades. As its name implies, the ensemble is at heart a wind band. But its precise formation varies according to the music that's in front of it, which means a lot of repertory is open to these musicians—including, happily, Ferde Grofé's inspired original orchestration for the Paul Whiteman Band of George Gershwin's iconic *Rhapsody in Blue*, as well as the arrangements Grofé made for Whiteman of a number of Gershwin songs. These are included on this disc together with Gershwin's *I Got Rhythm*

Variations for piano and orchestra (in the composer's own extraordinarily resourceful scoring), and a very special rendition of "Summertime" from *Porgy and Bess*.

For this splendid recording, apparently it wasn't enough for Richman and Harmonie Ensemble/New York to go back to the arrangements Grofé made for Whiteman's band—they also got one of Whiteman's reed players, the legendary Al Gallodoro, to sit in with them. I say "legendary," but until ten years ago the name meant nothing to me. It was James Galway, then newly knighted, who introduced me to Gallodoro's playing when I visited him in the summer of 2000 at his home in Meggen, Switzerland, outside of Lucerne. Sir James played a recording for me, and simply smiled as my jaw dropped, and then dropped some more. Gallodoro was then 87, an astonishing age at which to be so good; when he laid down "Summertime" for this recording, in an arrangement for alto sax and piano with Lincoln Mayorga at the keyboard, he was 93, and still had it. He's also heard here in Grofé's arrangement of "Fascinating Rhythm" (recorded in 2004, when he was 91), and he leads the reed section in *Rhapsody in Blue*. There's much to admire here beside Gallodoro's playing,

though it's a little hard to get over the fact that in addition to a bunch of very good contemporary musicians you are hearing a guy who was featured soloist with the Whiteman band from 1936 to 1965. You want authentic? You got it.

The playing of HE/NY is characterized by a swinging, relaxed virtuosity, tight ensemble, and perfect voicing of chords. This is "symphonic jazz" just as Whiteman styled it. Pianist Mayorga, who solos in the *"I Got Rhythm"* Variations and *Rhapsody in Blue*, is completely on top of it, magnificent. The recordings were closely miked and mastered at a very high level, causing Mayorga's piano to sound like a beast at my normal volume setting. Knocking it back four clicks put the musicians in the right relationship with the space and each other; suddenly, the soundstage became three-dimensional, with a depth corresponding to its breadth, and the experience went from listening to a recording to being at a performance. Still, for the attentive listener, there's a little fillip to remind you that this *is* a recording, and one with a connection to the past: the sensational clarinet glissando that begins *Rhapsody in Blue*...played by Mr. Gallodoro...starts out in mono (!), and blows into stereo at the top B flat. Fun! **Ted Libbey**

**Further Listening:** *Symphonic Jazz: Grofé & Gershwin* (Richman/Bridge); *The Gershwins' Porgy and Bess* (Mauceri/Decca)



**Symphonies 8 and 10 (Adagio).** Michael Tilson Thomas, San Francisco Symphony. SFS Media (SACD).

This 2-SACD set completes the Michael Tilson Thomas/San Francisco Symphony Mahler cycle, unquestionably the most successful from an American orchestra and conductor since Leonard Bernstein's iconic 1960s recordings.

Following an intense performance of

the Adagio from Mahler's Symphony No. 10, Tilson Thomas presents the vast Eighth with satisfying clarity and logic. Part I, the hymn "Veni creator spiritus," is played with a purposefulness that underscores the message of inextinguishable faith. This provides the spiritual background for Part II, Mahler's re-telling of the final scene of Goethe's *Faust*—a version of the legend with a happy ending. Faust's soul is saved following the appearances of a series of anchorites, angels, Blessed Children, and "penitents," including Gretchen, the woman he so egregiously wronged. The glorious closing pages have redeemed literature's most famous sinner, and Mahler's listeners.

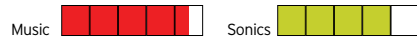
There has never been a more coherent recording of the "Symphony of a Thousand" than this one. Especially in 5.0 multichannel, the performing forces—nine vocal soloists, adult and children's choruses, and an enormous orchestra—remain intelligible, even at the most complex and roaringly powerful moments. You'll understand Mahler's Eighth as never before, high praise for canned music of any stripe.

**Andrew Quint**

**Further Listening:** Mahler: Symphony No. 1; Symphony No. 6 (Tilson Thomas/San Francisco) (SACDs)



## MUSIC - Ten Best New Releases from 2010 on Compact Disc



### Esperanza Spalding: *Chamber Music Society*. Heads Up.

The first time I saw bassist-singer-composer Esperanza Spalding, she wasn't yet being touted as The Next Big Thing. This was long before the succession of magazine covers, *The New Yorker* profile, and being named one of Oprah's "Ten Women on the Rise" for 2010. She was an instructor at the Berklee College of Music then, and her debut recording had just come out (2006's *Junjo* on the small Barcelona-based Ayva Musica label) and flew under the radar of most critics. But one look at her at the Berklee Performance Center in Boston (she opened for McCoy Tyner as part of the 2006 Beantown Jazz Festival) and I knew she was bound for stardom.

Fast-forward nine months: Spalding is playing the Montreal Jazz Festival

with her trio at The Spectrum. Here was a Canadian audience who had never laid eyes on this unknown artist, and yet after just two songs was captivated by her charismatic charms. Was it her pure, angelic vocals, her exceptional upright bass skills, or her huge dimples and audacious Angela Davis/Betty Mabry Afro hairstyle that won them over? It was easy for all to see how abundantly gifted this 22-year-old was and where she was headed.

Esperanza had a smash hit in 2008 with her self-titled debut on the Heads Up label. Now comes her artistic manifesto in *Chamber Music Society*. With keyboardist Genovese back on board, along with drummer Teri Lynne Carrington, percussionist Quintino Cinalli, and a string trio (Entcho Todorov, Lois Martin, David Eggar), Spalding artfully marries elements of jazz, folk, and pop into an intriguing new take on "chamber music." She establishes an adventurous tone from the opening track by setting William Blake's poem "Little Fly" to a gentle melody accompanied only by her bass and the three string players. It's a clever idea that she imbues with her ethereal yet confident vocals that waft into the Norah Jones zone. "Knowledge of Good and Evil" is a harmonically challenging number with the full ensemble that stretches Spalding to the peaks of her lovely soprano range and has her weaving seamless lines with the flute-like

wordless vocals of Gretchen Parlato. She also blends beautifully with Parlato on a sparse interpretation of Antonio Carlos Jobim's "Inutil Paisagem," with the two interwoven voices supported only by Spalding's rich bass.

"Really Very Small" has Esperanza investigating the rhythmic possibilities of setting a 6/8 melody over a percolating a 7/8 meter while "Winter Sun" shows off her considerable scat prowess and soulful delivery over a shifting, syncopated groove fueled by Carrington's explosive drumming. "Charcarera" continues Spalding's ongoing interest in Latin-flavored rhythms. The chops-busting unison lines here in voice, piano, and cello recall some of Chick Corea's work with vocalist Gayle Moran on his 1975 release, *The Leprechaun*. Esperanza's fresh treatment of the Dimitri Tiomkin-Ned Washington tune "Wild is the Wind" has Genovese on melodica and features some subtle tango allusions while her own lilting "Apple Blossom" pairs her with legendary Brazilian artist Milton Nascimento for some engaging vocal duets, backed by Richard Vogt's nylon-string guitar work and Gil Goldstein's interactive string arrangements. In short: a triumphant third offering from The Next Big Thing.

**Bill Milkowski**

**Further Listening:** Spalding: *Esperanza*; Corea: *The Leprechaun*



### Keith Jarrett and Charlie Haden: *Jasmine*. ECM.

More than 30 years had passed since pianist Keith Jarrett and bassist Charlie Haden last played together, when, in early 2007, they found themselves in

Jarrett's home studio, improvising on standards and love songs. The result, with Jarrett on a piano he favored for its "informality and slight funkiness," is a 62-minute declaration of allegiance to melody and spontaneity. Both musicians are famously sensitive souls, romantics, and in Jarrett's words, "obsessed with beauty." And while Jarrett was not in as fragile a state as when he recorded his *Testament* solo concerts the next year, vulnerability is at the core of these duets.

Haden may be the most leisurely and contemplative bassist in jazz. He and Jarrett do swing impressively on "No Moon at All" and pick up the pace midway through "Body and Soul," but more typically they meditate spaciouly on the slow-developing possibilities they find in "For All We Know," Peggy



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Lee and Victor Young's "Where Can I Go Without You," and the especially poignant Randy Crawford hit "One Day I'll Fly Away" (used in *Moulin Rouge*). Dry but detailed sonics put every crisply defined, emotionally ripe note, and the duo's probing intimacy, into sharp relief. **Derk Richardson**

**Further Listening:** Jarrett: *Melody at Night*; Haden and Jones: *Steal Away*



Music      Sonics

**Richard Thompson: *Dream Attic*.** ShoutFactory.

The best live Richard Thompson albums have been the ones made available exclusively at his shows and from his Web site. Those collections tend to revisit favorite songs from various phases of the 61-year-old London-born folk-rocker's long career. *Dream Attic* offers something unique—13 new songs

recorded in concert. The results satisfy two essential yearnings shared by most Thompson fans: a hunger for twists on his half-dozen or so songwriting templates, and a craving for the live performance energy that infrequently carries over into studio sessions. Thompson covers all the essential terrain here, from trad-based dirges and ballads through pounding rockers to whirling dervish dance ditties. Michael Jerome (drums) and Taras Prodaniuk (bass) provide crucial rhythm section assuredness, and multi-instrumentalists Pete Zorn and Joel Zifkin add richness and genre-defining detail. The only thing missing is Thompson's acoustic guitar, which means more of the killer electric solos that distinguish him as one of most expressive players of his or any generation. The only question remaining is: Which songs—inspired by everything from Bernie Madoff and Burning Man, an East End temptress, a serial killer, the death of friends, and the songwriter's own aging—will become the next staples of Thompson's astonishingly deep repertoire? **DR**

**Further Listening:** Richard Thompson: *The Old Kit Bag*; *More Guitar*



Music     Sonics

**Janelle Monáe: *ArchAndroid*.** Bad Boy.

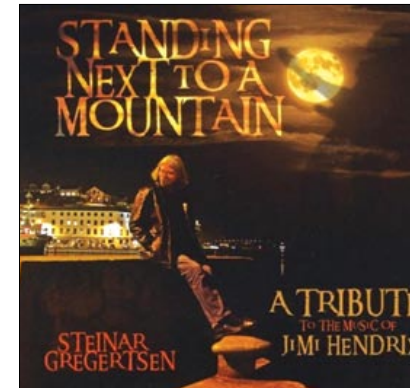
No matter how you feel about the updated Grace Jones persona of this diminutive Kansas City funk diva and Big Boi protégé, you have to respect the singularity of this ambitious concept album. Singer/songwriter Janelle Monáe has refined an alter-ego—Cindi Meriweather—who defies an oppressive ruling class in a world based on German expressionist filmmaker Fritz Lang's 1927 sci-fi classic *Metropolis*.

Fritz Lang. Funk. That's a combo we haven't heard before—well, except on Monáe's similarly themed 2007 EP *The Chase Suite*, the Grammy-nominated disc that drew favorable comparisons to the eccentric Afro-futurism of Nona Hendryx. On this engaging 70-minute follow-up, label chief P. Diddy, Monáe, and her Wondaland Crew deliver

well-crafted, sonically sophisticated, intelligently paced songs that run the gamut from the cinematic overture to the Latin-flavored "Dance or Die" (featuring Saul Williams), the urgent rock of "Faster," the gorgeous soul ballad "BaBopBye Ya," the contagious pop of "Make the Bus" (featuring indie-pop band Of Montreal), and the ethereal "57821," with the psychedelia-tinged funk of "Mushrooms & Roses" thrown in for good measure.

What does the future hold for Cindi Meriweather? Who knows? But we haven't heard the last of Janelle Monáe. **GC**

**Further Listening:** Monáe: *The Chase*; Outkast: *Idylwild*



Music      Sonics

**Steinar Gregertsen: *Standing Next to a Mountain: A Tribute to the Music of Jimi Hendrix*.**

Countless guitar slingers have paid heartfelt tributes to guitar god Jimi Hendrix. None, however, surpasses this one by Norwegian guitarist Steinar Gregertsen. He has the requisite chops to pull off such an audacious project, and his deep love of Hendrix's music comes across in every soulful reading of every potent tune. But it's his creative arranging and inventive layering of guitars that make this far more than just another well-meaning collection of Jimi covers.

A slide guitar demon, Gregertsen displays jaw-dropping command throughout. His version of "I Don't Live Today" begins as a haunting acoustic guitar Delta blues meditation before erupting into a full-blown, heavy-metal barrage with his lap steel fed through distortion and wah-wah pedals. His lyrical reading of "Angel" cleverly opens with the riff from "Burning of the Midnight Lamp" before smoothly segueing to the oft-covered power ballad. An intimate reading of one of Jimi's loveliest ballads, "May This Be Love," features the fragile, forlorn voice of Claudia Scott, who also appears on a gentle lap steel-vocal duet of "Bold as Love." On the quirky side is a bluegrass version of "Manic Depression" played by dobro and banjo. **BM**

**Further Listening:** Jimi Hendrix: *Are You Experienced* (Legacy); *Stone Free: A Tribute to Jimi Hendrix* (Reprise)

## MUSIC - Ten Best New Releases from 2010 on Compact Disc



**Britten's Orchestra.**  
Kansas City Symphony,  
Michael Stern.  
Reference Recordings  
(SACD).

Wayne Garcia lauded the HDCD iteration of this program in Issue 201 for its musical virtues and its exceptional transparency and realism. Reference Recordings has now released the same



program as an SACD—the company's first. Certainly conductor Michael Stern fully comprehends Britten's orchestral syntax. If the *Four Sea Interludes* don't have quite the majesty, urgency, and existential dread of André Previn's classic EMI account, Stern's performance of *A Young Person's Guide* is as good as any. *Sinfonia da requiem* is powerfully dramatic and moving, the pacifist message coming through loud and clear. As spectacular as the HDCD encoding is, the SACD is even better. The soundstage is expansive and seamless, with natural depth and air. Tonally, the recording features exceptionally truthful instrumental signatures: you won't confuse string basses playing high up on the fingerboard with cellos in their baritone register. Orchestral weight is impressive, with devastating bass drum/timpani strokes at the outset of the *Sinfonia*. RR's 5.1 multichannel delivers a room-filling soundfield—yet in surround there's somehow less evidence of Keith Johnson's distinctive genius as a recordist (and maybe a little too much direct sound in the rear speakers.) But be it in stereo or surround, find a way to hear this SACD. **AQ**

**Further Listening:** Britten: *The Prince of Pagoda; War Requiem*.



**Martin: Mass. Kodály: Missa brevis. Poulenc: Litanies à la Vierge Noire.** Chorus of the Bavarian Radio, Peter Dijkstra, conductor. BR Klassik (SACD).

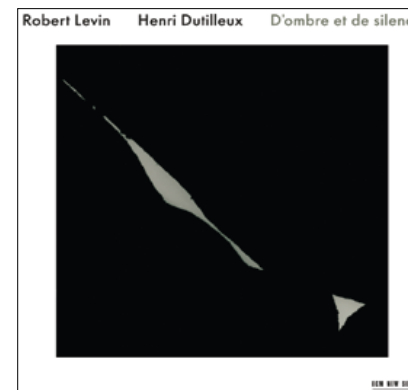
Every time we feel the urge to lament the drop-off in production at the "major" labels, along comes a release like this from Bavarian Radio to restore our faith in



the field and remind us that no one holds a monopoly on good recordings. Not that the artist-driven former majors would have been drawn to this repertory in the first place—after all, where's the glory in small-scale 20th century choral music? The answer comes in the first piece on the disc, Frank Martin's hauntingly beautiful *a cappella* Mass (1926) for double chorus. An unqualified masterpiece, it gets a performance from this well-trained German group that's as lucid and luminous as the music itself. This alone would be enough to recommend the disc, but there's more: Kodály's bracing *Missa brevis* for chorus and organ (1948) and Poulenc's short and sweet *Litanies à la Vierge Noire* (1936) for three-part female chorus and organ.

The Martin was recorded in a concert hall, the Kodály and Poulenc in Munich's Herz Jesu Kirche (which houses a good organ). Striving for surround, Bavarian Radio's engineers get as close as they can to the chorus in both venues, almost but not quite overloading the mikes. Even under such scrutiny, the singers hold up admirably. **TL**

**Further Listening:** Haydn: *Harmoniemesse* (BRSO, Jansons); Bach: *St. Matthew Passion* (BRSO, Dijkstra)



**Dutilleux: D'ombre et de silence.** Robert Levin, piano. ECM.

This record reminds us it's risky to typecast an artist. We know Robert Levin as an outstanding Mozartean, but here he puts his compelling musicianship and technique at the service of one of the greats of our own time. The disc



takes its title from the first of Henri Dutilleux's three preludes, all of which are presented here, but the centerpiece of Levin's program, rightly enough, is the magisterial *Sonata* (1948), one of the supreme contributions to the 20th-century piano literature. In the words of our own Mark Lehman, the *Sonata* is "a masterpiece...epic in size and range...hugely various and imaginative." Listening to it, one gets a very Baudelairean sense of beauty and malaise coming together, wedded, in this performance, to sheer aural exhilaration. Around it Levin offers the smaller works: the three *Préludes*, *Figures de résonances* for two pianos (with assisting artist Ya-Fei Chuang), and assorted interludes and pieces for young pianists—all of it music that repays repeated listenings. With his wonderful symphonies, brilliant concertos, exquisite chamber pieces, and these keyboard gems, what a gift Dutilleux has been to our impoverished times! As for sonics, what more need be said than that this is another superb piano recording from engineer Markus Heiland? **TL**

**Further Listening:** Dutilleux: *Cello Concerto* (Rostropovich); *Piano Sonata* (Chen)

# Ten Best Reissues from 2010 on Compact Disc



**Rolling Stones: *Exile on Main Street*. UMVD.**

*Exile on Main Street* was conceived and recorded when distractions and self-destruction ran rampant for the Rolling Stones. While they trudged ahead on endless recording sessions and added tracks held over from previous sessions, what it all might add up to remained a mystery.

Which makes it all the more remarkable that *Exile* held together so well that every track on the sprawling double album added something special to the mix. When it was released, no one in the band knew it was as good as it was—including Keith, the Stone who has since been most vocal in praising it. *Exile* has been called Keith’s album,

and one of many ironies about the record is that while his mind seemed to be elsewhere, the Muses were visiting him on a regular basis.

That said, on listening to the reissued *Exile I* was struck much more than before by Mick Jagger’s contribution. In spite of the sluggish recording process his lyrics were often composed on the spot, but they couldn’t have matched the music better. Equally impressive is the fact that a white guy from England who once majored in economics could sing so many styles of American roots music with such authority. Country rock was all the rage then, but no one could sing it more distinctively than Jagger does on “Sweet Virginia” and “Torn and Frayed”; where other white vocalists tripped over the blues, he shined on “Stop Breaking Down” and “Hip Shake.”

It didn’t hurt that he was surrounded by musicians who shared a remarkable reverence—and feel—for blues, country, gospel, soul, and fifties rock and roll. Never mind that they achieved a live-in-the-studio sound on songs that sometimes took forever to record, and never mind that Bill Wyman was fed up with the circus surrounding the Stones and Mick Taylor was, at the time, equally unimpressed. What matters is the music, not the process.

We may have reached the point, however, where the process receives more attention than the music. Among all the products celebrating *Exile*’s 30th anniversary is a deluxe edition that includes a documentary DVD and a collector’s book that puts the Stones’ nonstop party under a microscope. These extras are entertaining, but hardly essential.

Nor is the second CD of the 2-CD set, on which Mick Jagger mostly sings new lyrics over instrumental passages that are primarily from the *Exile* sessions (the others just sound like they are). Although Jagger still has a great voice, he doesn’t use it as well, sounding at times histrionic and strained. More than anything, these songs, plus the inferior alternate takes of “Loving Cup” and “Soul Survivor,” help clarify how good *Exile* was in its original form.

If the extra stuff isn’t essential, though, the album is. On the newly remastered CD the music sounds cleaner and sharper, and “Sweet Virginia” is absent the tape hiss that marred the original LP version. If you don’t already have a copy of the vinyl, though, I’d suggest the 180-gram reissue—partly out of nostalgia and partly because these unpolished performances seem simpatico with

a sound that, even for analog, is somewhat murky. Murky? Yes—but also full of a life that digital engineers work endlessly to approximate. **Jeff Wilson**

**Further Listening:** Rolling Stones: *Beggars Banquet*; *Let it Bleed*



**Wilson Pickett: *Funky Midnight Mover—The Atlantic Studio Recordings (1962-1978)*. Rhino (6 CDs).**

By the time he recorded “In The Midnight Hour,” the 1965 hit that would make his a household name, Wilson Pickett was a veteran R&B singer whose career had never quite

taken off. This six-CD set, delivered in a handsome, 92-page cloth-bound booklet complete with photographs, track-by-track commentary, notes by Atlantic’s Jerry Wexler, guitarist Steve Cropper, and others, offers a marvelous time capsule containing his first tracks as vocalist for The Falcons, to the early and then prime years for Atlantic, and on through his later career, including 13 previously unreleased recordings. Pickett found simpatico collaborators in two of the era’s great guitarists, Cropper and Duane Allman. Although this entire set showcases Pickett’s remarkable voice, the tracks with these two pushed him to places that still astonish. As is inevitable with such a wide-ranging collection, the sound here is variable. The earliest tracks are primitive, highly compressed, with meters pegging well past the red line. Yet the sound quality quickly takes a dramatic leap upward. About half the tracks are in very good mono—well balanced, focused, and full of the funk, sweat, and drive that make this music sizzle and smoke, these many decades on. **Wayne Garcia**

**Further Listening:** Booker T. and The M.G.’s: *Green Onions*; Otis Redding: *In Person at the Whisky a Go Go*

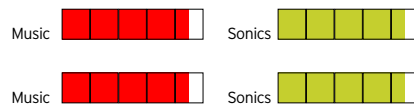
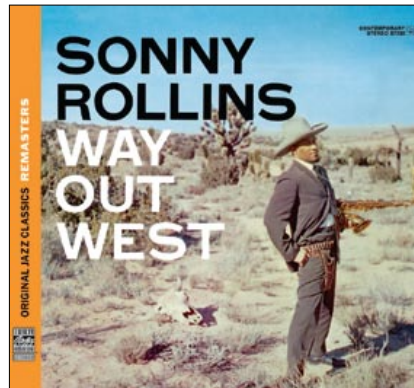




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The later period of his tenure with Columbia yielded the early 80s anthem “Jean Pierre” (from the live *We Want Miles*) and his lyrical take on the Cyndi Lauper’s “Time After Time” (from *You’re Under Arrest*).

Also included are Miles’ historic 1970 Isle Of Wight concert, previously unreleased tracks from the 1949 Paris Jazz Festival and from three Columbia albums, and a DVD of Miles’ 1967 quintet performing live in Europe. For aficionados, it’s an overwhelming treasure trove of sound. **BM**



**Sonny Rollins: *Way Out West*.** Concord.

**Thelonious Monk: *Thelonious Monk with John Coltrane*.** Concord.

John Coltrane’s brief association with Thelonious Monk in 1957 was among the most legendary in jazz history. The Monk-Coltrane quartet’s run at The Five Spot in New York marked

a turning point in the leader’s public visibility, and was crucial to his tenor saxophonist’s evolution into one of the greatest soloists we have ever heard. This reissue includes the only studio recordings this quartet made, along with some septet tracks and a great solo Monk blues.

Earlier that same year, Sonny Rollins had cut one of the most congenial records of his long career during his first trip to the West Coast. It was Rollins’ first outing with only drums and bass (though “only” may be a misleading modifier for Ray Brown and Shelly Manne), a format that became his norm for several years. Sonny obviously enjoyed working without a pianist, but he’s less inclined

on this wonderfully relaxed outing to fill up the wide open spaces than he would later become. **Duck Baker**

**Further Listening:** *Monk with Coltrane at Carnegie Hall* (Blue Note); *Thelonious Monk & Sonny Rollins* (OJM)



**Artie Shaw: *Classic Bluebird and Victor Sessions*.** Mosaic (7-CD Set).

Seventy years after the fact, the argument about whether Artie Shaw was a better clarinetist than his arch-rival Benny Goodman continues to smolder. Clarinetists themselves are often awe-struck by Shaw’s impeccable tone and

control, while Goodman was a bit more adventurous. On a personal level, these roles were reversed. Benny was a careful businessman whose only marriage lasted for over 35 years, while the mercurial Shaw hated the music business, and was constantly involved in lawsuits, breaking up his band, and alienating his fans. His very public private life, which included marriages to such icons as Lana Turner and Ava Gardner, was even more volatile. In fact, one comes away from reading John McDonough’s wonderful liner notes feeling that it’s a miracle Shaw left as large a legacy as he did.

And what a legacy it is! From huge hits like “Begin The Beguine” and “Frenesi” to timeless small-band jazz by Shaw’s Gramercy Five, a high percentage of tunes here became familiar as standards, often because of these versions. Shaw and his band always sounded like they were having a ball, and now, thanks to Mosaic’s superb remastering, they sound better than ever. No big band fan should be without this set. **DB**

**Further Listening:** *Artie Shaw: Last Recordings* (Nimbus); *Columbia Benny Goodman Orchestra Sessions* (Mosaic)



**The New York Art Quartet: *Old Stuff*.** Cuneiform.

The New York Art Quartet was formed in 1964 by trombonist Roswell Rudd and alto saxophonist John Tchicai. Rudd was a member of another quartet, completely devoted to the music of

Thelonious Monk, and wanted an outlet for his own compositions. The Danish-born Tchicai had hit New York the previous year and had quickly made an impact with an oblique style that somehow combined Lee Konitz cool and Ornette Coleman heat in equal measure. Rudd’s boisterous ’bone was a perfect foil. The NYAQ soon produced one of the definitive recordings of the free-jazz era, and then in 1965 Tchicai returned to Europe to scout for work. Rudd went also, but it was necessary to replace the seemingly irreplaceable rhythm section of Lewis Worrell on bass and drummer Milford Graves. Luckily, Danish bassist Finn von Eyben and South African drummer Louis Moholo proved up to the task. The release of *Old Stuff* adds 70 minutes of great live music—in some ways the best of their European recordings—to the painfully small output of this seminal group. Surprisingly good sound and the inclusion of several tunes the group didn’t record elsewhere make this a must for free-jazz fans. **DB**

**Further Listening:** *New York Art Quartet* (ESP Disk); *Roswell Rudd* (Verve)

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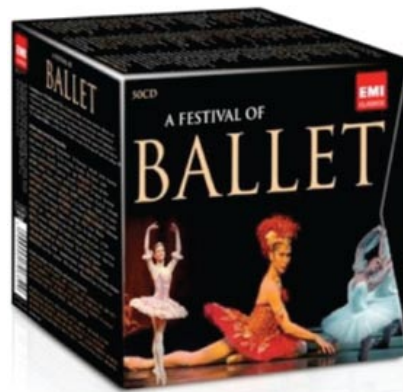


### Bud Powell: *Live in Geneva, 1962*. Gambit.

Bud Powell is often described as the man who first adopted Charlie Parker's style to the piano, but this is simplistic. Parker didn't invent modern jazz on his own: he was, rather, the central figure in the bebop revolution of the early 1940s, with Dizzy

Gillespie, Charlie Christian, Powell and others also contributing. Bud was something of a boy wonder at that point, then really came into his own as the new music solidified in the late 40s. But Powell was plagued by mental problems exacerbated by a beating at the hands of police, and his output became erratic as the 1950s progressed. As a result, many listeners give short shrift to his later recordings, but this is a huge mistake, and no record shows why more clearly than *Live in Geneva*. Recorded in 1962, when Bud was living in Paris and enjoying a limited sort of renaissance, it captures the pianist at the peak of his abilities. The instrument in use is wanting, and the bassist and drummer don't do much besides keep time, but Bud makes us forget such details, pouring out chorus after chorus of perfectly conceived, brilliantly executed melody. Free from the time constraints of the 78rpm era of his salad days, Powell's powers of spontaneous composition seem truly limitless. Not to be missed. **DB**

**Further Listening:** Bud Powell: *Jazz Giant* (Verve); *The Amazing Bud Powell, Vol. 1* (Blue Note)



### *A Festival of Ballet*.

Various performers. EMI (50 CDs).

This bargain-priced (\$100) compilation gathers more than 150 scores—ballets and quite a few works appropriated for that purpose, either excerpted or served up complete—that run the gamut from Purcell

and Rameau to the great narrative works of the late-19th and early-20th centuries and all manner of exotic modernist works. Alongside what is considered essential repertoire there are many rarely-heard scores; beyond that, there are four CDs of dances from operas, oratorios, and plays.

The Russian component offers substantial highlights from the great Tchaikovsky ballets and other works by that composer, along with music by Glazunov, Rimsky-Korsakov, Stravinsky—from *Firebird* (1910) all the way to *Agon* (1957)—Prokofiev, Khachaturian, Shostakovich, Liadov, and Glière. Not only is there scope here, but exceptional quality: the recordings of the big Tchaikovsky ballets are the outstandingly idiomatic early digital accounts from John Lanchberry and the Philharmonia Orchestra; the excerpts of Prokofiev's *Romeo and Juliet* and *Cinderella* are taken from André Previn and the London Symphony Orchestra; the complete recording of Glazunov's *The Seasons* is the classic from Evgeny Svetlanov and the Philharmonia; the excerpts from Khachaturian's *Spartacus* are conducted by Khachaturian himself, and beautifully, with the LSO at its absolute best; while the excerpts from Khachaturian's *Gayaneh* come from the hard-charging Yuri Temirkanov, here at the helm of the Royal Philharmonic. All of these are recordings to cherish.

The discs devoted to French, British, German, and American repertoire also yield many riches. We get Leonard Slatkin doing

Copland and Bernstein with the Saint Louis Symphony, and Jean Martinon's unsurpassed readings of Ravel with the Orchestre de Paris and of Debussy's *Jeux* and *La boîte à jousjoux* with L'Orchestre National de l'ORTF. I was particularly pleased to see generous excerpts from the wonderful recordings of Delibes' *Coppélia* and *Sylvia* made in 1977 by Jean-Baptiste Mari and the Paris Opera Orchestra, splendidly recorded by Paul Vavasseur in the Salle Wagram. I played the original LPs to shreds when they were released, and never thought I'd get to hear these lovable readings on CD, still sounding so wonderfully fresh—and still slightly out of tune in the brass.

Among the rarities in the set are John Antill's *Corroboree* (1950), inspired by the aborigines of Australia; Peter Maxwell Davies' *Salome*, complete; *The Good-Humored Ladies*, a delightful romp to music of Domenico Scarlatti arranged by Vincenzo Tommasini; an American work I had no idea existed, Cole Porter's *Within the Quota*; and Roberto Gerhard's *Don Quixote*. Then there's my personal favorite of all the rarities, Charles Koechlin's tone poem *Les Bandar-Log* (based on Rudyard Kipling's *Jungle Book*), which provided the musical underpinning for Antony Tudor's 1967 ballet *Shadowplay* (so I guess it doesn't belong here either... *tant pis*). The recordings of the Gerhard and *Les Bandar-Log* were made in 1964 by the BBC Symphony Orchestra under Antal Dorati, one of the great ballet conductors of all time—matchless interpretations, and they sound phenomenal. Indeed, remasterings throughout EMI's *Festival of Ballet* are mostly excellent—the latest digital jobs for material already released on CD, and fine new digital transfers for material appearing for the first time. **TL**

**Further Listening:** Delibes: *Sylvia* (complete); Prokofiev: *Cinderella* (complete)



# Ten Best New Releases from 2010 on Vinyl



**Johnny Cash: *American VI: Ain't No Grave*.** Lost Highway (LP and CD).

“Oh death, where is thy sting? Oh grave, where is thy victory?” Johnny Cash intones at the start of “I Corinthians 15:55.” The tune, among the last Cash ever wrote, is lovely and reflective, and unfolds like a dreamy waltz between old lovers in a dusty front parlor.

Unsurprisingly, death and resignation are overriding themes of *American VI: Ain't No Grave*, the final installment of Cash's remarkable late-career collaboration with producer Rick Rubin. Although Cash at the time was seriously ill, nearly blind, and broken over the recent death of June Carter Cash, *American VI* is anything

but a depressing downer of an album. Although its subjects are serious, and its language steeped in the biblical, Cash's voice, while worn to an old, scratchy ghost of a once effortless baritone, is determined and mostly lacks the almost unbearable-to-hear weakness that made *American V: A Hundred Highways* such a difficult, if not-to-be-missed journey.

Interestingly, the songs on these two albums were mostly recorded during the same four-month stretch that in which June Carter Cash and then Cash himself died. It was a remarkable final outpouring, apparently done to honor one of June Carter Cash's final requests—that Johnny keep on working. And while he was never shy about expressing his religious faith, the evidence here suggests that Cash not only relied on it evermore during these months, but also, true to his Christian beliefs, embraced the finality of it all.

Accompanied by a small core of musicians that mark the *American* series (typically, at this time, recorded separately and mixed in later), the traditional “Ain't No Grave” sets the tone as something defiant, yet also eerie and haunted. Cash's cracked voice calls out from a kind of acoustic crypt as a fingerpicked banjo, slide

guitar, and mocking organ seem to defy his defiance, while foot stomps suggests the devil's relentless knock, or perhaps earth being shoveled on a coffin lid. Things turn more gentle with a slow-churning version of Sheryl Crow's “Redemption Day,” and Cash's lovely take on Kris Kristofferson's “For The Good Times.” “Lay your head on my shoulder,” he sings in a voice that, while lacking sentimentality, is nonetheless capable of breaking your heart. Side Two doesn't sustain quite this intensity, and it seems that Rubin elected to sequence the tunes into a peaceful slow fade. A pair of numbers, “Satisfied Mind” and Bob Nolan's “Cool Water” feature Cash with only acoustic guitars; “Last Night I Had the Strangest Dream” is a gentle anti-war lullaby, and “Aloha Oe” allows the man in black to wave goodbye with a wistful “until we meet again.”

The sound of the LP is remarkably fine and consistent given the stitched-together nature of Rubin's loving effort. And as with the *American* series in general, there is an intimacy here that perfectly serves the music. The soundstage is life-size and very open; instruments have excellent detail, body, and texture—at times raw, at others gentle, as the mood requires, and Cash's vocals are quite natural

sounding—sonically unvarnished, emotionally naked. **WG**

**Further Listening:** Johnny Cash: *Unearthed* (box set); *American V: A Hundred Highways*



**Jakob Bro. *Balladeering*.** Loveland (LP).

The atmospheric and darkly beautiful playing of Danish guitarist Jakob Bro in the Paul Motian Band and in Polish trumpeter Tomaz Stanko's current quartet has brought him to the attention of adventurous jazz fans and ECM aficionados in Europe and the States. For his auspicious debut as a leader, he calls on some revered and open-

minded elders in drummer/mentor Motian, 82-year-old alto sax legend Lee Konitz, and guitarist Bill Frisell, easily Bro's most profound influence on the instrument. Along with bassist Ben Street, they delve into the intuitive zone on bewitching Bro originals like the ethereal and aptly titled rubato opener “Weightless,” the simple and delightful feature for Konitz, “Evening Song,” the mesmerizing “Greenland,” and the somber, sparsely meditative “Starting Point,” which begins as a delicate duet between Bro and Frisell on acoustic guitars and develops into a stirring trio number as Konitz enters halfway through (there's also a bonus electric version that pushes the envelope on guitar effects). Released as an elegant fold-out, three-panel package with slots for vinyl disc, accompanying CD, and bonus DVD (a documentary of the session by Danish filmmaker Sune Blicher), *Balladeering* is available in the U.S. through Bro's Web site, jakobbro.com. **BM**

**Further Listening:** Paul Motian: *Garden of Eden*; Tomasz Stanko: *Dark Eyes*

## MUSIC - Ten Best New Releases from 2010 on Vinyl



### Fred Hersch Trio. *Whirl*. Palmetto (180-gram LP).

The music should be enough when it comes to heralding Fred Hersch as one of the great jazz musicians of our time. But circumstances in the 54-year-old pianist's personal life took his music—and consciousness—away for several months. The story does add a compelling frame to his latest studio recording. Indeed, it makes the very existence of *Whirl* something of a miracle. And still, for all the drama, poignancy, and near-tragedy of the run-up to *Whirl*, it is in fact Hersch's radiant creativity and his sparkling interplay with bassist Jon Hébert and drummer Eric McPherson that make this beautifully realized LP one of the must-have jazz piano recordings of this year.

Having gigged as a sideman with

such giants as Stan Getz, Art Farmer, and Joe Henderson, Hersch was already a respected player when he became newsworthy in the early 1990s by going public as HIV-positive and gay. The jazz scene didn't become remarkably less closeted for that, and it was less the news hook than Hersch's "my way" attitude, manifested in a terrifically varied catalog of recordings, that elevated him to greater prominence. He played the music of Billy Strayhorn, Johnny Mandel, Thelonious Monk, and Rodgers and Hammerstein; he collaborated with such vocalists as Janis Siegel, Norma Winstone, and Nancy King; and he matured as a sophisticated composer, writing for large ensembles (including a setting of the poetry of Walt Whitman) and his unconventional Pocket Orchestra.

Then, in 2008, Hersch was beset with AIDS-related dementia and, after bouts with hallucinations and paranoia, fell into a two-month-long coma. His ordeal involved dialysis, a tracheotomy, and the loss of almost all motor functions. That he survived was amazing; that he regained enough strength and will to re-teach himself how to play piano was a testimonial to his dogged determination; that he resumed recording and has since released a live Pocket Orchestra CD, an album of Antonio Carlos Jobim tunes, and, now, *Whirl*, with more major

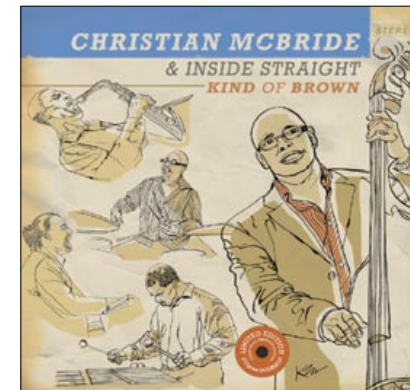
works (including "the coma project") in process, is almost unfathomable.

But when it comes to music, Hersch remains eminently comprehensible. An unabashed believer in beauty, he fills his pieces with lyrical melodies and cozy harmonies, and he chooses his borrowed material for the possibilities it offers for emotional expressiveness on those same terms. Of *Whirl*'s ten tracks, six are originals, inspired by the likes of ballerina Suzanne Farrell (the title track), saxophonist Wayne Shorter ("Still Here"), and Jobim ("Sad Poet"). Compositions by piano mentor Jaki Byard, drummer Paul Motian, and classic standards composers Harry Warren's ("You're My Everything") and A.E. Swan ("When Your Lover Has Gone") fill out the variegated panorama.

Staunchly accessible, Hersch's improvisations—in the tradition of Bill Evans and Paul Bley, more concisely focused than Keith Jarrett's, and antecedent to such younger acclaimed pianists as Brad Mehldau and Jason Moran—are hardly simple. Great pleasures can be had by listening carefully to how he chooses which notes to single out, which to cluster, which to stagger, and which to place in meticulous harmonic and rhythm juxtaposition to what Hébert and McPherson are playing. And those pleasures are delivered here with the vinyl trump cards of warm, breathing

ambiance and rounded precision, sonic qualities too often perceptibly diced in digital reproduction of piano music. **DR**

**Further Listening:** Fred Hersch: *Songs Without Words*; Fred Hersch and Bill Frisell: *Songs We Know*



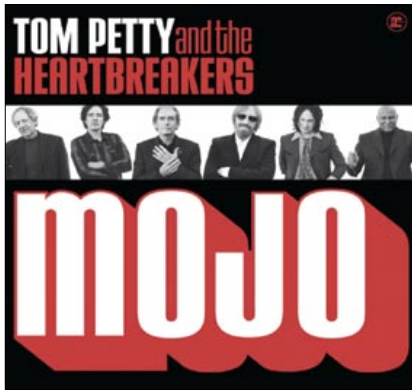
### Christian McBride & Inside Straight: *Kind of Brown*. Mack Avenue (two 210-gram LPs).

The bassist's debut for Mack Avenue Records introduces his new quintet with jazz veterans Carl Allen on drums, Eric Reed on piano, Steve Wilson on alto sax, and talented newcomer Warren Wolf on vibes. This solid group rekindles the classic 60s Blue Note sound on McBride originals like the steady swinging "Rainbow

Wheel" and the hard-charging bop number "Stick and Move," fueled by the bassist's flawless walking lines. McBride's affecting waltz-time number "Used ta Could" carries a soul-jazz undercurrent while his refined tribute to pianist Cedar Walton, "The Shade of the Cedar Tree," has the timeless feel of a straight ahead standard. The great bassist's deep-toned presence looms large on a cover of Freddie Hubbard's turbulent "Theme for Kareem," which features his signature pizzicato work on an astounding solo. McBride's mellow groover "Brother Mister" has Wilson and Wolf putting up glistening unisons on the frontline before engaging in some breezy solo exchanges. McBride also "sings" with his bow on a virtuosic *arco* rendering of the poignant Jimmy McHugh ballad "Where are You?," performed as an affecting duet with pianist Reed. Released as a limited edition 210-gram vinyl double LP set. **BM**

**Further Listening:** Christian McBride: *Getting' to It*; Carl Allen & Rodney Whitaker: *Work to Do* )

## MUSIC - Ten Best New Releases from 2010 on Vinyl



**Tom Petty and the Heartbreakers: *Mojo*.** Reprise (two 180-gram LPs).

*Mojo* blasts off with a Dylan-like shuffle imagining Thomas Jefferson's lust for Sally Hemings ("Jefferson Jericho Blues"). The American vernacular continues with "First Flash of Freedom," which

slumps into a dreamy, 60s psychedelic vibe worthy of the Dead or Allman Brothers, and takes off on the road with a cheeky ode to survival ("Running Man's Bible"). The musicians play beautifully throughout, and, given that they've been together for thirty-some years and are considered one of the great live acts, you've got to love the casual confidence in their playing. Lead guitarist Mike Campbell especially shines, and, on a tune such as "Good Enough," lets fly with a flurry of fiery licks that remain pyrotechnic without ever turning to histrionics. "Candy" is a rockabilly outing praising sweets and moonshine over arguably healthier tastes; "U.S. 41" stomps through a blues swamp; "Lover's Touch" is a slow, seductive rocker with creamy guitar tones aided by wah-wah and fuzz pedal effects; while "I Should Have Known It" is a fun, blues-skiffle mash-up of Yardbirds, Zeppelin, and the White Stripes. Petty's voice is consistently in good form, with an almost chameleon-like way of changing color to fit mood and style.

The recording nicely captures the sound of a well-oiled rock 'n' roll machine playing together with remarkable freedom and passion. For lovers of loose, expertly played blues-based rock, *Mojo* is one of the year's great albums. **WG**

**Further Listening:** Allman Brothers Band: *Live At Fillmore East*; The Yardbirds: *Having a Rave Up*



**Punch Brothers: *Antifogmatic*.** Nonesuch (CD and LP).

*Antifogmatic* (named after a 19th century hangover cure), the Punch Brothers' second album, offers a fine display of the subtle, nuanced instrumental dialogue among Thile (mandolin), Gabe Witcher (fiddle), Chris Eldridge (guitar), Noam Pikelny

(banjo), and Paul Kowert (bass). This interplay allows for dramatic changes of texture within a single song, in for example the way the ensemble falls away from a rousing pitch in "Welcome Home" into a ruminative, stark, rather ominous mood fashioned by subdued mandolin and fiddle musings bolstered by Kowert's low, grumbling bass, before lashing out again in a hard-charging bluegrass fury.

Apparently the antifogmatic these fellows need is a remedy for alcohol- and love-induced hangovers alike, though sometimes, as on the sprightly, fiddle-fired countrified celebration "Rye Whiskey," the inevitable ill effects of mixing women and drink are more celebrated than regretted. In "Me and Us," another tale of romantic misadventure, the softer passages allow for a kind of instrumental Greek chorus, transforming the number into a rootsy art song. "Next To The Trash" is a traditional, and lovely, country waltz, albeit one disguising a corrosive accounting of a couple's rocky relationship, while "Alex" is a tender farewell-and-good-riddance parting shot. Producer Jon Brion fashions a clean, robust ensemble sound (warmer and airier on the LP), weaving the acoustic instruments around Thile's insistent but sensitive vocals, then opening up the soundscape when everyone gets going at once. **David McGee**

**Further Listening:** Punch Brothers: *Punch*; Thile: *Not All Who Wander Are Lost*



**The Black Keys: *Brothers*.** Nonesuch (CD and 2-disc LP).

The first time I heard The Black Keys they opened for Sleater-Kinney. For a fan of raw and dirty electric blues they were an immediate delight, playing with an urgency that reminded me of early Johnny Winter. Since then the duo's sound has

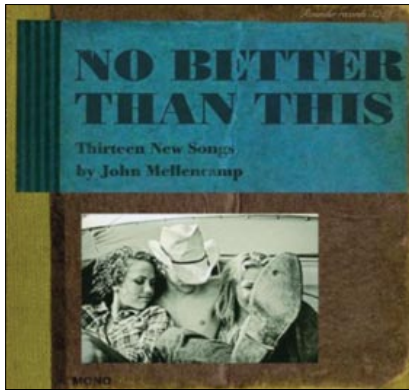
evolved, as when hip-hop artist Danger Mouse produced 2008's *Attack & Release*. Like later Butterfield Blues Band, The Black Keys have started adding a touch of soul to the mix; on *Brothers* there's even a cover of Jerry Butler's "Never Gonna Give You Up."

In different ways the less frenetic *Brothers* appeals to me as much as the concert I saw in 2003. I listened to the record on vinyl, and I love its vibrant sound; even with reverb piled on it still has plenty of punch. And the songwriting is so solid that several songs on the first three sides of the LP could have been released as singles. Yet the less catchy and more toned-down tracks on the last side offer much-needed balance. By then, it seems, enough songs have lamented and celebrated the dark side of male-female magnetism. Lyrically "Unknown Brother" and "These Days" dig deeper, and "Never Gonna Give You Up" is simply a nice warm love song. **JW**

**Further Listening:** The Black Keys: *Thickfreakness*; *Attack & Release*



## MUSIC - Ten Best New Releases from 2010 on Vinyl



**John Mellencamp:**  
*No Better Than This.*  
Rounder (CD and LP).

The backstory of John Mellencamp's *No Better Than This* is compelling: 13 songs written in thirteen consecutive fevered days, T Bone Burnett enlisted as producer, and recording done at three legendary American shrines—the

Sun Studio (including the rockabilly-influenced title song, all clicking-clacking acoustic bass and driving, echoey electric guitar behind Mellencamp's spitfire vocal); America's first black church, in Savannah, GA; and Room 414 of San Antone's Gunter Hotel, home to Robert Johnson's only recording sessions, with the music captured on a vintage '55 Ampex 601 recorder and a vintage RCA ribbon mike. Tender moments, such as the gently swaying, John Prine-ish "Thinking About You," are striking indeed, but the animating energy emanates from the singer's triumph over forces that have waylaid less fortunate souls, as in the fiercely expressed growl of a son determined not to be broken as his father was in a thumping dirge, "The West End," and in the spare but triumphant "Right Behind Me," in which a fiddle and acoustic guitar frame the singer exulting in beating the Devil. T Bone's sonics are typically uncluttered and atmospheric, but Mellencamp's hoarse musings add the soulful grit that raises the whole enterprise to an inspired exercise in unvarnished Americana. **DM**

**Further Listening:** Dion: *Bronx In Blue*; Bruce Springsteen: *Nebraska*



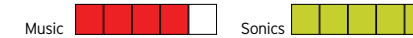
**Prokofiev, Gabriel:**  
*String Quartet No. 1.* Elysian Quartet.  
Nonclassical (LP).

New "classical" compositions on vinyl? Yep, here's the First String Quartet by Gabriel Prokofiev, London-based grandson of the great Sergei. There's a polycarbonate release of the complete quartet,

but the vinyl incarnation includes only two movements of it. Along with—get this—four computer-derived, digitally layered "remixes" of the music set to hip-hop dance beats. Like his grandfather, Gabriel has a strong iconoclastic streak, making a string quartet, most hallowed of classic genres, into a source of communal variations suitable for gyrating youths in a strobe-light-lit dance club is a deliberately subversive act.

The music itself is minimalist, with much herky-jerky lurching along to a steady pulse (overlaid with many syncopations) in an amiable, dancing-robots manner. Despite bone-dry timbres and grating dissonances it has some nifty tunes, albeit of a rudimentary sort. In short: clever, edgy, irreverent, category-violating stuff. To my surprise I rather enjoyed it, and the (some quite imaginative) "remixed" variations, too. The Elysian Quartet's playing is harsh and sandpapery, but suits the idiom. Recorded sound is up-close and hot, with lots of bite and detail but little air. **Mark Lehman**

**Further Listening:** G. Prokofiev: *Quartet No. 2*; *Concerto for Turntables*



**Christopher Campbell:**  
*Sound the All-Clear.*  
Innova (CD and LP).

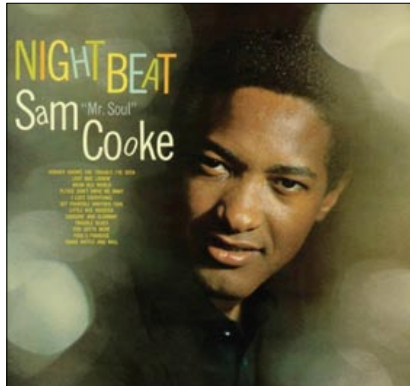
Chris Campbell's *Sound the All-Clear* is less a piece of music than an imaginary movie for the ear. Rickety mechanisms, synthetic pastoral scenes with twittering birdsong, tribal ceremonies, and every sort of looping, whistling, scraping,

droning, slithering, jangling, rattling string or wind or percussion or electric instrument you can think of, along with a few you can't (including voices, piano, organ, guitar, music boxes, sheng, koto, fiddles, PVC flutes, bassoons, Aeolian harps, toys, and lithophones) are concatenated into a sound-poem that even when densely layered (though it's often quite spare) never seems cluttered, and somehow adds up to more than a mere sonic collage. Rather it creates a simulacrum of the play of mind and memory—and suggests an ancient, mythic story, too. A droll, wistful, cheery, happiness-inducing story of the creatures of this earth celebrating (as the title suggests) their escape, however temporary, from danger.

Innova's sonics (especially on the LP) are flat-out spectacular. This is one of the most holographic, immediate, detailed, truthful, airy, dynamic, and sheerly gorgeous recordings ever—an instant audiophile classic. **ML**

**Further Listening:** Berio: *Cries of London*; Gerhard: *Libra*

# Ten Best Reissues from 2010 on Vinyl



**Sam Cooke: *Night Beat*.** Analogue Productions/RCA (two 45-rpm LPs).

Back in the late fifties, when I was in grade school, my mom gave me a table radio that I promptly ensconced by my bed. Every night I listened to it—to the late-night programming on the pop station WSAI—only instead of making me sleepy, the music woke me up.

Cincinnati was still, effectively, a segregated town back then—most American cities were—but the late-night radio waves of WSAI were something else entirely. While AM stations devoted endless hours to the soul-killing harmonies of The Four Freshman, the Lennon Sisters, the Johnny Mann Singers, for a few hours each night WSAI turned off the spigot

of pabulum and turned on what—to my nine-year-old ears—was a fire hose of excitement.

There were Elvis and Jerry Lee, of course. But there was also—and this was what was so excitingly new—a taste of the music that Elvis and Jerry Lee got their beat and bearings from. For the first time, I heard black singers who weren't *Ed Sullivan Show* staples. I heard the Silhouettes' funny "Get a Job," Chuck Berry's ecstatic "Sweet Little Sixteen," The Chordettes' delicious "Lollipop," The Drifters' lilting "There Goes My Baby."

As the fifties edged into the sixties, the music just kept getting more danceable, more energizing, more varied, filled with a sexuality already implicit in "Sweet Little Sixteen" and "Lollipop," mixed with gospel, doo-wop, blues, rock 'n' roll, and r&b. It was music that would branch out in many directions, from Motown girl groups to Hendrix jazz-rock to Clinton funk to Booker T r&b and, above all else, to soul—to Aretha, Sam and Dave, Otis, Marvin Gaye.

But before there was a category called "soul," before there were any of these vital things, there was "Mr. Soul" himself—Sam Cooke, who elegantly embodied every one of these interrelated musical threads in songs

like "You Send Me," "Chain Gang," "Bring It on Home," "Twistin' the Night Away," "Shake," and "A Change Is Going to Come."

His roots were literally in gospel but he had the looks and grace and ambition to successfully cross over into the mainstream. ("Chain Gang" was No. 2 on *Billboard's* Pop chart, "You Send Me" No. 1.) And he had a voice that "caused men to sit up and women to swoon." There was plenty of power and pathos in that silken tenor, though Cooke wasn't a shouter like Otis. He was more poised and polished, a sophisticated artist, who seduced in a lower (but no less ardent) key.

Who knows all Sam Cooke might have become had he not been gunned down in 1964 at the age of thirty-two in the office of a seedy South Central LA motel? He spoke to my generation so memorably that he was among the very first inductees in the Rock and Roll Hall of Fame. Thanks to Analogue Productions' 45-rpm reissue of Cooke's 1963 RCA album *Night Beat* he still speaks to us—eloquently. The sound is opulent; the songs excellent; the singing nonpareil; the mood, oh-so-nostalgic.

I just hope that this reissue meets with the success it deserves. Maybe then we'll get a reissue of Cooke's

even better 1964 bell-ringer *Ain't That Good News*. **Jonathan Valin**

**Further Listening:** Marvin Gaye: *What's Going On?*; Sam and Dave: *The Best Of*



**Ray Charles: *The Great Ray Charles*.** Rhino (LP).

Fans who scooped up Ray Charles' 1957 eponymous debut—which spawned the classics "Mess Around," "I've Got a Woman," and "Drown in My Own Tears"—were treated to a new and exciting R&B voice. This instrumental jazz album, released the same year, avoids the signature

Ray Charles R&B sound and instead highlights his chameleon gifts as a pianist, running the gamut from swing to small combo blues to Art Tatum-influenced showpieces. It kicks off with Quincy Jones' big-band blues shuffle "The Ray," featuring soulful sax solos by longtime Charles sideman David "Fathead" Newman. The Ellingtonian spin on "My Melancholy Baby" is less enduring, but "Black Coffee" gets a timeless slow blues treatment. Side One closes with a lyrical reading of the sentimental ballad "There's No You." The B-side steps up the pace, opening with a frisky soul-inflected rendition of Horace Silver's "Doodlin'," with horn charts indebted to Joe "The Honeydripper" Liggins. "Sweet Sixteen Blues," the album's only Charles composition, echoes "Drown in My Own Tears," while "I Surrender Dear" finds Charles experimenting with a celeste. The album closes with the Charlie Shavers/Sid Robins swing tune "Undecided." In sum: a revelation for those who only know Ray Charles as a hitmaker. **GC**

**Further Listening:** Ray Charles and Milt Jackson: *Soul Brothers/Soul Meeting*; Ray Charles: *Genius + Soul = Jazz*





## MUSIC - Ten Best Reissues from 2010 on Vinyl



**Dire Straits: *Love Over Gold*.** Warner (180-gram LP).

One hazard of being on the retail side of the audio biz is that you end up hearing a lot of the same music—*ad nauseam*. And while I haven't sold high-end gear for 16 years now, it's taken that long for me to again enjoy, say, Pink Floyd's *The*



*Dark Side Of The Moon* or Stravinsky's *Firebird*. (As to Fleetwood Mac's *Rumours* or the *1812 Overture*, uh, let's not go there.)

Dire Straits' 1982 *Love Over Gold* might well have remained on that never-want-to-hear-it-again list, if not for Warner's outstanding new reissue mastered by Bernie Grundman and plated and pressed at Pallas in Germany. A five-song collection, filled with lengthy, highly atmospheric instrumental passages and Dylanesque lyric imagery—most strongly exemplified on the 14-minute-long "Telegraph Road," and the following "Private Investigations"—*Love Over Gold* remains the band's high-water mark. It was also the first Dire Straits album to be entirely produced by bandleader Mark Knopfler, and the sound is a knockout. Granted, that sound is tinged with a bit of 80s, in-your-face brightness. But it also possesses real instrumental body, bottom-end punch, and a remarkably wide dynamic range. And the famous, sometimes eerie, sense of air and space is tremendously appealing, these nearly 20 years on. **WG**

**Further Listening:** Dire Straits: *Brothers In Arms*; Bob Dylan: *Slow Train*



**The Pixies: *Doolittle*.** Mobile Fidelity 309 (180-gram LP).

Even two decades after its initial release, the Pixies' sophomore album remains a staggering achievement, toning down the group's arty weirdness just enough for its natural pop sensibilities to shine. And shine they do on this

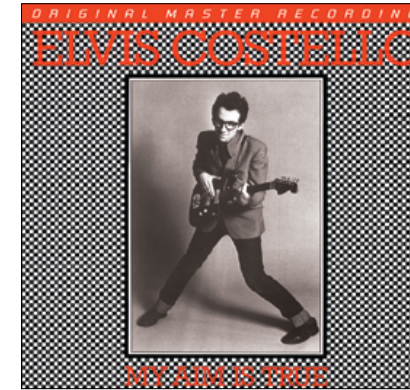


exceptional Mobile Fidelity reissue, remastered at half-speed from the original stereo mastertapes and lovingly pressed onto 180-gram vinyl.

Sonically, the album improves upon even the MoFi SACD—the previous standard in Pixies audio—offering greater depth, more tonal punch, and an impressively forceful low end (dig those booming drums on "La La Love You"). Frontman Black Francis' frayed-nerves vocals are captured with stunning clarity throughout, particularly on the angular, punkish "Debaser," where he screams, sighs, and spasms before losing himself completely in manic fits of laughter. "Tame" sets up the soft-loud template that Kurt Cobain would later adopt with Nirvana, beginning with Black's urgent whisper ("Hips like Cinderella") before exploding into bloodcurdling shrieks and white-hot guitar shrapnel once the chorus hits. Elsewhere, the group dabbles in fractured surf rock, art-punk, loose-limbed garage, and bastardized doo-wop—wildly disparate textures that are all presented here with analog warmth and clarity.

**Andy Downing**

**Further Listening:** Nirvana: *In Utero*; Husker Du: *Zen Arcade*



**Elvis Costello: *My Aim Is True*.** Mobile Fidelity (180-gram LP).

Although little can or needs to be said about Elvis Costello's superb 1977 debut, *My Aim Is True*, there's plenty to say about Mobile Fidelity's breathtaking new 180-gram vinyl release.



As mastered by MoFi vet Shawn Britton—see

the feature on Mobile Fidelity in Issue 199—who so loves this album that 25 years ago he named his daughter Alison after this record's best-known track, *My Aim Is True* is the sonic equivalent of an old master painting that has been scrubbed of ages' worth of muddy, detail-robbing varnish.

What was once tinny now has a genuine sense of weight and texture, be it Costello's ringing Fender Jazzmaster guitar, a floating cymbal, or the bottom end bump of bass and drums. What was once dynamically limp now snaps to life. And Costello's vocals—from the sweet tenor of "Alison" to the more slightly adenoidal sounds heard on "Sneaky Feelings," have a clarity and "there-ness" that will give you goose bumps. Moreover, there is a sense of musical coherence to the whole as well as a reach-out-and-grab-it immediacy that makes you feel as if you're back in that old London Pathways studio, eavesdropping on Costello and Co. at work. **WG**

**Further Listening:** Elvis Costello: *This Year's Model*; *My Aim Is True* (Rhino, with bonus tracks)

## MUSIC - Ten Best Reissues from 2010 on Vinyl



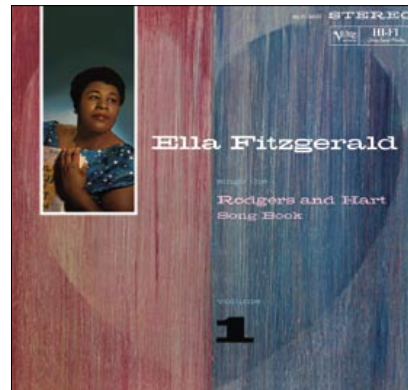
**Diana Krall: *Live In Paris*.**  
ORG (180-gram LP).

For well over a decade, Diana Krall, the leggy, blonde, telegenic singer/pianist, has effectively deployed her engaging pop-sweetened-jazz style and consistently hit the crossover sweet spot. And like Dusty Springfield decades before, Krall achieved audiophile



pinup status when she covered “The Look of Love,” a track that boosted her 2001 set, *Live in Paris*, into platinum territory. Recorded at the Paris Olympia in late 2001, it’s a collection of comfort-food standards that spans Gershwin’s “S’Wonderful,” and Porter’s “Let’s Fall in Love,” to pop classics like Joni Mitchell’s “A Case of You” and Billy Joel’s “Just the Way You Are.” Krall is an expressive interpreter who connects without over-singing and lets her smooth piano excursions do the talking. Her crack trio of Anthony Wilson, guitar, John Clayton, bass, and Jeff Hamilton, drums, offers rock-solid backup. For her efforts Krall received her second Grammy for Best Vocal Jazz Record. The recording, engineered by legend Al Schmitt, sounded good on CD. But ORG’s stellar two-disc, 180-gram vinyl reissue, remastered by Bernie Grundman, trumps it. Surfaces are dead quiet, and the LP is lighter on its feet, more layered, airier, finer grained, and more transparent. *Live in Paris* is a great addition to a choice LP collection. **Neil Gader**

**Further Listening:** Peggy Lee: *Moments Like This*; Jane Monheit: *Come Dream With Me*



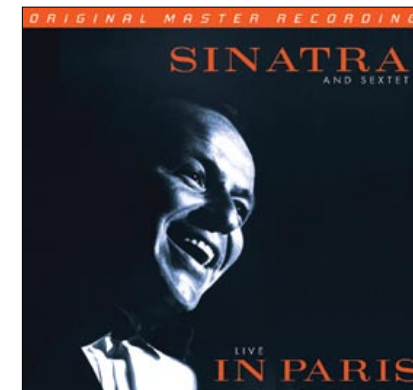
**Ella Fitzgerald: *Rodgers and Hart Song Book*.**  
ORG (two 180-gram 45rpm LPs).

When Ella Fitzgerald joined Verve Records in 1955, the 38-year-old singer was best known for a single hit (“A-Tisket, A-Tasket”), her bop-inspired scat singing, and a stack of mostly forgettable



recordings. Her manager (and Verve-founder) Norman Granz would quickly correct course. Beginning with the *Cole Porter Song Book*, Fitzgerald would record, among many other superb Verve releases, the first of eight landmark albums devoted to America’s finest songsmiths. *The Rodgers and Hart Song Book* is the first of Fitzgerald’s Verves to receive the 45rpm treatment from ORG. Mastered by Bernie Grundman, the sound is superb. Fitzgerald’s pure voice and impeccable diction—on tongue twisters like “I Wish I Were In Love Again”—are beautifully captured. She’s front and center, with halos of air surrounding her voice, and band laid out behind her on a large soundstage. Strings are exceptionally lush, while the brass can be punchy and raucous (“This Can’t Be Love”), as well as plush and creamy, as on “You Took Advantage Of Me,” where the bass is as rooted as a stately oak, and the kick drum delivers notable weight and wallop. A hint if needed: only 2500 sets were pressed. **WG**

**Further Listening:** Fitzgerald: *Gershwin Song Book*; *Let No Man Write My Epitaph*



**Frank Sinatra: *Sinatra and Sextet Live in Paris*.** Mobile Fidelity (two 180-gram LPs).

Here’s a project that was definitely done with the audiophile in mind; one of Frank Sinatra’s best records, remastered and pressed onto 180-gram vinyl by a company that specializes in such productions. This 1962



outing marked Sinatra’s first-ever appearance in Paris, as part of a 30-date international tour to raise money for children’s charities. He was accompanied by a group of musicians with impeccable jazz and studio credentials, and by the time of this concert the band was locked in on Neil Hefti’s swinging, streamlined arrangements. This ideal accompaniment supports and nudges the vocalist along without ever calling attention to itself, and though it may seem invisible, Sinatra definitely responds, especially on the sublime duo with guitarist Al Viola on “Night And Day.” The live situation doesn’t lend itself to perfection; there are a few dropped lines and fudged notes, which explains why the record has always had a few detractors. But really, when you’ve got a great vocalist near the top of his game, working through some of the high points of the Great American Songbook with superb backing, who could ask for anything more? The sound is much better here than on earlier CD releases, and the packaging near perfect. **DB**

**Further Listening:** *At the Sands* (Reprise); *In the Wee Small Hours* (Capital)

# XRCD Lives!

## Elusive Disc, Blue Note, and the Resurrection of an Audiophile Treasure

Wayne Garcia

**T**he fact that life can be unfair is hardly headline news. As the world has witnessed time and again—from Mozart to Billie Holiday, Van Gogh to Orson Welles, and more recently with our own friends and neighbors—excellence doesn't always lead to financial security.

And so it came to pass that sometime in 2005 JVC decided to shut down the American division of its highly regarded XRCD (Extended Resolution Compact Disc) label. While high-resolution formats, including DVD-A and SACD, have made their marks—the former essentially kaput, the latter still standing—XRCD, along with HDCD (High Definition Compatible Digital), continues to represent the pinnacle of sonic achievement for Red Book (16-bit/44.1kHz) compact discs.

Enter *dramatis persona* number one, Bob Bantz, owner of the audiophile hardware and software e-commerce site Elusive Disc. When Bantz first heard the news that American XRCD was to be no more, his initial impulse was to purchase all remaining XRCD stock to offer for sale on his site. His second impulse was to take over the label's U.S. operations.

As Bantz tells the story, “We hoped to revamp the existing catalog based on ongoing licensing

agreements, but we soon realized that was easier said than done.” Meaning that, since JVC was no longer involved, Bantz would not only need to seek out and license compelling new titles to reissue in the XRCD format, he would also need to start a new label to release them under.

But before we discuss that part of the story, as well as the titles already here and those to come, a seemingly obvious question comes to mind.

Given that the compact disc is following in the, shall we say, tracks of the LP—meaning displacing an older medium, and then rising to a long period of dominance followed by a slow decline—and that LPs are now *the* hot ticket in the audiophile community and also embraced by younger listeners, who are largely ignoring CDs in favor of digital downloads, why bother at all with a high-quality CD format, no matter how good it sounds?

Bantz has a simple answer, “Lots of people are



putting out great LPs,” he told me, “but not as many are doing CDs.”

He's right about that. Although several specialty labels are still producing SACDs, outside of Reference Recordings and Mobile Fidelity few are putting serious effort into releasing superior sounding Red Book CDs. And while your kids or grandkids may not give much of a hoot for the compact disc, millions of households, and of course, most audiophiles, still spin five-inch silver platters. Which means there remains a shrinking but devoted group of listeners who cherish their CD collections but whose desire for superior sound is not being fully served.

As to the sound of XRCD (and frankly, sound is its *raison d'être*), as those who have heard them know, a well-done XRCD—and especially those mastered by Alan Yoshida at Ocean Way Recording—isn't just any compact disc. It's a sound that comes about as close to analog excellence as we've heard from any digital format.

“The most important part of the XRCD process is the driver,” offered engineer and producer Joe



## MUSIC - XRCD Lives!



Harley, who, as a key player in Music Matters' knockout 45-rpm series of Blue Note vinyl reissues, has been working with Yoshida to bring Blue Note titles to life on XRCD. "It's like a car. The car itself is important, as are key elements in the XRCD process, but the guy driving the car is even more important. Alan is a very gifted engineer who, I would argue, more than any other knows how to maximize XRCD's potential."

Even a mastering engineer as discriminating as Steve Hoffman, who, along with Kevin Gray at AcousTech, is responsible for some of our finest vinyl, CD, and SACD releases (including Blue Notes from Music Matters and Analogue Productions), has sung his rival Yoshida's praises.

On a recent blog-post, Hoffman conducted a brief self-interview that went like this:

*Reviewer: "Would you have loved to master these XRCDs yourself?"*

*Steve: Of course. Who wouldn't?*

*Reviewer: "Are you mad or something that Alan Yoshida at Ocean Way got the gig?"*

*Steve: Not in the slightest. He is probably the best digital mastering engineer in the world today and will do the Blue Note catalog proud on XRCD."*

Although it sounds like it was inspired by Ocean Way, the label Bob Bantz launched to release the new XRCD titles, Audio Wave Music, was, as Bantz said, "Named after the Zen-surfer in me." Yoshida, of course, is in charge of mastering; Kevin Berg, formerly of JVC America, has been recruited to help usher the series back to fruition; and Joe Harley was hired to select the titles and produce Audio Wave's first releases, the Blue Note jazz series.

### WHY BLUE NOTE?

"Blue Note has been my favorite label going back to Junior High," an elated Joe Harley recently told me. "To work with these mastertapes is a dream come true." Harley, who is also Vice President of AudioQuest cables, is a critical part of the Music Matters team, as well as, of course, the group behind these XRCDs.

It makes sense that Bantz & Co. would choose to debut the revived American XRCD series with titles that inspire such impassioned devotion (and that also are among the best selling of all two-disc 45-rpm LP reissues from Music Matters

and Analogue Productions). It could even be argued that Blue Note is the most American of all record labels. Founded and run by immigrants, Alfred Lion and Francis Wolff, Blue Note focused on the most American of all musical expressions, jazz, and committed itself to recording the great artists of the mid-Twentieth Century—Thelonious Monk, John Coltrane, Sonny Rollins, Art Blakey, to name just a few. But Blue Note also nurtured young players such as Tina Brooks, Horace Parlan, Johnny Coles, and Lee Morgan. Guys who, while not exactly household names, were nevertheless important voices during the post-bop years when Blue Note recorded with such vigor (from the mid-50s to mid-60s).

There was also the look of Blue Note. Graphically striking covers that combined sophisticated typography (mostly designed by Reid Miles) with high-contrast black-and-white photography (mostly by Francis Wolff) to create arty, often playful jackets that cleverly hinted at the hip grooves contained therein.

Finally, of course, there's the Blue Note sound. While he wasn't the first or last to record for the label, the name Rudy Van Gelder is practically synonymous with Blue Note, for which he recorded from 1953 until the late-60s. That sound is typically very immediate, dynamically explosive, large,

spacious, and upfront in a way that places the listener in intimate proximity to the players.

"To listen to the way RVG recorded," said Joe Harley, "is to see patterns. Especially once he started recording in stereo, around 1957. You can hear when he changed the mics, when he went from using spring reverb to plate reverb, and when he switched from tubes to solid-state in 1964—which was not necessarily a good thing."

Van Gelder soon hit on a formula he rarely if ever strayed from. "Listen to Hank Mobley's *Soul Station*," Harley continued, "You've got the lead player in the left channel, piano and bass in the middle, drums on the right. And because there



## MUSIC - XRC D Lives!

were no isolation booths, and he recorded with the piano lid wide open, there's tons of leakage into the mics."

As of this writing, the first Blue Note titles were available for purchase: Horace Parlan's *Speakin' My Piece*; Hank Mobley's *Soul Station*; Sonny Clark's *Cool Struttin'*; and Tina Brooks' *True Blue*. Another 21 are lined up to complete the initial 25-title release schedule. (To see the complete catalog see [elusivedisc.com](http://elusivedisc.com).)

### THE PROCESS

It may not be something the music lover thinks about while enjoying a historic reissue—be it jazz, classical, or rock—but as a recent visit to Mobile Fidelity (see Issue 199) and then speaking with Harley underlined, working with tapes covered by million-dollar insurance policies is not something to be taken lightly.

And like the engineers at MoFi, Yoshida is said to be exceedingly fastidious—"anal" was Harley's admiring word—when it comes to every aspect of tape preparation. "Remember that these tapes have no test tones," he said. "Playback head alignment is the most critical aspect of all, and Yoshida can spend hours on that alone." Other prep techniques include checking a tape's phase, and deciding whether or not to "bake" it—literally placing the tape in a low-temperature oven to reactivate its binding elements—which is particularly important for tapes manufactured after 1964, when synthetic lubricating elements replaced older natural ones such as whale oil.

Finally, there seems to be some confusion over exactly what XRC D is. According to both Bob Bantz and Joe Harley, it is simply "CD done right," the way all discs should be made if time (read

money) wasn't squeezed out of the process. "It's not like the signal is run through some magic box." Harley explained. "But unlike, for example, SACD, where the DSD signal is transferred from the hard drive to an AIT tape, with XRC D the data on the hard drive of the (no longer made) Sony 9000 is literally shipped whole to the replication plant. It's a very different and much more direct means of getting the stored data to the cutting laser than either DSD/DACD or normal CD." (For details about XRC D technology, see Robert Harley's accompanying article.)

### LISTENING

Given the dedication of the team involved, as well as the general excellence of the Blue Note masters, it's no surprise that these XRC Ds not only sound consistently superb, but essentially lack any of the gnarly artifacts Keith Johnson refers to as "digital gritchies." These discs are open, dynamically free, tonally natural, and warm or cool depending on what the tape had to offer. Highs are airy, with floating cymbals and piercing trumpets, and the bass is textured, melodic, and explosive when a drummer lets loose. Spaces are well delineated, too. And given that the mics were picking up multiple sources, you'll hear musicians approaching and receding from them, as well as abrupt changes of reverb that I assume were sometimes activated on the fly.

The earliest recorded and best known of these four titles, Sonny Clark's *Cool Struttin'*, dates from 1958 and features the pianist/composer in a quintet setting with Art Farmer (trumpet), Jackie McLean (alto sax), Paul Chambers (bass), and "Philly" Joe Jones (drums). Although the music fits the hard-bop mold, the stand-out title track is

a laid-back, bluesy stroll that finds Clark spelling out a lovely solo followed by Farmer, and then a deliciously funky McLean, before the tune kicks into a more forceful exploration of the theme. Two (mono) "bonus" tracks are included, that, while okay, don't add much musical value to the original four-tune release.

Tina Brooks honed his chops in R&B bands and as accompanist on Blue Note outings with Jimmy Smith and Kenny Burrell before taking his turns as leader. He penned most of *True Blue*, and along with Freddie Hubbard, a meaty-toned, blues-oriented trumpeter, leads an excellent set that ranges from the chicken-shack feel of the title track to rollicking boppers.

With sidemen Wynton Kelly (piano), Paul Chambers (bass), and Art Blakey (drums), Hank Mobley's *Soul Station* remains one of my favorite discoveries of these new Blue Note releases. Overshadowed by the likes of Coltrane and Rollins, Mobley may not be their equal, but he was an inventive and expressive player with a distinctive, less bop-oriented, open-throated sound. Aptly titled, this is a most satisfying set.

With Stanley Turrentine (tenor sax), his brother Tommy (trumpet), George Tucker (bass) and Al Harewood (drums), Horace Parlan's *Speakin' My Piece* is also a beautifully realized record that reveals this soulful pianist's funkier personality. His days playing with Mingus, and influences from Bud Powell to Bill Evans, are evident, yet his playing is all his own.

Much-discussed aspects of Music Matters' 45-rpm series are the gorgeously produced gatefold jackets that include additional—mostly unseen—session shots by Francis Wolff. Although these XRC D packages can't compete with those full-

size LP jackets, the CDs are lovingly housed in mini LP-like cases that also include the same, albeit smaller, photos.

At \$30 a pop XRC Ds are expensive, though not as pricey as the same \$50 vinyl sets. And while—for these ears—they may not quite equal the breathtaking sonics of the vinyl discs in transparency, immediacy, and ultimate dynamic pop, they come very close. So close, in fact, that during one of my recent listening sessions I was prepared to get up and flip the LP to Side Two—except I wasn't listening to an LP but to a Yoshida-mastered XRC D. **tbs**

# JVC's Extended Resolution Compact Disc (XRCD)

CD Done Right

Robert Harley

**W**hat is an Extended Resolution Compact Disc (XRCD), and how is it different from a conventional CD?

First, XRCD is not actually a “format” that requires special players or decoding. Rather, an XRCD conforms to the Red Book specification that defines the compact disc, making XRCD compatible with all CD players. XRCD is simply a mastering and manufacturing process that attempts to extract the highest possible sound quality from the CD format.

JVC has examined each step in the CD mastering and manufacturing processes and designed specific equipment to improve those processes. Every combination of equipment, connections, AC power regulation, clocking, mastering format, and compact disc construction was evaluated technically and by listening tests. XRCD was created by a team that included Alan Yoshida, Akira Taguchi, Shizuo Nomiyama, Dave Collins, and Andrew Garver.

The XRCD process starts by converting the analog signal (most XRCDs are re-issues from

original analog tapes) to digital with JVC's custom 24-bit analog-to-digital converter. A considerable amount of human skill is involved in this process to extract the best sound from the analog mastertape. This includes researching the tape's provenance to be sure it's not a multi-generation “master.”

The A/D converter employs JVC's proprietary K2 Interface (see sidebar) that clocks the signal with high precision. The 24-bit signal is then reclocked in the digital domain with JVC's Digital K2 before being stored on a magneto-optical disc. This magneto-optical disc is the master from which the CD master glass is cut. Before the CD master is cut, one-off test discs are created from the magneto-optical master and must be approved.

The XRCD laser cutting system is unlike any other CD mastering system in the world. The 24-bit data from the magneto-optical disc are

## CD MASTERING: CONVERTING DATA TO MODULATED LIGHT TO PHYSICAL STRUCTURES

The digital signal that is to be recorded on the CD master doesn't actually turn the cutting laser on and off. Rather, it drives an electro-optical modulator, a crystal whose lattice structure “twists” when a voltage is applied across it, diverting the laser beam's path. This phenomenon allows the crystal to convert an electrical signal into a modulated beam of light.

The digital bitstream to be recorded on the disc drives a power amplifier that can swing very high voltages very quickly. The power amplifier's output is applied across the crystal. With no voltage applied across the crystal (corresponding to zeros in the digital data stream) the crystal allows the beam to pass straight through to the glass master, creating a “pit.” But when a voltage is applied across the crystal by the power amplifier (corresponding to “ones” in the digital datastream), the crystal's lattice structure twists and diverts the beam's direction away from the glass master, leaving the master unexposed and creating the “land” between the pits. (This explanation is simplified for clarity.)

The cutting laser is always on; its beam is modulated by the bitstream to be recorded on the disc by the crystal. This is how an electrical

signal is converted to a modulated laser beam, which in turn creates the pit and land structures on the glass master. Incidentally, the “rejected” beam that doesn't reach the glass master contains the identical data as the recorded beam. This beam can be picked up by a photodetector, decoded, and listened to. Variations in turntable speed introduce variations in the pit and land structures on the CD. One would assume that if the signal can be recovered from the CD with no data errors, subsequent reclocking could completely remove any traces of timing errors introduced by these pit-and-land-length differences. But one would be wrong about that. I've heard two CDs containing the same data (verified to be bit-for-bit identical) but cut on two different mastering machines, one of which used a vastly more sophisticated turntable rotational-servo system. The disc cut on the machine with the more precise turntable speed sounded more open, spacious, and smoother; it also had a greater sense of ease. An analysis of the variations in pit and land lengths (in essence, jitter embedded in the disc itself) revealed that the better sounding disc had less variation in its pit and land lengths.



## MUSIC - JVC's Extended Resolution Compact Disc (XRCD)

### JVC'S HISTORY IN DIGITAL AUDIO

JVC has a long track record of making digital audio sound better; it's no surprise that JVC is behind this significant technical effort to improve CD quality.

In the early days of the compact disc, JVC developed a mastering system that was sonically superior to the Sony PCM-1600 format. JVC's format, called the DAS-900, stored CD masters on 3/4" U-Matic tape as did the Sony system, but JVC's analog-to-digital converters, digital signal processing, and digital-to-analog converters were markedly better sounding. There was a brief format war which Sony won, but a few mastering engineers (notably Doug Sax of The Mastering Lab) continued to use JVC's superior system for many years after the industry had regretfully abandoned it.

The first time I became aware of jitter in digital audio was on a 1989 tour of JVC's R&D laboratory in Japan. Two of its engineers created a circuit called the "K2 Interface" that produced a cleaner and more precise clock for digital-to-analog conversion. I had been bewildered by the incontrovertible fact that two digital bitstreams with the same ones and zeros exhibited an analog-like sonic

variability. This phenomenon was particularly vexing because I'd spent the previous three-and-a-half years working in CD mastering and the topic was starting to become a wedge issue with my engineering colleagues, some of whom dismissed the phenomenon purely on theoretical grounds.

During the very technical presentation on the K2 Interface, I had one of those "ah ha!" moments when I realized that the timing precision of the analog-to-digital and digital-to-analog conversion process was crucial. JVC had known about the detrimental sonic effects of jitter for years, and developed the K2 Interface to solve the problem. To the JVC engineers, jitter was simply another engineering challenge to solve. Moreover, JVC employed professional listeners who worked with, and guided, the engineers. I met one of them, who told me that he compared all of the laboratory's new digital designs to LP playback. It's rare to see a major company's audio research laboratory where the attitude isn't "If it can't be measured, it can't be heard."

converted to 16 bits with a process called "K2 Super Coding," a noise-shaping technique that maintains much of the 24-bit signal's dynamic range in the 16-bit signal. This 16-bit audio signal is then encoded into the bitstream that will be recorded on the glass master. The signal is again reclocked with a circuit called "K2 Laser" before driving the crystal that modulates the laser beam.

All these efforts to create a signal with such precise timing would go to waste if the speed of the spinning glass master were not equally precise. Consequently, JVC developed a turntable speed control it calls Extended Pit Cutting Technology. Without precise speed control, the pit and land lengths would vary. (See sidebar for a more detailed description of CD mastering and the sonic effects

of turntable speed accuracy.)

All the components in the mastering chain are clocked from a single K2 Rubidium Clock. There are no crystal oscillators anywhere in the system. Moreover, all the AC power supplying the mastering system components is generated locally. That is, a precision oscillator creates a very clean low-level 60Hz sinewave that is amplified to 110V to power the components in the



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mastering chain. This assures perfectly clean power that's completely isolated from the power grid.

Finally, the stamper that presses an XRCD is created by a one-step rather than a three-step process. In conventional three-step stamper creation, the glass master is coated with a thin layer of silver and then electro-plated with nickel (step #1). Next the layer of nickel is peeled off to create a metal mother (step #2). Then the metal mother is electro-plated with nickel to make a stamper (step #3). Multiple stampers are created from a single mother. In the XRCD process, the glass master is itself electroplated to create the stamper. Eliminating two electroplating steps produces cleaner and more precise pit-and-land

structures on the replicated disc. But because only one stamper—a stamper that wears out—can be created from a glass master, the quantity of discs made by the XRCD process is limited. Before the production run of discs, however, a few discs are pressed so that the sound quality can be evaluated. Even after the production run, discs are sampled at random and auditioned. **tas**

# Vinyl Rules!

## The Resurgence of a Supposedly Defunct Format

Jeff Wilson

Typically when new technology comes along the product replaced dies a permanent death. People may develop a nostalgia for whatever was phased out, but that doesn't mean they're lining up around the block to buy videotape players, rotary phones, eight-track players or typewriters (or if they do buy them, to use them as anything other than decorations). So it is, and so it has always been—and therefore everyone was caught off guard when, after disappearing off the radar for over fifteen years, something that continually appeared in media obituaries came back to life.

That something was new vinyl records, which were produced in such limited quantities for so many years that you could have visited countless “record” stores without seeing any evidence that any were being made at all. I remember clearly, during the 1990s, entering a music superstore in New York City where I had purchased many albums, searching every shelf for vinyl, and finally checking with an employee who confirmed that there wasn't a single record in the store. One of the ironies of the re-emergence of vinyl is that the technology that replaced vinyl is a key reason that store is no longer there. Now record companies and record stores embrace vinyl because it provides a better business model than the digital media that supposedly rendered it obsolete. Free digital downloading, the most un-vinyl means of procuring and playing music, helped make new vinyl much more attractive to record companies, artists, and record stores. You can't steal an LP—or if you do, you better have a large shopping bag

and quick hands.

And the fact is that increasingly people are happy to buy new vinyl. During a prolonged recession new vinyl is experiencing huge growth spurts other industries would love to duplicate—and this has all happened very recently. In 2007 Nielsen soundscan reported 990,000 LPs sold; that number rose to 1.88 million in 2008, and in 2009 sales exceeded 2.5 million. And that's just for LPs; everyone agrees that the 7-inch market, though harder to quantify, is also growing. While writing this article I talked to many people who in one way or another are connected to the music industry, and none of them saw it coming. That's one of the best things about the vinyl renaissance: it wasn't the result of corporate groupthink and media hype. Rather, it was spearheaded and supported by people who care deeply about music and vinyl. So now record collectors have a lot to process, as what recently seemed like an anachronism is now popular and readily available.

The scope of both classic and obscure re-issues is staggering, and the number of new recordings is increasing at such a fast pace that new plants are opening just to press it all. Finally, it seems, after a long, long drought, vinyl is getting the respect it deserves.

### ELITE STATUS

Never mind that CDs and digital downloads still dwarf vinyl when it comes to overall sales; for those in the know, vinyl recently achieved an elite status. In recent years we've seen important records such as Bruce Springsteen's *Magic* and Elvis Costello's *Momofuku* released on vinyl first. And some releases are vinyl-only, such as Sunn's double live set *Domkirke* on the vinyl-friendly Southern Lord label. Actually small independent labels—in other words, the ones that kept vinyl alive through lean times—have a long tradition of vinyl-only releases, and on Record Store Day vinyl is king.

Remember when all the extra tracks were on the CD? Partly that was because compact discs could hold more music than a single LP, which was originally the norm; it also had to do with the effort to convert people to CDs. Now LPs tend to use two discs in order to accommodate the length of a CD, which makes for short sides. Recent releases making use of this extra space include The Fall's *Your Future Our Clutter* and Drive-By Truckers' *The Big To-Do*.

And it's not just the record companies that are giving vinyl preferred status; the fans are too. Jerry Dirr, the owner of a small underground rock label called Phratry Records ([phratryrecords.com](http://phratryrecords.com)), recently told me that the preference for vinyl is so strong that bands on his label now only bring vinyl for their tours. This was prompted by a tour where “We ran out of vinyl but had more than enough CDs. People were still willing to pay at the merch table and give me their address if we would just mail the LP to them. They wanted





## MUSIC - Vinyl Rules!

it that bad, versus the CD, which we would have given them for half the price.” On a larger scale, Sundazed Records, a label whose classic, rare, and previously unissued recordings focus on the late sixties and early seventies, has seen a clear shift in its customers. “Ten years ago we sold 70 to 75 percent CDs over vinyl, and five years ago it was 50-50,” project manager Tim Livingston said. “Now it’s 70 to 75 percent vinyl over CD.”

### QUALITY

If the early days of the LP are looked upon fondly, we should also admit that after a certain point the quality began to decline. Remember those flimsy lightweight pressings that started to appear in the early seventies, that you could flex? By the mid-eighties I held in my hand albums with vinyl so thin and lightweight I had to double check to confirm that there was anything inside the cover. And even during the glory days of Blue Note and Living Stereo there were plenty of labels making bad recordings pressed on cheap vinyl.

One of the pleasant surprises with new vinyl is that, as far as quality is concerned, the bar has been set high. Frequently record companies make a point of pressing virgin vinyl; 140-gram and 180-gram vinyl is more common than ever, and so are 45rpm LPs. And I don’t recall, when I was shopping for new vinyl at record stores in the 1970s and 1980s, seeing stickers boasting that an LP was pressed at an elite plant, but I see them often now.

As you might expect, new jazz and classical vinyl is often of audiophile quality, but increasingly we see the same attention to detail with rock. And it’s not just the small record companies that are giving vinyl the care it deserves. In fact Warner

Brothers, one of the “big four” music groups, was ahead of the curve when it came to vinyl, and as general manager Tom Biery is quick to point out, quality has been essential to its vinyl campaign.

“We started getting into vinyl in earnest around five years ago,” he told me. “We really wanted to brand ourselves, we wanted to brand our acts, we wanted to brand our company as people who still cared about art and sound. In the age of the MP3 and compressed audio we wanted to let people know that there are guys around at big companies that still really care about the idea of dynamics and sound, and we had a lot of acts that really cared.”

“If we’re reissuing a record, we will dig deep to find the original master,” Tom continued. “Our last choice would always be to use a digital copy. If analog exists, we’ll use analog. We painstakingly listen to every test pressing, and you might say, ‘Doesn’t everybody?’ No they don’t. They’ll drop a needle here and drop a needle there and they’ll say that it’s approved. I will record music from a test pressing in high resolution 96/24 at home and then listen back with headphones to make sure that the vinyl test pressing sounds proper.”

The quality Warner aims for includes packaging.

“For Neil Young’s *Harvest* we wanted to find the exact paper that he used, but the paper is no longer produced, so we had to go and pay someone to make it,” Tom said.

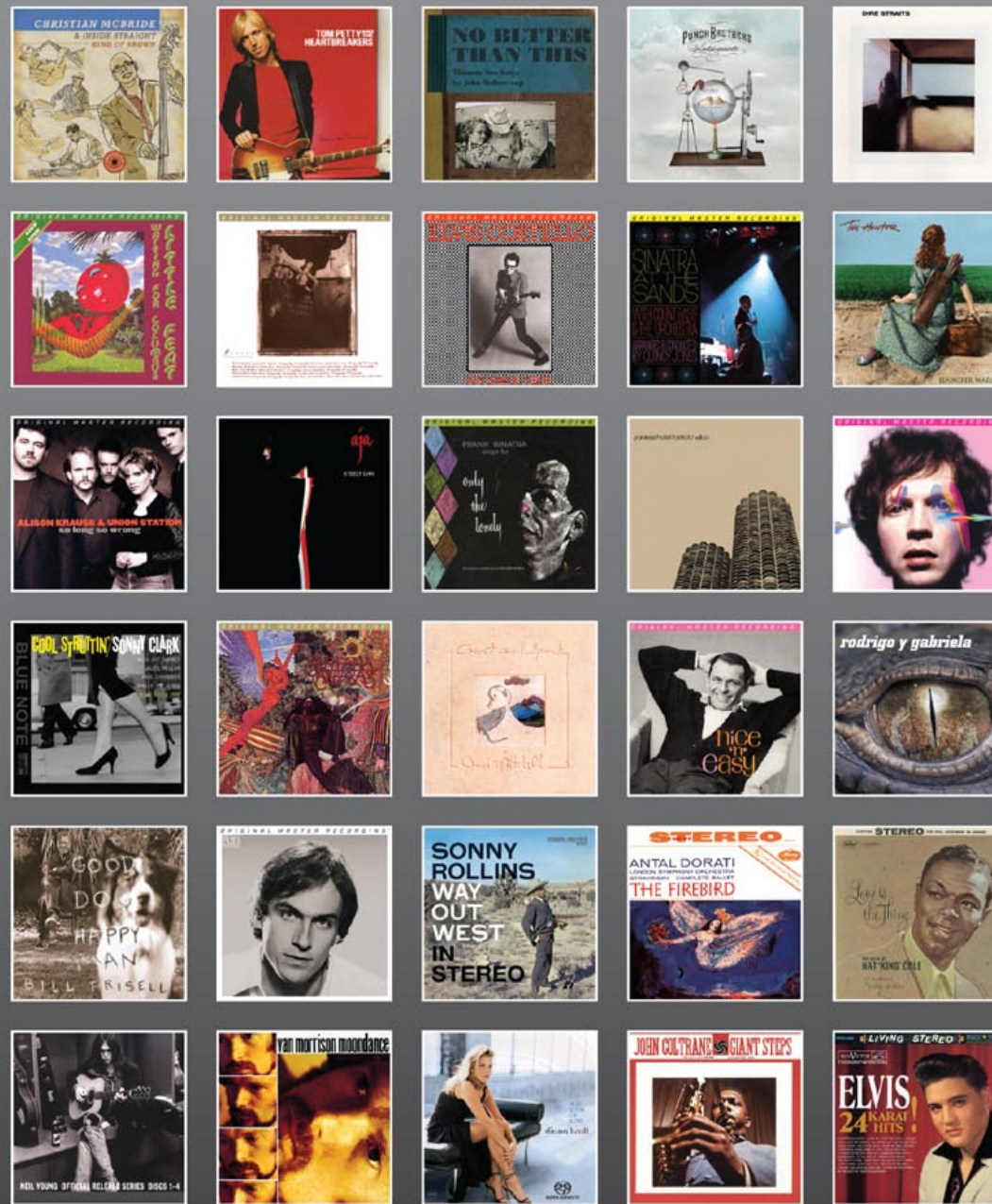
Apparently that wasn’t cheap, and in retrospect Tom wished he had passed that information along to record buyers. “We made one mistake with that—we didn’t tell the consumers why it cost ten bucks more than the other ones,” he said. “We should have let people know; we should have put



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## MUSIC - Vinyl Rules!

a sticker on there.”

Warner’s enthusiasm for records is readily apparent on its all-vinyl Web site, [becauseofsoundmatters.com](#), that along with selling records available in stores runs exclusive promotions. “We’ve given away test pressings on the site,” Tom said. “The Neil Young 180-gram box set was exclusive to the site. We did white label copies of Metallica and we sold them only on the site. Metallica didn’t even have them. And those went in like five minutes.” Apparently these efforts paid off; Warner now commands about 40 percent of the vinyl market.

### THE VIRTUES (AND FRUSTRATIONS) OF LIMITED RUNS

In the new era of vinyl there’s no such things as a blockbuster. The highest selling band in 2009 was Radiohead with 45,700 total copies, whereas in previous decades a popular new LP would sell millions of copies in a year. In 2008 nearly 400 LPs sold at least 1,000 or more copies, but that means that over 12,000 LPs sold 1,000 or fewer. Smaller runs are now the norm, and if a record goes out of print there’s no guarantee another pressing will come along to replace it, as Linford Detweiler from the band Over the Rhine learned the hard way.

“Once Over the Rhine realized that *Ohio* was going to be a double album, that raised the issue of gatefold vinyl, and we thought, wouldn’t that be amazing, and so we went for it,” Linford said. “It was 180 gram vinyl, and we had a really nice slipcase for it and some of Michael Wilson’s beautiful photographs with it. It was so nice to see Michael’s photographs on that scale.”

Nice, yes, but when Linford and his wife, Over

the Rhine’s lead singer Karin Bergquist, returned from a tour they discovered there was one detail they had overlooked. “Somehow in all of that I realized that we had sold all of these and I had forgotten to set myself aside a personal copy,” Linford said. “So now I’m left with the prospect of paying a hundred dollars or more for a copy.” Later this year Over the Rhine will release a record produced by Joe Henry, and there will be a vinyl version. When asked if he would set aside a copy this time, Linford laughed and said, “Definitely.”

To some extent limited runs have to do with supply and demand, but not completely, as I was reminded when I spoke to Michael Kurtz, who along with promoting Record Store Day was involved with a recent Beatles reissue. “We released last week through EMI The Beatles’ first reissues of the remastered recordings on vinyl with the 7-inch single of ‘Paperback Writer’ and ‘Rain,’” Michael said. “We had orders of 12,000 come in for that, but we only had 4,000 pressed because we don’t want these things to become so ubiquitous that it’s like who cares. We really want to keep them special.”

With the smaller scale comes a payoff for the music lover. “It’s not all about bean counting,” Tom Livingston explained about Sundazed Records. “We don’t have focus groups.” An alternative is spelled out in the company’s slogan, “Kinda like a record company, except fun and run by music lovers.” Fortunately that spirit seems much more prevalent in the vinyl world than it used to be. There’s more of a personal touch, and the fact that no one expects vinyl to dominate or even match other formats works in its favor.

## WHERE TO BUY VINYL ON-LINE

### • [acousticsounds.com](#)

Acoustic Sounds has a staggering quantity of both new and reissued vinyl; in fact, its catalogue of sealed vinyl, CDs, and SACDs is over 100 pages. Its house audiophile label, Analogue Productions, puts out both new and reissued recordings on vinyl.

### • [amazon.com](#)

Since launching its online vinyl store in September 2007, Amazon has played a substantial role in new vinyl sales.

### • [backtoblackvinyl.com](#)

This Web site represents the vinyl campaign of Universal Music Group (one of the “big four” music groups).

### • [becauseofsoundmatters.com](#)

The online music branch of Warner Brothers features high-quality vinyl and special promotions.

### • [better-records.com](#)

This company specializes in finding vinyl with exceptional sound quality. They play, clean, and evaluate the used records they sell and highlight the best-sounding of them (Hot Stampers). There’s a huge amount of commentary on the site to help guide you, and they also offer accessories and some equipment.

### • [ebay.com](#)

Along with selling everything else under the sun, ebay sells lots of new and used vinyl.

### • [elusivedisc.com](#)

Established in 1989, Elusive Disc sells both new vinyl and “out of print, hard to find (elusive) vinyl,” with an emphasis on audiophile pressings.

### • [losthighway.com](#)

This small and impressive label deserves special mention because every new release comes out on both CD and vinyl.

### • [musicdirect.com](#)

In their own words, “Music Direct sells audiophile hardware, audiophile music and analog gear”—as well as producing audiophile vinyl reissues on its own Mobile Fidelity label.

### • [redsparkmusic.com](#)

This UK website sells high quality vinyl.

### • [soundstagedirect.com](#)

Online store with more than 10,000 titles in stock.

### • [sundazed.com](#)

Classic, rare, and previously unissued recordings focus on the late sixties and early seventies.

### • [ttvjaudio.com](#)

While Todd the Vinyl Junkie is best known for their array of headphones and accessories, they also offer high quality vinyl from Mobile Fidelity Sound Lab, Box Star, Classic Records and many others, as well as turntables and electronics.

### • [vinyl-records.biz](#)

Good source of (mostly) used vinyl.

## MUSIC - Vinyl Rules!

### NEW VINYL AND THE INDEPENDENT RECORD STORES

In 1999 an independent record store opened to little fanfare in a neighborhood of Cincinnati called Northside, in a business district with lots of empty storefronts. At first Shake It Records ([shakeitrecords.com](http://shakeitrecords.com)) squeezed into about 700 square feet. Eventually it had a huge impact on Northside's business district and for that matter the entire neighborhood, especially after moving across the street to a building with 5,200 square feet. The bars, coffee houses, restaurants, and retail stores that have since opened on the same strip are thriving because of the foot traffic Shake It created.

And vinyl played a huge role in that. In fact, the entire basement of Shake It is now devoted to new and used vinyl, and every day it draws a crowd. Total vinyl sales, including new and used, is about 40 percent of overall sales, whereas ten years ago it was closer to 10 percent. The owner of the store, Darren Blase, is amazed at how much new vinyl is being created and how popular it has become. "Ten years ago new vinyl was ten percent of total sales," he said. "We started seeing it increase about five to six years ago. We still sell twice as much used vinyl, but we love new vinyl because the amount we make is close to the same." Blase also noted how strong the preference for vinyl is in cases where a choice exists. "Eighty percent of our jazz sales are new vinyl as opposed to CD," he said. "In fact, the *Blue Trane* LP outsells the CD ten to one."

Independent stores like Shake It are essential to the new vinyl renaissance. According to Nielsen soundscan, two out of every three new vinyl LPs are sold in independent record stores, but

Blase guesses the real figure is probably closer to 85 percent. As other retail outlets expand to the point where visiting their stores feels like entering an airplane terminal, the appeal of buying something in a store run by individuals as opposed to corporations only intensifies.

It's no wonder, then, that after only three years Record Store Day has become a huge success. On April 17th of this year Record Store Day was celebrated in more than 800 stores across America, many of which broke sales records. And as Michael Kurtz, a founder of the event, made clear, vinyl played a pivotal role in that. "The first year, we made about ten or fifteen pieces of vinyl," Michael said. "Here we are three years later at 2010 and we created almost 200 unique pieces for Record Store Day and it was probably close to 70 percent vinyl. Most of it was 45s, but we're going to try to have more ten inches and twelve inches in 2011, to take it in a totally different direction."

When asked about the vinyl market overall, Kurtz said, "It's exploding. You're talking about humongous growth. And the margin for artists, what they get paid for their art, is much higher for vinyl than it is for a digital track. So it's a win for everybody. It's one of the most positive things to come out of the music business in some time. It's a revolution. It's a *counter-revolution*."

Those are big words, but they ring true. With new vinyl the culture is such an improvement over business as usual that even if the people behind it were selling snow cones I'd still support it. As it turns out, it's something I like more—and apparently a lot of other people do as well. **tas**



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# David Chesky on HDtracks

## A High-Resolution Delivery Service

Andrew Quint

The first time I met David Chesky was at the 1997 Consumer Electronics Show in Las Vegas. One of the musician/producer's duties on that occasion was to show off to interested parties his record label's new 96 kHz/24-bit recording technology. Chesky appeared in the Alexis Park ballroom to guide me to the company's suite, muttering to himself that public relations was perhaps not his strongest suit. But, in fact, the compare- and-contrast demonstration that day—standard Chesky CDs vs the 96/24 version of the same program material rendered by a prototype DVD-Audio player—was extremely effective, and gave me new hope for the potential of digital encoding.

Thirteen years later, I'm meeting David Chesky again, this time on his home turf in mid-town Manhattan. Thirteen years is a long time on the audiophile space-time continuum, and much has happened on the digital audio front. SACD has established itself as a niche product, of interest mostly to classical music-consuming audiophiles; DVD-Audio has pretty much come and gone. Blu-ray may or may not have a future as a perfectionist music-only format. Sad to say, an ever-increasing percentage of consumers get their music as compressed, sub-CD-quality files via computer, smart phone, or whatever. But high-resolution downloads are beginning to get some real traction, and David Chesky is in the thick of it with HDtracks, the foremost source for audiophile-quality music via the Internet, as of late 2010.

"This has been a ten-year project for me," says Chesky. "I saw the demise of the record store. I always dreamed that, one day, when the Web was fast enough and we had the bandwidth, there'd be

a much better way to get music. Actually, it's better than the record store because, with HDtracks, you can listen to and read everything you want. When you walk into a record store and pick up a CD, it's just a cover, an abstraction. You don't know what's in there. You *think* you know, but the cover has to describe it. With HDtracks, you can listen to 30 seconds of each track. You can pretty much get the fidelity because our fidelity is 320 kbps for the samples—it's very high—so you can get on your computer speakers a sense of the soundstage and all that. You can get an idea if it's a good recording. If you want to be safe, you can download one track and listen to it; *then* you can buy the record."

Visit [HDtracks.com](http://HDtracks.com) and you'll find more than 150 available record labels, and that list is growing all the time. In evidence are well-established producers of SACDs, like PentaTone, Channel Classics, Harmonia Mundi, Chandos (and, naturally, Chesky's own label). But there are many, many others than can provide a CD-quality-or-better master for HDtracks to fashion



a download from, something superior to the heavily compressed 128 kbps MP3 files (of the same material) usually available from most commercial sites. In some instances, it's the musicians themselves who are pushing for placement on HDtracks. "The artists are telling their labels that they want to be on it," Chesky says. "It's an ego thing. They spend six months in the studio, they work hard, they spend hours slaving over equalization, space, reverb. They want people to *hear* all that. I know Peter Frampton approached us. He just said: 'I want you guys to put our record out.'"

What sources does HDtracks actually work from? "We get the masters from the record companies. We specify that, if it's a digital recording, it has to be native high-resolution. We don't like up-sampling; we don't allow it. We take *native* 96/24 or 88/24 and test it. In the case of a digital recording, we want the digital master. In the case of an analog recording, we specify how it should be transferred. We have our guidelines. We don't do the transfer, as those

tapes don't go out of those studios.

Take Verve, for instance. When we started a relationship with Verve, we explained what we were doing and it got their engineers excited because they get to hear their product as it was intended to be heard. They pull out the tape, they go through the splices, they clean everything, they try to match the original tape recorder it was recorded on, the original playback head configuration, the best set of cables, right into the best A-to-D converter and... boom...they make us a digital file."

How about DSD originals? "A lot of records that were put out as SACDs were not recorded in DSD—they were PCM. If that's the case, we get the original PCM master because we don't want to go PCM to DSD to PCM. We check for the source and if the source was PCM, we request the PCM master—88/24, 96/24, whatever. If it was a DSD master, we convert it to 176kHz and then we down-sample to 88/24 because the DSD world is based on a 44.1 concept. We want to keep the math correct. In the case of a DSD recording, even though 96/24 is a higher sampling rate than 88/24, the math works better for 88/24, and is going to flesh out the music better.

After doing this for a while, we've realized that the most important thing is not the sampling rate, it's the conversion, and to keep the math correct. So with 192 kHz recordings—Chesky's native rate is 192—we'll go to 96. Reference Recordings is 176—we'll go to 88. DSD recordings go to 176, then 88. That's how we convert things over."

Chesky continues, "We're trying to preserve the record company's intentions. We're a delivery service. We say 'Look. We're going to deliver this to a public that's going to appreciate the high resolution. We want to squeeze, like a sponge, every ounce of data we can get out of this. This



## MUSIC - David Chesky on HDtracks

is what we suggest to you.’ The labels get it, and they work hard. They send us what they feel is their best product. We want to be a neutral platform to deliver a high-resolution resource.”

David Chesky is an active performer and composer, successful in both jazz and classical spheres. He’s released several small group jazz recordings that have been extremely well received and his bassoon concerto garnered a Grammy nomination for Best Contemporary Classical Composition a few years back. It will surprise some that HDtracks pointedly does *not* employ any form of Digital Rights Management (DRM). Chesky observes: “Piracy is not predicated on sound quality. We find that people that pirate want the *worst* quality. Secondly, we have the best DRM in the world: it’s called the “large file.” It’s

too big to send. It’s too big to share. An average hi-res 60-minute album in FLAC can be around a gigabyte. What do you do with it? It’ll cost you money to send it somewhere. It’s sort of like a built-in DRM.” So Chesky never considered any sort of “watermarking,” something that could affect the sound of downloads. “If you’re going to buy a file, it’s your file, you can play it on anything. It’s not like I’m selling pop records. The content we sell and the customers we sell to—it’s not a market that’s going to share things.”

HDtracks has material available in a number of formats, including AIFF and 320 kbps MP3 files, but the recordings that will be of the greatest interest to audiophiles are, of course, the hundreds of 88/24 and 96/24 FLAC files for sale. Apple’s iTunes isn’t compatible with the FLAC format, so it will be necessary for

listeners who use that media player to download one of several free third-party “plug-ins,” such as Winamp, Media Monkey, Songbird, or Vox. Once this is in place, the first time you buy an HDtracks file, a folder is created on your computer’s desktop and all subsequent purchases are routed there. You’ll require a USB DAC or, if like most audiophiles, you already have a DAC you are happy with that has non-USB digital inputs, a USB interface that will allow you to bypass your computer’s soundcard and get the unadulterated data stream to your audio system.

I downloaded about 25 full-length programs from HDtracks—does the term “album” really have any meaning anymore?—for critical listening. The material ranged from classical to jazz (Miles Davis, Stan Getz, Al Di Meola) to rock (Vampire Weekend, Peter Dinklage, Alison Krauss/Robert Plant). The process is really pretty fast: six programs of about an hour’s duration each took an hour and a quarter. I have an iMac with a 2.4 GHz Intel Core 2 Duo processor and used a Halide Bridge, configured with a coaxial termination, to get the data to my Anthem D2v processor. For much of the material, I had silver disc versions on hand for comparison. I played these on an Oppo BDP-83, via its HDMI input into the Anthem. Comparing the CD and HDtracks versions of “Wyoming 307” from Time for Three’s *3 Fervent Travelers* (classical/“fierce folk” fusion

performed by a trio of Curtis Institute-trained string players—reviewed Issue 200), the download won hands-down. The violin sound was smoother and more involving; there was a better sense of bow grabbing string and more snap to plucked string bass notes. No surprise here—the download is 88.2 kHz/24-bit as opposed to the Redbook CD released on the E1 Entertainment label.

These surprises came when comparisons were made with high-resolution plastic discs. Yakov Kreizberg’s reading of the

Dvořák Symphony No. 6 with the Netherlands Philharmonic sounds very, very good on a PentaTone SACD—but it manifests warmer string sound and a bit more transparency on the 88/24 HDtracks version. The sound of the keyboard instrument on David Chesky’s own Piano Concerto (from the *Urban Concertos* SACD) has more body and the percussion more sparkle on the download. And the giddy finale of Benjamin Britten’s *Simple Symphony*, as presented by 2L on a music-only Blu-ray disc, fared better with the online source. The Trondheim Soloists here have been recorded very immediately: it’s an aggressive, if invigorating recording. The 96/24 download is more relaxed and natural sounding—even though the stereo program on the BD is theoretically higher resolution, 192 kHz/24-bit.

So the downloads do sound better than their disc-bound counterparts.

Why should that be? “Digital has a bad rep,” says Chesky. “It’s not digital; it’s the *execution* of digital.” According to David Chesky, when audiophiles complain about many of the perceived deficiencies of non-analog sound “we’re not hearing digital, we’re hearing the artifacts of the silver disc. To get the disc out of the way, without the error correction and without the jitter, that’s the way it was intended. When I burn CD-Rs and bring them home they sound good. But when I take home a USB drive and plug it into my hard drive, all of a sudden the quality of the entire system goes up 25%. Everything locks in. It’s smoother, the resolution is increased, and you hear low-level detail. Things don’t sound ‘digital.’”

Chesky doesn’t think physical media are going away anytime soon. “When the demand dies, it will go away,” he says. “Right now, there are a lot of markets that like physical discs. Audiophiles are older, they feel comfortable with it. Doing downloads is easy but it takes a few minutes to figure it out. Once you figure it out, it’s gravy. But somebody grows up holding something in their hand... it’s tactile...they’re used to it.” Still, the increasing visibility of good-sounding downloads could be enormously important to the future of recorded music genres with relatively small constituencies. Symphony orchestras have a limited ability to “make records” these days, if they have that ability at all.



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## MUSIC - David Chesky on HDtracks

The accelerating phenomenon of Internet-accessed music could overcome the grim economic realities of recording large-scale symphonic repertoire by focusing on live concerts. HDtracks, for example, offers a slew of superb Philadelphia Orchestra performances that are available *only* as downloads, including several that are high-resolution. Surround sound downloads? Not yet, Chesky says. “We may do that. Every SACD that we make at Chesky Records is multichannel. Yet I don’t think that 0.01% listen in multichannel. To offer it now when there’s no real demand—it eats up so much bandwidth—it’s just not viable. We want to get two-channel up and running and get a strong customer base. We could do multichannel tomorrow. But I find the audiophile world is a two-channel world. Movies—that’s a multichannel world—but audiophiles like two speakers.”

The biggest challenge may be to get younger listeners, undaunted by the technology involved with computer-based music, to view high-resolution downloads as “worth it” in terms of the additional cost and hard drive space required. Moving into a more philosophical frame of mind, David Chesky observes, “This is not an HDtracks problem or an audiophile problem—it’s a society problem. People are complacent and don’t really care about sound quality. When people *listen* to music, they’re jogging or cooking dinner, and music becomes background. When you listened to a CD, you had to listen to it. I wonder how many people listen today, attentively. I don’t like this thing where people say ‘*It sounds good enough.*’ That’s a cop-out. We need the same standards at home that we have in a concert hall. Somebody walks out on stage and pulls out a four-million-dollar Stradivarius. They’re listening to it for the *tone*. Our objective is, if you

don’t live next to Carnegie Hall, you should have the same experience. Why should we reduce that four-million-dollar Stradivarius to a plywood violin? The poetry of music is the tone. I can pick up a score and read it, but you hear Sonny Rollins or Miles Davis—it’s their tone. It’s the physicality of the tone that moves us. We want to preserve that, because the notes are just the notes.”

When it comes to meeting the needs of audiophiles, Chesky’s has been an unusual journey. After all, he and his brother Norman started Chesky Records in 1986 by reissuing Golden Age classical recordings on LP. Shaded Dogs. *Scheherazade*. About as traditional High End as it got. A quarter century down the line, here he is leading a cutting-edge enterprise, working hard at staying relevant to music consumers of all stripes, though devoted as ever to perfectionist audio.

David Chesky sees no discontinuity here, none at all. “Our mantra is very simple: whatever we do, let’s try to do it the best we can, with the best resolution. We’re going to be reissuing some historic classical, from the Everest catalog. We’re taking these Bert Whyte recordings and, instead of releasing them on vinyl, we’re doing them as 96/24 downloads. I have to tell you something. When I listen to these records, I sit there and say ‘This was done in 1958!’ I’m humbled by them. These guys were *brilliant* back then—they really understood the whole thing. It’s the same journey; we’re just using a different platform.” **tas**

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# Musing on the Demo Disc

Wayne Garcia

Roaming the packed halls of the California Audio Show on the last day of July—both surprised and relieved by the Bay Area’s remarkably robust audiophile population—I found myself peppered by a variety of music selected to show, and show off, the strengths of each exhibitor’s system. As snippets of *The Three Cornered Hat*, Stevie Ray Vaughan, Patricia Barber, and *Witches’ Brew* made their ways in and out of my consciousness, I couldn’t help but reflect on all the shows I’ve attended over the years, as well as my own time on the retail floor. I thought of the many wonderful pieces of music I first heard at shows, or that an excited customer had brought in to share with me, as well as some truly wretched fare that gets played over and over again simply because the recording performs aural magic tricks with stereo systems. Which pretty much defines the two schools of thought regarding what constitutes “demonstration-worthy” material.

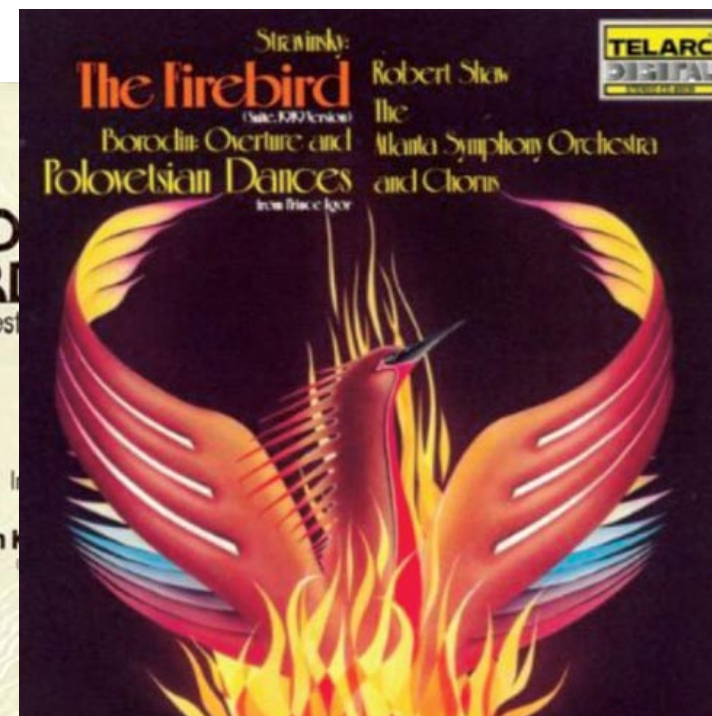
One is that reasonably well-engineered recordings of music that engages both the intellect and the soul will move us in ways we’ve never experienced before. That we’ll be so knocked over by hearing well-loved recordings of The Beatles or Sinatra, Monk or Mozart, that we’ll want to own the gear that gave us that “Wow, I’ve never heard it like that before!” musical experience.

The second school is one that prizes sound above music, leaping from sonic high to sonic high like an addict seeking that next fix. (You’ll find their latest discards on Audiogon at great prices.) This group would rather listen to, say, Amanda McBroom crooning about Dorothy’s post-Oz years than to Nina Simone’s “I Loves You Porgy,” simply because Sheffield Lab’s *Growing*

*Up In Hollywood Town* was “better” engineered than Simone’s stunning debut, *Little Girl Blue*.

But let’s be clear: pretty much everyone reading—and writing for—this magazine is made up of some combination of this, *ahem*, witches’ brew. So while admitting that I, too, have a foot in both camps, what follows is a personal musing on the audiophile demonstration disc—from the good, to the bad, to the ugly.

My own lure into the world of better—if not necessarily good or even high-end—stereos began when I was twelve. Up until that point, the records I played, or heard at friends’ houses, were spun over some variation of the portable “suitcase” design, wherein the speakers latch on and off a main unit housing the record player



and amplifier. On these, but not on my parents’ Admiral console rig, which was reserved for their collection of Nat “King” Cole, Sinatra, Herb Alpert, and other *Mad Men*-era favorites, I repeatedly played my growing collection of Hendrix, Stones, Beatles, Dylan, and local bands such as Grateful Dead, Moby Grape, the Airplane, Quicksilver, Big Brother, and, gulp, Blue Cheer. One day my older sister let me tag along on a visit to her boyfriend’s apartment. From outside his window I could already hear the Stones’ *Get Yer Ya-Ya’s Out!* playing at volumes I couldn’t get out of my suitcase system—even when I was in the same room with it. Entering, I saw two enormous horn speakers—the guy’s homemade take on Altec’s Voice of The Theater—a Harman-Kardon receiver,

and, if memory serves, a Garrard turntable with a Shure cartridge. I’m sure those speakers weren’t great, but the music (if not the recording) sure was. As the record segued from “Honky Tonk Women” to “Street Fighting Man,” with Keith Richards and Mick Taylor trading power chords like Harvey Keitel and Keith Carradine trading saber blows in *The Duellists*, audio’s narcotic effect had already taken hold.

It has been said that the music we hear in our youth more or less defines our taste from then on. I hope that kind of musical life-sentence isn’t really true. Although I certainly still enjoy a good romp with the Stones and other 60s bands now and again, one of the things that I love about music is that, no matter how much we know,



## MUSIC - Musing on the Demo Disc

there is so much more that we don't know, leaving plenty of music—in all genres—to discover.

Still, those early influences remain powerful. Thankfully, the so-called demo discs I was exposed to as a teenager, while not always things I remain drawn to, were at least pretty eclectic. I remember first hearing Magnepan Tympani 1-U's with the Mehta-conducted *Turandot*, Cat Stevens' "Morning Has Broken," as well as a Sheffield Lab's *The King James Version*—perhaps the first record my mother and I could agree on. I recall the ticking clocks and clanging chimes from Pink Floyd's "Money" the first time I auditioned Dahlquist's DQ-10, and the purity of Janet Baker's mezzo singing Mahler's *Kindertotenlieder* over Rogers LS3-5a's.

Things changed somewhat once I started selling gear at a high-end audio store, where each salesperson had his own philosophy and approach. The owner, being a strong believer in controlling a potential customer's initial impression, always chose the first music to play. These recordings were—and remain—recognized standards of sonic excellence. Among them were other Sheffields—Dave Grusin's *Discovered Again*, Lincoln Mayorga's *Missing Link*, and, need I add, *The Sheffield Drum Record*; the Proprius label's ubiquitous *Jazz at the Pawnshop* and *Cantate Domino*; and

early Telarc's.

The necessary overexposure that goes with the job certainly played a role—I quickly developed the habit of leaving the demo room during many of these tracks—but honestly, thinking about it now, I can't help but wonder how many "regular" people (i.e., non-audiophiles) we scared away or simply turned off by these sonically impressive but musically questionably choices. Although my approach was typically to let the customer either play his own music first, or choose from our vast collection, which contained many wonderful sounding major label releases, I certainly foisted many an audiophile label on innocent customers—because I thought it would elicit the desired effect.

Then there were the rock hits of those years that, as I've written elsewhere, in some cases I can still barely bring myself to play. It's only recently I've been able to stomach Pink Floyd's *Dark Side Of The Moon* and Dire Straits' *Love Over Gold*. And though they were never favorites, don't even get me started on Supertramp's *Crime of the Century* or Fleetwood Mac's *Rumours*.

When I started reading this magazine, Harry Pearson's "Super Disk" list began making its way into my personal collection. And while there are many great classics to be found there, a lot of the recordings,

like *Witches' Brew*, or *Music for Bang Baaroom and Harp*, is not the sort of stuff I, at any rate, find myself eager to revisit.

### Isn't this the part where you usually start weeping?

Over the years at CES, and especially once I hooked up with this magazine's Executive Editor, Jon Valin—with whom I founded *Fi Magazine* in 1994—I started to not only eschew the audiophile faves, but, along with JV, to bring along a much wider range of music. As I did at that recent Cal Audio Show, he and I used to hit the halls together, at first bounding from room to room, but soon dragging with fatigue. Unlike me, who for the sake of traveling light only brought CDs to Las Vegas, Valin—ever the analog die-hard, bless his soul—would carry around a handsome leather bag of his favorite LPs and CDs. Looking back, I guess I should've at least volunteered to share the load.

JV and I made an unusual pair back then. Not only because we brought sometimes esoteric—and quite disparate—records to play, but also because as we traipsed from room to room we'd often listen to three or four tracks from our current selection—in their entirety (brief selections are the

norm at shows). Much to the chagrin of some exhibitors, rooms would sometimes clear out after five or more minutes into, say, Prokofiev's gorgeous, if dark, Sonata No. 1 for Violin and Piano. Or, as I once did, play the entire 16-minutes of Neil Young's "Cowgirl in the Sand" (from *Live at The Fillmore East*), prompting MBL's Jürgen Reis to deadpan in German-accented English, "The guitar solos are too long."

For me, the ideal demonstration disc—be it for reviewing or show purposes—combines both great music and great sound, be it something obscure from a major label, like Decca's remarkable Gerhard LP, *Libra*, *Gemini*, *Leo*, or relatively mainstream music from an "audiophile" label such as Reference Recording's recent (and

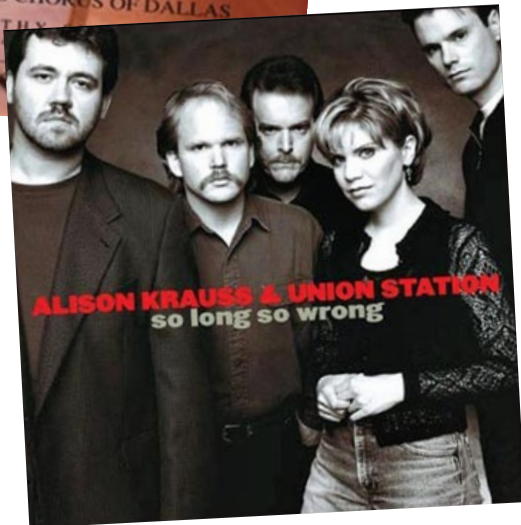
brilliant) *Britten's Orchestra*.

Ultimately, I want my music and my system to move me. Which reminds me of another anecdote from my Vegas days with JV. One day a third traveler joined us. As we three went from room to room, Jon would repeatedly ask to hear the lovely Andante movement of Barber's Violin Concerto. After he'd heard this track for perhaps the tenth time that day, our friend, halfway through the eight-minute movement, turned to Mr. V. and said, "Isn't this the part where you usually start weeping?" **TAS**



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# The Absolute Sound Guide to Audiophile Demo Discs

In the following lists TAS' equipment reviewers recommend the diagnostic or "demo" recordings they've found especially useful for evaluating audio systems. It goes without saying that these recordings are also worthwhile and often outstanding for their musical value as well, but we've selected them mainly on the basis of their sonic virtues and their utility in revealing how well audiophile gear accurately reproduces those virtues.

Our recommendations are organized as two annotated lists—of ten analog and ten digital recordings—offered by each of our seven contributors. These recommended demo discs are, we should add, the *current* choices of our contributors. As with any music-loving audiophile, the list of favorite recordings (whether demo or otherwise) evolves over time; new discoveries are always being made, and old standbys supplanted. So what we present here is a "snapshot" of our reviewers' recommended demo discs as of late 2010.

We also need to point out that not every demo disc listed is now nominally "in print," though most if not all are reasonably accessible to those willing to search through the various sources, both on-line and local, of deleted recordings.

## NEIL GADER ANALOG

1. **Jennifer Warnes: *The Hunter*.** (Private/Cisco). The follow-up to Warnes' FBR offers crisp percussion cues, solid bass throughout—but especially during "Way Down Deep"—and a surprise chamber quartet on the title track.
2. **Atlanta Brass Ensemble: *Sonic Fireworks*.** (Crystal Clear). Watch out below! This direct-to-disc features full-bore brass and high-caliber percussion that will rock or potentially unhinge your system. Listen for the specificity of the tympani strikes deep in the stage during Copland's *Fanfare*.
3. **Holly Cole: *Temptation*.** (Alert/Classic). Singer Holly Cole's tribute to the Tom Waits' songbook will reveal system weaknesses

in every area from low-level resolution and slovenly transients to low bass and soundstage width. The sonics of the brass ensemble during "The Briar and the Rose" can sound synthetic or naturalistic depending on a system's resolution.

4. **Tom Waits: *Mule Variations*.** (Anti/Epitaph). Waits' cavernous vocals, as well as the recording's many "found sound" ticks and tappings, will expose any lower midrange shyness or deficiency in low-level resolving power in a stereo system.
5. **Alison Krauss & Union Station: *So Long So Wrong*.** (Mobile Fidelity). Led by ethereal songbird/fiddler Krauss, the natural acoustics and intricate harmonies of the bluegrass, roots, and mountain songbook don't get much better

treatment than on this disc.

6. **Steely Dan: *Aja*.** (MCA/Mobile Fidelity). Rock-jazz perfection. With its streak of nihilism, A-list musicians, and the vivid back-up vocals of Doobie Brother Michael McDonald, this dynamic, punchy, impeccably layered studio disc is one that I often return to.
7. **Metallica: *Nothing Else Matters*.** (Vertigo 45rpm). The hit ballad from a seminal metal band is a minefield and an obstacle course for a system in that it sports wide dynamics, Ulrich's massive drumming, and Hetfield's scorching vocals.
8. **Beethoven: *Ninth Symphony*.** Chicago, Solti (Decca). Showing the Chicago at its finest and most naturalistic, this Ninth exhibits a broad enveloping soundstage with convincing

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depth and realistic image relationships. A particular feature is the accurate stage position of the brilliant soloists during the finale's "Ode to Joy."

**9. Louis Armstrong: *St. James Infirmary*. (Classic 45rpm).** In some circles considered a near-perfect recording; Armstrong's vocal is haunting and immediate. Listen closely to the trombone on the left: most systems can't handle its heft and explosiveness.

**10. Norah Jones: *Not Too Late*. (Bluenote/Classic).** A collection that constantly surprises with its buried offbeat textures, selection of unusual and very-low-level instrumental juxtapositions, and warm, airy background vocals.

### DIGITAL

**1. Mussorgsky, Glinka: *Piano Pieces*. Evgeny Kissin (RCA).** For solo piano, I never fail to listen to Glinka's *The Lark*, noting overall balance, soundboard resonance, smearing during arpeggios, or upper-octave stridency. If I can't hear the damping of the felt hammers, something's amiss. And, near the performance's end, listen for the closing stage door.

**2. Shelby Lynne: *Just A Little Lovin'*. (Lost Highway).** A rare minimalist pop recording of mostly Dusty Springfield covers—the imaging should be wide open, guitars and percussion highly naturalistic. It's overly burdened with reverb but a broad spaciousness and warmth pervades Lynne's melancholy vocals.

**3. Jen Chapin: *ReVisions, Songs of Stevie Wonder*. (Chesky SACD).** This spare, quirky, and ultimately exquisite collection of Wonder covers for voice, baritone sax, and acoustic bass provides a real workout for lower mids and upper

bass, transients, and spatial relationships.

**4. Tchaikovsky, Saint-Saens, Bruch: *Kol Nidrei, etc.* Pieter Wispelwey (Channel Classics SACD).**

As naturalistic as recordings come, with rich dimensionality and deep soundstage information. If a system is firing optimally, I can hear a properly miked cello, darkly resonant and alive within the horseshoe of the orchestra.

**5. John Rutter: *Requiem*. John Rutter and The Turtle Creek Chorale (Reference Recordings).** A

recording of deep acoustic space, an unearthly organ, and a richly detailed assemblage of voices make this a challenging disc for revealing minutiae as well as venue scale and scope.

**6. Clark Terry: *One On One*. (Chesky SACD).**

This collection of trumpet/piano duets really captures the brass and glow and immediacy of Terry's horn (not to mention his squeaky chair), as well as the unique touch, timbre, and tonality of each guest pianist.

**7. Tchaikovsky, Korngold: *Violin Concertos*. Anne Sophie Mutter (DG SACD).** A recording that

gets the sound of the violin just right—presenting its resonant body and also its bite, with warmth as well as electricity all bound up in Mutter's virtuosic performance.

**8. The Police: *Synchronicity*. (A&M SACD).** These prog-rock hits are filled with swimming phase-laden guitar effects and Stewart Copeland's rich polyrhythmic percussion—dynamic challenges in both the micro and the macro.

**9. Tierney Sutton: *Something Cool*. (Telarc SACD).** Torch jazz-singer Tierney and her cabaret-quartet accompaniment present a feast of detail and rhythmic liveliness and jump. Loaded with high-velocity dynamics, but listen also to the intimate "Alone Together" for its brilliant voice/

bass duet.

**10. Jennifer Warnes: *Famous Blue Raincoat, 20th Anniversary Edition*. (Shout).** The songs of Leonard Cohen are exquisitely rendered in this remastering. A terrific high-resolution vocal demo disc; the bonus track "If It Be Your Will" beautifully exemplifies the transparency of Warnes' singing.

### WAYNE GARCIA

#### ANALOG

**1. Bach: *Sonatas and Partitas*. Nathan Milstein, violin (DG).** I like this LP's harmonic complexity, dynamic nuance, rhythmic expressiveness, and sense of "bloom"—or the feeling of the instrument's body of air expanding and contracting in volume within a space.

**2. Ry Cooder: *Paris, Texas*. (Warner).** As still as a desert landscape, Ry Cooder's soundtrack shimmers in this atmospheric recording of various guitars, piano, and sound effects. And Harry Dean Stanton's vocal on "Cancion Mixteca" will bring tears to your eyes.

**3. Mario Davidovsky: *Synchronism No. 6*. Contemporary Music Group (Turnabout).**

*Synchronism No. 6* is a delightful study for piano and an array of electronic blips, bleeps, and burps. The recording is airy and transparent, and excellent for testing transient speed, soundstage width, and imaging precision.

**4. Ella Fitzgerald: *Let No Man Write My Epitaph*. (Verve/Classic 180-gram).** This warm and intimate view of Ella with only piano accompaniment highlights her pure, creamy voice. It also has a fine sense of spaciousness and Ella's rhythmic interplay with pianist Paul Smith.

**5. Lightnin' Hopkins: *Goin' Away*. (Prestige/Analogue Productions 45rpm, 180-gram).** About

as immediate sounding as the blues gets, this upfront and airy recording features Lightnin' Hopkins with just bass and drums; his haunting vocals will send shivers down your spine.

**6. Led Zeppelin: *Led Zeppelin*. (Atlantic/Classic 180-gram).** An unusually coherent rock recording, Zeppelin's debut has intense transient attacks, rich, thick textures, stinging guitars, throbbing bass, great overall clarity, and wonderfully sensory, if not the deepest, bottom-end wallop.

**7. Thelonious Monk: *Monk's Music*. (Analogue Productions 45rpm, 180-gram).** One of Monk's greatest delivers the remarkable sense and convincing size of a small ensemble in a studio. With a stunning "thereness," huge sense of space, dynamic impact, and tonal naturalness, this one smokes.

**8. Frank Sinatra: *Only The Lonely*. (Capitol/Mobile Fidelity 180-gram mono).** MoFi's recent reissue of what is arguably Sinatra's finest is like peeking into a session with the Nelson Riddle orchestra. The airy, deep, beautifully detailed mono presentation tracks every nuance of this master's unmatched phrasing.

**9. Stravinsky: *Petrushka*. Ansermet (Decca/Athena).** The Third Tableau is a terrific challenge to a system's ability to layer a very deep stage, as well as convey the air around instruments, their tonal and textural richness, dynamic range, and articulative transients.

**10. Wilco: *Yankee Hotel Foxtrot*. (Nonesuch, 180-gram).** I use "Jesus, etc." to suss out a system's ability to draw detail from a rather densely textured mix, allowing the clarity of the main and backing vocals, as well as the bass line, to come through.



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### DIGITAL

**1. Barber: *Violin Concerto*.** Stern, New York Philharmonic (Sony SBM CD). Credit Jonathan Valin and all those CES demos for exposing me to a CD of exceptional air, soundstage detail, dynamic sweep, and tonal beauty. Stern's gorgeous playing of this modern-romantic concerto will leave you breathless.

**2. Beck: *Sea Change*.** (Mobile Fidelity/Interscope UDCD). Mobile Fidelity's beautifully realized edition of *Sea Change* reveals a subtle studio masterpiece: immediate, delicate, detailed, and atmospheric, with noteworthy clarity, texture, and a heretofore-buried dynamic range.

**3. Britten's *Orchestra*.** (Reference Recordings HDCD). An instant classic of the recording art, RR's collection of Britten's orchestral music is breathtakingly airy, with magnificently convincing soundstage and imaging, superlative low-level detail, wide dynamics, and persuasive sense of bottom-end heft.

**4. Jeff Buckley: *Live at Sin-é*.** (Columbia/Legacy CD). Check out "Hallelujah" for the realistic impression of a lone man with his Fender Telecaster and Twin Reverb in a small club. Amazing harmonic nuance, with the most natural of all electric guitar/amp sounds.

**5. Sonny Clark: *Cool Struttin'*.** (Blue Note/Audio Wave XRCD). Digital's answer to Music Matters' superb Blue Note 45rpm LP reissues (and likewise produced by Joe Harley), *Cool Struttin'* is among the first of four releases since Elusive Disc took over. Prepare to be astonished.

**6. Grateful Dead: *Fillmore West 1969*.** (Rhino). This remarkable live set features a notably upfront and present feeling of a rock band in concert, with great clarity, superb bottom-end weight, and

textures as thick as the pot smoke that surely lingers on some 40 years later.

**7. Emmylou Harris: *Wrecking Ball*.** (Asylum HDCD). Daniel Lanois' atmospheric production of this superb album highlights the ring of a jumbo acoustic, the drop-dead weight of a kick drum, the subtle scratch of electric pickups, and especially Harris' otherworldly soprano.

**8. Ligeti: *Le Grand Macabre*.** Salonen (Sony). Ligeti's grim comic opera recorded live in Paris delivers a remarkably realistic "you-are-there" experience, with a palpably energized sense of air and superb transparency, as well as detail and dynamic snap that suck you in from the first bars.

**9. Mahler: *Symphony No. 2*.** Tilson-Thomas (SF Media SACD). This stunning SACD has it all—a huge, deep, and airy stage, amazing presence, fabulous detail, whisper-to-thunder dynamic range, bass response to raise the dead, a huge orchestra and chorus, and mezzo-soprano Lorraine Hunt-Lieberson.

**10. Ravel: *Gaspard de la nuit*.** Argerich (DG Originals). Argerich at her poetic best, this ethereal recording floats dreamy harmonic clusters and delicate tonal shadings combined with near-orgasmic dynamic explosiveness.

### ROBERT HARLEY

#### ANALOG

**1. Bill Evans: *Quintessence*.** (Fantasy/Analogue Productions). The 45rpm remastering of this wonderful record is particularly revealing of low-level micro-transient detail in the subtle brush work of Philly Joe Jones, especially on the beautiful Thad Jones composition "A Child is Born."

**2. Santana: *Abraxas*.** (Mobile Fidelity). When

a system is right, the percussion has a life and vibrancy that make you think it was recorded yesterday.

**3. Return to Forever: *Romantic Warrior*.** (Columbia). Stanley Clarke's bass figures and Lenny White's big floor tom punctuation on "Sorceress" are as deep and full in the bottom end as it gets. Any bass rolloff or lack of bass weight robs this music of its unusual rhythmic power.

**4. James Newton Howard: *James Newton Howard & Friends*.** (Sheffield Lab). Simply the most realistic recording of a drum kit—before or since. Massive dynamics, particularly the snare drum, reveal amplifier and loudspeaker transient limitations.

**5. Frank Sinatra: *Nice 'n' Easy*.** (Mobile Fidelity). This superb remastering reveals changes in a component's spatial perspective in the relative forwardness of Sinatra's voice. When everything is just right, Sinatra is upfront yet with an easy relaxation.

**6. Sonny Rollins: *Sonny Rollins*.** (Blue Note/Music Matters). Another 45rpm gem from Music Matters, *Sonny Rollins* is an acid test for tonal purity and lack of grain. On the best systems, Rollins' tenor has a rich, buttery warmth.

**7. Gary Burton: *Like Minds*.** (Pure Audiophile). This terrific two-disc set with Chick Corea, Pat Metheny, Roy Haynes, and Dave Holland has an atmospheric presence and sense of spontaneous music-making that are diluted by all but the best components. Lesser components tend to make the music less "alive."

**8. Victor Feldman: *Secret of the Andes*.** (Palo Alto Jazz). Hubert Laws' flute on "Valentino" has a purity of timbre that instantly reveals any grain

added by the audio system. This LP is also a great test of bass dynamics (Abraham Laboriel's bass has a percussive quality), detail resolution in the layers of Latin percussion instruments, and rhythmic drive.

**9. Handel: *Water Music*.** (Harmonia Mundi). This excellent recording (by the great Peter McGrath) conveys great delicacy of timbre in the period instruments, a palpable sense of air between the instruments in the smallish acoustic, and a lilt in the Bourée, all of which are easily diminished by less than stellar electronics.

**10. Thad Jones: *The Magnificent Thad Jones*.** (Blue Note/Music Matters). This mono 45rpm reissue is notable for the golden burnish of Jones' trumpet, which can sound hard and edgy with some cartridges, electronics, and speakers, or overly soft and lacking presence with others.

### DIGITAL

**1. Vassily Primakov: *Chopin Mazurkas*.** (Bridge). An astounding recording (and performance) that shows any brittleness in the midrange and treble, etch in transients, or diminishment of the acoustic space.

**2. Stanley Clarke, Al DiMeola, Jean-Luc Ponty: *The Rite of Strings*.** (Gai Saber). This mostly acoustic album, mixed through a Messenger preamp, is particularly revealing of grain (on the violin), treble etch (in the acoustic guitar), and flabby bass (on Stanley Clarke's superbly recorded instrument).

**3. Arturo Delmoni: *Bach, Kreisler, Ysaye*.** (Water Lily). One of the most beautiful solo violin recordings ever, this disc exposes any treble brightness in loudspeakers and upstream components. The delicate sense of air around

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the instrument can be truncated by jitter in CD players and DACs.

**4. Gordon Goodwin's Big Phat Band: *XXL*.** (Silvertone). This disc of innovative big-band music with a contemporary feel reveals a system's ability (or lack thereof) to resolve individual instrumental lines during complex passages as the various sections play in counterpoint to each other. Also revealing of dilution of tone color, heard as a reduction in vibrancy in the horn section.

**5. John Rutter: *Requiem*.** (Reference Recordings). With the most spectacular sense of space captured on disc, this is an acid test for evaluating a component's preservation of low-level detail that contributes to the reproduction of the lush acoustic. Also a test for very low bass; the organ pedal points will pressurize the room if your speakers extend low enough.

**6. Rachmaninoff: *Symphonic Dances*.** (Reference Recordings). This disc is particularly revealing of how well the system resolves gradations of tone color, which affects your ability to follow disparate musical lines. Also a good test of low-level resolution in the barely audible string-section entrance midway through the "Lento Assai" movement. Listen to this on HRx at 176.4kHz/24-bit and your jaw will drop.

**7. Rodrigo y Gabriela: *Rodrigo y Gabriela*.** (ATO Records). These two flamenco-influenced acoustic guitarists play with amazing speed and precision, revealing either transient etch on one hand, or slowness and lack of resolving power on the other. A great test of how fast your loudspeakers can start and stop.

**8. James Taylor: *Hourglass*.** (Columbia). This SACD has a wonderfully natural sound that reveals a system's overall perspective in the closeness

of Taylor's voice, and is also a test of deep bass impact in the humongous tom fill toward the end of "Gaia."

**9. Joey DeFrancesco: *Part III*.** (Columbia). This fabulous sounding disc by today's leading exponent of the Hammond B3 contains some intricate pedal work at very low frequencies. Your system should resolve the individual pitches, and also be agile enough to follow DeFrancesco's fleet footwork.

**10. Mickey Hart, Airtio, Flora Purim: *Dafos*.** (Rykodisc). Percussion doesn't get any bigger than this; the track "The Gates of Dafos" features a 25' circular drum frame that is dropped in a large acoustic to portray the "Great Sound of Dafos." Don't try this track on mini-monitors; this is the ultimate dynamic test for any system.

### CHRIS MARTENS

#### ANALOG

**1. Bill Frisell: *Good Dog, Happy Man*.** (Nonesuch). Eclectic guitarist Frisell teams with an all-star jazz/bluegrass ensemble for an outing that defies easy categorization. A terrifically detailed yet natural-sounding recording, this one is ideal for exploring purity of timbres, instrumental textures, and microdynamics.

**2. Ry Cooder: *Bop Till You Drop*.** (Warner). Sometimes LPs beat CDs at their own game, as this digitally-mastered record demonstrates. Check out Cooder's pure, immaculate guitar sound and the depth, power, and "pop" of Tim Drummond's bass and Jim Keltner's drum kit.

**3. James Taylor: *JT*.** (Columbia). This terrific studio recording captures everything lovable in James Taylor's voice: wit, sardonic humor, sincerity, and soulfulness. The disc also serves

as a "rhythm section realism reference" featuring Russ Kunkel (drums) and Leland Sklar (bass).

**4. Joni Mitchell: *Don Juan's Reckless Daughter*.** (Asylum). Showcases Mitchell's sultry vocals and evocative guitar work, plus Jaco Pastorius' virtuoso fretless electric bass accompaniment. Pay close attention to the interplay among voice, bass, and guitar; reproduced properly, the sound should convey real emotion.

**5. The Paul Desmond Quartet: *Live*.** (Horizon). This realistic, three-dimensional LP treats you to the vaunted "dry martini" sound of Desmond's saxophone from up close, and also places you smack-dab in the middle of the nightclub where the recording was made.

**6. The Bill Evans Trio: *Waltz for Debby*.** (Riverside). This hyper-realistic recording lets you hear the exact size and stage position of Evans' piano, the evanescent sounds of Paul Motian's deft brushwork, and—best of all—subtle ambient sounds from The Village Vanguard's interior.

**7. Shostakovich: *Violin Concerto No. 1*.** (New Philharmonia, Maxim Shostakovich, David Oistrakh (EMI)). This gorgeous recording gives a unique glimpse of a masterful violinist at work. Beyond textures, timbres, and dynamics, this record does an amazing job of capturing—to borrow Jonathan Valin's term—the "action" of Oistrakh's violin.

**8. Mahler: *Symphony No. 2*.** (Klemperer (EMI)). Klemperer conveys the sweep, flow, and sheer scale of Mahler's musical vision. Listen for rich, seductive string section tonalities, masterful handling of small- and large-scale dynamic shifts, and believable 3-D soundstaging.

**9. Hindemith: *Symphony in B Flat*. Schoenberg: *Theme and Variations*. Stravinsky: *Symphonies***

**of Winds.** Eastman Wind Ensemble, Fennell (Mercury). This almost shockingly realistic disc reveals, on the Hindemith piece in particular, the true power and personality of a full-on concert band. Expect wide, deep soundstages and (caution) extremely challenging dynamics.

**10. Wuorinen: *Ringling Changes*.** (New Jersey Percussion Ensemble, Wuorinen (Nonesuch)). *Ringling Changes* is a dissonant, sometimes jarring, yet strangely beautiful piece of music. If your phono system is up to the task, this record realistically captures the delicacy, edge, and potential explosiveness of percussion instruments.

#### DIGITAL

**1. Steve Strauss: *Just Like Love*.** (Stockfish, multichannel SACD). Producer Gunther Pauler crafts a spectacular 3-D multichannel mix on this folk/jazz record. Listen as Strauss' gritty, earthy-sounding voice commands centerstage, while the elastic growl of Hans-Jorg Maucksch's fretless electric bass supplies a foundation below.

**2. Jen Chapin: *ReVisions, Songs of Stevie Wonder*.** (Chesky, multichannel SACD). On "Big Brother," look for a sassy yet sincerely passionate quality in Chapin's voice, and note the eerily realistic simulation of saxophonist Chris Cheek's strolling to the left rear of the stage as he plays.

**3. Patricia Barber: *Nightclub*.** (Mobile Fidelity, stereo SACD). "Bye Bye Blackbird" showcases the smoky warmth and silky textures of Barber's voice, but note, too, the silvery dusting of percussionist Adam Nussbaum's delicate brushwork and the dark curvature of Marc Johnson's acoustic bass lines.

**4. Dean Peer: *Airborne*.** (ILS Records). Bassist

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Dean Peer teams with percussionist Bret Mann for this jazzy, rock-inflected recording. Observe Peer's breathtaking arsenal of bass techniques and use of audiophile-grade effects plus the sheer realism of Mann's drum and cymbals.

**5. Clark Terry: *The Chicago Sessions 1995-1996*.** The DePaul University Big Band, Bob Lark, Clark Terry (Reference Recordings, HDCD). This disc nails the "bite" and burnished glow of Clark Terry's trumpet, and the huge power and impact of full-on horn section dynamic swells—especially on "Moten Swing." Focused imaging and 3-D soundstages abound.

**6. Christopher Roberts: *Last Cicada Singing*.** (Cold Blue). Composer/instrumentalist Roberts performs four contemplative pieces for the Qin (a fretless Chinese stringed instrument).

Watch for subtle variations in attack and dynamic emphasis as Roberts plucks and bends notes. Expect (no, *demand*) "you-are-there" realism.

**7. Gary Burton: *Like Minds*.** (Concord, multichannel SACD). This disc captures an all-star jazz ensemble from a distinctive, *on-stage* perspective (in surround rigs, believable sonic images sometimes appear directly *beside* the listening position). Superior timbral accuracy, especially on Burton's vibes.

**8. Blue Chamber Quartet: *First Impressions*.** (Stockfisch, multichannel SACD). The quiet, focused intensity of this "chamber jazz" recording is breathtaking, as on "Kicho" where you'll savor the astonishing range of the bass, the lilt of the harp, and the percussive urgency of the piano.

**9. Alan Hovhaness: *Symphony No. 50, Mount St. Helens*.** Schwarz (Telarc, multichannel SACD). The second (Spirit Lake—*Allegro*) and third (Volcano—*Adagio-allegro-adagio*) movements provide a study in tonal and dynamic contrasts. In the former, pay attention to the percussion and woodwind themes, and in the latter, to the forceful orchestral "eruption."

**10. A Company of Voices: *Conspirare in Concert*.** (Harmonia Mundi). "The Water Is Wide" captures the penetrating intensity of soprano Melissa Givens' solos, the sonorous beauty of layered choral voices, and the focused warmth of Bion Tsang's brilliant cello accompaniment. Provides lifelike stage ambience, too.

### PAUL SEYDOR

#### ANALOG

**1. Bizet: *Carmen*.** Marilyn Horne, James McCracken, Leonard Bernstein (DG). If I were limited to one evaluation recording, this would be it: everything from full orchestra and chorus to solo numbers sensationally performed in a spectacular soundstage.

**2. Jacintha: *Autumn Leaves*.** (GrooveNote). The voice is recorded close up with stunning transparency in this beautifully sung collection, the piano chords that bleed through her headphones at the beginning of "Moon River" an acid-test for resolution.

**3. Sonny Rollins: *Way Out West*.**

(Analogue Productions). This early left/right/center stereo recording puts Rollins's sax gorgeously on display: big, rich, full-bodied with just a slight edge and some bite to it.

**4. For Duke.** (M&K). For fantastic clarity, presence, immediacy, and wowie-zowie dynamics, this direct-to-disc production of Bill Berry and His Ellington All Stars' tribute just might be the best recording I've ever heard. Resist the temptation to set the volume too high at the beginning, as the ultra-wide dynamics will soon blow you out of the room.

**5. The Christmas Revels.** (Revels Records). This reenactment of the Revels' annual Christmas show with actors, singers, a children's chorus, and all manner of "olde" instruments is rich in atmosphere with an unusually good presentation of the venue. When the Revelers enter in Band Two, they should sound like a group of individuals laughing and conversing, not like undifferentiated clatter and chatter.

**6. Bach: *Sonatas and Partitas for Solo Violin*.** Regis Pasquier (Harmonia Mundi). A ripely romantic violin sonority characterizes Pasquier's beautiful traversal of these magisterial pieces. If his instrument sounds at all like a period violin or in any way harsh, you've got frequency response issues in the upper midrange and highs.

**7. Harry Belafonte: *The Many Moods of Belafonte*.** (RCA). Despite a crack

of lightning and a peal of thunder from an approaching storm at the beginning of "Dark as a Dungeon" (a coal-miners' protest song), both singer and engineers didn't abort the take and they courageously released the undoctored result. About midway through, the rain starts and increases in intensity: it should sound like rain, not tape hiss gone awry. An unforgettably powerful experience.

**8. Doris Day: *Hooray for Hollywood*.** (Columbia). More left/right/center early stereo, but the focus, transparency, and sheer beauty with which Day's distinctive voice—light yet full of character—was here caught simply disarm criticism (despite the clearly audible presence-lift in the microphone). What a good, good singer she was.

**9. A Procession with Carols on Advent Sunday.** King's College Choir, Cambridge (Argo). Sumptuously atmospheric, this splendid recording is a really useful imaging and soundstaging check because the producers were thoughtful enough to provide both a diagram and a precise description of who is where and what you should be hearing at every point in the service. Deep, powerful, thrilling organ on the closing *Veni, Veni, Emmanuel*.

**10. Beethoven: *String Quartet No. 15*.** Yale Quartet (Vanguard). The timbre and sonority of a string



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quartet are here captured with a presence and dimensionality so palpable the players seem to materialize aurally in your room, precisely arrayed in solid space behind the speakers. Magnificent performance, too.

### DIGITAL

**1. Frank Sinatra: *Concepts*.** (Capitol). Sinatra's wide-range baritone is a continually useful tool for evaluating speaker performance in the 100–300Hz region, where shockingly many transducers (including a number of very expensive ones) exhibit a trough, valley, or recession. If The Voice ever sounds thin or nasal, suspect the upper bass/lower midrange.

**2. Ella Fitzgerald Sings the Duke Ellington Songbook.** (Verve). Though this is a mono recording, Fitzgerald and her accompanists are nevertheless surrounded by a lot of ambience in a very present perspective. On (a near definitive) “Do Nothin’ Till You Hear from Me,” the great Ben Webster’s tenor sax has rarely sounded more voluptuous.

**3. Bach: *Goldberg Variations*, (arranged for string ensemble).** Dmitry Sitkovetsky (Nonesuch). In the tonal sense this is an almost perfect recording of strings. The violins, for example, should have an ideal combination of body and brilliance; if they're too bright or in any sense thin, wiry, or steely, you've got response peaks in the upper midrange and highs.

**4. Gloryland: Anonymous Four** (Harmonia Mundi SACD). This beautiful program of American hymns, gospels, and folksongs is a killer test of a system's midrange resolution: While these four singers blend perfectly, you should be able to distinguish each voice from the others and to place each one

in the soundstage.

**5. Chesky: *Urban Concertos*.** (Chesky SACD). Recorded with single-point miking and no compression or overdubbing, the sonic landscape here has extraordinary spatial and dimensional integrity for a genuinely realistic presentation, with very persuasive depth and great transparency too.

**6. Rachmaninoff: *Symphonic Dances*.** Eiji Oue (Reference Recordings). Supremely wide-ranging and dynamic, with powerful bass-drum thwacks and climaxes that open out gloriously, this may be Keith Johnson's best recording of a symphony orchestra (which is saying a lot).

**7. Beethoven: *Complete Piano Sonatas*.** Richard Goode (Nonesuch). The perspective here is a bit close but that helps these recordings really put the piano in your room to powerful effect. In the coda of the last movement of the *Waldstein*, extremely wide in dynamic range, the climaxes register viscerally.

**8. *Tonalities of Emotion*.** James Boyk, piano (Performance Recordings SACD). This imaginatively programmed and beautifully played recital may be the most realistic recording I know of a piano: truly breathtaking transparency, amazingly truthful dynamics and timbral purity, and an almost spooky replication of space and ambience.

**9. Mahler: *Symphony No. 3*.** Salonen (Sony). The opening fanfare tells the story here: a gloriously spacious recording of the Los Angeles Philharmonic that really lets you hear into Mahler's complex orchestration without ever compromising the requisite large scale.

**10. Stravinsky: *Firebird*.** Dorati (Mercury SACD). This remains the most thrilling *Firebird* I know and for me the absolute pinnacle of the classic Mercury

team's recording technique. Dorati is on fire, the LSO match him every step of the way, and the engineers caught it all. A magnificent confluence of music, artists, and sonics.

### STEVEN STONE

#### ANALOG

**1. Randy Newman: *Creates Something New Under The Sun*.** (Reprise). Randy Newman's first solo release includes his best comic and tragic songs with “Davy The Fat Boy” and “Living Without You” on the same LP, enhanced by the lush Van Dyke Parks production.

**2. Buck Owens and His Buckaroos: *Carnegie Hall Concert*.** (Capitol/EMI). Back in the day live was live—no overdubs, no fixing in the mix. Here we have Buck Owens and Don Rich at their artistic peak playing in NYC's Carnegie Hall. These boys could pick and sing.

**3. Dusty Springfield: *Look Of Love*.** (Classic promo single). Yes, it's an audiophile guilty pleasure, but playing the 45rpm side of this double sided (33 and 45 rpm) single never fails to transport me to the 60s studio where the recording was made.

**4. Dar Williams: *The Honesty Room*.** (Razor and Tie). I love Dar Williams' voice. This LP with its special audiophile remixes gets closer to reality than any CD I've heard. “Alleluia” sounds especially angelic.

**5. John Hammond: *Southern Fried*.** (Atlantic). Get your greasy electric white-boy blues courtesy of John Hammond and a little-known guitar player by the name of Duane Allman. Muscle Shoals regulars David Hood on bass and Roger Hawkins on drums.

**6. Michael Ruff: *Speaking in Melodies*.** (Sheffield

Labs). This superb-sounding ultra-slick 90s pop/soul music does sound musically dated, but I've heard it so many times it serves as a pop-music test-tone. I'll never tire of Michael Ruff's singing.

**7. Chet Atkins: *Teen Scene*.** (RCA). A totally cheesy album cover pix and truly useless album notes only add to this album's charm. Recorded at RCA's famous studio B in Nashville with Bill Porter. Killer sound.

**8. Clement Jennequin: *XIX Chansons Nouvelles*.** Ensemble Polyphonique de France. (Astree). This 1977 release has a near holographic presentation of the vocalists and the recording space. With some very outside (for 1549) harmonies and counterpoint this disc delivers both ear and head candy.

**9. Gilbert and Sullivan: *Overtures*.** Alan Ward. (RCA). Six Gilbert and Sullivan overtures, all recorded splendidly by uncredited Brit engineers have both verve and reserve. My copy has a “Miracle Surface” sticker and a 1S Shaded Dog stamper number.

**10. Gary Burton Quartet: *Duster*.** (RCA). Most people name a Miles or Coltrane album as the first jazz album they ever bought. For me it was this one. Using a fake ID, I even saw the band live at the Village Vanguard.

### DIGITAL

**1. Matt The Electrician: *Animal Boy*.** I played the title cut, “Animal Boy,” in many rooms at the most recent CES audio show in Las Vegas. Every time I played it someone asked, “What was that?” and then scribbled down the info so he could buy his own copy.

**2. Punch Brothers: *Punch*.** (Nonesuch). Chris Thile and his band, the Punch Brothers, have

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produced the first piece of modern classical music in the last 50 years that has relevance for a non-classical music audience. Superb sound.

**3. Darrell Scott: *Aloha From Nashville*. (Sugar Hill).** Every time I listen to Darrell Scott I'm more impressed by his lyrical facility and highly seductive melodies. If you aren't familiar with Scott, this album is a good place to start.

**4. Tori Amos: *Past The Mission*. (East/West).** This limited distribution EP includes a live version of "The Waitress" that is sonically stunning and artistically unassailable. Nothing like a well-miked Bösendorfer to get your system in tune.

**5. Toy Matinee: *Toy Matinee*. (Special Edition 1990/Reprise).** Back in the early 90s many engineers carried a copy of this CD, which they would play in a studio they hadn't worked in before to get a handle on the room's sonics.

**6. Andrea Wittgens: *In The Skyline*. (Trapdoor Music).** Andrea Wittgens accomplishes something that few contemporary songwriters achieve—a cohesive and unique musical statement that defies labels and simple descriptions. Liberal use of mellotrons, farfisas, and live string quartets makes every tune special.

**7. Asleep At The Wheel: *Live at Billy Bob's Texas*. (Smith Music Group).** If you're a western swing fan *Live at Billy Bob's Texas* is simply a must-have. Their version of Freddy Fender's "Teardrops Must Fall" featuring Haydn Vitera never fails to stop me cold in my tracks.

**8. Johnson: *Shakespeare's Lutenist*. (Virgin.) Emma Kirkby, David Thomas, Anthony Rooley.** Beautifully recorded during Thomas and Kirkby's prime. I've long used this for evaluating a system's depth recreation. Kirkby walks around while singing, which supplies excellent locational cues.

**9. The Gourds: *Shinebox*. (Sugar Hill).** I love these guys: they are retro redneck rockin' rollin' gods. *Shinebox* features an assortment of live and studio recordings that reflect the quirky dumb-smart intellectual stance that typifies The Gourds' music. Their version of "Gin and Juice" kills.

**10. Victoria Vox: *Chameleon*. (Obus Music).** Vox has a retro-40s hip-chick smart-but-savvy vibe. The smartness stems from her Berklee College of Music degree in songwriting. *Chameleon* is beautifully recorded and sounds wonderful.

### JONATHAN VALIN ANALOG

**1. Joan Baez: *Joan Baez*. (Vanguard).** Arguably the greatest record of the 50s/60s folk revival—and certainly the most influential—Joanie's debut is also her best LP. That famously pure soprano of hers never sounded purer or more angelic than it does here. Though it seems almost criminal to treat a record this good as a "test disc," the LP *will* tell you a good deal about the upper midrange of speakers and electronics. If Joanie's fortissimos turn bright or glassy, you've got a problem somewhere else along the line.

**2. Prokofiev: *Violin Sonata No. 1*. (MusicMasters).** This was Nadia Salerno-Sonnenberg's first recording, and it's a breathtaking debut. Because the violin is closely miked, fingering and bowing details are unusually clear, and because the music itself, with its huge leaps and falls in intensity (this is a disc that will give you true whispery pianissimos as well as hammered fortissimos on violin and piano, often in close conjunction), is challenging, the LP is a wonderful test of dynamics and resolution. Timbre (on violin and

piano alike) is also, or should be, gorgeous.

**3. Schoenberg: *Five Pieces for Orchestra*. (Mercury/ Speakers Corner).** Even after better than 100 years, the *Five Pieces* is still an absolutely thrilling Polar Bear plunge into the icy-hot realms of memory, dissonance, and the unconscious, with unforgettably imaginative, musical, and emotional sense being made of the nexus of all three. A famously superb Mercury recording—the closest on my list to a celebrated "test record"—it will certainly work out your system from timbres to intensities to durations to pitches (top to bottom) to soundstaging and imaging.

**4. Bartók: *Third Quartet*. (Juilliard Quartet/ Columbia).** Another sonic "workout," albeit on a much smaller scale, and just as thrilling and daring as the Schoenberg, Bartók's celebrated *Third Quartet* is by turns and at once, dark, nervous, frightening, cerebral, mysterious, and honest-to-God thrilling. This Juilliard Quartet performance (the second of the three they made of all six Bartók Quartets) will tell you all you need to know about your system's way with transient response, timbre, rhythm, imaging, and the resolution of low-level musical and performance detail.

**5. Martin: *Concerto for Seven Wind, Timpani, Percussion, and Strings*. Ansermet (London).** Swiss composer Frank Martin is one of the relatively unsung "greats" of the twentieth century. All you have to do is listen to this beautifully crafted concertante piece—which ranges from gorgeously somber to irresistibly dance-like, with a concluding march and coda that will absolutely send chills down your spine—to understand why he should be more highly esteemed. A supremely musical test of resolution, timbre, dynamics, rhythmic clarity, imaging, and soundstaging.

**6. Gerhard: *Gemini, Libra, Leo*. (Decca Head).** Like Martin, Roberto Gerhard is an undersung master. Though he spent most of his adult life in England, Gerhard was by birth a Spaniard and this piece—his last and the only bit that he finished of his projected *Astrological Series*—conjures the Catalonia of his memory. I'm particularly partial to *Gemini* for violin and piano and *Libra* for small ensemble, both of which manage to summon up, quite poetically, a landscape in which foreground and background space stand in for time present and time past. A superb recording, the disc is a wonder of spaciousness and three-dimensionality, with exquisite timbre on all instruments and equally excellent small-scale and large-scale dynamics.

**7. Janacek: *Sinfonietta*. (Columbia or Supraphon or Denon).** Alongside Bartók's *Music for Strings, Percussion, and Celesta* (though written a decade before it), this may be the most distinctive and distinguished concertante work of the first half of the twentieth century. Janacek sounds like no one else—and no one else had his way with rhythms and tone colors, particularly those of brass and wind instruments. Absolutely haunting and exhilarating, this wonderful piece of music will thrill and entrance you—and take your system to its limits in virtually every audiophile category.

**8. Mihaly: *Cello Concerto*. (Hungaroton).** It's a mystery to me why this sweeping, ravishingly beautiful concerto never gets played in concert halls. Audiences would swoon. It's on this list simply because the cello's timbre and melodies are so damn gorgeous that I never tire of hearing them—and neither will you.

**9. Lutoslawski: *Concerto for Orchestra*. (EMI or London).** What Bartók's *Concerto* is to the first

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half of the twentieth century, this grand, gorgeous, rousing music is to the second. Certainly it owes an (acknowledged) debt to Bartók, but Lutoslawski is his own man. A master orchestrator, he creates, in the second movement, an enchanting palimpsest of sounds—an almost iridescent backdrop of tone color against which winds flit and twitter like forest birds. And in the final movement he simply electrifies. A great “test” of every aspect of hi-fi.

**10. Campbell: *Sound the All-Clear* (Innova).** I really don’t know much about Christopher Campbell, a young filmmaker and the composer of this intriguing, upbeat, witty, and colorful sonic dreamscape of prepared piano, strings, koto, sheng, electric guitar, toy whistle, “PVC flute,” “balloon bassoon,” bells, drums, voice, and God knows what all else. Though you won’t find melody or tonal centers here, you will still find much to delight the ear. The sound is *phenomenal*—the best-recorded LP of new music JV has heard in years. Fantastic transients, very deep bass, amazing treble, wall-to-wall staging, precision imaging, exotic timbral contrasts and harmonies. A sonoric *tour de force*.

### DIGITAL

**1. *Came So Far* (MusicMakers).** This collection of field recordings of little-known Carolina bluesmen (and women) has perhaps the most realistic tenor and bass-baritone vocals I’ve heard on digital, with the incalculable bonus of also being great music.

**2. H.K. Gruber: *Frankenstein!!* (Chandos).** This delightful “pan-demonium” for bass singer and orchestra (and when’s the last time you heard a symphony orchestra that features a toy whistle?) is the closest anyone has come to the

sophisticated cabaret of Brecht and Weill since, well, Brecht and Weill. Fabulous low end, large-scale dynamics, voice, and soundstaging.

**3. *The International* (Varese-Sarabande).** An exciting and propulsive techno-pop soundtrack composed by the film’s director Tom Tykwer (who also wrote the music for his great film *Run, Lola, Run*), with some exceptionally deep synthesized bass and floor-and-wall-shaking percussion.

**4. *Lost Highways* (soundtrack). (Geffen).** A great pop soundtrack with any number of fabulous cuts, especially Bowie’s drum-and-bass “I’m Deranged” and Trent Reznor’s own “pan-demonium” “Perfect Drug,” which in addition to being a terrific test cut for dynamics, resolution of timbres and textures, and clout was also (rightly) nominated for a Grammy.

**5. *The Thin Red Line* (soundtrack). (RCA).** Everybody’s go-to disc for low bass.

**6. *Schoenberg: Violin Concerto*. (DG).** Recommended to me (as so many discs have been) by our Mr. Lehman, this performance by Hilary Hahn of one of the most challenging and rewarding pieces for violin never played is simply standard-setting, as perfect in its way as Edward Steuermann’s incomparable recordings of Schoenberg’s solo piano music.

**7. *Paul Simon: Songs from The Capeman*. (Warner).** Problem-plagued and over budget, Paul Simon’s musical *The Capeman* didn’t fare well on Broadway, which is too bad considering how memorable the songs on this quasi-cast-recording are. The doo-wop harmonies and lovely Spanish guitar work are fine tests of timbre, texture, and resolution. Soundstaging is also excellent.

**8. *Mario Lanza Live From London*. (RCA).** An

extremely well sung recital disc recorded live (and uncompressed) in the London Palladium with some of the most challenging dynamics on CD. If your speakers or electronics can handle Lanza’s *fortissississimos* on “Lamento di Federico,” you’ve got terrific dynamic scale in the middle and upper midrange.

**9. *Shostakovich: Second Piano Concerto*. Bernstein (Sony).** Dmitri Shostakovich must have truly loved his son Maxim (for whom this concerto was written as a birthday present and a graduation showpiece) for the second movement Andante is quite the most beautiful thing he ever composed, particularly in this nonpareil Bernstein-conducted-and-performed performance. A superb showcase of timbre, texture, and touch.

**10. *Barber: Violin Concerto*. Stern (Sony).** As lovely as the second movement of the Shostakovich is, it is fully matched by the second movement Andante of this glorious violin concerto, which is certainly one of the two or three most meltingly beautiful of the century. Isaac Stern plays it as if he owns it, with Bernstein conducting with equal skill and sympathy. The sound is as splendid as the music—rich timbre, highly resolved textures on solo violin and orchestra, and capacious soundstage. **tas**