POWER CABLES

Over the past 20 years, Shunyata Research has invested enormous resources into the scientific research, measurement, and materials development of its many power cable models. Shunyata is the only company to have developed its own DTCD™ Analyzer that precisely measures instantaneous current through contacts, wires, switches and breakers. We are also one of the only companies that manufacture all of its own power wiring, terminals and connectors. Shunyata Research treats power cord design as a critical element in the performance of high-end entertainment and professional systems.

A common misconception regarding power cables is that they represent the final link in the transfer of power after traveling through miles of power lines and in-home wiring. The power cable is actually the first two meters of power wiring that the audio component sees — electrically speaking. In effect, the power cable is an extension of the transformer in the component’s power supply.

Shunyata Research has developed advanced conductor geometries, electrical contacts, power connectors and junction-to-junction bonding techniques with measurements provided by our exclusive DTCD™ Analyzer. Shunyata Research’s NR Series power cables have built-in noise filters that measurably improve CCI™ (Component-to-Component Interference) by reducing conducted power line noise and radiated RFI/EMI interference. Some of the key features of our power cables include: pure OFE (Oxygen-Free Electrolytic) copper; VTX™ ‘hollow tube’ wires; CopperCONN® connectors made with pure copper contacts; and built-in NR noise reduction filters. Last but not least, Delta, Alpha and Sigma series power cables are conditioned with our proprietary Kinetic Phase Inversion Processor (KPIP™) that improves performance and eliminates burn-in issues.
DELTA NR AND EF POWER CABLES: MEASURABLE NOISE REDUCTION

Delta power cables feature ultra-pure OFE copper, arrayed in a ‘hollow core’ VTX™ geometry that minimizes skin effect related distortions. They are terminated with Shunyata Research’s exclusive CopperCONN® connectors, which contain pure copper contacts — not the plated brass and bronze contacts used in other power cables. The Delta NR is the most affordable in Shunyata Research’s ‘NR Series’ cables to provide measurable noise reduction with built-in CCI™ filters. Delta NR power cords also use pure fluorocarbon dielectrics, normally found in only far more expensive designs. Delta EF power cords possess the same parts and build quality of the Delta NR but instead of the filtered Noise Reduction, the Delta EF uses a slender female IEC connector that can fit into narrow or obstructed component IEC openings.
DELTA EF POWER CABLE: ULTIMATE FLEXIBILITY

The EF Series are specialty power cables designed for electronics that have obstructed power-inlet entries. Many entertainment systems are installed in custom cabinetry that require exceptional flexibility and compact connectors for easy routing through small openings.

Shunyata Research has created the CopperCONN® EF-C15 power connector that features a compact physical size and yet retains all the capabilities of Shunyata’s full-sized CopperCONN® connectors. It has high grip, pure copper contacts and oversized contacts to accept 8 gauge wire without ‘downsizing’ the wire.

The Delta EF and Alpha EF power cables offer near reference level performance with exceptional ease of use and flexibility.
**DELTA NR**

The Delta NR power cable is the most affordable of the NR (noise reduction) power cables from Shunyata Research. NR power cables have built-in filters that reduce power line noise. Delta NR features VTX™ (hollow-core) conductors and pure copper CopperCONN® connectors. The 10 gauge conductors make it ideal for high-power amplifiers and source components.

| WIRE     | OFE 10 gauge, VTX™ geometry |
| TERMINATION | Connectors: C15, C19; Plugs: US, EU, AU, UK and Swiss. |

**DELTA EF**

The Delta EF power cable has the same 10 gauge VTX™ (hollow-core) conductors from the Delta NR but uses the compact CopperCONN® EF-C15 allowing connection to obstructed AC inlets. The Delta EF does not include noise reduction. KPIP™ eliminates burn-in issues.

| WIRE     | OFE 10 gauge, VTX™ geometry |
| TERMINATION | Connectors: EF-C15, C19; Plugs: US, EU, AU, UK and Swiss. |
ALPHA NR AND EF POWER CABLES

The Alpha NR and Alpha EF power cables deliver true reference caliber performance with massive 8-gauge VTX™ conductors and the industry’s finest CopperCONN® power connectors. The Alpha NR model adds measurable noise-reduction through the use of Shunyata’s own CCI™ Filter-system, while the ultra-flexible Alpha EF provides world-class performance to components with obstructed power entries. Alpha EF and Alpha NR power cables possess exclusive technologies, metal-treatments, parts customization and noise reducing properties that simply do not exist in competitive products. Alpha NR and EF models accomplish all this at surprisingly affordable prices.
**ALPHA NR**
The Alpha NR power cable offers the best price to performance ratio in Shunyata's Noise Reduction series. Eight gauge VTX™ (hollow-core) conductors are equipped to handle the highest-powered amplifiers and yet be incredibly flexible for use on small CD players. CopperCONN®, pure copper connectors, are the best in the business. KPIP™ eliminates burn-in issues.

- **WIRE**: OFE 8 gauge, VTX™ geometry
- **TERMINATION**: Connectors: C15, C19; Plugs: US, EU, AU, UK and Swiss.

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**ALPHA EF**
The Alpha EF uses the same 8 gauge VTX™ (hollow-core) conductors from the Alpha NR but is extremely flexible with its Tri-Flex, Extreme Flexibility design. The exclusive CopperCONN® EF-C15 allows connections to obstructed AC inlets. KPIP™ eliminates burn-in issues.

- **WIRE**: OFE 8 gauge, VTX™ geometry, Tri-flex
- **TERMINATION**: Connectors: EF-C15, C19; Plugs: US, EU, AU, UK and Swiss.
SIGMA POWER CABLES

The Sigma power cables combine all of Shunyata Research’s most advanced power cord technologies and parts, including it’s massive 6-gauge (VTX™) hollow-core conductors and Shunyata’s own CopperCONN®, solid copper connectors. The Sigma NR possesses incredibly low measured resistance to peak current (DTCD™), which delivers unparalleled performance when used with even the most current-hungry amplifiers. Sigma NR’s built-in wide-bandwidth noise filtration system also reduces power-line and component generated power supply noise, making it an ideal choice for source components and digital systems. Sigma EF power cords possess the Sigma NR’s signature build quality attributes but is packaged in a smaller more flexible body so that it can be used when flexibility and limited space are required.
**SIGMA NR**

The Sigma NR power cable is the ultimate expression of Shunyata Research’s Noise Reduction series. Six gauge VTX™ (hollow-core) conductors equip it to handle the highest-powered amplifiers and yet it is surprisingly flexible for such a large diameter cable. CopperCONN®, pure copper connectors, are the best in the business. KPIP™ eliminates burn-in issues.

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**SIGMA EF**

The Sigma EF is identical to its sibling Sigma NR power cord in every respect except two areas — Sigma EF does not have the NR model’s built-in filter network, and Sigma EF models are constructed using a very flexible hollow external tube making the EF model narrower and extremely flexible so that it can be routed around any tight corner. The Sigma EF offers exceptional performance when used with Hydra power distributors or with electronics and speakers that require greater flexibility in the body of the power cord.

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Shunyata Research uses only the highest purity of copper available for the production of its wire products. **OFE Alloy 101** or C10100 is the highest grade of copper with a minimum 99.99% purity and a conductivity rating of 101% IACS. OFE stands for oxygen-free electrolytic and supersedes the term OFHC (oxygen-free high conductivity). C10100 is the only grade of copper that comes with a written certification of purity. Certified by ASTM F68 C10100.

Shunyata Research’s exclusive **VTX™** conductors are made in the shape of hollow tubes. Since current can only travel through the outer rim on the wire, there are no skin effects or random eddy currents. VTX™ conductors are made from pure OFE C10100 or Ohno (single crystal) copper.

**KPIP™** (Kinetic Phase Inversion Process) was developed by Caelin Gabriel after years of research into the underlying causes of various effects such as burn-in, wire directionality and the effects of cryogenic treatment. He discovered that there was an underlying core principle that burn-in and cryogenics only “partially” addressed. Once the governing principle was understood it became possible to create a processing technique and machine that could virtually eliminate the need for burn-in and cryogenic treatment.
**ArNi®** is a type of wire created by Shunyata Research designed to be the finest quality wire available for audio purposes. It begins with the highest purity of copper available – OFE C10100 or Ohno (single crystal). Then it is formed in virtual hollow tubes eliminating skin effects and eddy current distortions. In addition, the wire undergoes our proprietary KPIP™ process.

**CCI™** filters have the unique ability to reduce component-generated power line noise without affecting instantaneous current delivery. NR Series power cables have built-in CCI™ filters that prevent power line noise from one component contaminating the other adjacent electronic components without the use of a power conditioner.

Many audiophile grade connectors are made from brass or bronze. While some may get a plating of silver, gold or rhodium, the majority of the current is carried by the contact’s base-metal. **CopperCONN®** connectors contain pure copper contacts which has a much higher conductivity than brass. The difference in performance is clearly audible.