CARDAS

Bandon, Oregon

George Cardas received U.S. Patent Number 4,628,151 for the creation of Golden Section Stranding Audio Cable. It is so unique, the industry's best designers, constructors and reviewers, The Academy for The Advancement of High End Audio, gave George the award for "The Most Significant Contribution to the Advancement of High End Audio in Cable and Accessory Design."

Constant "Q"

A multi-strand electrical cable having electrica[illegible] conductive strands of different cross-sections, i.e. cross-sectional areas, arranged in ascending order of strand cross-section from the center toward the outer circumference of the cable and sized in accordance with an irrational and preferably golden ratio progression in such a way that larger strands are located outwardly toward the cable circumference relative to smaller strands and stabilize the smaller strands against resonant vibration in a manner such as to reduce cable resonance produced by fluctuating current flow through the cable.

Golden Multi

optimum signal/power transmission characteristics are realized in a cable containing a plurality of individually insulated conductors which vary in size one to another wherein the ratio of the size of one conductor to the next larger conductor is about 0.62. Normally, at least three different sizes of conductors will be employed in a cable wherein each size classification differs from the next larger or smaller size classification by the specified ratio. This particular ratio is often called the Golden Section and is the ratio between the two sizes in which the lesser of the two is to the greater as the greater is to the sum of both.

You see things that are
and say "Why?"
I dream of things that never were
and say "Why not?"
George Bernard Shaw

U.S. Patent Database

IBM

http://patent.womplex.ibm.com/details?patent_number=4628151
http://patent.womplex.ibm.com/details?patent_number=4980517
http://patent.womplex.ibm.com/details?patent_number=5335282

Man's mind,
once stretched
by a new idea,
never regains
its original dimension.
Oliver Wendell Holmes

B. I. BROWN, ATTORNEY
DKT. 5153 SH. 1 OF 2
GEORGE F. CARDAS

FIG. 4

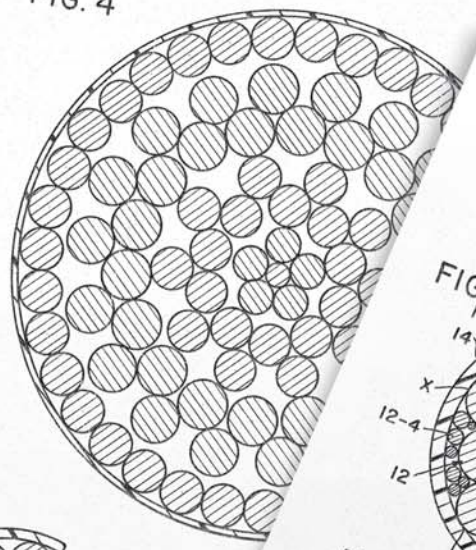


FIG. 1

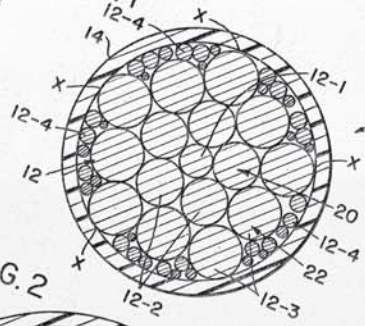


FIG. 1c

FIG. 5

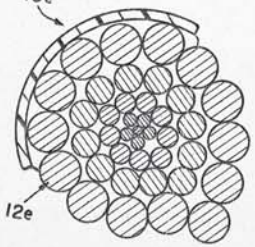


FIG. 2

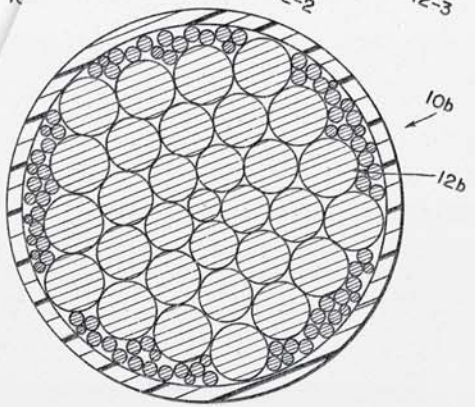
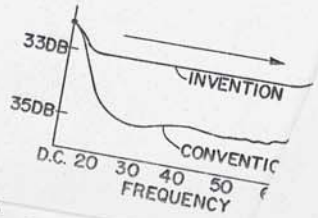


FIG. 8



GEORGE F. CARDAS
Sheet 191- DKT. 4836 AH4.

Serial No. 814,727
Filed 12/30/85
Group Art Unit 215
Examiner: L. E. Askin

FIG-1

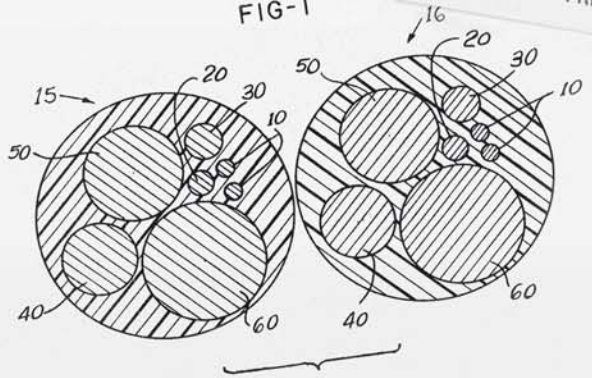
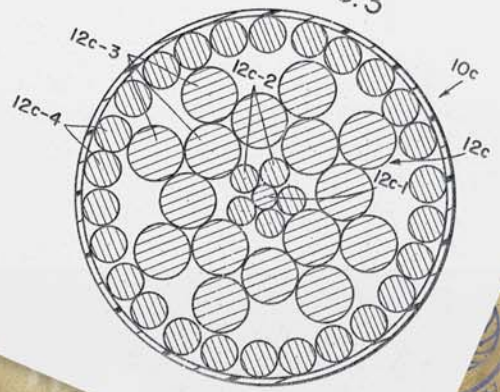


FIG. 3



"I do not think there is any thrill
that can go through the human heart
like that felt by the inventor as he sees
some creation of the brain unfolding to success...
Such emotions make a man forget food, sleep, friends,
love, everything."

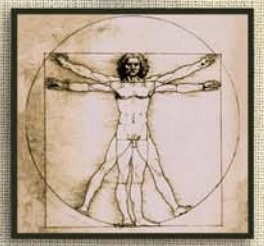
Nikola Tesla, 1896

It is said, wire is just wire. In reality, a high-end audio cable must balance resistance, capacitance, inductance, conductance, velocity of propagation, RF radiation and absorption, mechanical resonance, strand interaction, hysteresis, high filtering, wavy serial impedance and reflections, electrical resonance, dissipation factors, envelope delay, phase distortion, harmonic distortion, piezoelectric effects, hall effect, field effect, voltage and current tracking, thermoelectric phenomenon effects, structural return loss, skin effect, corrosion, cross-talk, bridge-tap and the interaction of these and a hundred other things. As a high-end cable manufacturer, Cardas Audio strives to address every detail of cable and conductor construction, no matter how small.

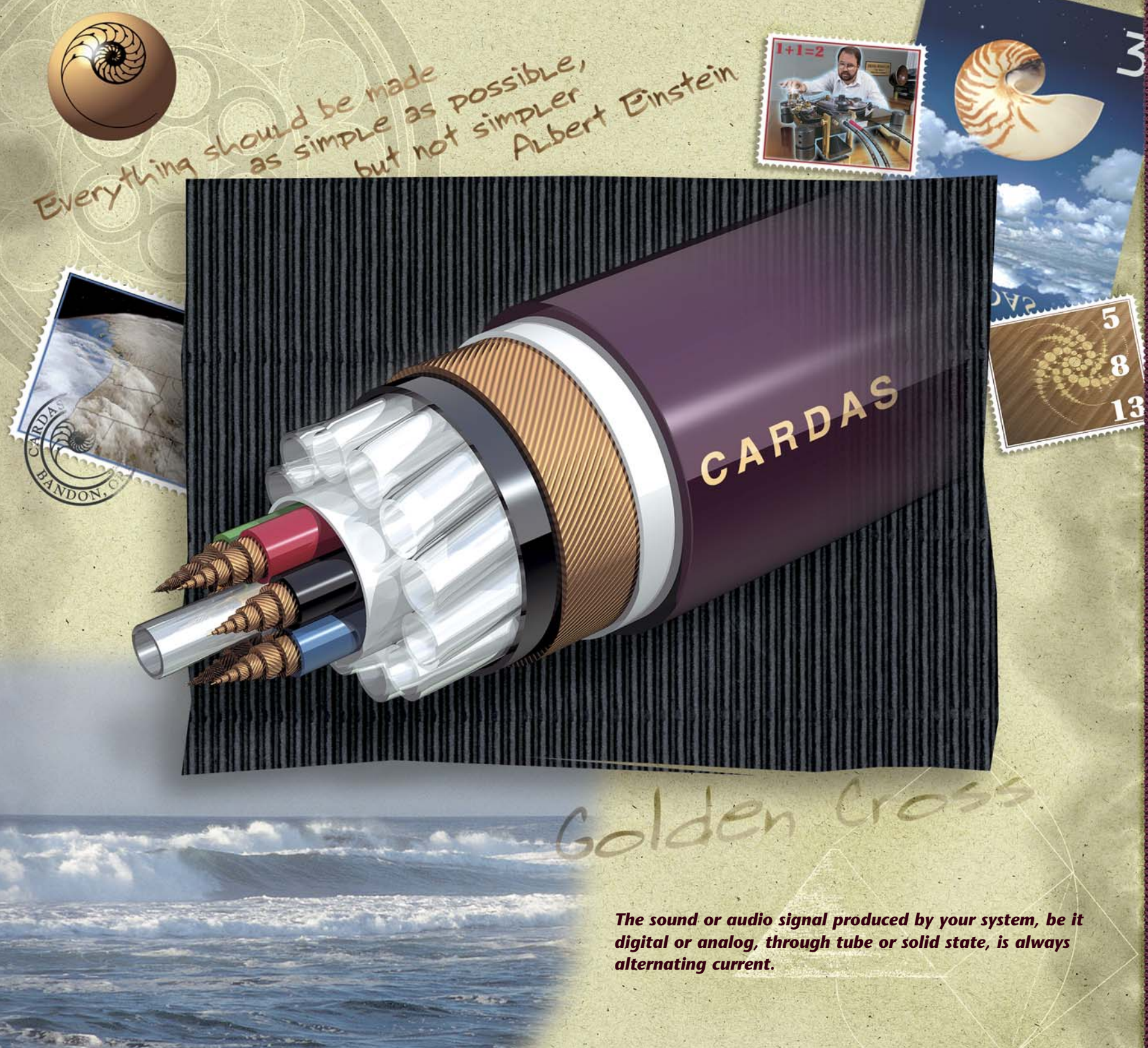
An elegant solution deals with quality, not quantity. Cable geometry problems are resolved in the cable's design, not after the fact with filters.

George Cardas received U.S. Patent Number 4,628,151 for creating Golden Section Stranding Audio Cable. It is truly unique.*

**George introduced the concept of Golden Section Stranding to high-end audio, but Golden Ratio, 1.6180339887... : 1 is as old as nature itself. Golden Ratio is the mathematical proportion nature uses to shape leaves and sea shells, insects and people, hurricanes and galaxies, and the heart of musical scales and chords. "Discovered" by the Greeks, but used by the Egyptians in the Great Pyramid centuries before, man has employed Golden Ratio to create his most beautiful and naturally pleasing works of art and architecture.*



Everything should be made
as simple as possible,
but not simpler
Albert Einstein



Golden Cross

The sound or audio signal produced by your system, be it digital or analog, through tube or solid state, is always alternating current.

Golden Cross

Urethane

Teflon® Binding

100% Spiral Shield and Litz Drain

Teflon® Graphite Composite Shield

Ultra Thin Wall Air Tubes

Teflon® Binding

Golden Section, Constant Q, Cross-Field Conductors

Ultra-Thin Wall Air Tube

Ultra-Pure, Ultra-Soft, Copper Litz Wire

Teflon® Jacket

CARDAS

All associated cable components both electrical and mechanical are cross layered

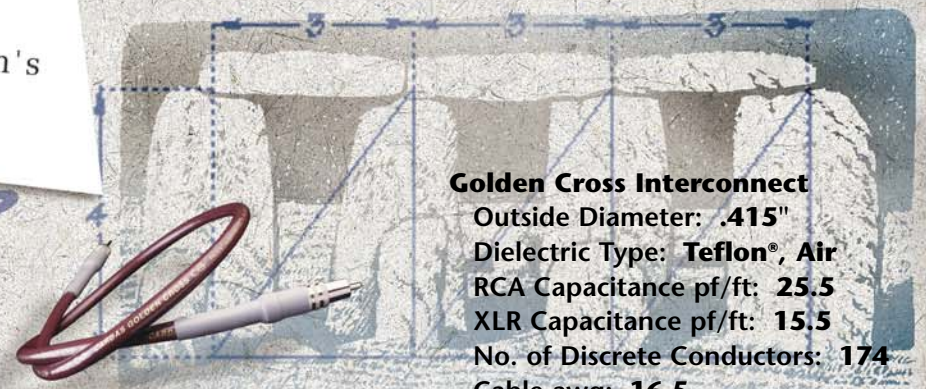
When you learn to quiet the cable and purify it of all its resonance, the simple reality of how music sounds, pure music, unfolds.

CARDAS AUDIO BANDON, OREGON

The cyclic effect of alternating current vibrates the wire in your system like the strumming of a guitar string. The beating of the capacitive, inductive and mechanical elements in audio cable is set in motion by the transient energy of the audio signal, just as the guitar string is set into motion by the strike of a pick.

Place photograph of Bandon's Coquille River bar on preceeding page

Golden Cross



Golden Cross is the finest expression of the Cardas design. It features Cardas patented, "Golden Section", multi-gauge, Litz stranding in a symmetrical, hex-axial design. Thin wall, Teflon air tubes are used as dielectric and air suspension for the conductors.

Cardas patented, "Constant-Q" construction places the smallest of the Golden Ratio strands at the center of the conductor to reduce stored energy, signal time delay and conductor resonance.

Cable resonance is further reduced with Crossfield construction, which alternates the layering direction of each electrical and mechanical component. This stabilizes the conductor matrix and effectively reduces radiation and re-absorption of RFI and EMI.

All conductors are individually coated to insulate and prevent oxidation. Golden Cross is also double shielded using a 100% coverage, copper spiral shield with a unique Teflon® and graphite composite.

Like all Cardas cables, Golden Cross cables are individually inspected, then hand terminated using Rhodium plated connectors and Cardas formulated Quad Eutectic solder. Golden Cross is designed and manufactured for a lifetime of listening pleasure.

Golden Cross Interconnect
- Outside Diameter: **.415"**
- Dielectric Type: **Teflon®, Air**
- RCA Capacitance pf/ft: **25.5**
- XLR Capacitance pf/ft: **15.5**
- No. of Discrete Conductors: **174**
- Cable awg: **16.5**
- Shield Type: **Double**
- Conductor Type: **Golden Ratio, Constant Q, Crossfield, Pure Copper, Litz**

Golden Cross Speaker
- Outside Diameter: **.600"**
- Dielectric Type: **Teflon®, Air**
- Inductance uh/ft/loop: **.0368**
- No. of Discrete Conductors: **752**
- Capacitance pf/ft: **154**
- Cable awg: **5.5**
- Internal Bi/Tri-Wire Options: **Bi/Tri**
- Conductor Type: **Golden Ratio, Constant Q, Crossfield, Pure Copper, Litz.**

Golden Power Cord

A large diameter cord, the optimum for any audio component where flexibility and cable weight are not an issue. Cardas power cords provide a very low noise path from the wall plug to your components, eliminating internal noise generation/radiation and attenuating component generated noise (clock signals etc.).

only the heart knows the correct answer.
deepak Chopra

"When the solution is simple,
God is answering."
Albert Einstein

Golden Cross

This form of vibration or resonance distorts the audio signal and produces many sound anomalies, from colored bass to glare. Every interconnect, every speaker cable, every chassis and speaker wire has its own resonant signature.

CARDAS AUDIO LTD.


The secret to seeing innocently
is to see from a new viewpoint,
one that is not conditioned
by what you expect to see.
— Deepak Chopra-
INNER PEACE
Cross
Like the mass,
tension and
hardness of the guitar string, the mass, tension and hardness of
the conductor, coupled with its inductance and resistance, and
the capacitance of the cable, determine what sound is made.

Cross

Cardas Cross is a relatively new series of cables which have gained instant popularity. The 17.5 awg Cross interconnect is light and flexible. Cross speaker is a medium size, 10 awg cable that is internally bi-wireable and may be used on virtually any speaker.

Both Cross interconnect and speaker are symmetrical, quad-axial in construction. Both feature Teflon® air dielectric, air suspension, Golden section, Constant Q, Crossfield, Litz conductors and double shielding.

The Cross power cord is a slightly larger version of the Quadlink power cord.

Cross Interconnect

Outside Diameter: **.415"**
Dielectric Type: **Teflon®, Air**
RCA Capacitance pf/ft: **26.4**
XLR Capacitance pf/ft: **16**
No. of Discrete Conductors: **136**
Cable awg: **17.5**
Shield Type: **Double**
Conductor Type: **Golden Ratio, Constant Q, Crossfield, Pure Copper, Litz.**

Cross Speaker

Outside Diameter: **.585"**
Dielectric Type: **Teflon®, Air**
Inductance uh/ft/loop: **.11**
Capacitance pf/ft: **34**
No. of Discrete Conductors: **238**
Cable awg: **10**
Internal Bi/Tri-Wire Options: **Bi**
Conductor Type: **Golden Ratio, Constant Q, Crossfield, Pure Copper, Litz.**

Cross Power Cord

A medium diameter cord suitable for high powered pre-amps and low powered amplifiers.

The Chambered Nautilus

"Build thee more stately mansions, O my soul,
As the swift seasons roll!
Leave thy low-vaulted past!
Let each new temple, nobler than the last,
Shut thee from heaven with a dome more vast,
Till thou at length are free,
Leaving thine outgrown shell by life's unresting sea."

Oliver Wendell Holmes

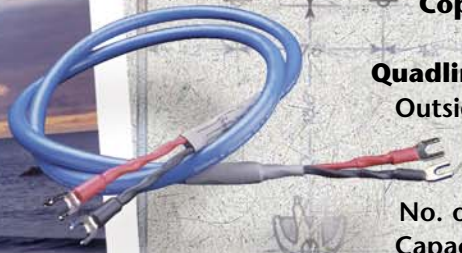
Each strand in a cable has its own note or beat. When strands are combined in a conductor they interact with other same sized, near unison, and multiplistic sized strands. This creates beats the same way a cube listening room would, or one with multiplistic dimensions like 8' x 16' x 32'.

Quadlink

Quadlink Interconnect is our popular, mid-line interconnect. It features 16.5 awg, quad-axial construction, Teflon® air dielectric, Golden Section, Constant Q, multi-gauge, Litz conductors, double shielding and a urethane jacket.

Quadlink Speaker is great for small, efficient, home audio speakers to 88db. It has 12.5 awg, quad-axial construction, Teflon® air dielectric, Golden Section, Constant Q, multi-gauge, Litz conductors and a urethane jacket.

Quadlink Interconnect
Outside Diameter: **.375"**
Dielectric Type: **Teflon®**
RCA Capacitance pf/ft: **55**
XLR Capacitance pf/ft: **34.3**
No. of Discrete Conductors: **200**
Cable awg: **16.5**
Shield Type: **Double**
Conductor Type: **Golden Ratio, Constant Q, Crossfield, Pure Copper, Litz.**



Quadlink Speaker
Outside Diameter: **.495"**
Dielectric Type: **Teflon®, Air**
Inductance uh/ft/loop: **.16**
No. of Discrete Conductors: **200**
Capacitance pf/ft: **19**
Cable awg: **12.5**
Internal Bi/Tri-Wire Options: **Bi**
Conductor Type: **Golden Ratio, Constant Q, Pure Copper, Litz.**

Quadlink Power Cord
Quadlink is a medium size power cord which is suitable for small amplifiers or large power supply preamps, etc.

The sound produced by any stereo system depends on the purity of the audio signal it produces. When the cable linking all components together imparts its own sound, the audio signal is corrupted.

Cardas created a multiple strand conductor, where every individual strand is coupled to another, sharing no common mathematical node or resonant point, which in effect, absorbs or cancels the noise that each strand creates. This is the same reason The Standard Listening Room is 10′ x 16′ x 26′ (read: 10.00000′ x 16.18033...′ x 26.18033...′ or Golden Ratio).

"The truth is out there"
X-Files

An infinitely indivisible progression known as the Fibonacci Sequence or Golden Section is the key to controlling resonance. The ratio of ø (Phi), or 1 to 1.6180339887... to ∞ (infinity), is the Golden Mean, called Golden Ratio or Golden Proportion.

George Cardas holds the patent, U.S. Patent Number 4,628,151, where the ratio of ø is applied to any electrical conductor.

Don't be afraid to be amazing
Andy Offutt Irwin

Micro Twin / Twinlink

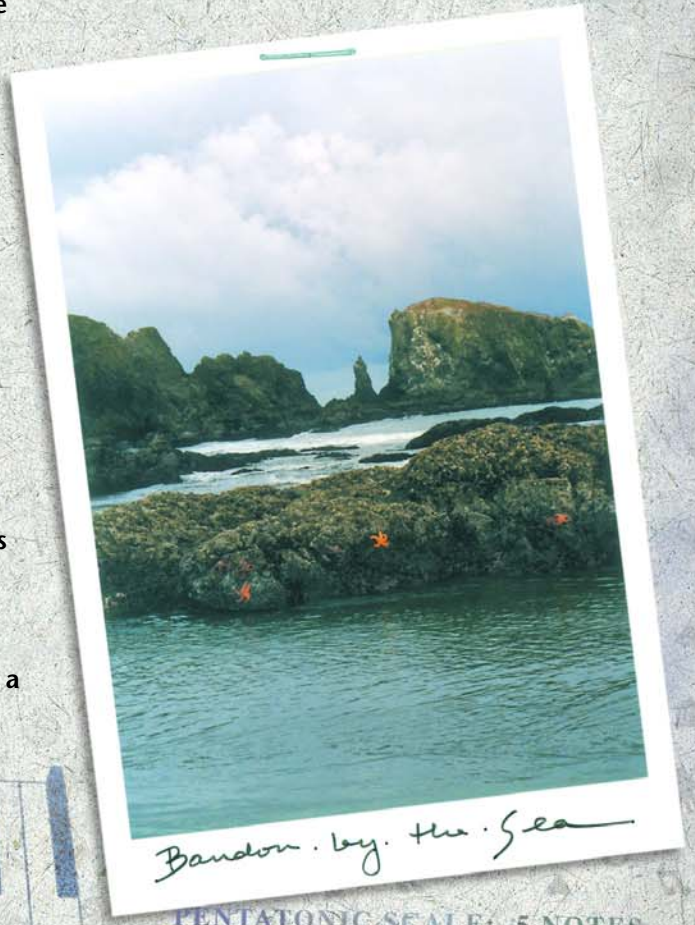
Micro Twin Interconnect
Outside Diameter: **.295**"
Dielectric Type: **Teflon®**
RCA Capacitance pf/ft: **42.9**
XLR Capacitance pf/ft: **26.5**
No. of Discrete Conductors: **88**
Cable awg: **18.5**
Shield Type: **Double**
Conductor Type: **Golden Ratio, Constant Q, Pure Copper, Litz.**

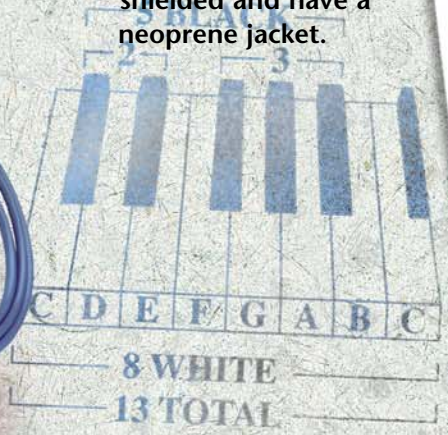
TwinLink Speaker
Outside Diameter: **.345**"
Dielectric Type: **Teflon®**
Inductance uh/ft/loop: **.10**
No. of Discrete Conductors: **136**
Capacitance pf/ft: **29**
Cable awg: **11.5**
Internal Bi/Tri-Wire Options: **External Only**
Conductor Type: **Golden Ratio, Constant Q, Pure Copper, Litz.**

TwinLink Power Cord
Twinlink is a small power cord that is light weight and flexible. It is designed for front end components such as pre-amplifiers, CD players, turn tables, etc.

300-B Micro-Twin is our entry level interconnect. It is flexible, light weight and easy on the budget. 18.5 awg, quad-axial construction, Golden Section, Constant Q, multi-gauge, Litz conductors are used. Teflon® and cotton create the dielectric, with double shielding and a neoprene jacket.

Twinlink is a small speaker cable for automotive applications and very efficient (96db+) home audio speakers. 11.5 awg, twin-axial construction, Golden Section, Constant Q, multi-gauge, Litz conductors have Teflon® and cotton dielectric, are shielded and have a neoprene jacket.





PENTATONIC SCALE: 5 NOTES
DIATONIC SCALE: 8 NOTES
CHROMATIC SCALE: 13 NOTES

In Golden Section Stranding, individual strands are arranged so each strand is coupled to another, whose note or beat is irrational with its own, thus nulling interstrand resonance.

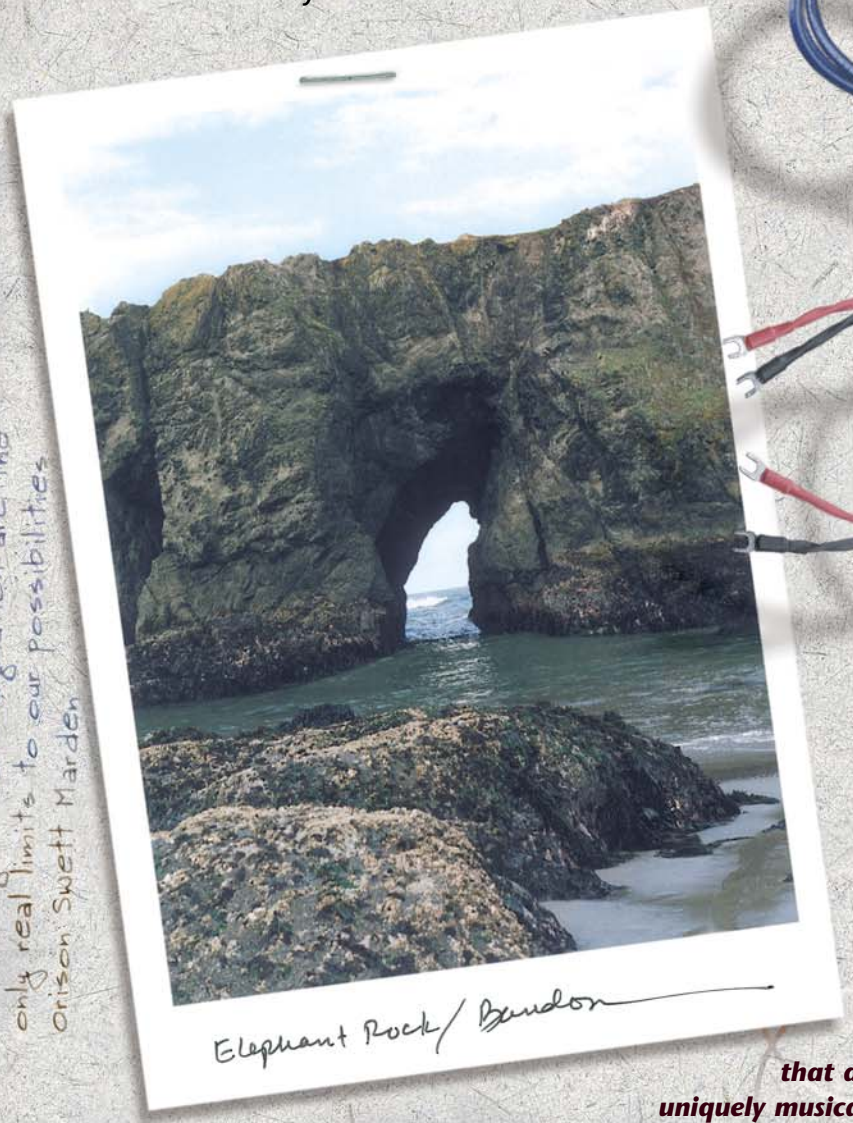
Crosslink

Crosslink is our entry level cable. It is the only Cardas cable sold in bulk, and it can be terminated by a Cardas dealer. It is very flexible and light weight. Multi-gauge, Golden Section, Constant Q conductors are used. Teflon® and cotton create the dielectric, with double shielding and a neoprene jacket.

Crosslink is great for automotive installations and small home audio systems.

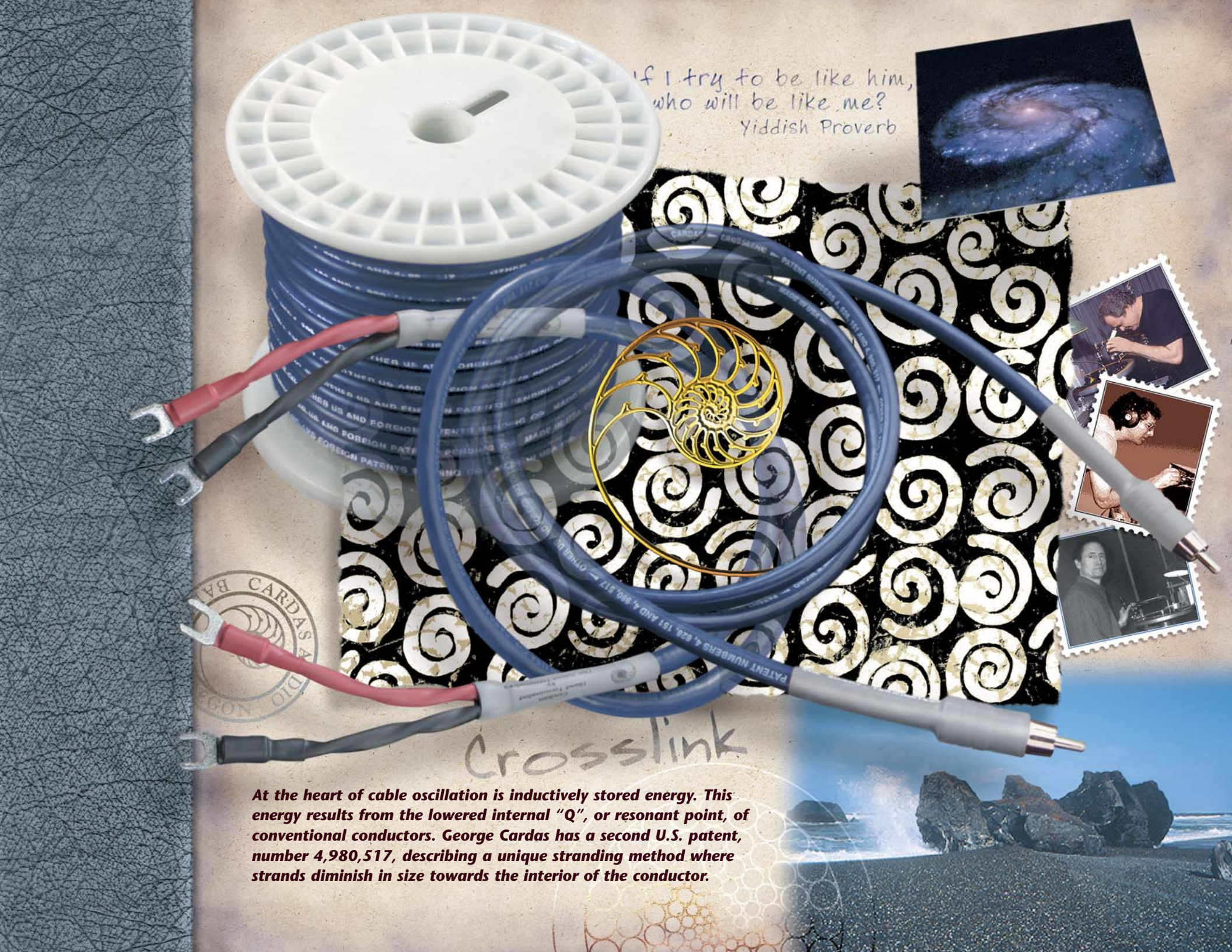
Crosslink Interconnect
Outside Diameter: **.305"**
Dielectric Type: **Teflon®**
RCA Capacitance pf/ft: **36.9**
XLR Capacitance pf/ft: **22.8**
No. of Discrete Conductors: **68**
Cable awg: **20.5**
Shield Type: **Double**
Conductor Type: **Golden Ratio, Constant Q, Crossfield, Pure Copper, Litz.**

Crosslink Speaker
Outside Diameter: **.365"**
Dielectric Type: **Teflon®**
Inductance uh/ft/loop: **.11**
Capacitance pf/ft: **55**
Cable awg: **12**
Internal Bi/Tri-Wire Options: **Bi**
Conductor Type: **Golden Ratio, Constant Q, Tubular Crossfield, Pure Copper, Litz.**



Our thoughts and imagination are the only real limits to our possibilities.
Orison Swett Marden

This is the famous "Silent Conductor". It is the silence of Cardas conductors that allows them to be so uniquely musical and pure.



At the heart of cable oscillation is inductively stored energy. This energy results from the lowered internal "Q", or resonant point, of conventional conductors. George Cardas has a second U.S. patent, number 4,980,517, describing a unique stranding method where strands diminish in size towards the interior of the conductor.

This design is called Constant Q Stranding and it allows each strand of the cable to share the load equally. It is a very effective method of reducing the internal rise in inductance seen in ordinary conductors, without compromising the symmetry of the conductor or the capacitance of the cable.

Lightning Digital Cables
Dielectric Type: **Teflon®, Air**
Impedance: **75 ohm (+.5 -0)**
Shield Type: **Double**
Conductor Type: **Golden Ratio, Constant Q, Crossfield, Pure Copper, Litz.**

Lightning
Outside Diameter: **.280"**
No. of Discrete Conductors: **21**
Cable awg: **20.5**

Lightning 18
Outside Diameter: **.324"**
No. of Discrete Conductors: **41**
Cable awg: **18.5**

Lightning 15
Outside Diameter: **.481"**
No. of Discrete Conductors: **57**
Cable awg: **15.5**

High Speed Data Digital Cable
Outside Diameter: **.265"**
Dielectric Type: **Teflon®, PE**
Impedance: **75 ohm (+.5 -0)**
No. of Discrete Conductors: **41**
Cable awg: **20.5**
Shield Type: **Single**
Conductor Type: **Golden Ratio, Constant Q, Crossfield, Pure Copper, Litz.**

AES/EBU Digital Cable
Outside Diameter: **.330"**
Dielectric Type: **Teflon®, Air**
Impedance: **110 ohm (+.5 -0)**
No. of Discrete Conductors: **82**
Cable awg: **20.5**
Shield Type: **Double**
Conductor Type: **Golden Ratio, Constant Q, Crossfield, Pure Copper, Litz.**

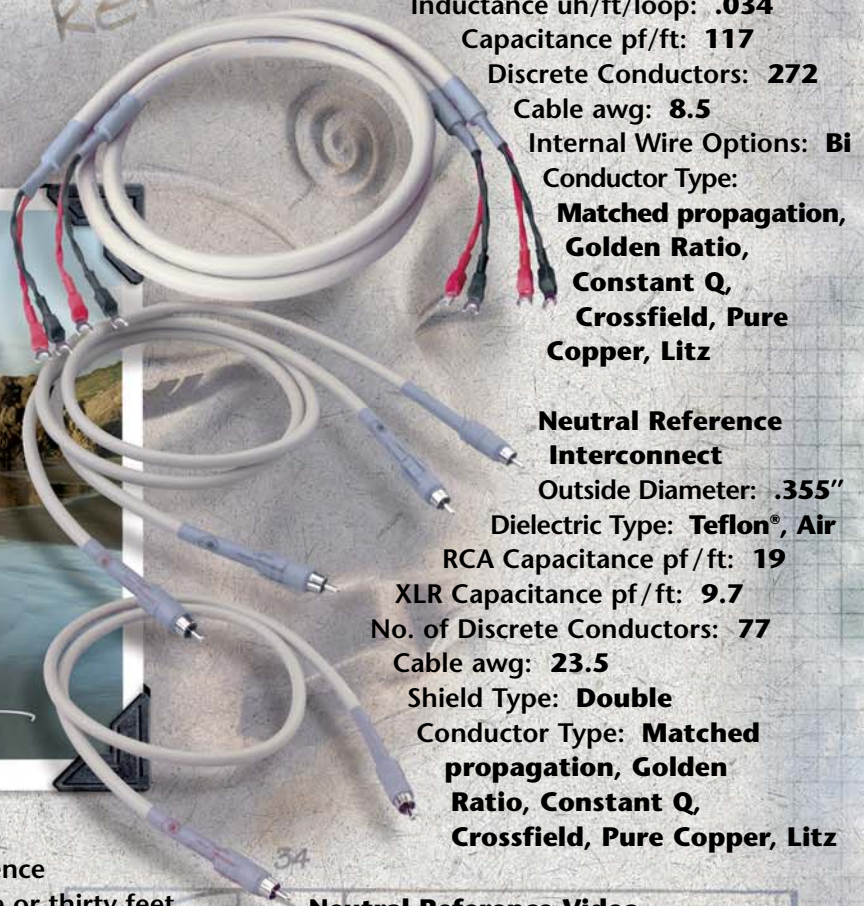
Cardas Lightening is a 75 ohm coaxial design for RCA, BNC and other digital applications. It features 20.5 awg, Golden Section, Constant Q, multi-gauge, Crossfield, enameled Litz conductors and constant impedance construction. Teflon®-air dielectric, air suspension and urethane jacketing are used.

Cardas High Speed Data/Video is a 75 ohm cable for RCA, BNC and other digital information. The design is 20.5 awg, coaxial, Golden Section, Constant Q, multi-gauge, Crossfield, enameled Litz conductor construction, with Teflon® foam dielectric and urethane jacketing.

Cardas AES/EBU is the industry standard for digital transmission. It is a 100 ohm, balanced cable using 20.5 awg, twin-axial construction, with Teflon® dielectric, air suspension, Golden Section, Constant Q, multi-gauge, Crossfield, enameled Litz conductors, and a urethane jacket.

Ordinary Cables are di-pole antennas, both radiating and absorbing RFI/EMI, which sustains system resonance. George's cable design incorporates Crossfield Construction in its manufacture, which reverses every other stranding layer to defuse the di-pole effect.

You cannot discover new oceans
unless you have the courage
to lose sight of the shore
Andre Gide-



Neutral Reference speaker
Outside Diameter: **.600"**
Dielectric Type: **Teflon®, Air**
Inductance uh/ft/loop: **.034**
Capacitance pf/ft: **117**
Discrete Conductors: **272**
Cable awg: **8.5**
Internal Wire Options: **Bi**
Conductor Type: **Matched propagation, Golden Ratio, Constant Q, Crossfield, Pure Copper, Litz**

Neutral Reference Interconnect
Outside Diameter: **.355"**
Dielectric Type: **Teflon®, Air**
RCA Capacitance pf/ft: **19**
XLR Capacitance pf/ft: **9.7**
No. of Discrete Conductors: **77**
Cable awg: **23.5**
Shield Type: **Double**
Conductor Type: **Matched propagation, Golden Ratio, Constant Q, Crossfield, Pure Copper, Litz**

Cardas Neutral Reference is a perfectly neutral reference cable. It sounds the same at any length, whether one or thirty feet, between any component, at any originating or terminating impedance. Neutral Reference is perfectly symmetrical and non-directional. It can be terminated either single-ended or balanced. Neutral Reference has extremely low capacitance, inductance and reactance.

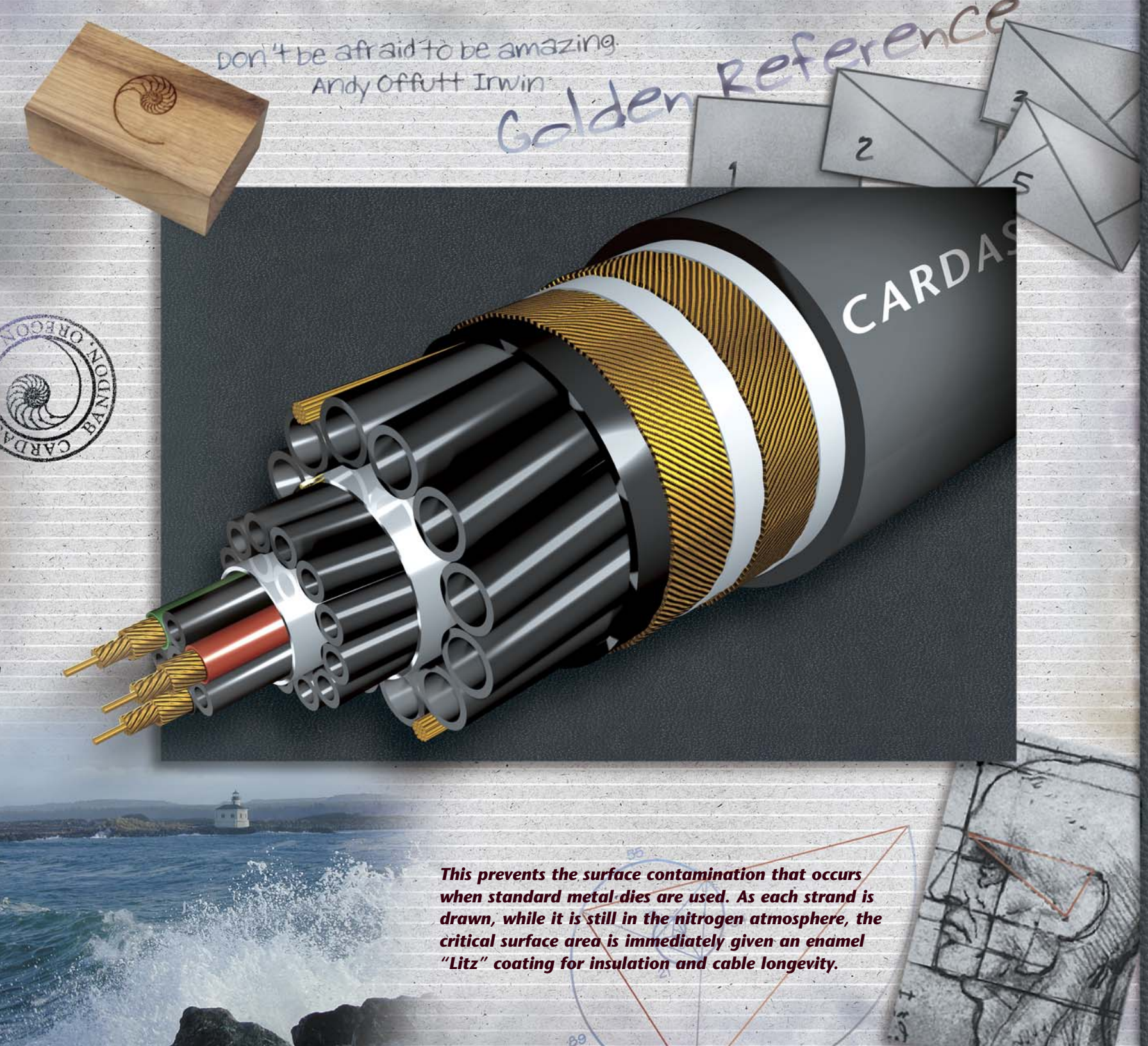
Our Neutral Reference Video cable is an excellent digital transmission cable for both AES/EBU and SPDIF applications. It is currently being used for that purpose by Bernie Grundman, one of the largest mastering houses in Los Angeles.

Cable resonance is further reduced through the use of ultra pure copper, air dielectrics and quad-eutectic solders.

Neutral Reference Video
Outside Diameter: **.355"**
Dielectric Type: **Teflon®, Air**
Impedance ohms: **+.5 -0 constant impedance, transfer impedance matchs originating impedance +/- .5 ohms, from 0 to at least 50 ft. of cable**
No. of Discrete Conductors: **77**
Cable awg: **26**
Shield Type: **Double**
Conductor Type: **Matched propagation, Golden Ratio, Constant Q, Crossfield, Pure Copper, Litz**

The only way to discover
the limits of the possible
is to go beyond them
into the impossible.
Arthur C. Clarke-

Copper has proven to be the best conductor for an audio signal, but the purity of the copper is critical to the performance of the conductor. Cardas uses only diamond dies, in an atmosphere of pure nitrogen, to draw the individual, ultra pure, copper strands.

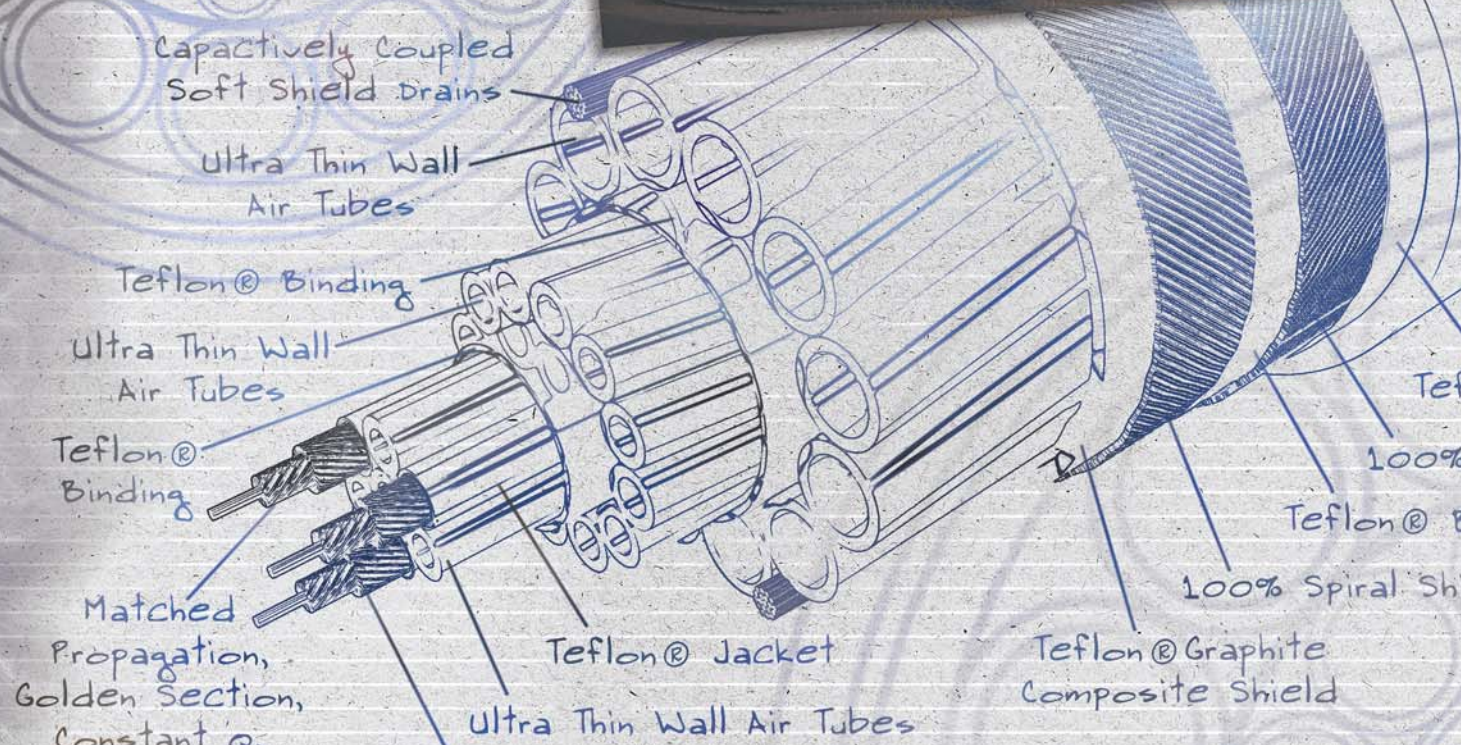


This prevents the surface contamination that occurs when standard metal dies are used. As each strand is drawn, while it is still in the nitrogen atmosphere, the critical surface area is immediately given an enamel "Litz" coating for insulation and cable longevity.

Golden Re

Where-soever you go,
go with all your heart
Confucius

CARDAS AUDIO
BAND



Ordinary uncoated copper stranding corrodes in a relatively short time. During every step in the manufacturing process Cardas maintains the purity of the copper until it is sealed during termination.

Golden Reference

Golden Reference interconnect and speaker are the latest evolutionary cable designs by George Cardas. They feature patented "Golden Section", multi-gauge stranding in a symmetrical, 12 conductor, helical triad of quad-axial planetary arrays of golden ratio, constant Q conductors.

Golden Reference Interconnect
Outside Diameter: **.415"**
Dielectric Type: **Teflon®, Air**
RCA Capacitance pf/ft: **12**
XLR Capacitance pf/ft: **7**
Cable awg: **26.5**
No. of Discrete Conductors: **109**
Shield Type: **Double**
Conductor Type: **Matched propagation, Golden Ratio, Constant Q, Crossfield, Pure Copper, Litz**

Golden Reference Speaker
Outside Diameter: **.702"**
Dielectric Type: **Teflon®, Air**
Inductance uh/ft/loop: **.0031**
Capacitance pf/ft: **36.9**
Resistance: **10k .00079 ohms per foot, 100~ .00076 ohms per foot**
No. of Discrete Conductors: **816**
Cable awg: **5 awg**
Internal Bi/Tri-Wire Options: **Bi/Tri**
Conductor Type: **Matched propagation, Golden Ratio, Constant Q, Crossfield, Pure Copper, Litz**

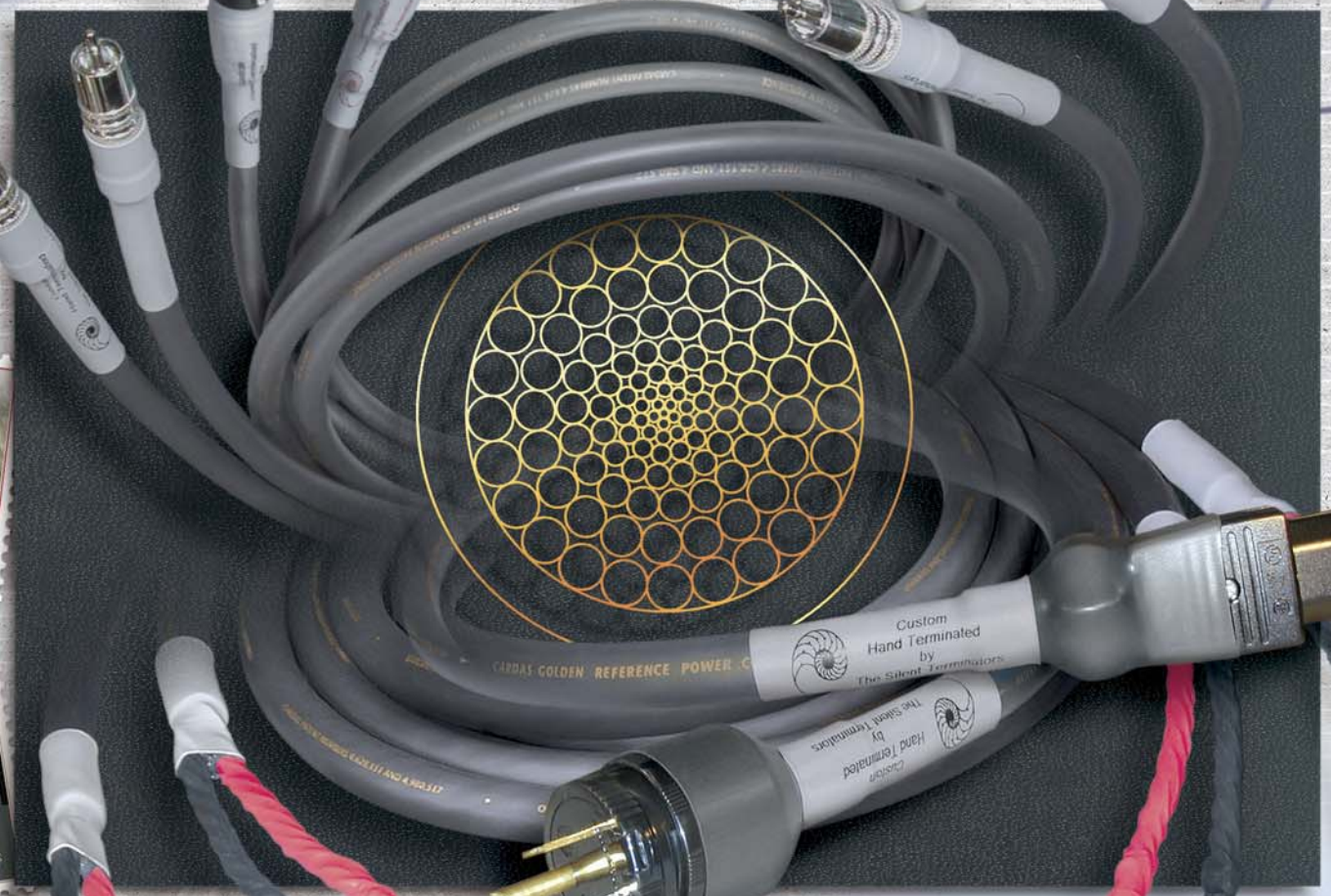
Golden Reference Power Cord
The Golden Reference power cord provides the ultimate current flow, excellent isolation between components and broad band power line filtration. It is shielded and relatively flexible for its size.

Cardas patented, "Constant-Q" construction places the smallest of the Golden Ratio strands at the center of the conductor to reduce stored energy and conductor resonance. Cable resonance is further reduced with controlled propagation, Crossfield construction, matching conductor and cable loop characteristics with carefully computed strand layering. Cross layered conductors reduce EMI and RFI to a new low. All conductors are individually coated to insulate and prevent oxidation.

Golden Reference is a perfectly neutral reference cable with unmatched transient purity. Golden Reference is perfectly symmetrical and non directional.

Do, or do not.
There is no try.
Yoda

Golden Reference



Every detail in Cardas cables is at the leading edge. Pure Teflon® is used as a stabilizing wrap to firmly bind the conductors, while thin wall tubes provide an air dielectric to isolate the conductors from each other.

The future Belongs to those who believe in the beauty of their dreams.
Eleanor Roosevelt

Cardas Power Strip

The Cardas Power Strip provides broadband ground and line filtration without circuit breakers, transformers, resistors, capacitors, varistors, chokes, or regulators in the current path; nothing but pure, Cardas Golden Section Stranding. The Power strip has a machined, black anodized, fluted, aluminum housing with matching end caps and six 20 amp receptacles.

Cardas Custom Cables

Cardas Audio makes a wide variety of custom cables for manufacturers and end users. Shown are Single and Bi-Wire Jumper cables, a DC and an External Power Supply cable.

RCA to XLR Adapter

A Cardas GRFA female or GRMO male RCA connector to either a female or male XLR. Silver/Rhodium contacts.

Cardas OEM/DIY

Cardas manufactures many custom connectors, conductors and OEM related products. Separate catalogs are available.

Cardas Sweep Record

This frequency sweep record ultrasonically cleans the cartridge stylus and cantilever, at the same time degaussing the entire system. Pressed on 180 gram vinyl for longevity, it has blank plateaus for tone arm and cartridge set-up and other useful tools.

George created an ultra pure, quad-eutectic solder for a perfect joining of conductor to connector. All connectors are custom machined with rhodium over silver contact surfaces. Finally, to insure the quality of each cable, they are terminated by hand and individually inspected.

To be suprised, to wonder, is to begin to understand

Jose Ortega y Gasset-

The universe is full of magical things, patiently waiting for our wits to grow sharper. Eden Phillpotts

Cardas Heart and Myrtle Heart Phono Cartridges

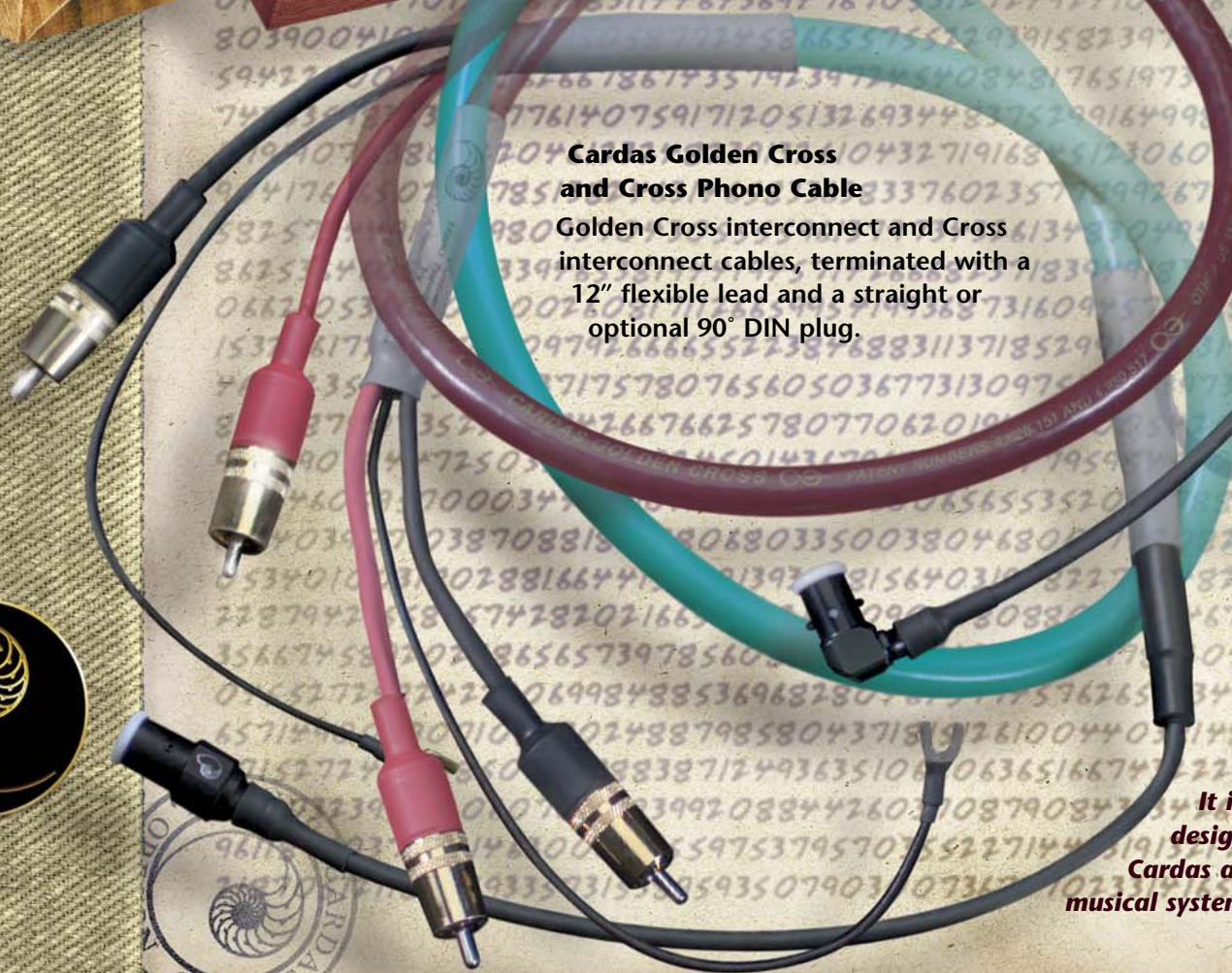
The Heart's design is a collaboration between George Cardas and Ernst Benz of Benz Micro in Switzerland. The Heart is a moving coil cartridge, built on a unique Benz chassis, featuring a resonance damping, Briarwood or Myrtle body. There are two Heart models. The Heart Ruby has an output of 0.35mv, a weight of 8.2 g, a Boron rod cantilever, nude micro-edge diamond stylus, ruby plate coil core, output impedance of 38 ohms and a frequency response of 10-50,000 Hz. The Heart Reference has an output of 0.45mv, with the coil former made of 99.9999 iron and an output impedance of 10 ohms.

Cardas Phono Cartridge Clips

Machined from non-magnetic brass, rhodium plated with a beryllium copper tension spring, they are the ideal replacement for standard tone arm leads.

Cardas Golden Cross and Cross Phono Cable

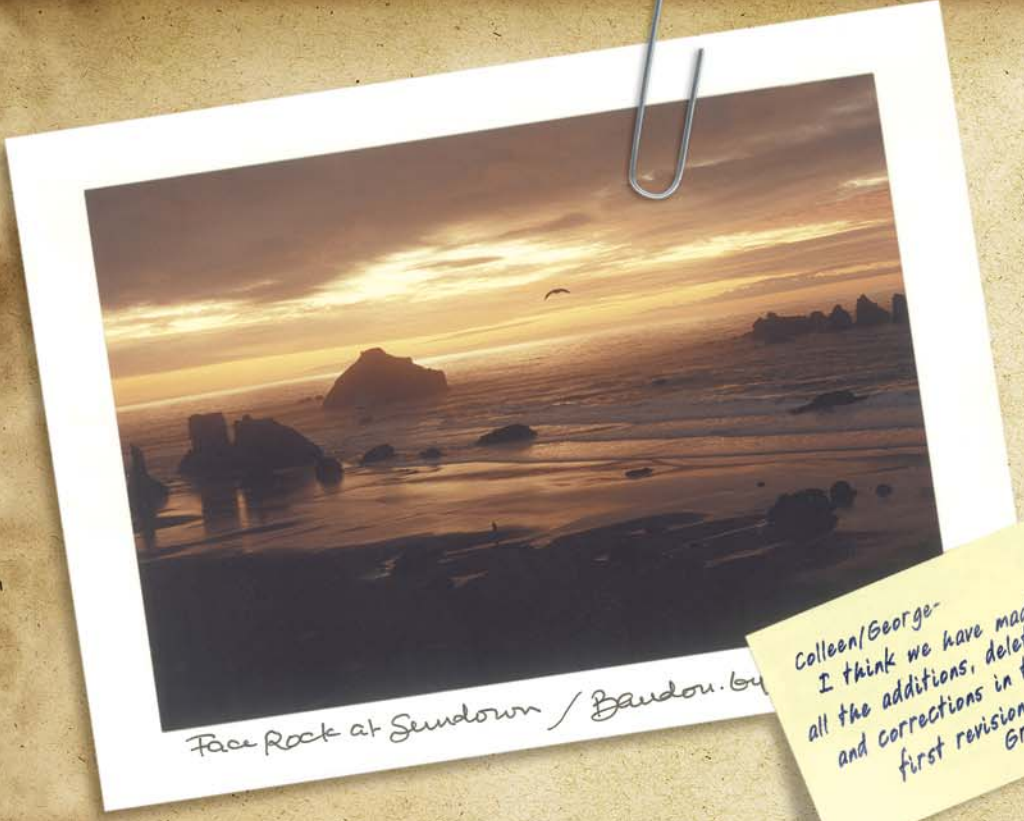
Golden Cross interconnect and Cross interconnect cables, terminated with a 12" flexible lead and a straight or optional 90° DIN plug.



Cardas Phono Interface Box

The Phono Interface Box is a machined, anodized aluminum housing with two female RCAs, grounding posts, a 10" flexible lead and a straight or optional 90° DIN plug.

It is this meticulous attention to details in design and care in construction that puts Cardas at the heart of the most uniquely musical systems in the world.



Face Rock at Sundown / Bandon. Or

Colleen/George-
I think we have made all the additions, deletions and corrections in this first revision
Graham-

In the end we shall have had enough of cynicism and skepticism and we shall want to live more musically.

Vincent van Gogh-

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