

# AUDIO CABLES



Tributaries complete line of audio, speaker and power cables were developed exclusively for Tributaries by celebrated cable designer Jay Victor. Using some of the same design principles from Clarus Audiophile cables, it took 3 years to complete the engineering and cosmetic design to offer this comprehensive family of cables to the market.

Tributaries cables incorporate a host of patented technologies. Beginning with copper made specifically for audio applications; conductors are multi-gauge in design with individually insulated strands and precision impedances. The Tributaries collection is complemented by painstakingly meticulous hand-craftsmanship.

#### Copper

One of the most important considerations in developing audio cables is the grade of copper. Typical high quality electrical grade copper has a purity level of 2N and approximately 1500 crystal per foot. Signals crossing thru these crystal boundaries result in loss and distortion. The next level above this is oxygen-free copper (OFC), the purity of OFC varies. Tributaries uses 2 grades: 3N OFC and a high-conductivity oxygen-free copper (HC-OFC) with 4N of purity. Both are extruded in an oxygen free environment resulting in only 400 crystals per foot. Series 8 cables use copper with purity of 5N called "linear-crystal" copper (LC-OFC). LC-OFC is carefully drawn to produce only 70 crystals per foot, a vast improvement resulting in less loss and distortion.



### The Expert in Cable Design

Jay Victor, The engineer behind the development of the Tributaries Audio, Power and Speaker Cables, is a holder of approximately 50 patents for cable geometry. "I am a musician and a life-long music fanatic. Being a technically-minded person, and an Engineer, it is inevitable that Hi-Fi equipment would become a major preoccupation. If music is a major value in your life, then the realistic reproduction of it becomes an obsession. This is what goes into the cables that I design; a relentless pursuit of perfection in reproducing the sound of real music."

#### **Insulated Multi-Gauge Conductors**

Tributaries uses solid conductors in its audio cable design. Although stranded cables are valued for their flexibility, the signal can jump from strand to strand in an undesirable manner causing distortion. Another undesirable effect is oxidation which can quickly spread between strands and cause a diode effect impeding signal flow. Conductor size also has an influence on sound. Large conductors transmit signals with less resistance than smaller ones and will also more accurately reproduce the lower frequencies; medium gauge conductors, the midfrequencies; and fine gauge conductors the high frequencies. Most theories cite skin effect and flux density as reasons for this phenomenon. Further, insulating gauges from one another result in greater clarity.

#### **Cable Geometry**

Tributaries audio cables use a twinaxial design. Twinaxial cables have two equally balanced conductors precision twisted and surrounded by a shield. Conductors are insulated using Polyethylene. Polyethylene is chosen because its transparency is similar to Teflon but without the harshness in the high frequencies. Polyethylene is flexible and has a sound quality that is warm and balanced. The shields have 360° coverage to keep noise from entering the signal path. Series 6 and 8 cables include copper braided shields with lower resistance for trapping induced noise current. In this design the signal and return have dedicated separate conductors and the shield is free to be connected at the source end only eliminating EMI & RFI induced noise from entering the receiver. The best balanced cables are triple balanced with three equally balanced twisted conductors surrounded by a shield. In a balanced system using dedicated conductors for the positive, negative and ground with an additional shield connected only at the source end delivers audible improvements by lowering the noise allowing you will hear more of the recorded music



# AUDIO CABLES

Balanced audio is the highest quality of analog audio distribution. Most professional audio components require signals that are transmitted over balanced connections using differential mode signaling to cancel out induced noise for crystal-clear audio. Differential mode signaling requires each wire to carry signals in opposite polarity to each other. Electromagnetic Interference (EMI) will induce an equal noise voltage in each wire and the amplifier measuring the difference in voltage between the two signals will reject the noise that is identical on both wires. Tributaries Balanced cables are sold in pair or mono.







## **SERIES 4 BALANCED AUDIO CABLE**

MODEL: 4AB

High Performance Audio cable

All Series 4 audio cables are assembled by hand in Orlando, Florida. Series 4 balanced audio cables begin with ultra-pure highly conductive oxygen free copper (HC-OFC) developed specifically for audio applications. Conductors are solid gauge to prevent grainy distortion caused by stranded wire. The Series 4 balanced cables are a precision twisted balanced in design. Dedicated conductors with equal impedance for positive and negative signals. The signal conductors are wrapped with dual shielding to keep noise from reaching the single path. To reduce signal hum during connection the Tributaries Series 4 XLR connectors have the female ground (pin 1) placed forward in the shell so the ground connects first. The Series 4 balanced cable is high performance cable that looks as good as it sounds

The Series 4 Balanced Audio cable is stocked in pair and mono cables in lengths from  $\frac{1}{2}$  meter to 4 meter lengths with custom lengths available.

### Model 4AB Highlights

Assembled by hand with foreign and domestic parts in Orlando Florida, USA

Heavy solid 22AWG HC-OFC conductors for improved bass and accurate signal transfer

Precision twisted pairs excellent for balanced audio

LDPE eliminates distortion while maintaining flexibility

Dual shielded to lower the noise floor

Gold-plated solid-brass XLR connectors, no hum on connection

Decorative woven jacket over a flexible PVC jacket

Available in custom lengths either pairs or mono cables