

# 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



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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 8 BALANCED AUDIO CABLE

MODEL: 8AB MKII

Reference Grade Audiophile cable

All Series 8 Cables are meticulously assembled by hand in Orlando, Florida. Series 8 Mark II balanced audio cables begin with extremely high-grade linear crystal copper (LC-OFC) developed specifically for audio applications. Tributaries LC-OFC is carefully drawn to produce a low crystal volume per foot resulting in less signal loss and distortion. Conductors consist of multiple solid gauges that are mathematically and tonally chosen to support low, mid and high frequencies for a natural sounding cable. Individually insulating each conductor yields zero strand interaction and better sound quality. The Series 8 balanced cables are precision-twisted triple balanced in design. Three dedicated conductors with equal impedance for positive, negative and ground are surrounded by a separate shield to keep noise from reaching the single path. The Mark II cables are silver soldered onto proprietary XLR connectors made with Tellurium (TE) copper contacts increasing conductivity and strength. To reduce signal hum during connection, the Tributaries Series 8 XLR connectors have the female ground (pin 1) placed forward in the shell so the ground connects first. The end result is a dead-quiet neutral sounding cable that accurately produces the sound of live music.

The Series 8 Mark II 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 8AB Mark II Highlights

Hand crafted by skilled artisans in Orlando Florida, USA

Triple balanced 20AWG LC-OFC conductors

Sophisticated multi-gauge design for natural balanced sounding cable

Insulated conductors eliminate strand interaction/distortion

Dual shielded to lower the noise floor

Tellurium copper XLR connectors are highly conductive and strong

Decorative woven jacket over a UL® CL2 PVC jacket

Available in custom lengths either pairs or mono cables

"Tributaries Series 8 Balanced Audio cables produced a dramatic and easily perceivable improvement in clarity, resolution, musicality and overall listening pleasure"

Ralph Tarnofsky I Professional Audio Consultants