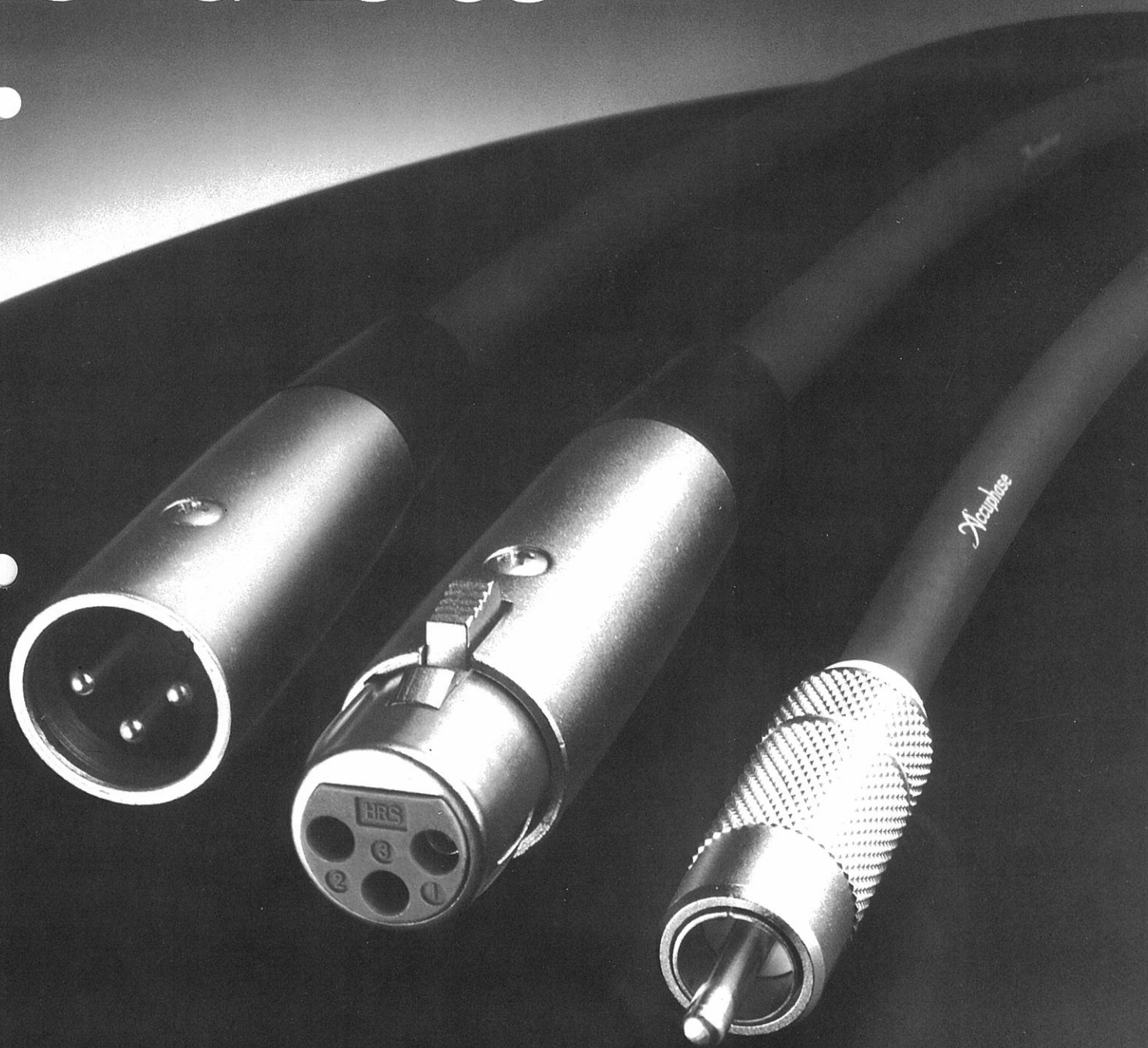


Accuphase

AUDIO CABLES

L-10/L-15/L-30

LC-15/LC-30

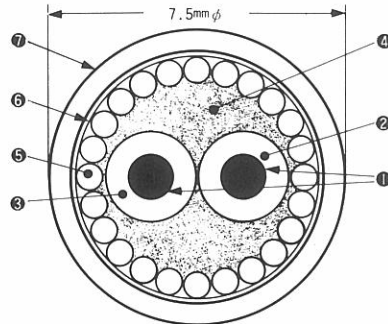


High Quality 2-Conductor Shielded Cable of Litz Wire Design Completely Eliminates Transmission-line Loss and Coloration.

The two most important factors to any audio cables for signal transmission are: 1) not to generate transmission-line loss due to distributed constants such as inductance (L), capacitance (C) and resistance (R) and 2) not to add any coloration. Although the question as to why a simple device like a cable should have coloration is yet to be answered, it is presumed that the characteristic quality of a cable varies with its conductor material, insulating material and construction, because the insulating material between conductors is also a dielectric and the cable can thus be considered to be a sophisticated structure with distributed constants. In addition, minute vibrations generated due to the difference in signal potential between the poles contribute to the total coloration of the cable. For the center conductors, the Accuphase audio cable employs Litz wires made of high-purity oxygen-free copper, minimizing transmission-line loss. For the dielectric, foamed polyethylene is used, which also functions to prevent resonance. The result is that the Accuphase audio cable is a high-quality cable with extremely low transmission-line loss and coloration. The shielding has been specially designed and constructed to prevent the entry of induction noise into the signal.

Moreover, a 2-core shielded construction is adopted to reduce entry into the signal of external noise components induced by the outer conductors (braided shields). For the contacts of the phonoplugs, the outstanding characteristics of rhodium plate are exploited.

The types of cables available are: 1.0 m, 1.5 m and 3.0 m cables with phonoplugs and 1.5 m and 3.0 m cables with 3P XLR (cannon type) connectors.



- ① Center conductors
- ② Dielectric (white)
- ③ Dielectric (red)
- ④ Intersticed core
- ⑤ Outer conductor (braided shields)
- ⑥ Paper taping
- ⑦ PVC jacket

Cross-section View of the Accuphase Audio Cable

2-core shielded construction center conductors

As can be seen in the cross-section view, the audio cable has two shielded center conductors. Because the ground of the signal, which is one of the center conductors, is parallel to the outer conductors, the resistance of the center conductor for signal line becomes smaller, thus realizing a high-quality transmission. The high-density braided shield of the outer conductors, consisting of 0.12 mm dia. x 112 oxygen-free copper wires, provides a superb shielding effect.

Center conductors of Litz wire design minimize high-frequency characteristic loss

As the strands for the two center conductors, high-purity oxygen-free copper is used. Each conductor is of Litz wire design, in which 168 strands each measuring 0.08 mm in diameter are separately insulated with polyurethane and woven together. The Litz wire gives reduced skin effect; hence, minimized high-frequency characteristic loss. The Accuphase audio cables employing such center conductors increase the effect of the Litz wire and assure DC resistance as low as 0.025 ohm/m. The surface area of 0.08 mm dia. x 168 strands corresponds to a copper wire measuring 13.4 mm in diameter, which substantiates reduced deterioration in high-frequency ranges.

Foamed polyethylene used as dielectric

Dielectrics for shielded cables call for a low dielectric constant and a high electrical resistance.

The insulating material used should also be flexible to bending. The Accuphase audio cables use foamed polyethylene which is one of the most outstanding dielectrics for shielded cables. The dielectric constant of polyethylene is 2.3. When this plastic is expanded in the foaming process, the figure for the dielectric constant becomes even lower. Foamed polyethylene effectively reduces stray capacitance between the conductors and also increases the flexibility to bending.

Abrasion-resistant, anti-corrosive rhodium-plated phonoplugs

Because phonoplugs are normally inserted and removed at high frequency, they must be highly resistant to abrasion. As the phonoplugs used for Accuphase audio cables are plated with high-grade rhodium, they are not only resistant to abrasion but also to corrosion due to sulfuric gases which may be generated from kerosene or gas stoves in indoor environments. The hardness of rhodium ranks at the top of all the precious metals; a 1 μm-thick layer of rhodium will allow each plug to withstand up to 100 million sliding actions.

3P XLR (cannon) type connector cables

Recently, audio equipment using Cannon type terminals has seen a marked increase. To accommodate these types of equipment, Accuphase offers audio cables with 3-pin XLR (cannon) type connectors, the pin No. 1 of which is connected to the shielded outer conductor section.

Specifications

- Type: 2-conductor shielded cable
- Center conductors: Litz wire composed of oxygen-free copper strands, polyurethane insulated (0.08 mm dia. x 168 strands)
- Outer conductors: Braided shield composed of oxygen-free copper (0.12 mm dia. x 112 strands)
- Dielectric: Foamed polyethylene
- DC resistance of center conductors: 0.025 ohm/m
- DC resistance of outer conductors: 0.018 ohm/m
- Capacitance between 250 pF/m center conductors:
- Capacitance between 100 pF/m center and outer conductors:
- Inductance between 2 0.9 μH/m center conductors:
- Insulation resistance between center and outer conductors: 40 megohms/Km
- Jacket: Dark blue PVC, 7.5 mm dia.

Model No.	Cable Length	Type of Plug	Cables per set
L-10	1.0 m	Phonoplug	2
L-15	1.5 m	Phonoplug	2
L-30	3.0 m	Phonoplug	2
LC-15	1.5 m	3P XLR (cannon) type	2
LC-30	3.0 m	3P XLR (cannon) type	2

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