

# FURUTECH

PURE TRANSMISSION

## *A Guide to Differences in Metal Plating Materials*

Rhodium, a member of the exclusive platinum group, is the most costly and rare precious metal. It's extremely hard and doesn't corrode. Most people don't think about it but most of world's rhodium production goes into the catalytic converters under your car! Furutech chooses rhodium plating for their highest-performance cable lines. Numerous tests with different plating and treatments reveals that durable rhodium plating provides fast, powerful, controlled bass, an open and extremely palpable midrange with detailed and transparent mid- to upper-frequencies and a smooth, nuanced wideband tonal balance. Furutech recommends rhodium as the most refined plating metal.

Gold is a dense, soft, extremely malleable metal that -- in pure form -- won't oxidize in air or water. Among gold's more practical characteristics is its resistance to corrosion -- better than nickel or silver -- and its superior electrical conductivity. Gold is softer than rhodium and the surface is not molecularly flat. Over time some erosion takes place and a dark build-up occurs that is, in fact, gold dust! Furutech recommends periodically disconnecting and reconnecting gold-plated connectors with all components turned off, of course. Auditioning reveals that gold plating produces a warmer, slightly more plump and romantic midrange, somewhat more powerful but less controlled mid to deep bass, with high frequencies that are either sweeter or less extended than rhodium plating. As always it depends on the connected equipment.

Silver is very malleable and slightly harder than gold. Pure silver distinguishes itself with the highest electrical and thermal conductivity and the lowest contact resistance of any metal. It tarnishes when exposed to air or water with ozone or hydrogen sulfide and that forms the familiar tarnish, silver sulfide. Silver is effective at protecting bare copper heat oxidation and boosting the conductivity of braided shielding. Silver-plated copper conductor's sound is more detailed and open than gold but slightly less natural than rhodium. It offers a very tight bass and detailed midrange, plus extended high frequencies with a tendency towards detail rather than warmth.

Copper is another very malleable metal and its low hardness is one reason for its high electrical and thermal conductivity, the second highest among pure metals. Copper is a good conductor because there are a lot of "free electrons" that can carry current flow efficiently. These free electrons don't remain tied with the copper atoms but instead form an electron cloud around the outside of the atom and move through the solid very quickly. Long auditioning reveals that copper plating produces a sound that resembles gold; somewhat warm mid frequencies, a big bottom end, and relatively sweet high frequencies, but not as extended as gold or especially rhodium.