Types of Connectors

Sound also has a bunch.

Balanced vs. Unbalanced audio cable

There are two types of audio cables: Balanced and Unbalanced.

Unbalanced cable: They are simpler and cheaper than balanced cables, but should not be used for long lengths because they are susceptible to “noise”

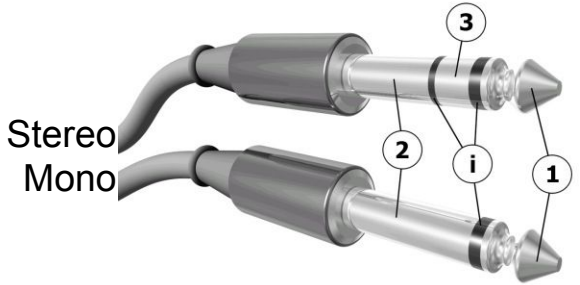
> **Noise**: All cables (audio, power, etc) give off a small magnetic fields. These fields can actually affect the electricity in the other cable. This effect on audio cable makes “noise,” which sounds like white noise and is undesirable.

Balanced Cable: More complex and more expensive, balanced cable. These cables implement a sciency technique helps prevent noise.

Unbalanced Cables

TS Cable: Also called ¼” cable, ⅛” cable, headphone cable, etc. These cables come in two sizes (¼” and ⅛”). They are generally used for electric guitars, basses, keyboards and phone/ headphone jacks. They can be both stereo and mono.

> **Stereo v. Mono**: Mono is one signal, stereo is two, generally a “left” and “right” signal. A stereo TS cable will have an extra connector in it, and basically carries two signals at the same time.



Unbalanced Cables

RCA Cable: This cable can carry either sound or video data. This used to be the standard for TVs, DVD players, etc, but has more recently seen a drop in popularity with things like HDMI taking over.

Balanced Cables

XLR: This is the most commonly used cable for all things sound. XLR can come in 3, 4 or 5 pin configurations. The latter two almost exclusively for lighting. Female plugs have a small tab that must be compressed to unplug. Male ports also have a similar tab.

Balanced Cables

Speakon: Unlike other cable, speakon delivers both sound data *AND* Power. It looks a lot like its lighting cousin, powercon. Speakon, like powercon, cas a small tab that must be pulled back in order to plug it in. It also rotate and locks into the outlet.

Adapting and Converting

Often we'll be in situations when someone's equipment doesn't match out cables. They have a 1/8" plug and we have a ¼" plug. We utilize adapters to change one type of connector to another.

Unbalanced connectors can very freely change from one to another.

RCA to ¼"

Stereo ⅛" to
Mono ¼"

Stereo ¼" to
Stereo ⅛"

Adapting and Converting

You CAN convert an unbalanced cable to a balanced cable, but it won't TRULY be balanced. You'll basically be running an unbalanced signal through it.

Direct Injection Box: a "DI" box converts unbalanced signals to balanced signals. They must be powered by either a battery inside or through phantom power. There are both Stereo and mono DI boxes.

Stereo ⅛ to XLR

Mono DI box