

Cords & Cables

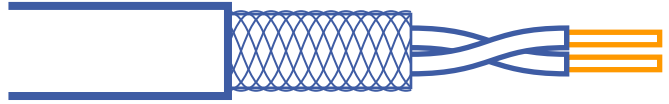
Click on the cable type for description

Mic Cables

Instrument Cables

Speaker Cables

Mic Cable Cross Section



XLR Connector



Mic Cables

Construction: Microphone cabling is generally constructed to two insulated cores and a braided copper screen. This provides the best insulation to reject the hum and buzz of interference.

Connectors: Cables are terminated at each end with a XLR connector. Three-pin configuration is most common. One side has a male XLR and the other has a female XLR connector.

There are generally two options – for low-impedance and high-impedance (or unbalanced) operation. Low-impedance cables tend to have XLR connectors, while high-impedance cables, slightly less common, tend to have 1/4" phone plug connectors. In most cases, you will probably choose low-impedance XLR cables.

Tips:

1. Good-quality cables are worth what you pay for them. They will save you time and trouble onstage. Make sure you have extras on hand.
2. Never wrap cables using the "elbow-wrap" method. Because cables are made with different cores – from lightweight aluminum to highly conductive copper – they are highly susceptible to damage. Care for them properly. (See the Over/Under diagram.)
3. When using mic clips and mic stands, disassemble for travel and tighten screws before your sound check or gig. They will loosen.
4. Mark any defective cable. Repair it or discard it. The problem won't correct itself.
5. Leave some slack cable at the base of the mic stand, allowing for movement on stage. Laying it in a 'figure 8' shape will prevent it from twisting, coiling and damage.

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Mic Cables

Instrument Cables

Speaker Cables

Instrument Cable Cross Section



1/4" Phone Plug Connector



Instrument Cables

Construction: A typical instrument cable consists of a central conductor, insulation, a surrounding shield that completes the circuit, then an electrostatic shield to reduce handling noise — all encased in an outer jacket. Generally speaking, stranded wire is preferred as the center conductor because it is more flexible and withstands movement.

Today, jacketing material has evolved from the days of rubber and neoprene to include PVC compounds. Their relative lack of elasticity tends to protect the center conductor, meaning you'll get months or years of extra service from them and they're also available in a wide range of colors, which makes your cable easy to find.

Connectors: Almost all instrument cables use a 1/4" phone plug. There is a relationship between cable diameter and the type of plug you're using. A larger cable diameter demands a larger cable plug – and that's not always practical.

Tips:

1. Know something about your instrument's impedance. Different sources have different cable length demands. A keyboard, with low impedance, can still sound crisp with a 100' cable. High-impedance sources like guitars and bass guitars can lose high frequencies and sound muddier with a 40' cable.
2. Do not consider the more sophisticated "snake" cabling option unless you have a sophisticated and complex PA system. If you're a small group, you probably don't need this \$500 expense. Avoid the temptation to buy gear you don't really need.
3. Color-code your instrument cables by purchasing them in different colors. They'll be a lot easier to identify when you're setting up.
4. Generally speaking, the higher the AWG, the better. The Average Wire Gauge of the center conductor tells you how many tiny copper strands are packed in there. The higher the number, the more strands there are inside the core. You'll get greater cable flexibility and longer life.
5. Never wrap cables using the "elbow-wrap" method. See The Under/Over Method in this issue.
6. Mark any defective cable. Repair it or discard it. The problem won't correct itself.

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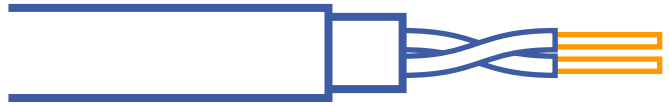
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Mic Cables

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Speaker Cables

Speaker Cable Cross Section



1/4" Phone Plug



Speaker Cables

Construction: Connecting your amplifier to your speakers, these cables are typically constructed of two stranded copper conductors, covered with insulation, twisted together with fillers and sheathed in an outer jacket. While pro audio speaker cables are more sophisticated today, their basic components aren't that different from the lamp cord we used to use to wire our home stereo systems.

Connectors: Generally speaking, cables are terminated at each end with a 1/4" phone plug.

Tips:

1. Speaker cables move much higher electrical currents than either mic or instrument cables. Look for cables with the largest conductor size – the larger the better. This is a measure of the number and gauge of single conductor strands. The thinner the gauge, the greater the conductor size (because more can be packed in) – the better the electrical performance.
2. Place the power amplifier as close as possible to the speaker and don't use 30 feet of speaker cable if you only need ten.
3. For cable reliability, look for speaker cables with the thickest jacket. They'll hold up better.
4. Never wrap cables using the "elbow-wrap" method. All pro audio cables are highly susceptible to damage. Care for them properly. (See the Over/Under diagram.)
5. Don't substitute instrument cables for speaker cables except in emergency situations. Instrument cables aren't meant to handle the higher load requirements that speakers demand. Meltdowns and short-circuits may result.
6. Don't use unnecessary connectors and extensions; these degrade the signal. Make sure you use the right connections, that they're tight and that solder joints are clean and intact.
7. Mark any defective cable. Repair it or discard it. The problem won't correct itself.