

# **XLR Connectors.**

The XLR connector was introduced in the early 1960's as a balanced microphone connector by Cannon Electrical. It is available in four types ie male free, female free, male panel and female panel. Panel mount connectors are also available in PCB mount format. It has now become the industry standard microphone connector and most microphones with detachable leads have XLR connectors. By convention the female connector is used as the input. The original Cannon type is held together by a small screw and has a saddle type cable clamp which requires packing for use with smaller cables. Unfortunately the screws tend to work loose and fall out. Later versions have a screw together body and a collet type cable clamp and, apart from a soldering iron to connect to the terminals, do not require tools to assemble. As well as Cannon, XLRs are also made by other manufacturers including Neutrik and Switchcraft.

XLRs are now available in 3, 4, 5, 6 & 7 pin versions.

The original 3 pin version is used for balanced microphone cables and the pins are allocated as follows:- 1. Screen, 2. Signal "Hot" and 3. Signal "Cold". For unbalanced operation pins 1 & 3 are strapped.

The 4 pin version has become the industry standard for 12V dc power connection. The "belt pack" batteries used by TV camera operators have XLR 4 pin connectors. The female connector is used as the output. The connections are:- 1 & 2 strapped -ve and 3 & 4 strapped +ve.

The 5 pin version is used for balanced stereo operation. The connections are:- 1 & 2 Left, 3 Screen and 4 & 5 Right.

There is also a mains version of the XLR known as XLR LNE. The design is such that it is not possible to touch the pins in both the male and female versions. This feature proved to be its downfall, as users used the two versions differently. The BBC used the the female connector as the output and Independent TV companies used the male. It was possible to connect a BBC lead and an ITV one and end up with a lead with a 13A plug on each end! XLR LNEs are now obsolete having been replaced by IEC connectors but they may still be found on older equipment. XLR LNEs are no longer approved for mains use.

XLR connectors are available from many suppliers including Maplin and RS.