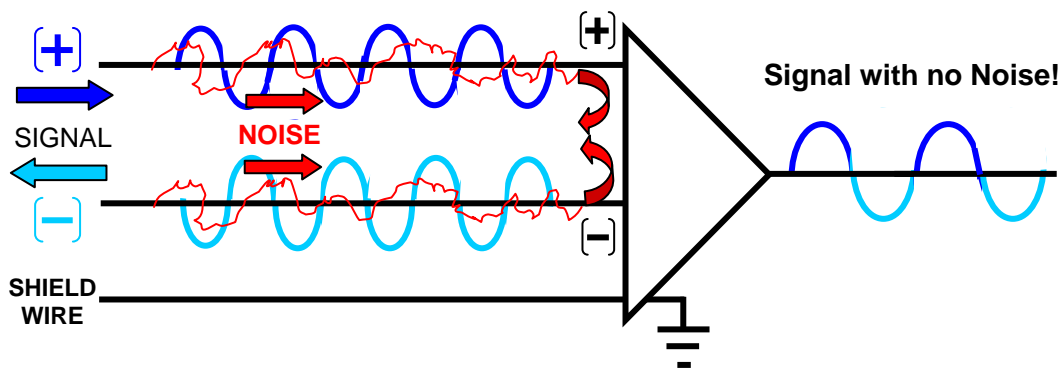


‘Balanced / Un-Balanced Connections’

All musicians should understand the difference between “Balanced” and “Un-Balanced” connections. The examples below are the best way I feel this can be explained...

BALANCED CIRCUIT EXAMPLE

Balanced connections use two conductors (two signal carriers), with each wire carrying the same signal potential, but, at a different polarity (one signal is positive, and one signal is negative). Equal noise energy (electrical noise) tends to be at the same on each of the conductors and is rejected. A Balanced input amplifies only the “difference” between the two signals, and will reject any part of a signal (usually noise) that is the “same” in each conductors.



UNBALANCED CIRCUIT EXAMPLE

Unbalanced connections use two conductors also, but one conductor is carrying signal, the other conductor will be at ground potential. Noise energy on the shield wire will be grounded, but noise energy on the signal conductor will flow through and be amplified with the audio signal.

