

### Why do I need a preamplifier?

The output from a condenser microphone is a very high-impedance signal and is therefore very sensitive to the capacitive loads of cables. This makes it necessary to introduce a driver with high input impedance and low output impedance. Such a driver is called a preamplifier and it actually prepares the output signal of the microphone to be able to be fed into a cable and travel with minor or no losses at all for many meters up to the data acquisition system.

Even though it is called preamplifier, not only it doesn't amplify the signal coming from the microphone, but it usually reduces its gain. Typically, most preamplifiers have a gain of around -0.3 dB.