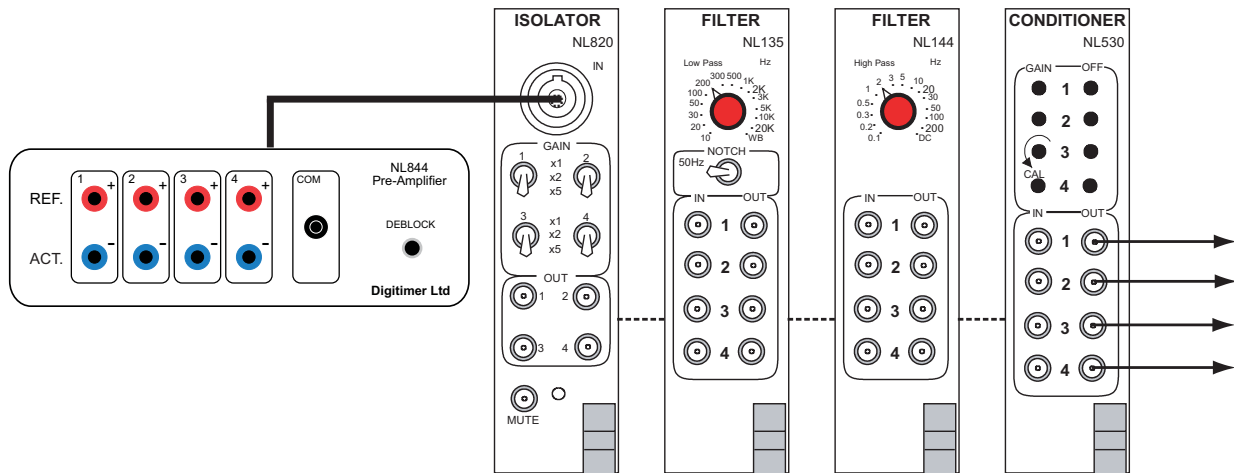


## 4-Channel Isolated Amplifier System with Filtering and Signal Conditioning



### Overview

Using the **NL820A ISOLATION AMPLIFIER** with an **NL844 4-CHANNEL AC PREAMPLIFIER** (replacing the NL822/4), the NeuroLog System becomes a flexible and upgradeable multi-channel isolated amplification system for research applications such as electromyography (EMG) or electroencephalography (EEG).

Unlike the NL824 it replaces, the NL844 input circuit automatically adjusts to the d.c. input conditions and features a non-linear filter that subsequently modifies its time constant if the differential input signal exceeds its normal  $\pm 20\text{mV}$  working range. Therefore, fast, short artefacts do not block the subsequent stages, resulting in an amplifier with a very fast recovery time from stimulus artefact pulses. A de-block button is provided to remove any d.c. offset introduced during electrode placement. The rear of the NL844 includes channel selection switches so that any unused channels can be switched off, gain (x100, x1k, x10k) and low cut off filter (3, 10, 30Hz) toggle switches, as well as an impedance checking facility.

Amplified signals can be filtered through one or more of our dedicated 4 channel filters within the **NL134/5/6 & NL144 FILTER** series. If further signal conditioning is required prior to acquisition via a computer interface, the **NL530 CONDITIONER** provides additional filtering, gain and offset options. All connections between the NL820A and these modules can be accomplished through rear panel links, removing the need for a large number of interconnecting leads.

Output to your chosen acquisition system is simply achieved through the use of our NL951B-1m or NL951B-2m Lemo-BNC cables (one per channel).

If you are interested in amplifying from 8 or more channels, you simply need to use multiples of the modules illustrated above. A single NeuroLog System can handle a 12 channel version of the system shown here.