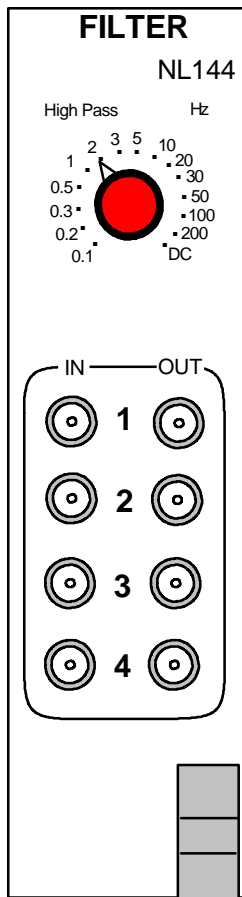


NL144 - Filter (4-channel)

**Introduction**

The NL144 FILTER is a 4-channel, second order (two-pole) high-pass filter module. It is an ideal partner for the NL820A Isolated Amplifier system with its 2/4-channel AC (NL822/824) or DC (NL832/834) pre-amplifiers and the NL530 4-channel Conditioner module. In combination with either the NL135/136 or NL134 Filters, a full 4 channel low frequency and high frequency cut-off system is provided.

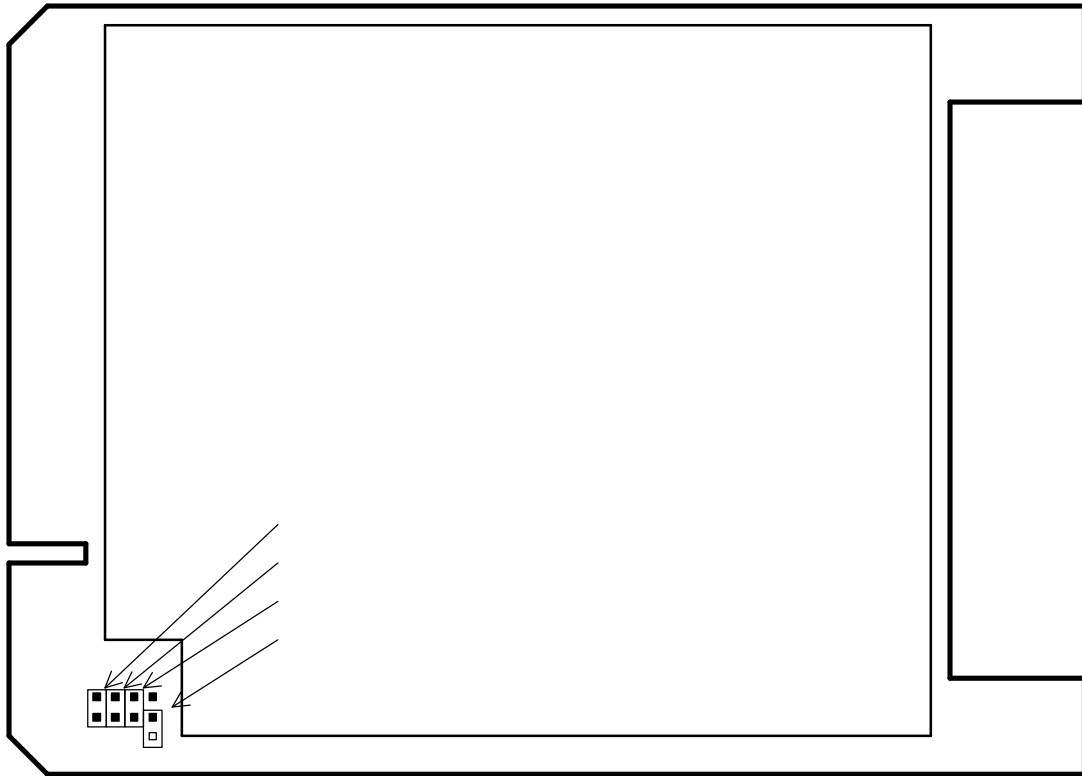
The filter settings have been selected for most Electrophysiological and Clinical protocols but other frequencies can be factory set to order. The design is implemented using low noise active linear circuitry and does not suffer any of the aliasing problems that are encountered when cheaper methods are used. A rotary switch selects the 14 frequency settings giving repeatability over a wide range with 12dB/octave [40dB/decade] attenuation below the selected frequency value. The 'DC' switch position by-passes the filter sections completely.

Specification Summary

Input voltage range:	±15V max. >±10V operating
Input impedance	120kΩ
Filter settings (-6dB)	0.1, 0.2, 0.3, 0.5, 1, 2, 3, 5, 10, 20, 30, 50, 100, 200 - Hz and DC
Cut-off accuracy	±3% + ±0.01Hz <6.3Hz ±3% + ±0.63Hz >6.3Hz
Gain after cut-off	+1.0
Attn. below cut-off	40dB/decade, 12dB/octave
Crosstalk	better than -60dB
Noise	<100µV rms.
Output DC offset	<±10mV
Output voltage range	±10V
Output impedance	<600Ω

Rear connections to the motherboard allow Input and Output interconnections between this and (newer) NL820A, NL134/135/136 and NL530 modules without the need of front panel cables.

NB: This module must NOT be placed adjacent to a Counter module in the **NeuroLog™** rack.



Rear Connections and jumpers

The rear edge connector in the NL900 rack allows adjacent modules to be connected together without the need of front panel leads. This module has the output signals permanently connected to the rear connector for automatic routing to the module on the immediate right. The input signals can be disconnected from the outputs of the module on the immediate left if they are inappropriate. This is done by removing one of the jumpers, in the lower rear corner of the PCB, for each channel to be disconnected. The jumpers can be 'parked', so that they are not lost, by placing them on just one of the pins (as shown for channel 1).

We reserve the right to alter specifications and price without prior notification.

Last Revision: October 21, 1998
File Reference N:\DOCS\COMPANY\MANUALS\NEUROLOG\NL144.SAM
