

NEUROAMP II

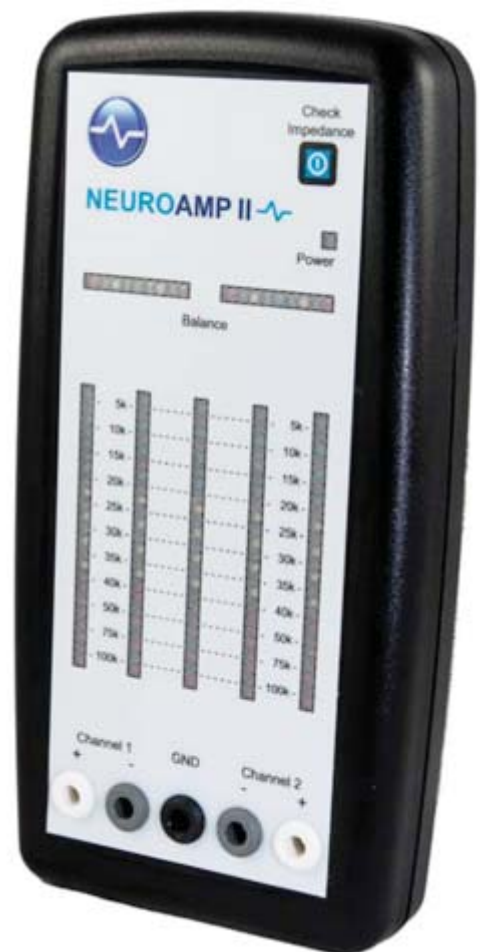
Technical Data

EEG Amplifier

Number of channels	2
Bandwidth (3dB)	DC ... 100Hz, no 1/f noise
Data acquisition rate	1'024'000 samples per second (1Msps)
Sampling rate	250sps (sub-sampling after digital filter)
Resolution	32bit, equivalent input noise: < 0.01 $\mu\text{V}/\sqrt{\text{Hz}}$
Input impedance	Typ. 10E12 Ohm
C-Mode	AC coupled, 0.08Hz, 13 bit

Peripheral Amplifier

Number of channels	8 (C-Mode: 3)
Gain	1
Frequency response	DC ... 70Hz
Sampling rate	250sps
Resolution	24bit (C-Mode: 13 bit)



Audio/Visual/Tactile Feedback Output

Number of channels	8
Frequency range	DC ... 250Hz in 1Hz steps
Amplitude range	-2.5V...+2.5V DC or 0 to 5Vp-p AC
Power supply	3 x 5V, 100mA (max total current < 150mA)
Driving current per ch.	±40mA typ

Impedance Measurement

Impedance range	0 ... 140kΩ, indicator for > 140kΩ		
LED steps	red: >100k, 100k...75k, 75k...50k, 50k...40k yellow: 40k...35k, 35k...30k, 30k...25k, 25k...20k green: 20k...15k, 15k...10k, 10k...5k, <5k		
Balance bars	red: more than +/-20%	yellow: +/-10% ... +/-20%	green: less than +/-10%
Measurement frequency	Half cycle: 150ms, full cycle: 300ms		
Max. electrode voltage	0.1Vrms		
Measurement current	< 5μArms		
Max current (fault cond.)	< 25μA		

Power

Operating voltage	4.5 5.5V (USB powered)
Power management	Auto power off after 5 minutes
Power consumption, ON	Impedance Meter: 800mW Amplifier mode: < 500mW
Power consumption, OFF	< 20mW

Signals

Power indicator	On if device turned on
Check impedance beep	1.6kHz, 200ms
Galvanic voltage too high	LED bar blinks, if differential voltage is critical Periodic beep, if differential voltage is too high

Product class according to 93/42/EWG IIa

Classification according to IEC 60601-1 Class II, Type BF

Life time 5 years

EMC: Compliance with IEC 60601-1-2

IEC / CISPR 11, Class B (RF emission)

IEC 61 000-4-2 (Electrostatic Discharge - ESD)

IEC 61 000-4-3 (RF susceptibility)

IEC 61 000-4-6 (RF asymmetric)

IEC 61 000-4-8 (LF magnetic field)

Mechanical

EEG jacks Shrouded plugs 4mm / 1.2mm
Colors: White, Grey, Black, Grey, White

Tactile feedback jack 3.5mm stereo phone jack

Peripheral sensor jacks 3 x Mini DIN 8 pins

Size (LxWxH) 183 x 93 x 30 mm

Weight 300 g

Environment

Storage and transport Temperature: -40°C...+70°C, no condensation.
Air pressure: 500 ... 1060 hPa

Operating Temperature: 0°C...+50°C, no condensation.
Air pressure: 700 ... 1060 hPa