

# NeuroConnex

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## Wireless Bio-Amplifiers

Be free ...

Our new generation of Wireless Bio-Amplifiers (WBA) will free you from the typical cable clutter and give you a new feeling of freedom in your lab. The animals can be connected to your PC during EEG, ECG or EOG while freely moving in the cage.

All Wireless Bio-Amplifiers include a multi-channel preamplifier with build-in low- and high-pass filters, data encoding engine and highly effective FM transmitter. A single battery is enough for more than 120 hours of continuous operation.

The PC interface includes a multi channel FM receiver and can monitor up to 16 different WBAs simultaneously. Using several WBAs you can transmit 64 EEG channels to one PC without any wired connection.

Two different versions for US and European markets are available.

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## Wireless Bio-Amplifiers

Compact Wireless Bio-Amplifiers give you a low-cost solution for monitoring of EEG, ECG, EOG or EMG signals. Different models allow you to choose the most cost-effective system for your application. A full compatibility of different WBAs allows to cascade them and combine multiple signal sources. The general purpose WBA can be connected to external sources like temperature or pressure sensors and monitor them simultaneously with ECG, for example.

### Behind-the-Ear WBA

EOG or EEG applications may profit from the specially designed Behind-The-Ear (BTE) Wireless Bio-Amplifiers. Single or two channel BTE version is optimally suited for observation of freely operating human subjects in the real environment. Special applications like Brain-to-Computer Interfaces may be implemented. High gain capability and internal digital signal processing core will be used to perform a signal pre-processing according to your algorithms. Open Software Interface includes communication, signal conditioning and DSP libraries. Dedicated development tools may be used to design special algorithms for the real-time signal processing.

### Multichannel Brain-to-Computer Interface

A 64 channel wireless Bio-Amplifier compatible with our Intra-Cortical Interfaces will be available in Q2/2006. Sixty four penetrating electrodes can monitor the activities of motor cortex and send the signals to a PC. Open Software Interface, compatible with Windows and Linux based systems, gives a unique opportunity to design your own BCI applications

### Technical characteristics

Number of Channels	1, 2, 6
Transmission frequency, MHz	88-108 (US) 433 ISM (EU)
Transmission range, m	10
Gain <sup>1</sup> , dB	0-80
Band-pass filter <sup>1</sup> , Hz	0.15—1000
Internal noise, $\mu$ V RMS	5
Sampling frequency, KHz	20
Input voltage range <sup>2</sup> , $\mu$ V	100 - 1000
Number of WBA IDs	65535
Power supply, V	1.5
Battery life time, hours	120
Dimension, mm	50x30x14
Weight, g	5

(1) - customer defined

(2) - application specific

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