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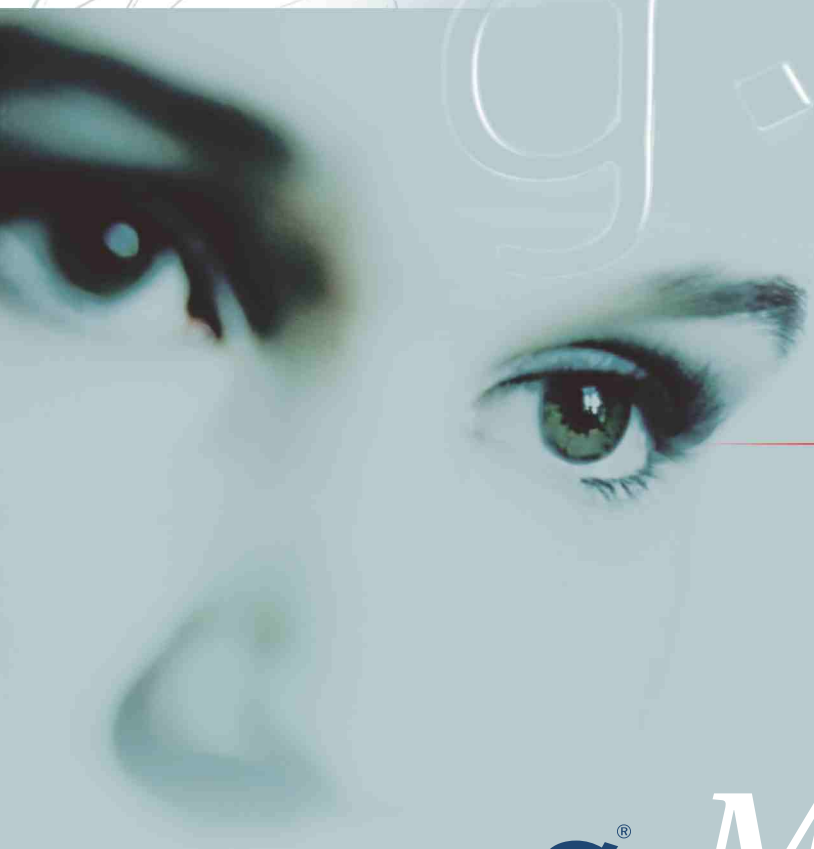

g.MOBIlab

MOBILE BIOSIGNAL LABORATORY

g.tec
GUGER TECHNOLOGIES

medical & electrical engineering

Mobile biosignal acquisition with Pocket PC or notebook

g.MOBIlab

Highlights

- acquire EEG, ECG, EOG, EMG and other signals even outside your lab
- on-line visualization and storage of up to 12 channels on a Pocket PC or notebook
- various software solutions available (API, recording software, MATLAB/SIMULINK interface ...)
- download the data via a docking station
- transmit acquired data with GSM or WLAN to your lab
- integrate the device into your real-time system under SIMULINK (BCI, neuro-, biofeedback)
- can be combined with *g.DAQsys, g.BSanalyze, g.HIsys and g.RTanalyze*

g.MOBIlab - g.tec's portable biosignal acquisition and analysis system - is the perfect tool for recording multimodal biosignal data on a standard Pocket PC. It allows to investigate brain-, heart-, muscle-activity, eye movement, respiration, galvanic skin response and other body signals.

g.MOBIlab is available with 4 EEG/EOG and 2 ECG/EMG channels, 2 analog inputs which can be utilized for other sensors and 4 digital channels. Optionally the device can also be equipped with 8 monopolar EEG channels and 4 digital channels.

MathWorks Partner

g.tec is an official *MATLAB* partner.
(The MathWorks, Inc., Natick, MA.)

Basic package example

- portable biosignal acquisition system g.MOBIlab
- pocket PC with charging device
- 1 switch for external triggering
- EEG/EOG connector box for 9 electrodes
- 5 lead ECG/EMG cable

Accessories

- respiration sensor
- photoelectric pulse sensor
- galvanic skin response sensor (GSR)
- GPS module
- ruggedized Pocket PC
- data storage with 256 MB, 512 MB or 1 GB
- battery extender
- electrode cap
- feedback software
- EEG electrodes
- water-proof case

From simple data logging to advanced online processing

g.MOBIlab

g.MOBIlab is a real handyman for a wide range of applications. Various software solutions allow the integration into almost any experimental setup.

Based on a Pocket PC the device is wearable and fully mobile. Thus, one can find it on the worlds highest summits used in high altitude medical research as well as in flight simulators, pressure chambers, vehicles and many imaginable life science experiments.

An optional device driver/API enables the user to realize his own applications for the Pocket PC (Windows Mobile) or notebook (Windows).

To record biosignals on the notebook a MATLAB-based recording software (*g.DAQsys*) is available.

g.MOBIlab can also be fully integrated into g.tec's online/real-time processing system "High-Speed-Online-Processing for SIMULINK" (*g.HIsys*). This system provides the perfect environment needed for advanced real-time data processing and analysis. For this reason, doors are opened to the world of biofeedback/neurofeedback research and system development.

g.MOBIlab hard- and software also meets the high requirements of BCI (Brain Computer Interface) applications and is used by world leading groups in this field.

The easy handling of hardware and software combined with highest signal quality makes the *g.MOBIlab* a favoured tool for scientists, teachers and system developers.

A large variety of available accessories and sensors enable the user to investigate even unusual scientific questions.

The tiny *g.MICROlab* is equipped with 2 biosignal channels and an external trigger input. Fitting into any pocket it is seamlessly compatible to the whole range of *g.MOBIlab* software solutions.

With a total weight of only 128 g/4.5 oz (including batteries) it can be fixed at an electrode cap or anywhere else on the body to record biosignals with very short electrode lead wires for optimal artifact suppression.

Technical details and specifications

g.MOBIlab (multi purpose)	***EEG/EOG***	EEG Channels: 2 Filters: 2 - 30 Hz Sensitivity: 100 µV (bipolar)	DC Channels: 2 Filters: 0.01 - 30 Hz Sensitivity: 500 µV (bipolar)	***ECG/EMG***	Channels: 2 Filters: 0.5 - 100 Hz Sensitivity: 5mV (bipolar)
g.MOBIlab (8 EEG channels)	***EEG***	EEG Channels: 8, Filters: 0.5 - 30 Hz, Sensitivity: 500 µV (monopolar)			
Analog inputs		Channels: 2, Filters: DC-100 Hz, Sensitivity: 5 V			
Additional inputs/outputs		2 digital TTL inputs/outputs,1 internal trigger channel, 1 external switch			
Power supply		4 standard AA batteries or accumulators (50 - 70 hours operation)			
g.MICROlab (2 biosignal channels)		Channels: 2 (bipolar), customized settings for EEG/EOG/ECG/EMG, depending on application			
Additional inputs/outputs		1 internal trigger channel, 1 external trigger switch			
Power supply		2 standard AAA batteries or accumulators (30 - 40 hours operation)			
Data acquisition		ADC with 16 Bit and 256 Hz, serial interface (RS232)			
Standard		meets IEC 60601-1, for research application, no medical use			

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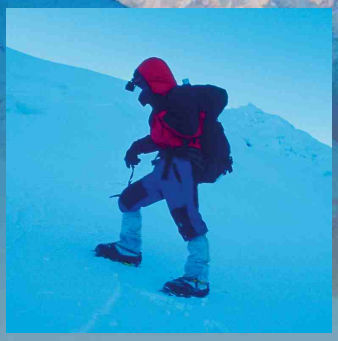
Truly mobile.



The *g.MOBIlab* equipment successfully recorded EEG and ECG biosignals on an Austrian expedition to the Chulu Far West (6419 m) in the Himalaya.

The water-proof case for the *g.MOBIlab* equipment.

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