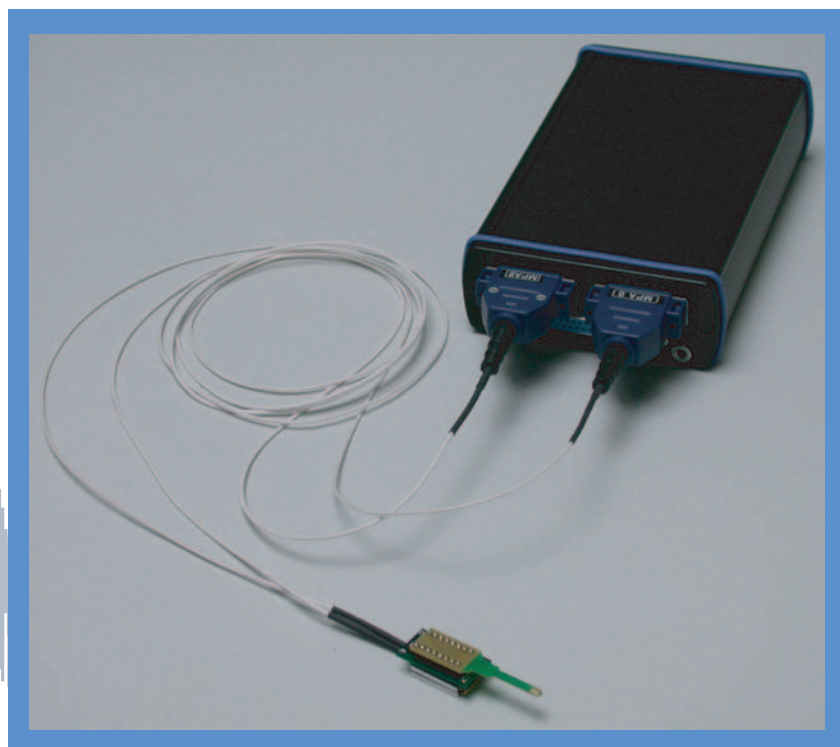


ME*

16-USB-System

Universal 16-channel extracellular recording system

- * Complete 16-channel recording system for *in vivo* and *in vitro* applications
- * Mobile and very compact recording system
- * Combined 16-channel filter amplifier and data acquisition
- * Complete with two 8-channel miniature preamplifiers
- * Adapters for multielectrode arrays and headstages available
- * Novel technology with full speed USB 2.0 interface
- * Can be connected to any computer or laptop
- * Can be controlled from custom programs (via DLL)
- * Highest quality at very competitive price



2 x 8-Channel Miniature Preamplifier (MPA8I):

Dimensions (W x D x H)	17 mm x 25 mm x 1.8 mm
Weight	1.3 g w/o cable and plug, 21 g with cable and plug
Maximum tensile strength of cable	2 kg
Input connector type	Single-row precision sockets, 50 mil (1.27 mm) grid pattern, for 0.35-0.45 mm round pins)
Number of input channels	8
Input voltage	0 to 400 mV (with respect to a supply voltage of 4 V)
Input impedance	10^{12} Ohms parallel to 10 pF
Input noise	$< 1.5 \mu\text{V}_{\text{RMS}}$ (1 Hz to 5 kHz, inputs short-circuited)
Noise density	$e_n = 15 \text{ nV/ SQRT Hz}$
Bandwidth	DC to 50 kHz
Gain	10

16-Channel filter amplifier:

Number of input channels	16
Input voltage	AC Coupled
Input impedance	2.2 MOhms
Input noise	$< 1 \mu\text{V}_{\text{RMS}}$ (full bandwidth, inputs short-circuited)
Noise density @ 1 kHz	$e_n = 9 \text{ nV/ SQRT Hz}$
Bandwidth	1-5000 Hz *
Filter slope	80 db/decade
Gain	100 *

* Other gain and filter settings available on request.

16-Channel data acquisition:

Sampling frequency	Up to 50 kHz/ channel simultaneously
Data resolution	16 bit
Crosstalk (channel to channel)	typically 0.01 %
Number of analog input channels	16
Number of digital input channels	16 TTL (CMOS 5 V TTL level)
Number of digital output channels	16 TTL (CMOS 5 V output)

Interface and connectors:

Analog inputs	2 x 15 Pin SubD for MPA8I
16 Digital input and output bits	37-Pin Sub D connector
Data transfer	USB 2.0 Full Speed (true USB 2.0 transfer rate)

External power supply:

Input voltage range	110-240 V
Supply voltage	9 V DC
Supply current	200 mA

MC_Rack program:

Operating system	Data Acquisition and analysis software Windows 2000, or XP with NTFS; English and German versions supported
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Export features via MC_DataTool:

Data Export	Axon Binary File (*.abf), ASCII file (*.txt), and binary file (*.raw) format
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