

16-Channel Microelectrode Array System for in-vitro electrophysiology

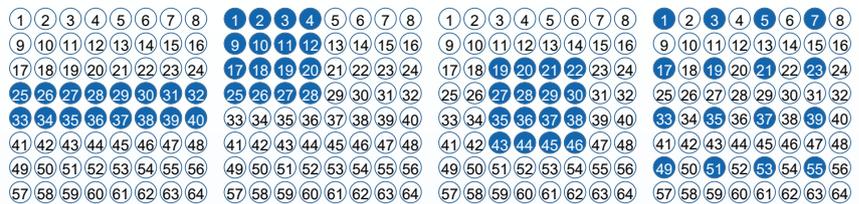
MED64-Entry II

The Next Generation
MED64-Entry Amplifier
Now Available



- CONFIGURATION -

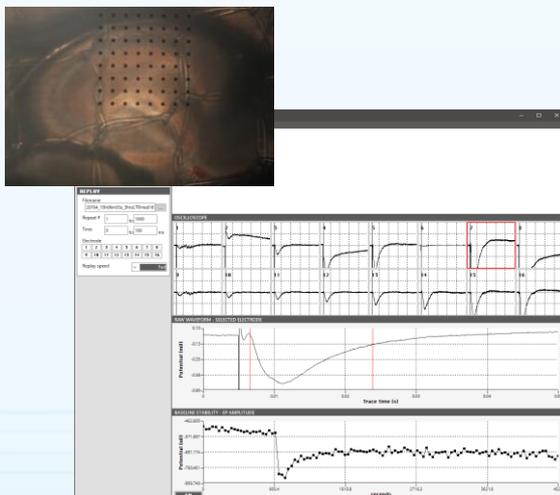
- ◆ MED64-Entry II Amplifier **New!**
- ◆ MED Connector or MED Thermo Connector
- ◆ MED Connector Cover (optional)
- ◆ Data Acquisition PC
- ◆ Control Software (included free of charge)
- ◆ Data Analysis Software "MED64 Offline Toolkit" (optional)



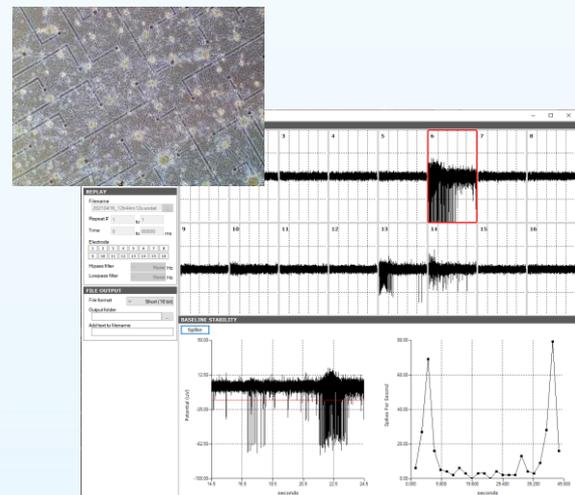
Select the signal acquisition electrode layout from the above patterns when ordering.

FEATURES

- Entry model with a 16-channel amplifier offering excellent affordability.
- Simultaneous extracellular recordings from the 16 pre-assigned electrodes out of 64 electrodes using a dedicated MED Probe.
- 22-mm-diameter well that can accommodate acute slices, organotypic cultures, and dissociated cultures.
- Current-driven stimulation via any electrode (up to two electrodes simultaneously).
- Dedicated control software for data acquisition (provided free of charge). With this software, users can monitor neural activity by selecting a time-series plot of either evoked potential amplitude, spike count, or inter-spike interval (equivalent to RR interval). This enables appropriate timing of electrical stimulation or drug application.



LTP assay in hippocampal brain slice; evoked potentials obtained from 15 electrodes excepting the stimulating electrode.



iPS cell-derived motor neurons. Even weak spikes (action potentials) can be clearly acquired.

- SPECIFICATIONS -



MED64-Entry II Amplifier [MED-A16HD1]

General	
Power supply	DC 12 V
Weight (w/o PSU)	1.7 kg
Dimensions (w/o PSU)	W298 x D237 x H54 mm
Amplifier	
# Channels	16
Bandwidth	0.1 Hz - 10 kHz (+0 dB to -3 dB)
Input impedance	100 MΩ
Input terminal	68 pin x 1
RMS noise (short-circuited)	14 nV / √ Hz
Digitizer	
Resolution	16 bit
Sampling rate	20 kHz / 80 kHz
Stimulator	
# Channels	2
Output format	Current-driven
Max. output	±200 μA
F1 stimulus input	
Max. input	±4 V
I/V conversion ratio	25 μA/V
Power supply unit (PSU)	
Input	AC 100 - 200 V (50 / 60 Hz)
Output	DC 12 V, 5 A, 60 W



MED Connector [MED-C03]

MED Probe securing mechanism	Screw down
Material	Aluminum, Gold plate for contact pins
Contact resistance	≤ 30 mΩ
Weight	480 g
Dimensions	W174 x D150 x H21 mm



MED Thermo Connector [MED-CP04]

MED Probe Securing Mechanism	Screw down
Material	Aluminum, Gold plate for contact pins
Contact Resistance	≤ 30 mΩ
Weight	480 g
Dimensions	W174 x D150 x H21 mm
Temperature Accuracy	< ±1°C
Range of verified < ±1°C	With perfusion: 32°C (Ta=25°C) Without perfusion: 37°C (Ta=25°C)
Heater	Transistor



MED Connector Cover [MED-CC06] *dedicated for MED-CP04

Material	Acrylic resin
Weight	491 g (main body: 443 g)
Dimensions	W215 x D120 x H95 mm
Accessories	Gas port, lid, conical flask

Data Acquisition PC Requirement

Operating System	Windows 11 Home or Pro
CPU	Intel Core i5 or higher performance
RAM	8 GB (Recommend 16 GB or more)
Storage	500 or more GB SSD
Display Resolution	1920 x 1080

KEY IMPROVEMENTS

- The new 16-channel amplifier with built-in digitizer, enabling to adopt a laptop as the data acquisition PC.
- Even more compact A4-size enclosure than the previous model.
- In addition to the conventional 20 kHz sampling, 80 kHz sampling is also selectable, enabling data acquisition with higher time resolution.

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