

BMA-200 AC/DC Bioamplifier

High-performance portable extracellular amplifier



The BMA-200 is a low-noise, portable, battery operated amplifier for EEG, ECG, EMG, and other extracellular applications. The BMA-200 features a wide gain range, sharp cutoff bandpass filters, an AC calibrator, and a built-in audio amplifier and speaker for monitoring the signal. Stimulus delivery to the electrodes is accomplished by a front-panel switch, or via an external logic signal. True DC response is switch-selectable, with a variable DC offset control. Low-power circuitry contributes to long operating time between charges, or the unit can be operated continuously with the included AC adapter. It can be used as a stable DC amplifier, and includes adjustable DC input offset controls.

Positive and negative DC voltages are provided at the input connector for bridge excitation or powering optional head-stage active probes. For human subject recording, the ISO-Z Isolation Amplifier head-stage should be used. Active probes are available for high-impedance microelectrode applications. The BMA-200 is fully compatible with the complete line of cables, electrodes, and other accessories available for the BMA-931 modular amplifier.

The BMA-200 is the latest in our line of high-performance preamplifiers. Its versatility and wealth of features make it equally at home in the laboratory or as a rugged field instrument.

SPECIFICATIONS: (Note 1)

Input type and impedance	Differential instrumentation amp, $> 10^9$ ohms
Wideband noise, RTI	$< 7\mu\text{V}$ P-P
Common Mode Rejection	$> 95\text{dB}$
Gain range	10X - 50,000X, 12-positions
Coupling	AC or DC, switchable
Input connector	Amphenol 703-91T-3478-009 7-pin
Input offset adjustment ranges	$\pm 2\text{mV}$, $\pm 20\text{mV}$, $\pm 200\text{mV}$, jumper selectable
Voltages at input jack for external devices	$\pm 7.2\text{V}$, 20mA max current
AC calibrator	1mV P-P square wave, approx. 10Hz
Low-pass filter	100Hz - 50kHz, 6-positions
High-pass filter	DC - 300Hz, 6-positions
Filter type, slope	Butterworth, flattest response, -12dB/octave
Stim/record input	TTL negative logic, or switch closure
Stimulus inputs (rear panel)	2mm (0.080") pin jacks
Audio amplifier	200mW, built-in mylar speaker
Audio output connector	3.5mm stereo mini-phone jack
Output connector (rear panel)	BNC jack
Operating time between charging	approx. 24 hours
Power adapter/charger	24VDC
Dimensions	6W x 1.75H x 7D inches, 15 x 4.5 x 18 cm

Note 1: Not to be used for human life support applications.

Options:

- 220V charger/adapter
- Pre-wired input cable
- ISO-Z Isolation head-stage
- Electrodes
- Spare connectors & pin plugs

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