
















**BIOPAC Systems, Inc.**  
 42 Aero Camino, Goleta, CA 93117  
 (805) 685-0066, Fax (805) 685-0067  
 info@biopac.com  
[www.biopac.com](http://www.biopac.com)

## MP40 Hardware Guide

### MP40 Data Acquisition Unit Control

-  Safety Rated
-  Off (preserves battery power)
-  On
-  Eyes: EOG Electrooculogram
-  Heart: ECG Electrocardiogram
-  Arm: EMG high Electromyogram
-  Hand: EMG low Electromyogram
-  Brain: EEG Electroencephalogram
-  Transducer: optional accessory mode
-  Dial: selector knob
-  LED indicator
  -  Flashing green light:
    - 1-sec green light = power check*
    - Flash while pressed = System Check or MP40 check*
    - Always flashing = replace battery (will not flash if battery is dead)*
  -  No light: operational (depends on dial position)
  -  No light while the Check Pad is pressed: battery may be inserted improperly or dead. Check the battery connections and if necessary, replace the battery with a fresh alkaline battery.
-  Check pad: output check pad; also performs baseline reset

### 40EL Lead Set

The 40EL Lead Set connector fits the end of the MP40 unit and can be screwed in to secure placement. The lead set has three (3) clip connectors for attachment to EL500 series disposable electrodes.

Biopac Science Lab lessons connections use:

- Red** – positive
- White** – Negative
- Black** – Ground



**Measurements:** ECG, EEG, EOG, EMG (high level) , EMG (low level)

**ECG, EOG settings:**

Maximum signal input 12mV (pk-pk)  
Hardware filter range: 0.05Hz to 500Hz (before software filtering)  
S/N ratio: 73dB (before software filtering)  
Noise: 0.2 uV rms (0.05Hz-35HzLPN)

**EMG (low gain) settings:**

Maximum signal input 12mV (pk-pk)  
Hardware filter range: 5Hz to 500Hz (before software filtering)  
S/N ratio: 73dB (before software filtering)  
Noise: 0.2 uV rms (5Hz-35HzLPN)

**EMG (high gain) settings:**

Maximum signal input 3mV (pk-pk)  
Hardware filter range: 5Hz to 500Hz (before software filtering)  
S/N ratio: 73dB (before software filtering)  
Noise: 0.2 uV rms (5Hz-35HzLPN)

**EEG setting:**

Maximum signal input 600uV (pk-pk)  
Hardware filter range: 0.5Hz to 500Hz (before software filtering)  
S/N ratio: 73dB (before software filtering)  
Noise: 0.2 uV rms (0.5Hz-35HzLPN)

**Output:** Amplitude Modulated Carrier of 4.096kHz

**Connector:** 3.5mm mono male

**Cable length:** 3.6 meters

**Dimensions:** 14cm long x 8cm wide x 2.2 cm high

**Weight:** 132 grams