Magnet Compatible 4-point Stimulator

The Magnet Compatible 4-point Stimulator (CM-MRI) is a high voltage, piezoelectric stimulator that delivers tactile stimulation in and around strong magnetic fields.

The core system controller interfaces to a PC using a USB 2.0 connection. The system can be programmed to deliver customizable sinusoidal stimuli. A wide range of frequencies and amplitudes make this device suitable to researchers investigating the somatosensory cortex and pathways. Input and Output triggers allow the device to synchronize stimuli with imaging systems and other devices.

A high-voltage rated, 50ft cable allows for the controller system to stay near the host PC and a safe distance away from the magnetic field. The cable and head unit contain no steel or other ferric materials, ensuring that the device and signals remain unaffected by magnetic fields exceeding 5T.

High voltage, low amperage piezoelectric actuators deliver stimuli to the skin in a safe manner. Internal protection features are provided to prevent high voltage power transmission when the device is idle.

Warning: supplying 220V when 110 V is selected can seriously harm or destroy the piezo controllers.

Hardware Dimensions

- Actuators: Up to 4
- Weight (combined): 12lbs
- Storage Case: 18” x 15” x 8”
- Head Unit: 11” x 6” x 6”
- Controller System: 9” x 5.5” x 4”

Computer Requirements

- Windows 8+ or
- Mac OS 10.13+
- One USB 2.0 port
- 1 GB HDD Space

Provided Cables

- 110-240V AC Power Cable
- USB 2.0 Male A to Mini-AB Cable
- HV Shielded 8-pin cable (50ft)

Miscellaneous

- Voltage Switch (110V or 240V)
- Custom placement with independent actuators

Vibrotactile Capabilities

- 4 Independent Actuators
- Frequency Range: 10Hz - 200Hz
- Max Amplitude: 500µm @ 25Hz

Triggering Capabilities

- 1 TTL Input Trigger
- 1 TTL Output Trigger
- Triggering Accuracy: 10kHz
- DB9 or BNC Connectors can be used for Triggering

Software Functionality

- Custom Control of Stimulus Parameters via TSV format
- Custom Control of Timing Parameters via TSV format