Wireless Trigger Hub

Revolutionizing EEG Research

- Wireless triggering
- Untethered ambulatory research
- Multiple input modalities
- Easy integration with other systems
- Auto-triggering
- Versatile event synchronization
- Adjustable thresholds
- Enhanced efficiency and productivity

Applications
Evoked response potentials (ERPs)
Multi-device interfaces
Timing synchronization
and many more...

WearableSensing.com
The wireless trigger hub enables interfacing between Wearable Sensing’s Dry Sensor Interface (DSI) EEG headsets and other systems, facilitating device synchronization and third-party system integration. The hub allows you to acquire triggers from and transmit triggers to many sources, consolidating up to 8 trigger sources into a single multi-channel output that inputs directly into DSI systems.

**Wireless Trigger Hub Technical Specifications**

**Inputs/Outputs**
- 1 parallel port (DB-25 connector, 8 channels)
- 4 analog inputs
  - 2 via BNC connectors
  - 2 via 3.5 mm stereo connector
- 1 line-level audio input (3.5 mm stereo connector)
- 2 switch inputs (3.5 mm stereo connectors)
- 1 auto-trigger function (output on all ports)

**Uses Standard Input Connectors**
- Digital (parallel port (DB-25))
- Analog (BNC connectors; 3.5 mm jack)
- Line-level audio (3.5 mm jack)
- Switch inputs (3.5 mm jack)

**Analog/Parallel Port**
- Input voltage range: 0-20 V

**Audio Input**
- Input voltage range: line-level, 2 Vpp
- Min. audio signal level (1 kHz): 40 mVpp
- Bandwidth: 40 Hz - 20 kHz (-3 dB)

**Output Triggers**
- Voltage: 0-5 V
- Current: 100 mA continuous/200 mA impulse
- Min. pulse width: 20 ms
- Min. Inter-trigger interval (rising edge): 40 ms
- Latency:
  - <100 micro s (digital/analog/switch inputs)
  - <0.5 ms (audio input)
  - 12 ms wireless with <400 micro s jitter
- AutoTrigger: 1 Hz

**Wireless**
- Transmission range: 10 m
- Repeater eliminates transmission shadow effect
- Increases fidelity of transmission to 99.999%

**Hub Outputs to DSI Systems**
- 8-bit wireless trigger
- 8-bit wired (DB-25) trigger

**AutoTrigger**
- Distributes a 1 Hz square wave to all outputs
- Enables synchronization across multiple systems

**Threshold**
- Number of settings: 10
- Range: 0.63-5.8 V
- Adjustable thresholding circuit on every input
- Resulting triggers are consolidated and transmitted to DSI systems

**Power**
- Micro-USB 1.x/2.0 receptacle

**Accessories**
- Photodetector
- Push-button trigger
- Stereo cable
- Wired trigger cable
- Wireless dongle
- Wireless repeater