

EE.L.G-2 EEG LOGGRER-2

EEG Logger

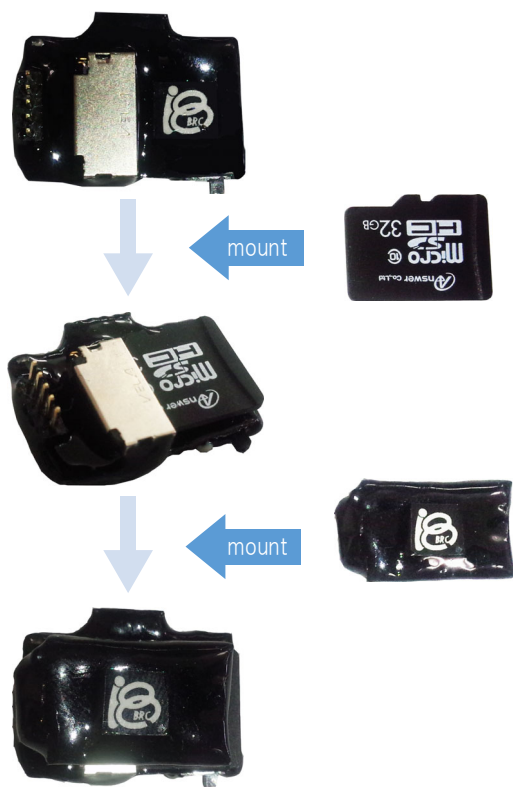


When you chronically record EEG and/or EMG from mice/rats, the tether connected to the head of the animal can cause a variety of problems, e.g. it can restrict animal behaviour, stress by the twisted tether, animal bites and breaks it, electrical noise comes via long tether, etc. To solve these issues, we developed extra small logger which even can sit on the head of mouse. By the nature of head-mount device, the distance between the electrodes and amplifiers is very close, so no electrical noise comes in. It has two differential biopotential input channels so can record EEG and EMG simultaneously, best suited for sleep research, epilepsy research, etc.

● Simple recording in microSD

First, insert a microSD card in the logger.
Next, connect a battery and turn the switch on, then recording starts.
After recording, pull out the microSD and simply connect it to PC. You can directly read data from Matlab. No dedicted reader is needed.

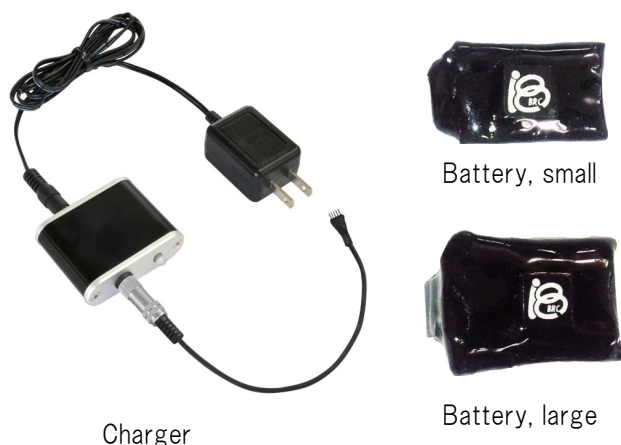
Specifications	
Logger weight	1.5g
Battery weight	Small: 1.2g, Large: 2.9g
Recording time	Small: 26h, Large: 70h
Recording Channels	Differential 2ch (Ch1+, Ch1-, Ch2+, Ch2-, GND)
Sampling rate	100Hz/ch
Input range	$\pm 5\text{mV}$
Resolution	16bit ($\pm 6.5\text{mV}$ by $0.2\mu\text{V}$ step, but clipped at 5mV)
Highpass filter	1Hz
Lowpass filter	100Hz
Media	micro SD
Data format	Binary, Matlab compatible



● Battery & Charger

Battery can be recharged by a charger included in the package. Charging will be finished 1–2 hours after connecting. By the supervising function, charging will be automatically terminated after full charge, and indicator LED will be dimmed.

The small battery is for mice, and the large battery is for rats. Or we can provide smaller / larger battery on request.



● Electrode for EEG and EMG

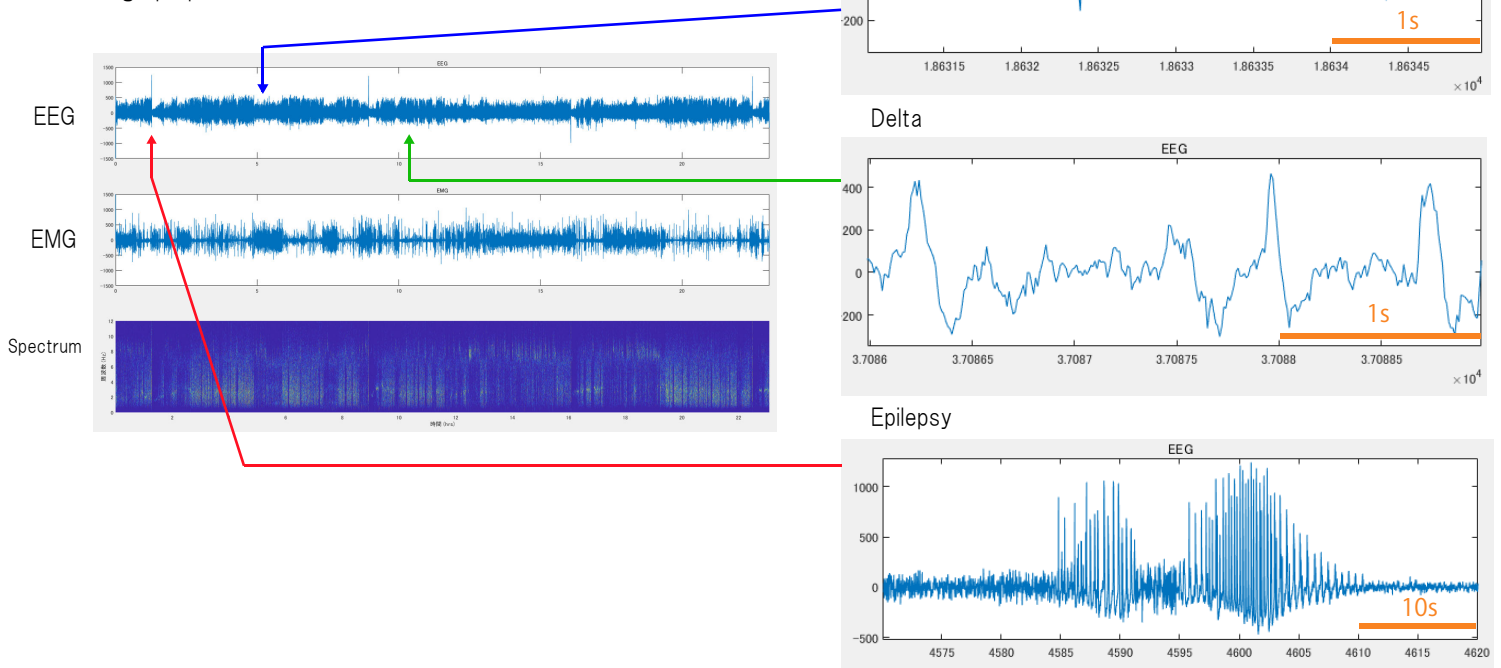
The Input connector is universal 1.27mm pitch 5pin connector. We provide an electrode specially designed for the logger. It has two screws for EEG, two silver wires for EMG and one screw for GND. By default, the length of screw wire is 12mm, the length of EEG wire is 25mm, the screw diameter is 1mm, but we can provide customised version on request. Of course you can use your self-made electrodes, too.



● Data

Data format is simple binary, so it is compatible with Matlab, Octave, etc., any software compatible with binary reading. Matlab sample codes are included in the package.

The following data shows 24h EEG & EMG recording from a mouse showing epileptic seizures.



● EEG logger standard set

This package includes the following items :

- ELG-2-Head EEG logger x1
- ELG-2-Charger Charger for EEG logger x1
- ELG-Bat-S or L (※) Battery for EEG logger, small or large x2
- EeEm-12-25-12 Electrode for EEG and EMG x1
- ELG-2-Con Male mating connector (incl. 2) x1
- ELG-2-ConF Female connector (incl. 2) x1
- ELG-2-Dummy-S or L (※) Dummy logger x1
- ELG-mSD microSD for EEG logger x1

(※) Please specify the size of battery and dummy logger. S will come without specifying.

Model	Description
ELG-2-Set	EEG logger standard set
ELG-2-Head	EEG logger
ELG-2-Charger	Charger for EEG logger
ELG-Bat-S	Battery for EEG logger, small
ELG-Bat-L	Battery for EEG logger, large
EeEm-12-25-12	Electrode for EEG and EMG
ELG-2-Con	Male mating connector (incl.2)
ELG-2-ConF	Female connector (incl.2)
ELG-2-Dummy-S	Dummy logger, small
ELG-2-Dummy-L	Dummy logger, large
ELG-mSD	microSD for EEG logger