

Materials List for:

A Simple Stimulatory Device for Evoking Point-like Tactile Stimuli: A Searchlight for LFP to Spike Transitions

Antonio G. Zippo¹, Sara Nencini¹, Gian Carlo Caramenti², Maurizio Valente¹, Riccardo Storchi³, Gabriele E.M. Biella¹

¹Institute of Molecular Bioimaging and Physiology (IBFM), Department of Biomedicine, National Research Council

²Institute of Biomedical Technologies (ITB), Department of Biomedicine, National Research Council

³Faculty of Life Sciences, University of Manchester

Correspondence to: Gabriele E.M. Biella at gembella@gmail.com

URL: <https://www.jove.com/video/50941>

DOI: [doi:10.3791/50941](https://doi.org/10.3791/50941)

Materials

Name	Company	Catalog Number	Comments
Microstepper	AB Transvertex (Stockholm, Sweden)		The microstepper used to pull down the electrode matrix
32-channel Cheetah System	Neuralynx (MT, USA)		The electrophysiological recording system
L293D h-bridge	RS Components (Cinisello Balsamo, Italy)		The bridge used to connect the microcontroller to the speaker
H21A3 Optical Interrupter Switch	Fairchild Semiconductor Corporation (San Jose, California)		The phototransistor used to establish the tip displacement
Arduino Uno	Arduino (Duemilanove, Italy)		The microcontroller used to deliver current pulse to the speaker
Microelectrode Matrices GB1	FHC		
Isoflurane	Rhodia Organique Fine Ltd.		The anesthetic used to prepare animals
Stereotaxic apparatus	Narishighe (Tokyo, Japan)		
Sprague-Dawley male rats	Charles River (Calco, LC, Italy)		
Gallamine triethiodide	Sigma-Aldrich		The compound used to curarize the animals
Cresyl violet	Sigma-Aldrich		
Topical antiseptics (Betadine 10%)	Meda Pharma (Milan Italy)		
Heparine	Sigma-Aldrich		
Formaldehyde	Carlo Erba Reagents (Pomigliano Milanese, Milan, Italy)		