

Materials List for:

Simultaneous Transcranial Alternating Current Stimulation and Functional Magnetic Resonance Imaging

Kathleen A. Williams¹, Yuranny Cabral-Calderin^{1,3}, Carsten Schmidt-Samoa¹, Christiane Anne Weinrich^{1,2}, Peter Dechent¹, Melanie Wilke^{1,3,4}

¹Department of Cognitive Neurology, University Medicine Goettingen

²Department of Neurology, University Medicine Goettingen

³German Primate Center, Leibniz Institute for Primate Research

⁴DFG Center for Nanoscale Microscopy & Molecular Physiology of the Brain (CNMPB)

Correspondence to: Kathleen A. Williams at katie.aw@gmail.com

URL: <https://www.jove.com/video/55866>

DOI: [doi:10.3791/55866](https://doi.org/10.3791/55866)

Materials

Name	Company	Catalog Number	Comments
None			
DC-Stimulator MR	NeuroConn, Ilmenau, Germany		includes: inner filter box, outer filter box, MR-safe electrode and stimulator cables (1 each), stimulator, 2 surface electrodes, and one shielded LAN cable; NOTE: This manuscript describes tACS-fMRI setup with NeuroConn's MR-safe stimulator, but such a stimulator from another manufacturer would be acceptable, with adaptations made based on manufacturer specifications.
3 tesla Tim Trio MR scanner	Siemens, Erlangen, Germany		
presentation computer			
presentation software (e.g., Matlab)	The Mathworks, Natick, USA		
shielded LAN cable			
projector	InFocus Corporation, Wilsonville, USA	IN-5108	
Ten20 Electrode Paste	Weaver and Co., Aurora, USA		
EEG cap - EASYCAP 32-channel system	Brain Products GmbH, Germany		
tape measure			
marker			
pillows			
button response box	Current Designs, Philadelphia, USA		
isopropyl alcohol			
cotton pads			
tape			
MR-safe sand bags	Siemens, Erlangen, Germany		
MR-safe mirrors	Siemens, Erlangen, Germany		
MR-safe screen			can be built in local machine shop to fit site-specific parameters
E-A-Rsoft ear plugs	3M, Bracknell, UK		