

Checklist for personalized NIBS for L2 learning

• Before arrival

- ☐ (>4h) Charge amp batteries
- ☐ (>4h) Charge stimulator battery
- ☐ (>1h) Stimulator battery $\geq 95\%$
- ☐ (>1h) Make sure all EEG caps are clean and dry
- ☐ (>1h) Set up and test equipment
 - ☐ Waveform generator
 - ☐ Stimulator REMOTE
 - ☐ Stimulator SIGNAL OUT
 - ☐ Stimulator Output using oscilloscope
 - ☐ Audio & Earphone
 - ☐ Recording & Microphone
 - ☐ EEG system, incl. caps, SIGNAL OUT & Trigger
- ☐ (>1h) Print consent, payment, feedback/quiz and study protocol forms
- ☐ (>1h) Tissues, 2*cotton swabs, 2*syringes, EEG gel, Ten20 paste, two water-based pens with different color

• Preparation

- ☐ Introduce lab (Only for the first time)
- ☐ Give consent form to subject and receive it signed
- ☐ Assign / look up identifier
- ☐ Get a glass of drink and bring snack for subject
- ☐ Explain task
- ☐ Prepare subject (gelling)
 - ☐ Follow that mat.
- ☐ Put "Do not disturb" signs on both doors

• Recording

- ☐ Start NeurOne recording \Rightarrow "paradigm_practice.py" \Rightarrow Answer question \Rightarrow "paradigm_main.py"
 - ☐ In practice stage, adjust volume on computer to be comfortable for subject & confirm they can hear 40 Hz sound within questions.
- ☐ Watch for amplifier battery warning. In case of warning: wait for next break \Rightarrow stop recording \Rightarrow change battery \Rightarrow start recording \Rightarrow Note down the break.
- ☐ Watch for stimulator battery warning. In case low battery or the subject want to stop: wait for next break \Rightarrow stop recording \Rightarrow run "safe_stop.sh" \Rightarrow run "safe_start.sh" \Rightarrow start recording \Rightarrow Note down the break
- ☐ Denote anything out of the ordinary in the study protocol, e.g. loud noises, breaks in recording, faulty equipment
- ☐ During breaks: offer water, ask if everything is ok

• After Recording

- ☐ Hand out and receive feedback form
- ☐ Make appointment for next session (if applicable)
- ☐ Pay subject and receive signed payment form
- ☐ Export data and save it to NI share
- ☐ Shut down EEG equipment, stimulator and computers
- ☐ Clean EEG cap, stimulator rubber electrodes
- ☐ Charge batteries