

# EEG Recording Checklist

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## Prior to arrival

1. Print:
  - Consent form
  - Information sheets
  - Payment sheet
  - Relevant questionnaires
2. Fill syringes with gel
3. Assign participant number
4. If relevant, run stimShuffle script
5. Launch stimulus presentation software (E-Prime, Matlab, or Python) and enter information for the current subject
6. Connect EEG system to fiber optic cable
7. Confirm sampling rate at 512 Hz (1/32) (Decimation)
8. Set ActiView config file as BILSWED
9. Confirm settings:
  - High pass at 0.05 Hz
  - Low pass at 100 Hz
  - Sampling rate at 512 (Decimation 1/32)
  - Reference: None (raw)
10. Set up Swedish keyboard
11. Wash hands

## Participant arrival and setup

1. Welcome participant
2. Consent form
3. Give participant Language History Questionnaire and a writing utensil

## Capping

1. Measure head size around and ear-to-ear
2. Gel and place mastoid electrodes
3. Place cap on participant and put gel in each hole
4. Attach electrodes to cap
5. Place additional electrodes:
  - (a) Mastoids: Left = EX1, Right = EX2
  - (b) Outer canthi of both eyes (2 electrodes): Left = EX3, Right = EX4
  - (c) Above (EX5) AND below (EX6) left eye (2 electrodes)
6. Attach electrodes to system
7. Check high and low bandpass (.05 - 100 Hz)
8. Check sampling rate (512 Hz (1/32))
9. Press “START” in ActiView
10. Resolve electrode issues
  - Make sure electrode offset is close to zero for all attached electrodes
  - Make sure offset remains constant when participant moves
  - Check monopolar display to make sure everything looks good
  - In case of issues, remove electrode from cap, scrub gel off the end of it, and replace
  - Add additional gel to electrodes as needed
11. Press “START FILE” in Actiview
12. Enter unique subject identifier in “Enter Local Subject Identification”

13. Select “A1 - B32” under “Save subset:”
14. Make sure to check “Add 8 EX electrodes”
15. Save file in the data folder for your experiment using the unique subject identifier as the filename

### Experimental session

1. Seat participant in chair
2. Double check instruction file for subject number
3. Remind:
  - Don’t blink your eyes during the sentences
  - Leave your hands on the keys
  - Try to move as little as possible
  - There will be pauses every about every X minutes
  - If you need a break in addition to these, press “P” during appropriate window (depending on the experiment)
4. Press the pink “Paused” button in ActiView to begin recording
5. Launch experiment in Matlab, Python, or E-Prime and put in subject number
6. Double-check to make sure you actually started recording!

### After the task is done

1. Stop recording in ActiView
2. Remove cap
3. Perform any follow-up tasks or questionnaires as needed
4. Debrief
5. Show participant to the shower room, and give them a towel, shampoo, etc.
6. Copy ID card back/front
7. Pay money and sign form

### Afterwards

1. Copy EEG data to backup from BIOSEMI computer
2. Copy experimental output files to backup from EXPERIMENT computer – results as well as stimuli for all tasks
3. If EEG system battery is low, charge it before putting materials away
4. Record any equipment problems in Calpendo

### Clean up

1. Put remaining gel from syringes back in the tube
2. Wash syringes – inside and out
3. Wash flat electrodes – use toothbrush to get gel off of the sensor
4. Wash scalp electrodes
5. Remove chinstrap and clean the cap. Make sure no gel remains in any of the holes. Rinse well.
6. Hang cap and electrodes to dry