Guidelines for EEG LAB 241

1. Booking the Lab

Before starting any piloting/data collection you need to let the other users know that you will be accessing the lab, what equipment/setup you will use and preferred slots. Message the group on the dedicated Discord channel with this information.

* Calendar Access: Contact any team member with access to the calendar to gain booking permissions (you can ask Joana).
* Bookings:
  + Avoid Full Week Bookings: Do not reserve the entire week unless no one else requires lab time. Always check both the calendar and the EEG lab channel for other team members' needs and plans. During busier times, coordinate with other users in the EEG lab channel to establish fixed weekly slots.
  + Schedule Reasonable Booking Slots: Avoid blocking full days unnecessarily, especially during busy weeks. A typical recording day could accommodate up to 3 sessions (typical session duration 2.5–3 hours). As a rule of thumb, when longer sessions are required, you can book two back-to-back sessions, but these should be either the first or last two sessions of the day, so that other users can still use the remaining slot within reasonable working hours (e.g. scheduling participants out of office hours can be challenging due to participants’ class scheduling constraints/fatigue).
  + Cancellations: If a participant cancels or does not show up, inform others using the lab

1. Before start testing

* Do not install any software, packages, toolboxes, office etc. in the stim PC without consulting Marios and letting all other users know. Additional installations can disrupt presentation timings and affect the whole experiment.
* Task development: Do not use the stim PC for coding up/developing tasks. Use the PC on the desk across the door (to the right) or your own machine. The current version in the stim PC is Psychopy3 so code up your tasks accordingly. Coding up tasks in Coder, rather than Builder, is preferred for compatibility across versions in different shared spaces (EEG, MRI, level 7)
* Do not move the EEG chair: Our stimuli/calibrations are programmed for a specific distance from the monitor.
* Login: Both stim and EEG PCs: user is .\stim ; pass is mitsmits
* Stim PC frame rate: Ensure the refresh rate is set to 120 Hz (right click on the main windows screen > NVIDIA control panel. If the refresh rate is not 120Hz, do not change it! Turn off the monitor and reboot the stim PC, which will reset it to 120Hz - never change any monitor settings!
* EEG PC: Confirm that the workspace is correctly configure for your cap (we typically use "PassiveCap64"; check the right corner in the bottom of the recorder). If not, File > Open Workspace >select PassiveCap64.rwksp (or your workspace)
* Remove any unnecessary cables inside the booth: Ideally, no extra cables and/or peripheral devices should be used without prior agreement. With any additional devices entering the booth, the risk of noise/artifacts increases. Loose unplugged cables inside the booth, will most certainly introduce noise in the EEG (due to conductive pickup on EEG cables). If you find any disconnected/ unnecessary cables for your experiment inside the booth, remove them to avoid artifacts. The only exception to this is the eyetracker cable, which should not be disconnected from the plugin on the monitor, as it is very sensitive (see point below)
* Eyetracker: By default the eyetracker usb cable is not connected to its box outside the booth, as having it on induces noise in the signal. If you need the eyetracker for your experiment, connect the usb cable outside the booth (labelled as “eyetracker cable”) to the black box that sits on top of the stim PC. Ensure that the box is ON (blue light), otherwise turn in on. Note that this is all outside the booth, don’t fiddle with the eyetracker cable inside the booth.
* If the sockets are not working, check that the red master switch near the door is turned on – this master switch can never be turned off in any case!

1. Participant Setup in the Booth

Proper handling of the EEG chair is crucial, as the attached response box may malfunction if the chair is subjected to excessive force or misuse:

* Chair rotation
  + Do not to turn the chair more than 45 degrees from the front wall of the cabin. Always rotate the chair yourself before the participant sits down or gets up.
  + While rotating or adjusting any parts of the chair, keep an eye on the response box cable attached beneath the chair to ensure it does not become caught or tangled in any parts underneath. Straining or pulling out this cable will result in malfunction of the box.
  + Participants must not climb into or jump out of the chair. Ensure you assist them to sit down and stand up smoothly by slightly rotating the chair (as described above) to avoid any sudden movements or pressure on the right arm with the response box.
* Protecting the response box and armrest
  + When the participant is sitting down or standing up, shield the right armrest and response box with your arm and hand to prevent the participant from putting any weight on it.
  + Advise participants to avoid leaning heavily on the armrests when positioning themselves and during task.
* Chair and response box adjustment
  + Do not allow participants to twist or adjust the arms of the chair or response box independently, as this can strain the response box cable. Always ensure the response box is stable and positioned comfortably for the participant. If adjustments are necessary, make them yourself and carefully without putting stress on the cable.
* Securing chair levers
  + Confirm that all chair levers are securely locked, particularly those on the right arm where the response box is.

4. Before Leaving the Lab

It is critical that all equipment and settings are reset to their defaults before leaving the lab

* Equipment Cleaning: Clean all equipment thoroughly, including the cap, chair, amplifiers, and other devices. There are cleaning wipes near the prep desk. Be meticulous about removing gel residues from equipment and wiping down PCs and desks outside the booth.
* Remove Additional Testing Cables: If it was agreed to introduce additional devices in the booth that are not part of the “default” setup, please remove any additional testing cables that you might have used inside the booth that are associated with these devices.
* Eyetracker: if you used the eyetracker, disconnect the usb cable from the eye tracker box outside the booth (top of stim PC) --don’t unplug, or change, the eyetracker cable inside the booth, just leave it disconnected outside.
* Workspace: If you changed this, return it to the "PassiveCap64" configuration.
* Log File Update: Record cap usage and electrode issues after each session using this link. This allow us to track broken electrodes <https://docs.google.com/spreadsheets/d/1uSCQBgyfLt5m5uFhFGr-5tHs48YUQIHV/edit#gid=1625760250>
* Windows: Ensure that any lab windows you might have opened are closed and securely locked.
* Radiator: During winter months, keep the radiator on a very low setting. It should not be left above the purple marker on the knob/wall, as the booth can become quite warm and uncomfortable. If you increased the setting for your session, reset it to a very low level afterward by adjusting the knob.
* Ventilation: Switch off the booth ventilation system should you have turned it on
* Towel Handling: Return all dirty towels to the cupboard (do not leave them in the lab/radiator), and mark an “X” on the calendar atop the cupboard to track towel use.
* After leaving, always return the key to the red box in the pigeon hole.
* Report Issues: Communicate any abnormal issues encountered during the session in the EEG lab chat.

5. Supplies and Inventory Management

* Supply locations: You can find most of the supplies in the upper and bottom drawers near the prep desk and should refill them as needed. Extra supplies (e.g., gel, syringes, cotton buds) are stored in the middle cupboard. Joana does a round in the lab every month to check the supplies, but you should also monitor supply levels to prevent shortages, as restocking requires time.
* Order Supplies:
  + Need to reorder when you find:
    - Fewer than three jars of gel
    - Only 1 box of syringes or cotton buds
    - The last sticker roll
    - Fewer than two small bottles of shampoo
  + Placing an order: When more supplies are needed, contact the designated person (currently Joana) to place an order.
* Software license: Keep track of the Presentation license, as we need to request a renewal from IT at the beginning of each year. If you notice any warnings about the license expiring, let Marios know.