

CABI - EyeLink 1000 Plus Operating Instructions

Below is a summary of the steps involved in operating the MRI eyetracker. Before operating the eyetracker, make sure it is setup in the scanner and plugged in, and that your participant is comfortably situated. You will be operating two computers from the control room: the host computer, which has the EyeLink software on it, and the display computer, which is the computer that has your presentation software on it (e.g., E-Prime, Psychtoolbox, etc.). The instructions here refer to E-Prime as an example, but can be applied to any program you choose depending on how you set up your experiment script.

1. Open E-prime on the display computer
2. Turn on the host computer; EyeLink should open automatically after the computer boots.
3. Run your E-prime script: First enter the subject ID for the E-prime data file, then enter the subject ID for the .edf file
4. After entering the subject IDs, the E-prime script will take you to the “calibrate” screen. Press any button to continue.
 - a. On the host computer, confirm that the eyetracker search limits are set by clicking on the eye.
 - b. Transfer the image to the display computer (click “Image → Display”). Make sure you’re in the zoom setting using the left and right arrows
 - c. When you’re in the camera setup view, select whether you’re recording the right or left eye under “eye tracked”
 - d. Go into the scanner room and adjust the focus of the camera while in zoom mode
 - e. Back in the control room on the display computer, adjust the thresholds for pupil and corneal reflection by using the up/down arrows and minus/plus sign keys, respectively
 - f. At this point, you’re ready to calibrate. Press the “c” key
 1. Instruct the participant that they will see dots appear on the screen. They should look directly at each dot as it appears, and stay focused on it until the next dot appears. Press the spacebar to start. If you’re in “manual” mode, you will press the spacebar after each dot in order to advance calibration. In “automatic” mode, you just press spacebar once at the start and the program will complete the rest of the calibration process.
 2. To validate the calibration, press “v”. This will allow you to repeat the calibration steps with the participant, and will output information regarding the quality of the calibration
5. Press “o” to move on to the experiment
6. After the experiment completes, shut down the eyetracker: first make sure to be in offline mode on the host computer, then click “shutdown host”