

# **DBIC Standard Operating Procedures for EyeLink 1000+ Eye Tracker**



**Learning to use the EyeLink 1000+. The complete user guide for the EyeLink eye tracker is attached to this manual starting on page 6. Please read through this entire manual and the user guide before attempting to use the eye tracker. For hand on training on how to use the eye-tracker and for technical support, contact Terry Sackett.**

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## **DBIC specific instructions for setting up the Eye-Tracker.**

**Default Protocol:** When not in use, the eye-tracker is to be stored on the cart in the scanner room behind the magnet. Follow these instructions for setting it up each time you use it. Always return the eye-tracker to its storage location when you are finished using it.

### **Setting up the Eye-Tracker and Screen**

**Step 1:** Power on the Eye-Tracker and the EyeLink computer: First, turn on the power strip behind the computer, then press the power button on the computer. The EyeLink computer is plugged in to a power strip located on the counter behind the computer. The power strip also provides power to the eye-tracker's camera and infrared light source. When not in use, both the EyeLink computer and the power strip must be off.

**Step 2:** Set up the eye-tracker in the scanner: First, move the projector screen out of the way so you have full access to the rear of the bore. Next, gently remove the lens cover from the camera and place it on the cart. Then, remove the eye-tracker from its cart and place it in the bore\* to align with the positioning marks on the rails, and gently tighten the screws to hold it in place. If you are using the standing projector screen, place it back on its positioning marks. If you are not using the standing projector screen, see Steps 3 and 4.

**\*Important Note:** *The eye-trackers's calibration can be easily thrown out of whack if not handled properly. When moving the eye-tracker, you must hold it in the upright position using two hands and gently place it where it needs to go. Always grasp the distal arm of the base of the eye-tracker stand with your left hand, and*

*grasp the proximal arm of the stand with your right hand. Never grasp or move the camera, the infrared light source, or the top mounting bar.*

**Step 3:** Install the eye-tracker-mounted projector screen.\*\* First, remove the dust cover from the top of the screen and place it on top of the cart. Next, grasp the screen gently with both of your clean hands—preferably wearing gloves—being careful to touch just the edges of the screen to avoid leaving finger prints. Place the screen in the mounting groove on the eye-tracker with the shiny side facing the subject. Gently hand-tighten the screws to hold it in place.

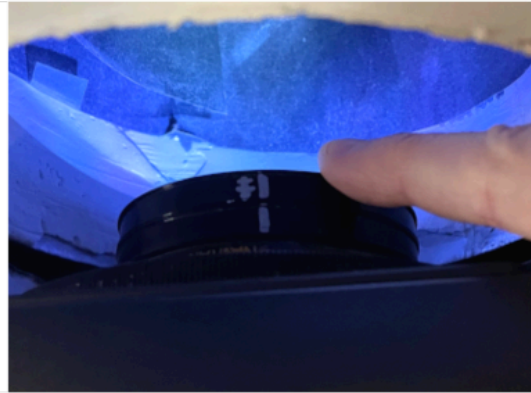
**\*\*Important Note:** Always mount the screen to the eye-tracker **after** securing the eye-tracker to the rails of the bore, and always put away the screen **before** removing the eye-tracker. **Never** move the eye-tracker when the screen is attached, and never attach the screen to the eye-tracker when the eye-tracker is on the cart.

**Step 4:** Adjust the focus on the projector lens to get clear images on the newly mounted screen. You must manually adjust the lens of the projector by turning it ever-so-slightly and gently to the right so that the reference positioning mark lines up with the cross-hatched positioning mark.\*\*\* It helps to have a friend confirm that the image is in focus by viewing the screen from within the bore.

**\*\*\*Important Note:** *There are two dials on the barrel of the projector lens. Only turn the outer-most dial. Using just one finger, gently turn the dial so that the position marks align to the desired setting. Never grasp the lens or try to turn the barrel of the lens. See the images below:*



Mount-Screen Setting



Stand-Screen Setting

### Disassembly and Storage

**Step 1:** If you used the eye-tracker-mounted screen, refocus the projector by turning the lens ever-so-gently to the left to set it back to the Stand-Screen Setting.

**Step 2:** If you used the eye-tracker-mounted screen, remove the screen from the mount while the eye-tracker is in the bore. Return the screen to its place on the cart and replace its dust cover.

**Step 3:** Remove the eye-tracker from the bore and place it gently on the top of the cart to store it.\* Gently put the lens cover back on the camera. Return the Stand-Screen to its position at the rear of the bore using the positioning marks on the floor.

***\*A Note so Important that it appears twice:*** The eye-trackers's calibration can be easily thrown out of whack if not handled properly. When moving the eye-tracker always hold it in the upright position using two hands and gently place it where it needs to go. Always, grasp the distal arm of the base of the eye-tracker stand with your left hand, and grasp the proximal arm of the stand with your right hand. Never gasp or move the camera, the infrared light source, or the top mounting bar.



**Step 4:** Power down the EyeLink computer by choosing shut-down in the EyeLink GUI. After the computer has powered down, turn off the power strip to shut down the camera and infrared light on the eye-tracker.

**Fake eyeball.** In case you do not have a volunteer to help you calibrate the eye-tracker, you can use the phantom with a fake eyeball secured to the head coil. Terry can help you secure the fake eyeball to the head coil.

