

## Outdoor Eye Tracking FAQ

### 1. What performance can I expect outdoors?

As a general rule, eye tracking is more challenging in brightly lit conditions than in an indoor environment. With the recent update on our I-13 and I-16 devices, we have made very significant improvements to the outdoor performance in order to serve users in environments where eye tracking previously would not work at all. While we have taken a major leap in terms of using the device in direct sunlight, users will most likely have a better experience in the shade. Furthermore, users can expect even better performance indoors, as that environment offers optimal conditions for eye tracking. It's also important to note the difference in performance may vary between individuals.

### 2. What can I do to ensure best possible performance outdoors?

Avoid glare, reflection, low screen visibility, and making the user have to squint to see the screen. However, if you find yourself in direct sunlight, you can try wearing a baseball cap, hat, non-mirrored slightly tinted sunglasses, or any other headwear that will throw shade over your eyes. It's beneficial to avoid sun beaming straight onto the eye tracker. Direct sunlight straight into the eye tracker impedes the device from clearly seeing the user's eyes. Positioning the device so the tracker faces away from the sun generates better results.

### 3. What is the optimal position outdoors?

For optimal performance outdoors, position yourself and the device away from the sun. If the user's eyes are shaded so the eye tracker can see them, the user can face the sun. The least favorable position outdoors is when the sun shines directly on the eye tracker. The eye tracker should not get blinded by the sun nor should any type of screen dimmer be used on the eye tracker.

### 4. Can I use the same calibration outdoors and indoors?

Yes, the same calibration can work outdoors and indoors. However, many users will benefit from having two separate calibrations for indoor and outdoor environments. Since your pupils dilate and contract in different light conditions, their appearance can change significantly when moving between environments. You will experience a significant gain in accuracy by having separate calibrations for those two environments. It will be important to remember when to switch between the two calibrations.

#### **5. Can I use sunglasses when eye tracking?**

Yes, most sunglasses should work as long as the lenses are not mirrored and appear translucent. If you experience issues, try removing the sunglasses to see if the frames or lenses are causing the issue.

#### **6. Which Tobii Dynavox products does this apply to?**

The outdoor performance improvements are currently only available in the new I-Series devices which are the I-13 and I-16. The outdoor functionality is exclusive to these Tobii Dynavox eye tracking devices and not available on gaming devices such as Tobii Eye Tracker 5 or Alienware laptops.

#### **7. How do I enable outdoor eye tracking functionality on my device?**

Users do not have to make any changes to settings to enable outdoor eye tracking. The eye tracker automatically handles different light conditions. Just make sure to run Update Notifier to get the latest updates.

#### **8. Does outdoor eye tracking affect power consumption?**

The outdoor eye tracking functionality does not consume more power. The outdoor functionality is made possible by algorithm improvements based on large image collection in outdoor environments, and efficient use of the platforms capabilities. However, keep in mind that use in very bright environments will require higher backlight (brightness) intensity, which does affect battery consumption.