**ERGONEERS**
FROM SCIENCE TO INNOVATION

**1** **Head unit**

Field camera

Micro HDMI

Eye cameras

**3** Four different nose pieces

**2** **eBox**

On/Off
Power Supply
HDMI
USB-B

**Battery Charger** (5)

**Cables** (6)
1x HDMI
1x USB-B to USB
1x Power supply for eBox

**4** **3x Rechargeable Lithium ion Batteries**

| Remaining Recording Time | LED Status | Meaning |
|---|---|---|
| 90 min - 30 min | 🟩 | Optimum charge |
| 30 min – 15 min | 🟧 | Prepare to replace battery<br>Do not start a new Recording! |
| Less than 15 min | 🟥 | Replace battery immediately! |
| Less than 5 min | 🔔 🟥 | WARNING: Not replacing battery can cause data loss and can damage the battery. |

**1**

### Software Installation

Download the D-Lab 3.50 setup from the Ergoneers FAQ page (ergoneers.com/faq) and follow installation instructions. Connect license dongle to D-Lab computer.

Download D-Lab

D-Lab

D-Lab license
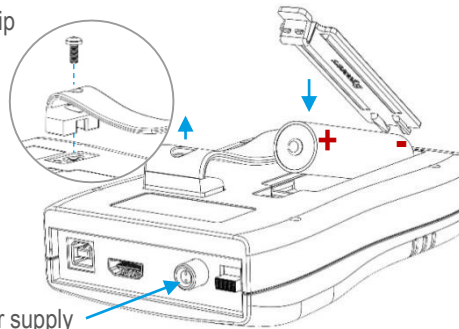Eye Tracking
Head Mounted

**2**

### Prepare the eBox

Open the back of the eBox and insert a charged battery or connect the eBox to an external Power supply.

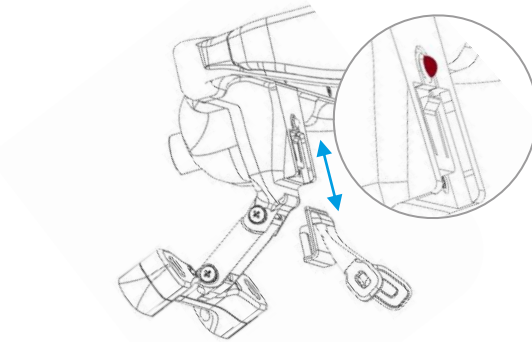NOTE: Only use batteries supplied with the system.

Optional:
- Remove clip

Socket for external power supply

**3**

### Select a Nose Piece

Choose one of the four different nose pieces for a comfortable fit of the Head-Unit. To remove a nose piece push down the small button above nose piece and pull it downwards.
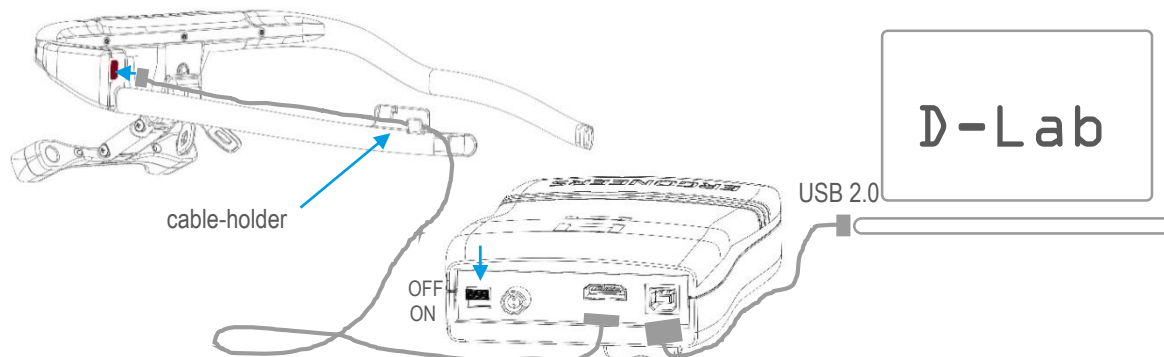
**4**

### Connect Head-Unit, eBox & Laptop

Connect the eBox to the Head-Unit and the laptop. Use the HDMI cable to connect Head-Unit and eBox. Use the cable-holder on the Head-Unit to secure the HDMI cable.
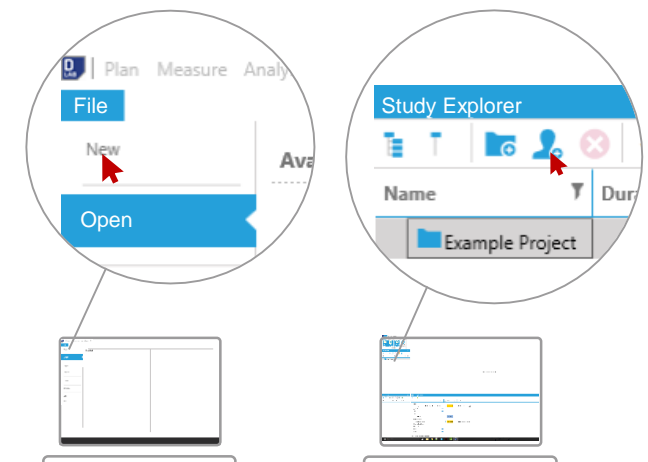Connect eBox and Laptop with the USB cable. Turn on the eBox / Head-Unit by pushing the switch downward.

cable-holder

D-Lab

USB 2.0

OFF
ON

**5**

### Start D-Lab & Create a Study

Create a New Study and add a Participant in the Study Explorer (Plan mode).

Plan  Measure  Analy

File

New

Open

Ava

Study Explorer

Name        Dur

Example Project

## 6 Open the Calibration Wizard

Go to the **Screen Layout** tab and click on **Eye Tracker**. Drag & drop the Eye-Tracker **Dikablis Glasses 3** from the **Recording Devices** window into the empty Eye-Tracker window. Then click on the **Eye icon** on the right panel of the Eye-Tracker visualization to start the **Calibration Wizard**.
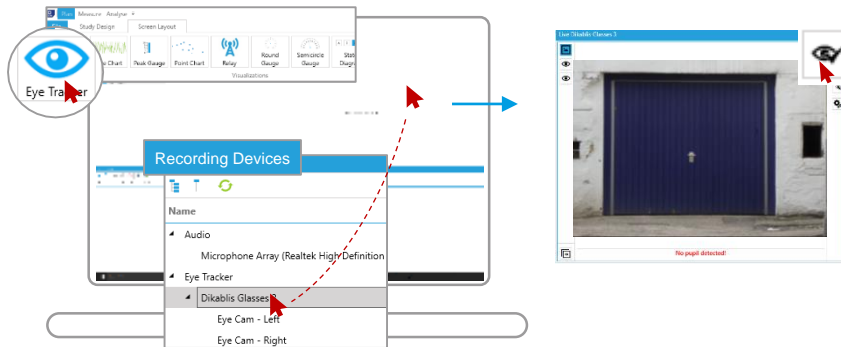
## 7 Adjust Eye Cameras

Grasp the T-shaped eye-camera bar with two fingers (red dots) and rotate / move it until the eyes are horizontally aligned in the center of the eye videos.
Work your way through the steps of the Calibration Wizard by using the arrows in the top-right side of the Eye-Tracker visualization.
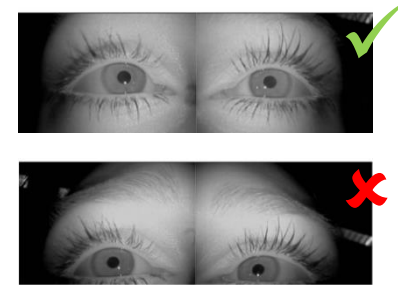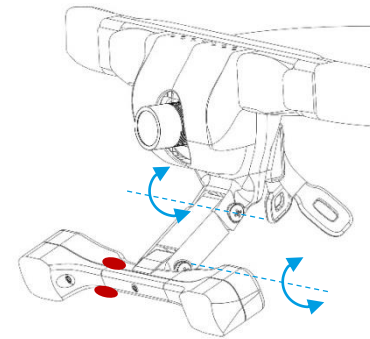
## 8 Set Pupil Detection Mask

Set the area (mask) of the eye-image that is scanned for pupil detection. The size of the mask can be changed by dragging the white dots on the outline of the mask. The mask itself can be moved by dragging the white dot in the center of the mask. Check to ensure the pupils are tracked at all times during normal eye movements after this step. Use the small arrow on the top right of the visualization to go to the last step of calibration.

Adjust height

Adjust position    Adjust width
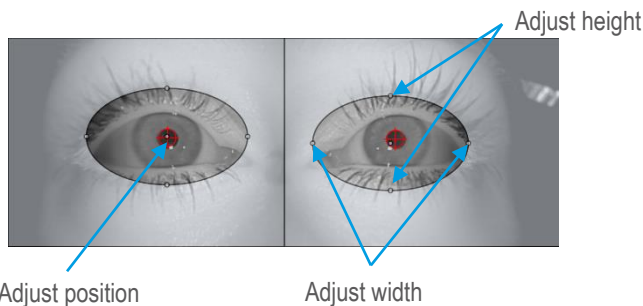
## 9 Adjust Field Camera

Adjust the angle of the Field Camera by tilting the lens up or down manually. After this step the relevant areas for the eye-tracking study should be visible in the field camera. Rotate the lens to adjust the focus if necessary.
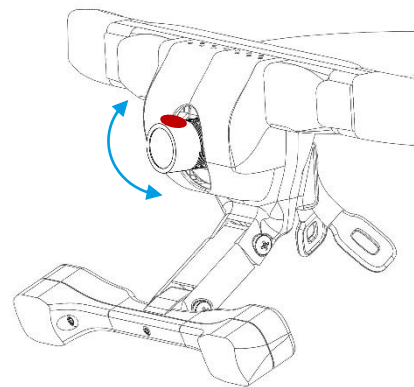
## 10 Four-Point Calibration

Choose **one calibration point** in each quarter of the Field Camera image.
Ask the subject to hold steady and look only by moving eyes at the first calibration point. Click on the corresponding point in the scene video where the subject is looking. Repeat until all four points are clicked. Subject may then move freely.

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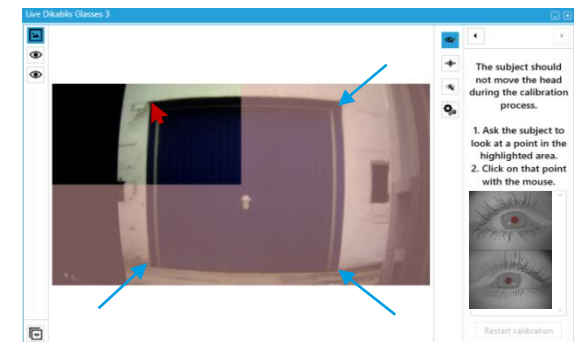
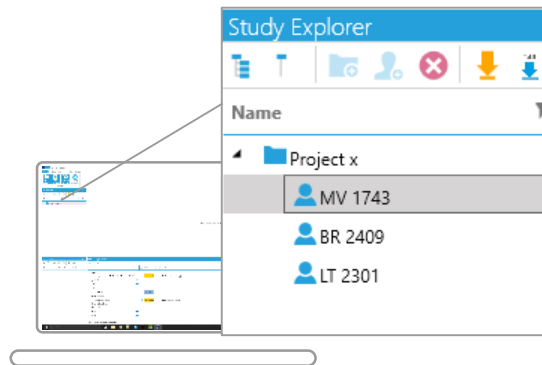**11** **Switch to D-Lab Measure**

Click on Measure in the very top left corner of D-Lab to switch to Measure mode.
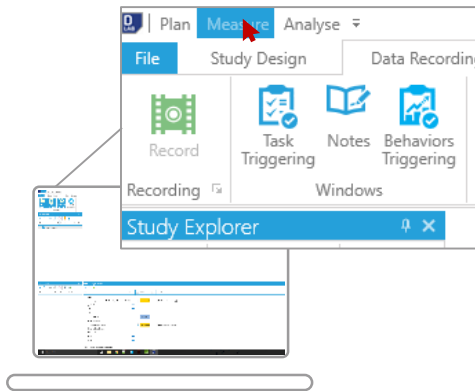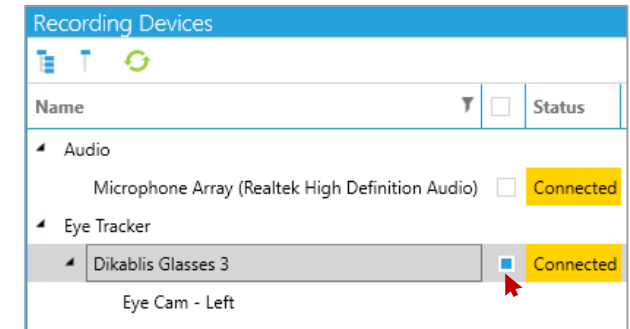


**12** **Select a Participant**

The Study Explorer contains all participants. Chose one of them or create a new one to start a recording.



**13** **Select Dikablis Glasses 3 to record**

Ensure that the blue checkbox next to Dikablis Glasses 3 is checked in order to record the Eye-Tracker.
WARNING: No data will be saved If this box is unchecked.



**14** **Start & Stop Recording**

Start the recording by clicking Record within the Recording tab of Measure mode. End the recording by pressing Stop.