Dialog
AUSILI MEDICALI

EYE POINTING SYSTEM

Deye


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DIALOG

Each person, regardless of the degree of disability, has the right to influence, through communication, the conditions of its own life.

**National Joint Committee for the Communication Needs of Persons with Severe Disabilities, 1992.*

Presentation and intended use

The DEye is a binocular eye-tracker, an eye-tracking system that tracks the movement of both eyes and enables people with neuromotor impairments and diseases such as ALS, SMA, or quadriplegia, to communicate.

It is also indicated for people with speech and writing problems. It is made with the best pupil tracking technologies, both hardware and software.

Description

The DEye is a low-power and self-powered system from the USB connection, which ensures precision and accuracy of the pointing system by binocular gaze direction detection.

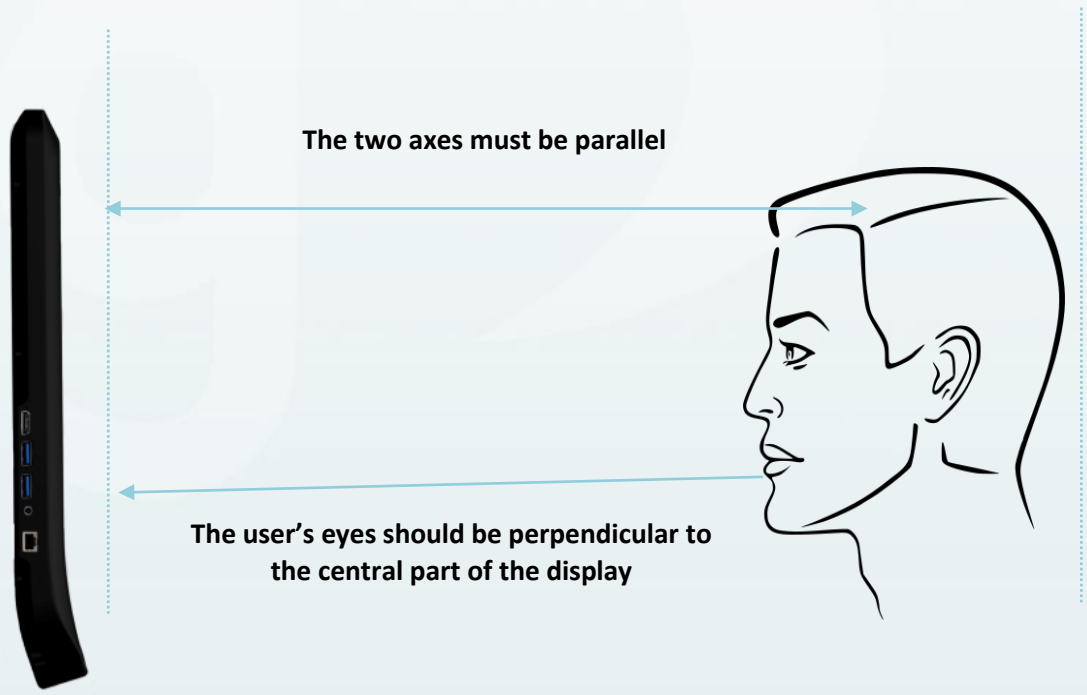
However, single eye detection can also be set especially in cases where tracking is compromised due to the presence of a specific problem or pathology.

Positioning

Its correct positioning is facilitated by an indicator.

The most important initial step in the installation of an eye-pointing system is the positioning of the aid, followed later by a good calibration. A single calibration is required.

The system, designed to tolerate head movements, can determine whether or not it is a voluntary gesture of the user.



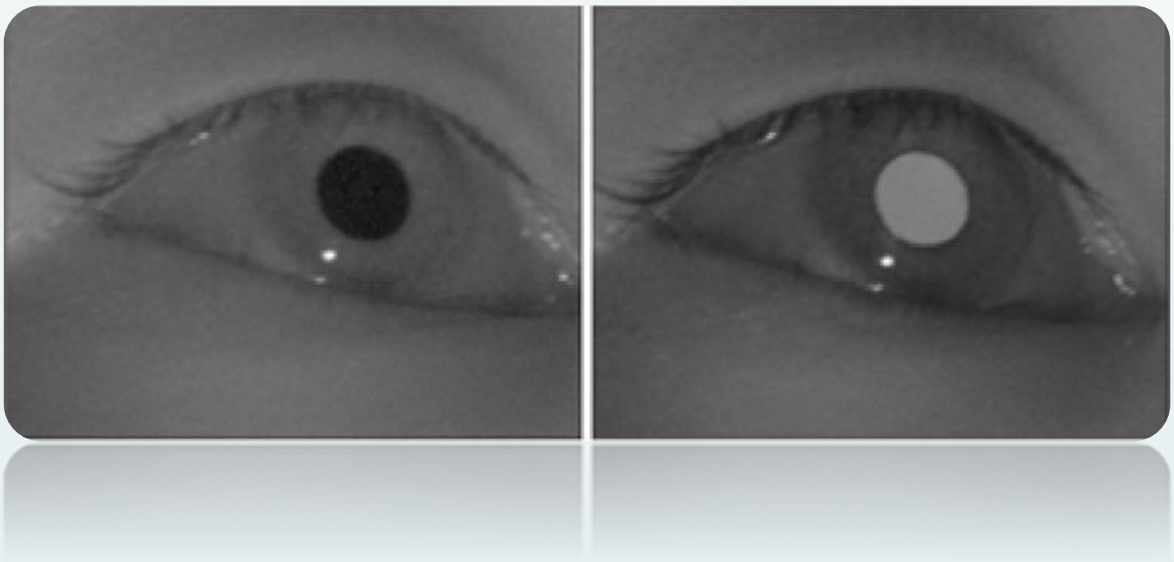
Dark and Bright Technology

The DEye is one of the few Eye-trackers on the market to use Dark and Bright eye-detection technologies.

With the phenomenon called Bright Pupil, the eye acts as a retroreflector, so the pupil appears as a bright white circle.

With the Dark Pupil phenomenon, the pupil appears dark because the retinal retro-reflection is direct, away from the chamber.

The advantage is to make the pupil darker than under normal lighting conditions.



Technical Specifications

- **Tracking technologies**: Dark and Bright Pupil
- **Head movement tolerance**: more than 15%
- **Cameras**: 2
- **Frequency**: 40Hz to 200Hz
- **Width**: 27.6 cm
- **Height**
  - 4 cm at the ends
  - 4.6 cm at the centre
- **Depth**
  - 2.2 cm at the ends
  - 5.2 cm at the centre
- **Weight**: 0.40 kg
- **Distance from the User to the DEye**: 55-70 cm
- **USB Port**: USB A 3.1 – Type C

Minimum requirements of the device to use with the eye-tracker

- **Processor**: Quad Core i3 - 2.3 Ghz Intel
- **RAM**: DDR4 8GB 1633mHz
- **SSD/HDD**: 256GB

Matrix AAC

The DEye is fully integrated into the Matrix AAC communication software and all its features, including calibration, are managed within the program.

Matrix AAC allows to create structures, tables, communication books for Augmentative and Alternative Communication (AAC) and, in addition to facilitated communication, permits the integration of functions related to environmental control at home and PC management in Microsoft Windows environment.

DEye Tool

With the DEye Tool software, supplied with the device, the user can establish settings for using the eye-tracker, set parameters, perform calibration, all other available features such as minimize the toolbar, enlarge the gaze monitor, back to main menu).

The user can also select the type of technology (dark or bright); in this way, the DEye will precisely intercept eye movement and transform it into mouse movement.

The DEye Tool will allow the DEye to be used with communication software other than Matrix AAC software.

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