



Practitioner's instructions for use

EMAA PRO 2 - EMAA HOME

EMAA Pro 2 User Guide

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Symbol	Title
	Medical Device
	CE Marking
	Consult the instructions for use or consult the electronic instructions for use
	Caution, consult the User Guide for important warning information
	Manufacturer
	Authorized representative in Switzerland

1. Important - Read Before Use

1.1. Before first use

Welcome to the user guide for your EMAA Pro 2 solution.

This manual has been designed for the latest available version of the software, exclusively for the PICO Neo 3 Pro Eye and G3 headsets.

Before starting to use the solution and the platform for the first time, please read the following information carefully:

- Keep the original packaging as well as the manufacturer's instructions so that you can refer to them for the headset's advanced features.
- Digital instructions are available online. You can access them via the [Eyesoft Support Portal](#).
- Paper-format instructions are available free of charge on request. To obtain them, use the contact form on the support portal. Delivery time: 7 calendar days.
- A (stable) Wi-Fi connection is essential to connect the headset (if this is not possible, you can use your mobile's connection via mobile hotspot sharing).
- Secure the immediate surroundings to avoid impacts and falls; a seated position is recommended for use.
- Please note that any damage resulting from improper use (breakage, damage, exposure of the lenses) will be your responsibility.
- Clean the leather before or after each use: use a gentle solution (alcohol-free disinfectant wipes) to limit premature wear.
- It is recommended to recharge the headset every two hours.
- You can report any serious incident related to the device to contact@eyesoft.fr or to the French National Agency for the Safety of Medicines and Health Products (ANSM).
- In the event of a device malfunction, please contact Eyesoft.



Never expose the lenses to direct sunlight!

1.2. Technical recommendations

TECHNICAL INFORMATION

For the headset, a minimum 4K RGB resolution is recommended with a refresh rate of 75 hertz, a pixel density greater than 800px, a FOV (Field Of View) of more than 90° and a minimum storage space of 32GB. The EMAA Pro 2 version is used with a headset equipped with an eye tracker, allowing measurement of both eyes' movements.

WEB BROWSER

The EMAA Pro 2 solution, running the Android operating system, is compatible with the Google Chrome browser (V≥88).

1.3. Recommended Internet Speed

- Upload (outgoing) speed*: 5 Mbps* required
- Download (incoming) speed: **5 Mbps** of bandwidth allows use of the Eyesoft interface, but the display of certain data on the interface may be slowed down. A speed of **25 Mbps** is recommended for an optimal experience.
- Latency (Ping): **60 ms or lower**.

Proper functioning of Eyesoft is not guaranteed for upload or download speeds below 5 Mbps.

In some cases, poor network stability may also disrupt the experience even with a satisfactory bandwidth. It is recommended to assess stability using dedicated speed-test sites.

1.4. Port configuration

- **Secure and private Wi-Fi network**
- **app.eyesoft.fr** available on **port 443 (HTTPS)**
- **api.eyesoft.fr** available on **port 443 (HTTPS)**
- **api.hads.eyesoft.fr** available on **port 443 (HTTPS)**
- **stun.eyesoft.fr** available on **port 5349**
- **turn.eyesoft.fr** available on **port 5349**
- **iot.fr-par.scw.cloud** available on **ports 1883 and 8883 (MQTT)**
- **websocket.iot.fr-par.scw.cloud** available on **ports 80 and 443 (Websocket)**
- **www.eyesoft.fr** available on **port 443 (HTTPS)**

2. Intended use and indications

EMAA Pro 2 is an extended reality software medical device intended for the analysis and rehabilitation of visual and oculomotor functions.

The solution aims to assist in the assessment, training and improvement of oculomotor abilities in order to relieve symptoms.

Its use is indicated to assist in the assessment and rehabilitation of patients suffering from oculomotor imbalances, aged over 8 years (under adult supervision for minors), whose cortico-retinal correspondence is normal (CRN). It should not exceed 20 minutes per session and one session per day.

As with any orthoptic practice, the device may cause certain transient effects (visual discomfort, headaches, nausea, dizziness).



Patients with a history of vestibular or neurological disorders (convulsions, epilepsy, or other major neurological disorder) are particularly prone to the adverse effects described above. For these patients, it is recommended to specifically assess the relevance of including the EMAA solution in the patient's orthoptic care and to inform them of the potential adverse effects related to their history.

Before using the Platform for remote care as part of the EMAA Home offering, the orthoptist acknowledges being aware of Amendment No. 14 relating to the use of remote care, an amendment to the National Agreement governing the relationship between Orthoptists and the National Union of Health Insurance Funds. The notice of this Amendment No. 14, dated 28 October 2021, was published in the Official Journal No. 0254 on 30 October 2021.

3. Getting started



3.1. Headset ergonomics

As stated in the precautions, it is strongly recommended that you personally put the headset on the patient and remove it yourself.

Position the lenses in front of the patient's eyes and pass the straps behind their head.

Once the headset is positioned, adjust it by turning the dial at the back of the adjustable strap.

This will save you time and prevent handling errors.



When removing the headset, pay close attention to the patient's glasses; ask them to hold them.

3.2. Powering on



Hold down the on/off button located on top of the headset for 5 seconds.



The same action is used to turn off the headset: hold the button down until you see the LED blink.

3.3. Headset LED indicator

On your headset, next to the On/Off button, there is an LED that lets you track the state of your headset (when not charging) or the battery level (when charging).

Headset not charging



Headset on
(solid blue)



Headset shutting down
(blinking blue)



Battery drained - below 5%
(blinking red)

Headset idle and charging



Battery full - between 98% and 100%
(green)



Battery charging - between 20% and 98%
(yellow/orange)



Battery low - below 20%
(red)



The headset's network performance is degraded below 20%, make sure you have enough battery before starting your session.

If you are using a mannequin head, **remember to turn off the headset before placing it on the stand**, otherwise it will be kept active by the photoreceptor between the lenses and risks discharging quickly.



3.4. VR realignment

If you cannot see the menu in front of you inside the headset, it may be positioned behind you or to the side within the virtual reality environment.

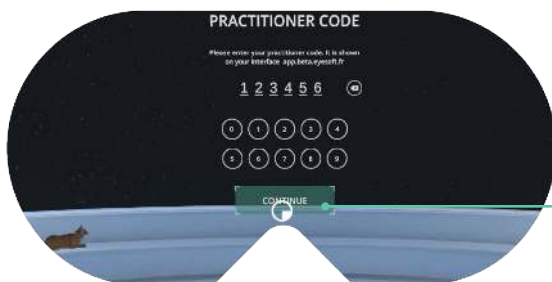


You can simply realign it in front of you with a long press on the bottom button on the side of the headset.

You can also realign the scenery during the session directly from your interface.

3.5. Navigation and interaction inside the headset

You can validate tabs in VR in two different ways:



Either by intuitive selection: simply aim and let the round cursor fill up for 3 seconds.

This is the main selection method your patient will need to understand in order to use EMAA Pro 2.



Or by aiming (pointing the white pointer at the tab) then clicking the main button on the right side of the headset.

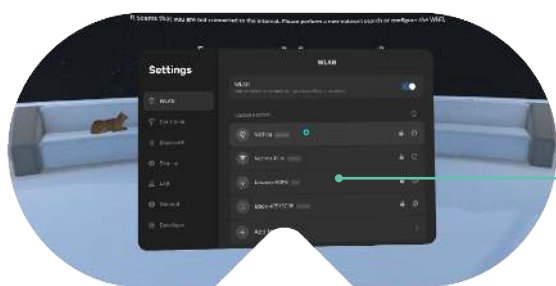
This button will mainly be used for Wi-Fi configuration at the start.

3.6. Wi-Fi setup

During the initial configuration, you will need to setup the Wi-Fi connection.



Using intuitive selection, select "Setup" to enter the headset's network menu.



For this step, you will need to use click selection (the headset's main button).

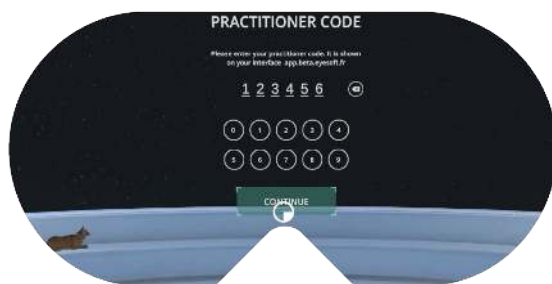
Select your network, enter the Wi-Fi key, confirm, then exit the menu by aiming at the window and pressing the (-) button (top button on the side of the headset).

i To manage your Wi-Fi connections, you can find them by going to the "Settings" tab in the headset's home room.

After this step, you will need to enter your practitioner code.

3.7. Entering your practitioner code

Using intuitive selection, enter your 6-digit code (shown on your web interface dashboard) then confirm with "continue".



You then arrive at the headset positioning stage (a preliminary step before each use).

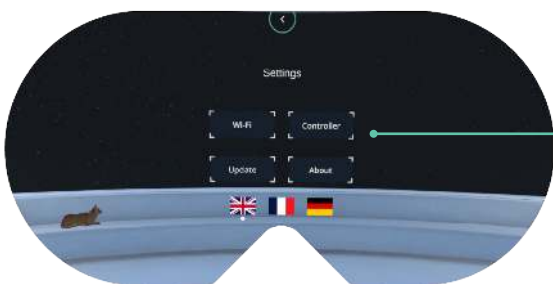
3.8. Controller configuration



For more information on using the controllers, watch [this video](#) on the Eyesoft help center.



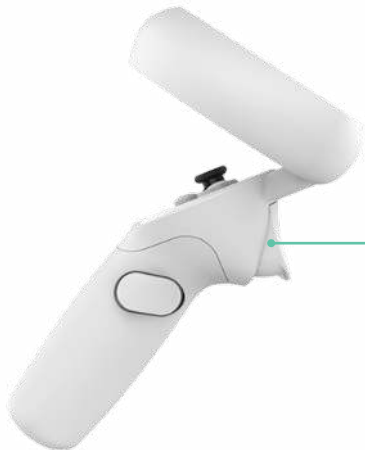
Turn on the controllers by pressing the " home " buttons on the controllers.



In the headset, while in the home room, go to the settings tab (gear icon at the top) then select " Controller ".

Using the headset's intuitive selection, select the " Controller " tab on the left, and let yourself be guided through the headset to pair / unpair the controllers.

To use the controllers, after initial pairing:



The controller and the aiming laser appear in VR, and you can then use it to select with the trigger.



To recalibrate the controller and the aim, hold the " Home " button for 3 seconds.

Hold the (-) button on the controller for 3 seconds to quickly activate / deactivate the controller.



You will be able to activate / deactivate the controller directly from your interface during the session, by clicking the **Activate/Deactivate game controller** button (see [Session management](#))

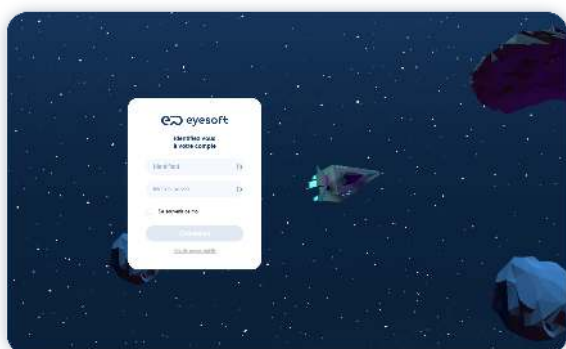
Congratulations! You are now ready to use EMAA Pro 2!

4. Using the interface



4.1. Practitioner login / web interface

On the eyesoft.fr homepage, select **Connexion** at the top right, then **Accès à votre espace** choose **Orthoptistes** to enter your practitioner interface.



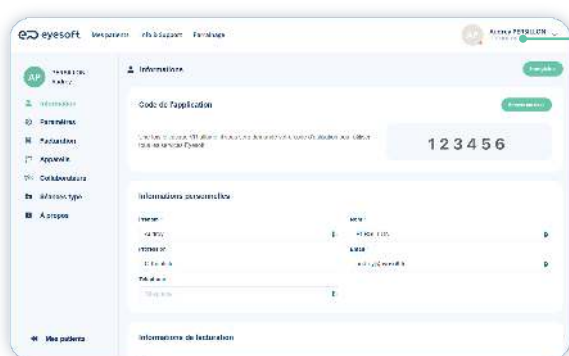
Enter your username (email address) and your password, then confirm.



Only one session should be active at a time; do not log in to your interface on another tab or computer at the same time.

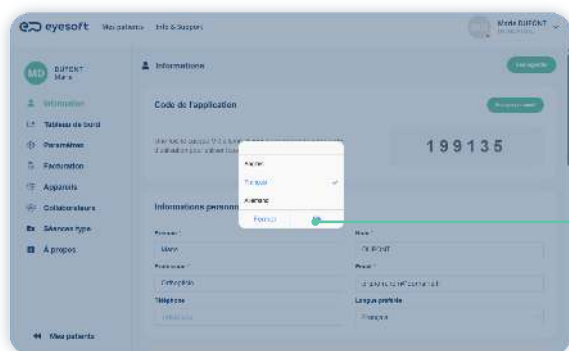
4.2. My profile

PERSONAL INFORMATION



You can access your personal and billing information by clicking on your name and then selecting "**My profile**".

FAVORITE LANGUAGE

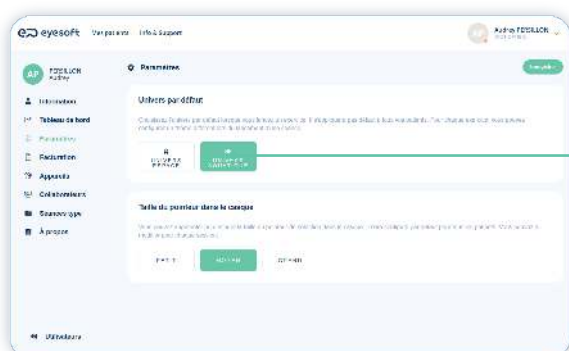


You can change the language used on the platform: choose the desired language from the **Favorite language** drop-down menu, then click **Save** at the top right of the page.

This change also affects the language used in the headset. This change takes effect after the headset is restarted.

DEFAULT UNIVERSE

You can set the default universe for your headset. Choosing an universe affects the scenery as well as the objects that appear during the exercises.



Go to your profile and click the **Settings** tab. Select one of the available worlds.

This choice applies by default to all your patients, but for each exercise you can configure a different theme when launching a session.



→ Space universe

This is the "original" environment of the EMAA Pro 2 solution; it offers strong contrasts and simple geometric shapes.

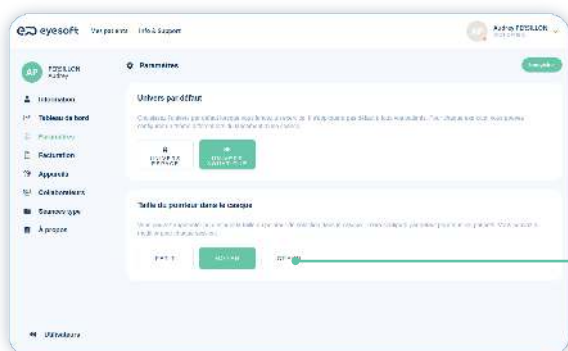


→ Aquatic universe

This environment offers more organic shapes and softer colors.

INTUITIVE SELECTION POINTER SIZE

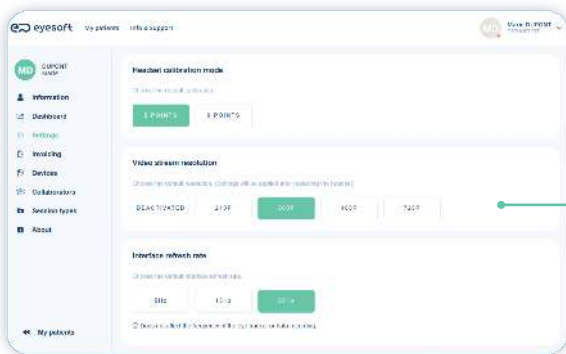
You can also adjust the default size of the intuitive selection pointer in the headset. This setting applies to all patients but can be changed for each session.



Go to your profile and click the **Settings** tab and select one of the 3 available pointer sizes.

IMPROVING INTERFACE SMOOTHNESS

Depending on the performance of your hardware and network configuration, the application may experience smoothness issues.



You can access these optimization settings by clicking on your name (top right) then selecting "**My profile**", then **Settings**

By adjusting the following two parameters, you can optimize:

- **network bandwidth requirements** via the video stream resolution
- **browser memory requirements** via the interface refresh rate

The interface offers several graded operating modes:

Video stream resolution (VR preview): Disabled / 240P / 360P / 480P / 720P

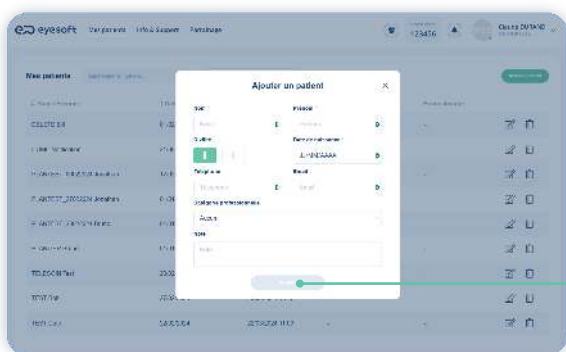
- Disabled: Video disabled
- 240p -W 320x240 / 20Hz / 121 to 230 kbits/s
- 360p -W 480x360 / 20Hz / 273 to 518 kbits/s
- 480p -W 640x480 / 20Hz / 485 to 922 kbits/s
- 720p -W 960x720 / 20Hz / 1090 to 2074 kbits/s

Interface refresh rate: 5hz / 15hz / 30Hz

As indicated, this setting does not affect the eye tracker's frequency.

4.3. Patient list

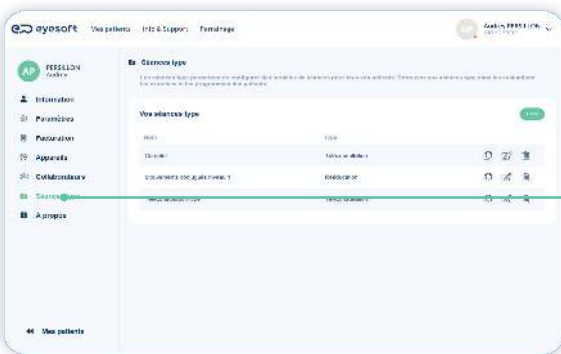
Once logged in, you have access to your patient list.



To create a **new patient**, select the green button at the top right. Complete the details and click "Add" to finalize your patient's registration.

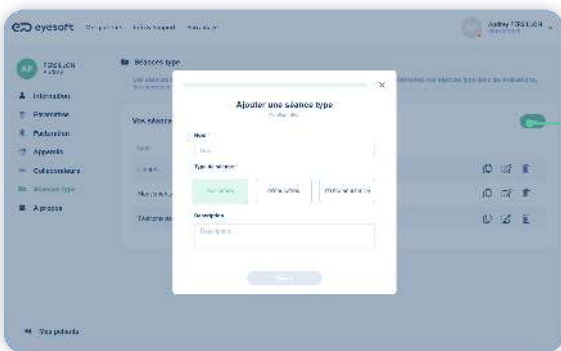
4.4. Predefined sessions

The **Predefined sessions** button on the **My Patients** page takes you to the tab for managing standard sessions available for all patients on your profile.



You can also access the predefined session management tab from your profile: click your name at the top right of your Eyesoft interface, then select the "**Predefined sessions**" tab.

Note: Here you will find the old predefined sessions created per patient, prefixed with "Migrated -".



Click "**Create**", choose the name of your predefined session, then its purpose (rehabilitation / evaluation / remote consultation).

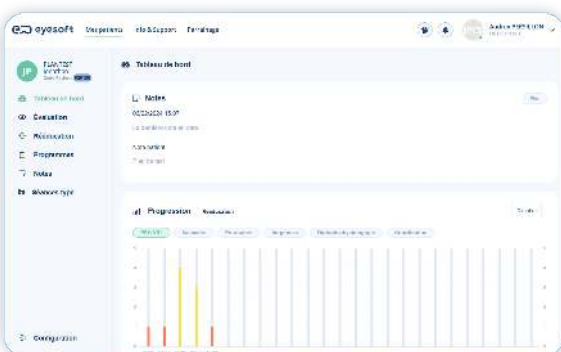
You can also add a description if you wish.

Click "**Next**", select the order and level of the desired exercises, then "**Finish**".

i Custom modes are not available for remote consultation.

4.5. Dashboard

For each patient, by clicking 📊 **Dashboard**, you will find the following information:



→ **Overview of recent history**

→ **Patient progress**

→ **List and duration of all completed sessions**

4.6. Merging two patient records

If you have added the same patient twice to your list, you can merge the two records by going to the **Configuration** page of the patient in question.

Click **Merge records**.

The duplicate profile is automatically identified: if it does not appear, check that the last name, first name and date of birth are identical on both records.

Then check the box to confirm and click **Merge**.

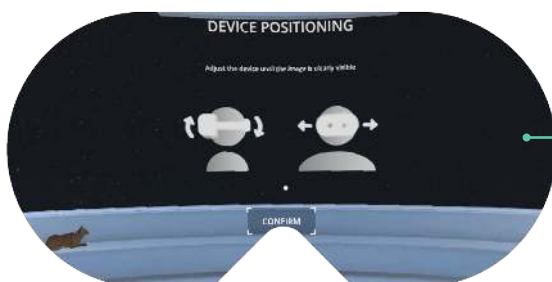
To cancel the merge, click **Cancel merge**.

If the same patient appears more than twice in your list, the operation must be performed several times. In addition, merges are performed asynchronously, overnight.

4.7. EMAA Pro 2 home environment (inside the headset)

HEADSET POSITIONING

This is a preliminary step before each use. It allows the headset to be positioned optimally.



Once the headset is placed on their head, the patient must align their head to correctly see the characters in the headset. **If part of the image looks blurry**, the headset needs to be repositioned.

You can ask the patient to adjust the headset themselves as prompted in VR.



*Remember to **align the menus** so that the patient starts the session with the menus facing them.*



Please note that the headset will automatically return to this step if it is removed or if you click the round target near the "Start" tab.



Purpose of the sticker

It lets you keep the headset out of standby mode. When first handling the headset, or if you want to run tests yourself (without a patient), **put a sticker onto the photoreceptor between the lenses; this helps you avoid the automatic return to the calibration steps.**

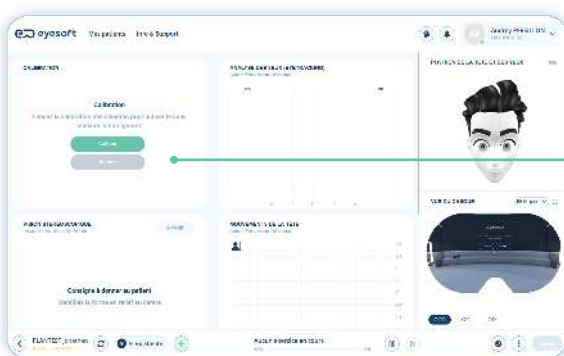
HEADSET FEATURES



- 1. Exit the session :** To exit the session, select the cross then confirm. The practitioner code will be requested to open a new session.
- 2. Change environment :** Select the rocket-shaped or fish-shaped tab to switch from one environment to another.
- 3. Access settings :** Select the gear-shaped tab to access settings (controller, Wi-Fi, or update).
- 4. Reposition / Recalibrate :** Select the tab on the right to return to " headset positioning ".

EYE TRACKER CALIBRATION

Before using the EMAA Pro 2 solution, a calibration step is required. It allows the eye movements to be calibrated.



Throughout the calibration phase **you can take control of your patient's actions** in order to confirm the commands displayed in the headset.

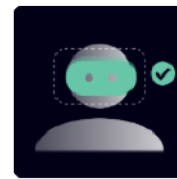


Select **Calibrate** to start calibration.

The patient must **precisely follow with their eyes** a target moving in all directions, in order to validate the calibration.

Inside the headset and on the practitioner interface, instructions appear indicating how to adjust the headset's position to optimize calibration:

This step is only necessary if the detected position is not optimal.



→ If it detects that the headset is too high, an image recommends lowering it:

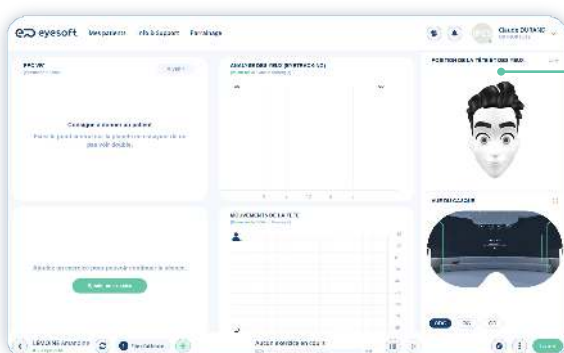
→ If it detects that the headset is too low, an image recommends raising it:

Once the headset position is corrected, calibration starts automatically.

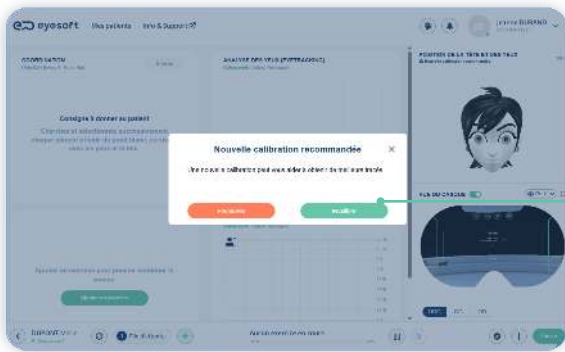


Once calibration is complete, make sure the patient **does not move the headset during the session**, as this may disrupt tracking!

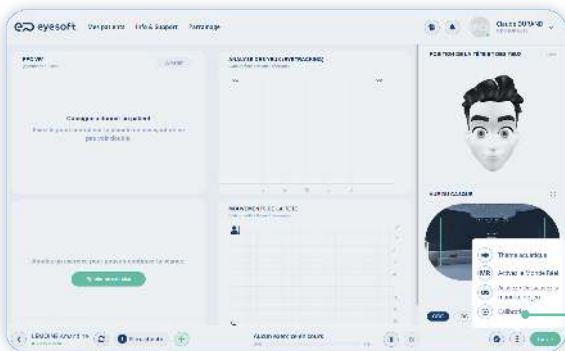
The eyes modeled on the head in the interface appear in green if eye tracking data is available, and in gray when the data is unavailable (poor calibration, poor detection, closed eyes).



In case of poor calibration, the following message appears on the interface above the avatar: "**New calibration recommended**"



At the start of the session, if the indication is still present, calibration is suggested before starting.



You can also restart it by clicking the "**calibration**" tab.

Important information on eye tracking

In certain cases, it is normal for calibration to lack reliability (children / dark irises / corrective lenses...).



Slight head movements (including when the patient speaks) can noticeably move the headset and affect the reliability of the eye tracker. You may therefore observe discrepancies between the recorded eye-movement traces and the theoretical traces.



The purpose of the eye tracking offered by EMAA Pro 2 is to visualize eye movements in order to monitor and confirm the correct completion of the tests and exercises by the patient. It is in no way intended to precisely analyze micro-movements during pursuits and saccades, even though the visuals are accurate enough to assist in assessing the quality of oculomotor movements.

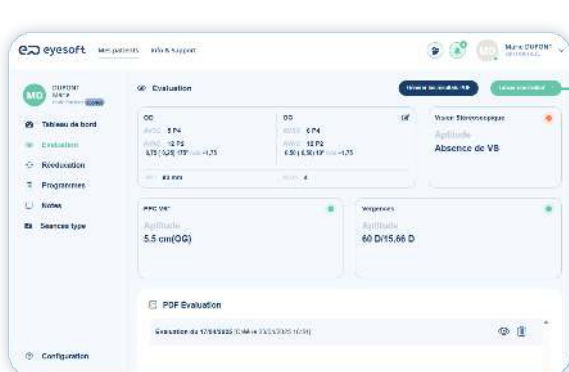
4.8. Session management

To start a session, go to the profile of the patient in question, then to the  **Evaluation** or  **Rehabilitation** tab.

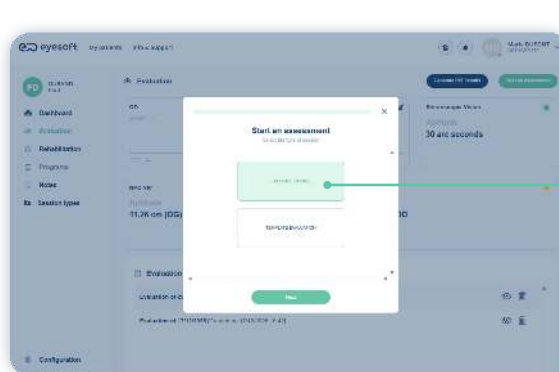
STARTING A SESSION

Evaluation

Click "Start an assessment"

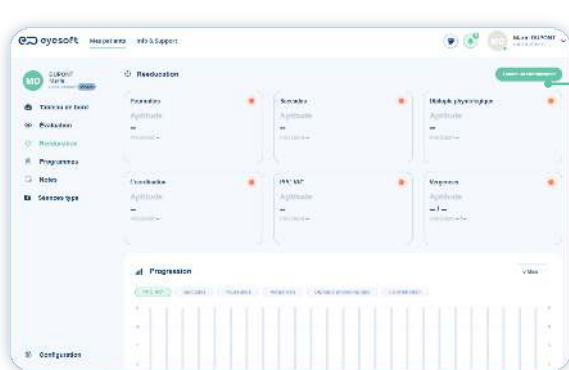


then choose "Tailored session" or "Predefined session".

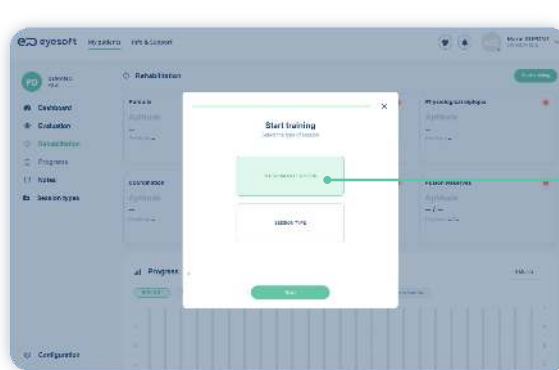


Rehabilitation

Click "Start a training session"



then choose "Tailored session" or "Predefined session".



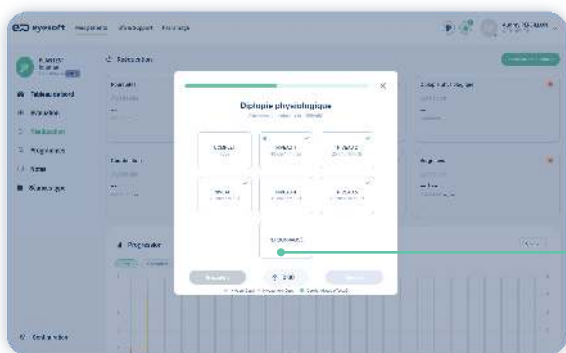
If you choose "Tailored session", the next page will invite you to select the desired exercises from the list.



For more information on the exercises and their instructions, see the Evaluation module exercises and the Rehabilitation module exercises.

Note that the exercises will start **in the order of your selection** (which can be changed in the exercise summary or during the session in the Queue).

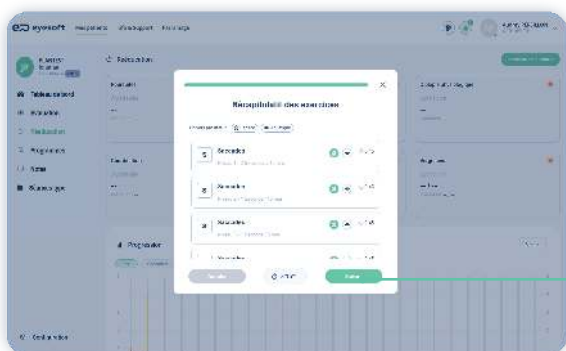
SELECTING LEVELS/REPETITIONS



Several **levels** of the same exercise can be selected, and/or several **repetitions** of the same level.

i For vergences, you must first select "convergence", "divergence" or "custom", then the exercise type (Fusion, Stereo Fusion or Voluntary)

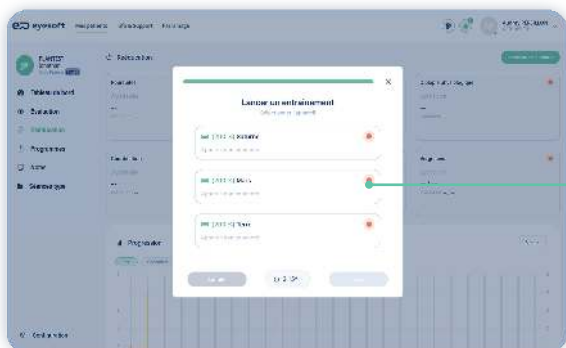
EXERCISE SUMMARY



Review your choices in the **summary**: you can **add, remove or modify exercises/levels, choose the themes** and reorder the exercises by dragging them.

Click "**Next**".

LIST OF AVAILABLE DEVICES



The available device(s) are displayed along with their availability and battery level; choose your headset then click "**Next**".

HEADSET STATUS

The headset status appears when starting a session (in the device selection tab), as well as at the top of the current exercise page. It can be:

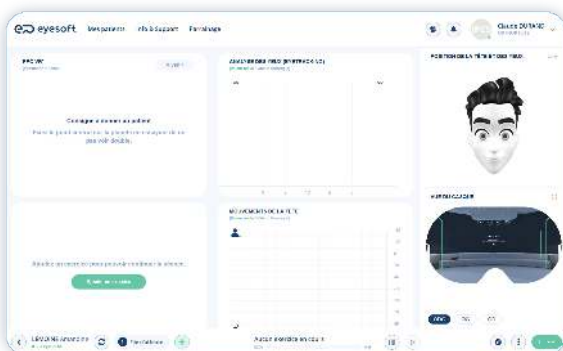
- Device not connected (red) if on standby or off
- Calibration in progress (yellow)
- Device available (blue)
- Active connection while tests are running (blue)



You can select a headset even if it is not connected or is currently calibrating; it will switch to available as soon as positioning is validated by the patient. Make sure you have selected the correct device!

Once calibration is successful, make sure the patient does not move the headset during the session, as this may disrupt tracking!

STARTING THE SESSION



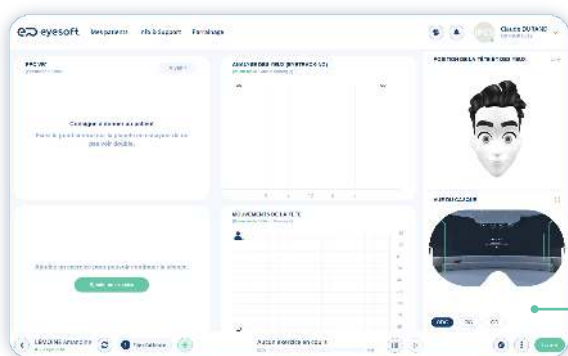
Once the connection is active, start the session by clicking "**Start**" at the bottom right.

Each exercise then starts in the selected order.



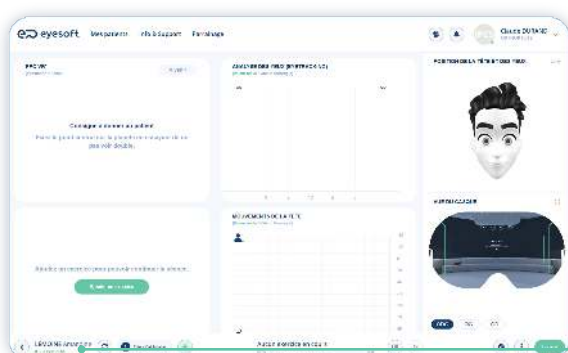
You can start preparing your session before the headset is turned on / positioned on the patient's head.
It is normal for patients to briefly see the white dot doubled after a fusion or convergence exercise (transient).

REAL-TIME MONITORING



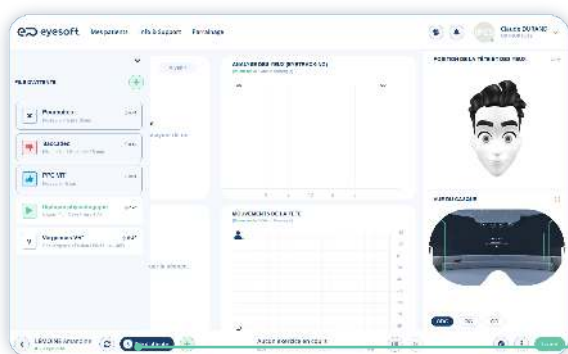
You can follow and view in real time the movements of the patient's eyes and head, both on the animation and on the corresponding graphs. You can display both eyes or only the right/left eye (OD/OG).

REFRESH / SEARCH DEVICE



If your headset does not appear active in your session management interface, you can search for it by clicking the  icon. If it still does not appear active, restart the headset and start a new session.

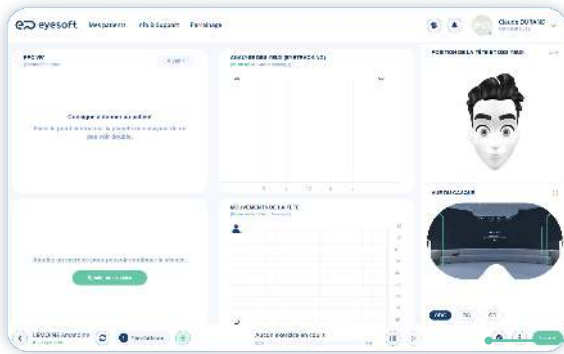
VIEW QUEUE



You can view the list of exercises chosen for the session, remove / add or change the order of the exercises. Depending on the state of the exercise, several icons may appear to the left of the exercise:

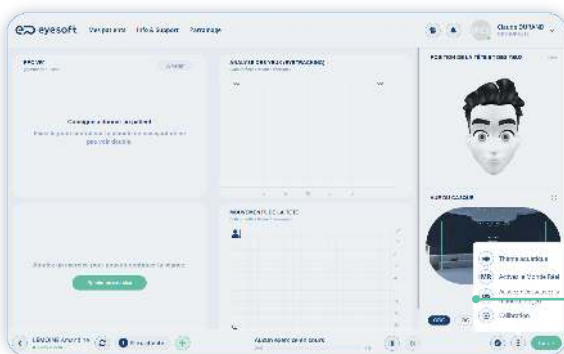
- **Green "play" triangle:** Exercise in progress
- **Cross:** Exercise skipped/not performed
- **Blue thumb:** Exercise performed and successful
- **Red thumb:** Exercise performed but failed
- **Letter:** Upcoming exercise (order can be changed)

RECENTERING / REALIGNING THE HEADSET



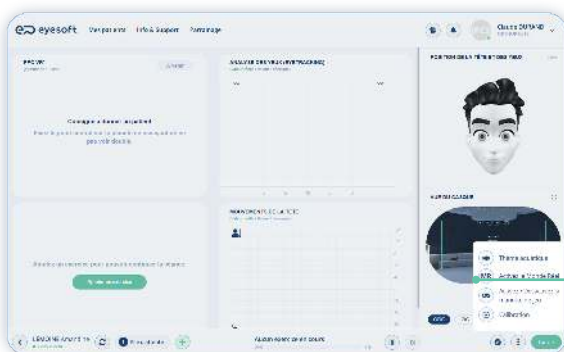
To avoid drift of the scenery in the headset, you can recalibrate the gyroscope directly from your interface during the session, by clicking the compass button.

CONTROLLERS



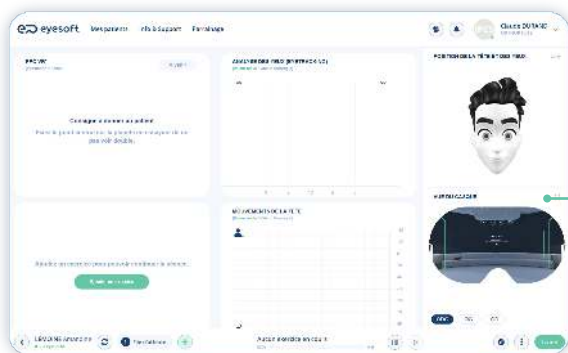
You can activate / deactivate the controller(s) directly from your interface during the session, by clicking the corresponding button.

REAL WORLD



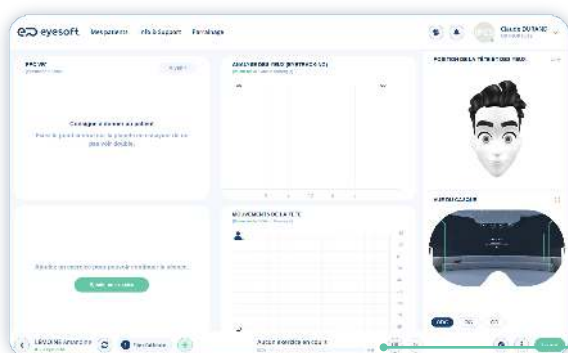
You can enable mixed-reality vision through the headset's cameras. This allows you, for example, to reconnect visually with your patient when giving them instructions.

VR ZOOM



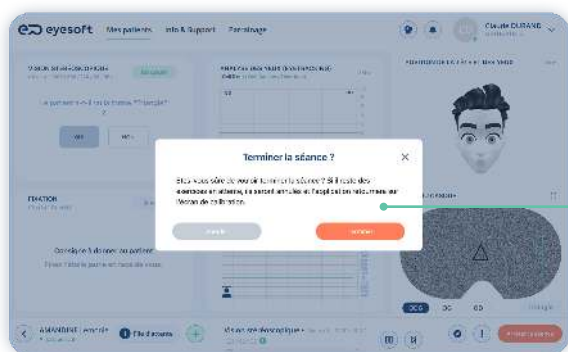
You can change the VR preview by clicking the "Headset view" tab.

PAUSE



You can pause the exercise being performed by clicking the "pause" icon. To resume the exercise, click "pause" again.

STOPPING THE SESSION



→ **Cancel**

→ **Finish**

Cancels the entire ongoing series of exercises (the patient will be redirected to the home room). The exercise in progress will not be saved.

4.9. Assessment (option)

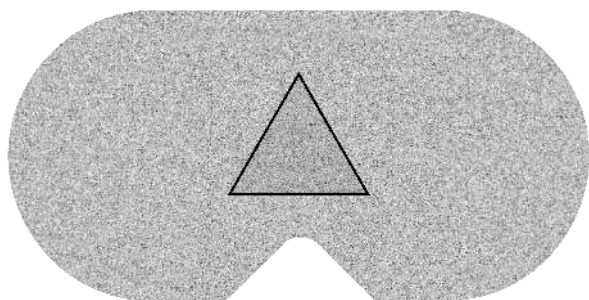
STARTING AN ASSESSMENT

To start an assessment, go to the profile of the patient in question, then to the **Assessment** tab.

See the "Starting a session" section.

EXERCISES AND INSTRUCTIONS

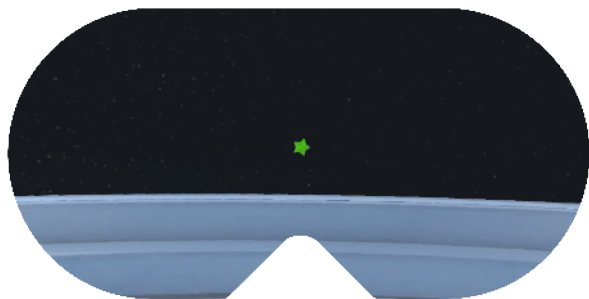
Stereoscopic vision



The patient must perceive the shape appearing in relief among the random dots (circle, square, cross or triangle).

The following levels are tested from easiest to hardest and correspond to the degrees of depth perception in arc seconds: 1000, 500, 120, 60 and 30. The test ends when the patient answers correctly at the highest level, or gives two consecutive wrong answers at the same level.

VR Phoria Test*



The patient must look at and precisely fixate on the star for the entire duration of the test (30 seconds).

This is an alternate occlusion test; warn your patient that their vision will be alternately blurred in each eye several times.

This test is performed once simulating distance vision, then simulating near vision.

This exercise does not require any response from you; the result is analyzed by eye tracking.

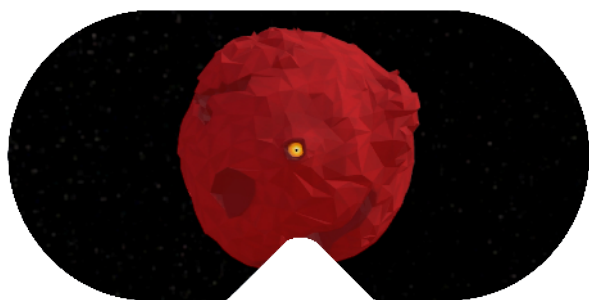


These results do not replace an actual measurement of near-point phoria performed under real conditions. A virtual reality headset simulates near vision but does not engage the accommodation required under real conditions. The values obtained in diopters by EMAA are decompensated and therefore higher, as they are dissociated from the accommodative reflex.



For near vision, reassure your patient if they transiently see double; it is normal for some subjects to be unable to refuse / re-fuse the star due to their exophoria.

VR NPC*



The patient must precisely fixate on and follow the center of the planet until the end of the test, making the effort not to see double.

This exercise requires effort, and the patient may end up seeing double.

This exercise does not require any response from you; the result is analyzed by eye tracking.



As with the near-point phoria test, the results obtained differ from those obtained under real conditions. A virtual reality headset simulates near vision but does not engage the accommodation required under real conditions. The fusional NPC values obtained in cm by EMAA are higher, as they are dissociated from the accommodative reflex present during a real NPC test.

VR Vergences*



The patient must fixate on the image and try not to see double. They may feel that the image is changing size, moving closer, shaking, or becoming blurry.

This exercise does not require any response from you; the result is analyzed by eye tracking.



The values obtained in diopters differ from the values obtained with a prism bar. With EMAA, vergences are simulated binocularly and therefore represent the sum of OS + OD.



As with the previous exercise, this exercise requires effort, and the patient may end up seeing double.

Fixation / Pursuits / Saccades



The patient must follow and/or precisely fixate on the element as indicated in the instructions (spaceship or center of the planet). During saccades, fixation must alternate and the rhythm must be maintained.

This exercise does not require any response from you; the result is recorded by eye tracking.

NV Strategies

NV strategy exercises allow visualization of eye-movement traces during a visual reading or visual exploration task.

Reading: adult / child

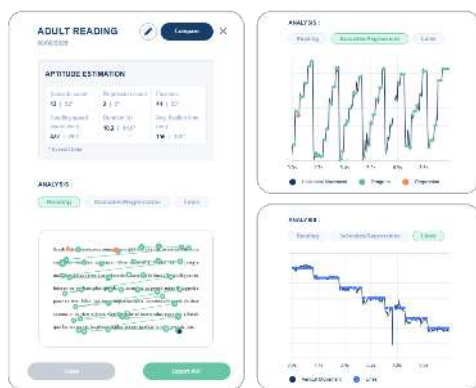
Text variants are available in French, German, English and Spanish.



Instruction: Read the text that appears.

From the interface, press **start** to display the text and begin recording, then **stop** to end it.

The eye-movement traces are overlaid on the image used for the task (text or images); **fixations** are represented by dots and **eye saccades** by lines.



For the reading task, the following indicators are displayed:

- number of fixations
- number of progressive saccades
- number of regressive saccades
- reading speed (in words per minute)
- reading duration (in seconds)
- average fixation time (in milliseconds)



By clicking the pencil button, you enter recording edit mode, allowing you to :

- click the circles to **correct a progression or regression**
- edit the segment to **adjust the start and end of the recording**.

Exploration: images



Instruction: You will see several images. Count the number of Cats (5), Cars (8), Birds (6), Flowers (5), Houses (6)

From the interface, press **start** to display the images and begin recording, then **stop** to end it.

Exploration: scene

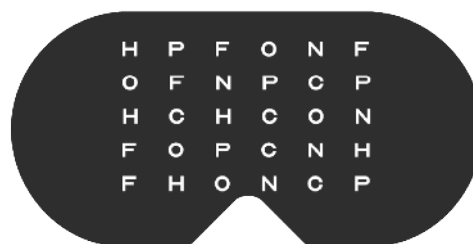
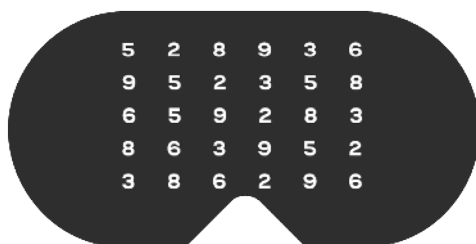


Instructions (choose one):

- Scene description: "You are going to see a scene, describe what you see."
- Specific question about the scene: for example, "Count how many characters are in the scene."
- Completely free exploration: no instruction, simply display the scene and observe where the patient looks.

From the interface, press **start** to display the scene and begin recording, then **stop** to end it.

Exploration: numbers / letters



Choose a number or a letter and ask your patient to count them. They must find 5 of them. **Instruction:** Count the number of ...

From the interface, press **start** to display the scene and begin recording, then **stop** to end it.

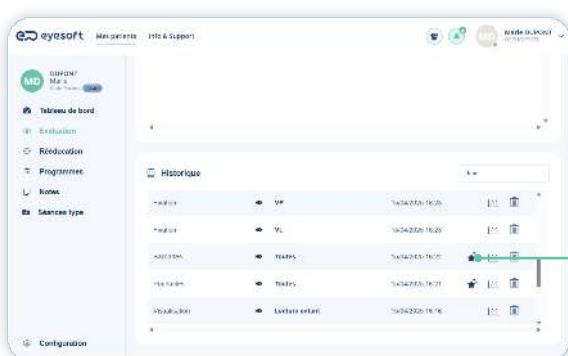
VIEWING THE ASSESSMENT RESULTS

A simple visualization of eye movements is available for all EMAA Evaluation exercises in the patient's history.

Expert mode

A more detailed visualization of eye movements is available for the following animations:

- VR NPC
- VR Vergences
- Pursuits
- Saccades
- Fixation



To access it, click the ☆ stars next to the exercise to analyze.

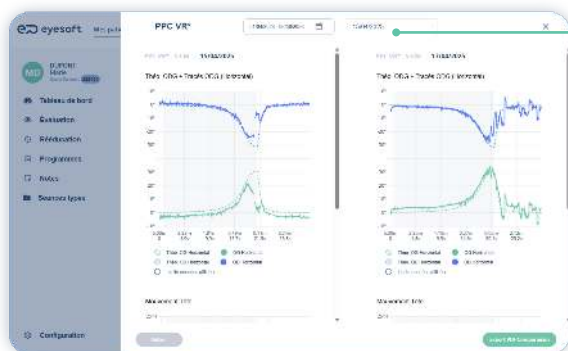
Expert mode allows visualization of the eye tracking data on a graph with time on the x-axis and eccentricity on the y-axis (in degrees or prism diopters).



In expert mode, it is possible to **change the unit display** (Degrees or Diopter) and **the trace display** (Lines or points).



For **saccades and pursuits**, you can choose to display the data for the horizontal axis or the vertical axis.



While viewing traces in expert mode, you can click "**Comparison**" at the top of the page to display the traces of a second exercise performed by your patient.

Select the period and then the date of the exercise from the history. The two exercises are displayed side by side (the most recent on the right).

You can export the traces by clicking **Export Comparison PDF** at the bottom right.

EDITING THE RESULTS



Click the pencil button in the exercise preview tab to edit its result.

4.10. Rehabilitation

STARTING A TRAINING SESSION

To start a training session, go to the profile of the patient in question, then to the **Rehabilitation** tab.

See the "Starting a session" section.

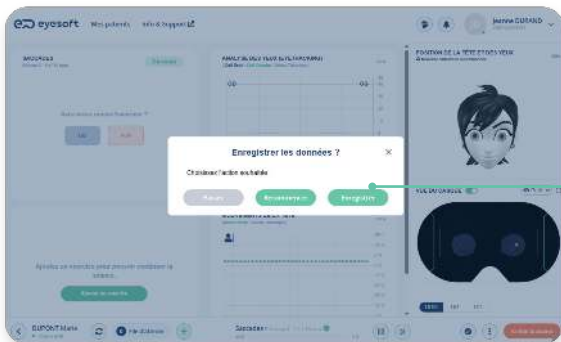
SUCCESSFUL COMPLETION OF AN EXERCISE

Each exercise performed by level ends with the question " **Did you complete the exercise successfully?** ". You can ask the patient to answer themselves via intuitive aiming, or you can click the answer yourself. Once the answer is confirmed, the next exercise starts automatically.

Once the last exercise is completed and confirmed, your patient will be notified and redirected to the home environment.

SKIPPING TO THE NEXT EXERCISE

You can interrupt the exercise at any time by clicking **Skip to next exercise**.

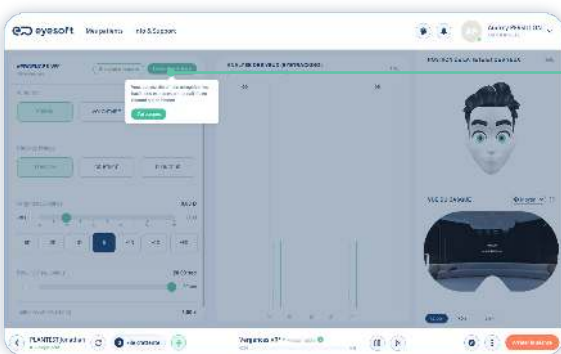


If you have already answered "**Yes**" to the success question, no further action is required, the result is saved.

If you have already answered "**No**" to the success question, you can choose between three options:

- **Skip**: ends the exercise without recording it
- **Restart**: repeat the same exercise (same level and theme) into the queue ahead of the exercises already scheduled
- **Save**: keeps the trace (and score) even though the exercise was not completed

SAVE THE TRACE



The traces of custom exercises can also be exported as a PDF report by clicking the " **Save trace** " button located at the top right of the exercise control panel.

Note that saving the trace ends the exercise in progress.

BACKGROUND CONFIGURATION

Background configuration is available on all rehabilitation exercises in custom mode to display lines or a grid, fixed or moving, on your interface.



Click the **Background** tab to configure the grid options.

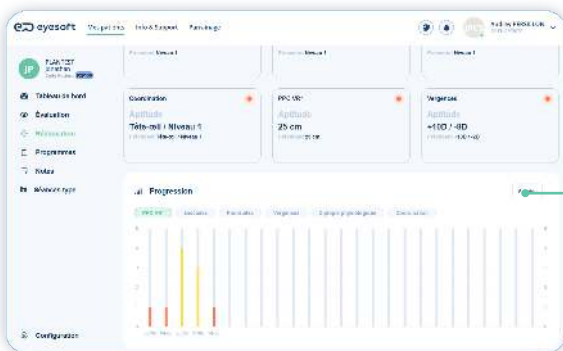
- background display : on / off
- type: grid / vertical lines / horizontal lines
- line spacing
- animation: fixed or scrolling
- scroll direction
- scroll speed

By default, the background is not enabled.

PROGRESS

Accessible from the 

Progress block lists the successfully completed exercises with their " custom fusion " scores. It lets you track your patients' progress and evolution.



You can **display** the progress for a given exercise over a period of 6 months to 2 years.

HISTORY AND EXPORTS (PDF)

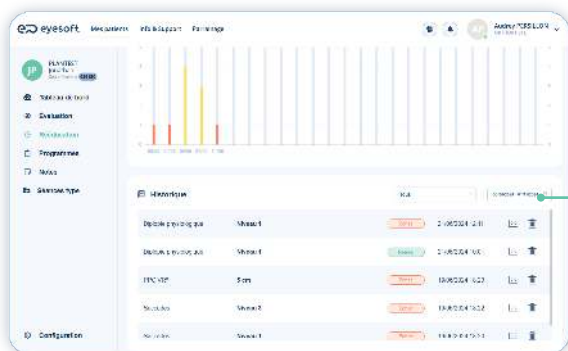
Accessible from the  **Rehabilitation** and  **Evaluation** tabs, the  **History** block lists all sessions and exercises performed, along with their success or failure.



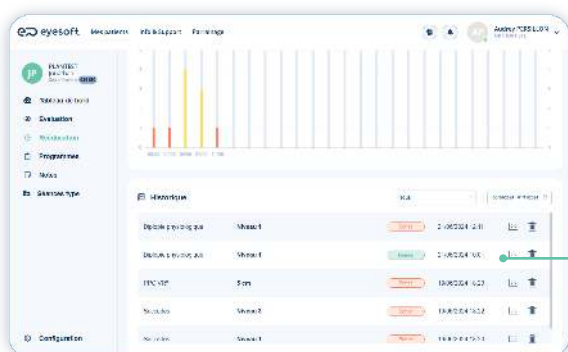
For exercises performed in custom mode, two export options are available:

- **Portion of traces** to select, using the time-interval slider, a 40 second portion of the exercise performed.
- **All traces** to obtain all the traces of the exercise performed, split into 40 second portions.

Traces may appear on several pages depending on the total duration of the exercise.

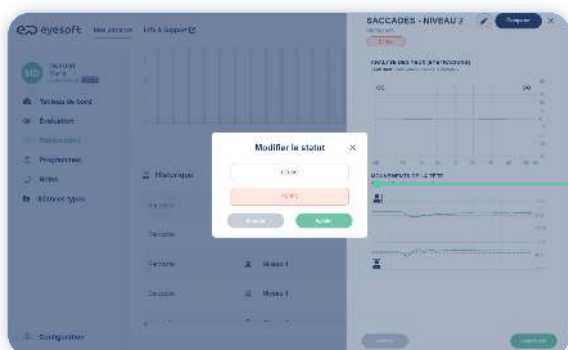


You can **filter the information** of interest for a given exercise, or for a given period, for better visibility.



You can **display** and **export** the traces of your patient's eye and head movements during the exercise by clicking .

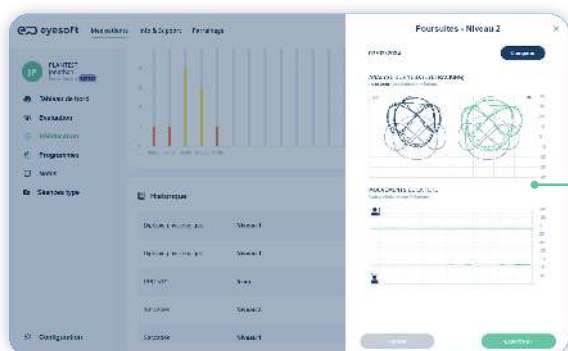
EDITING THE SUCCESS STATUS



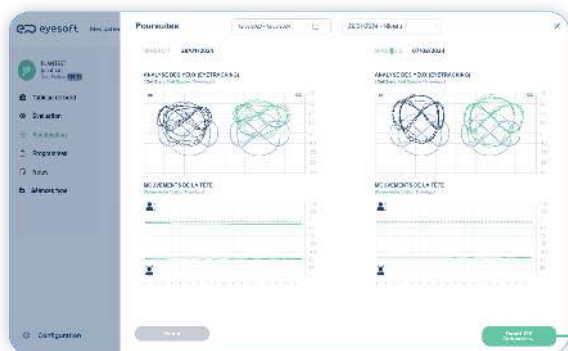
The success status of a rehabilitation exercise by level is chosen during or after the exercise ends. It appears in the patient's exercise history.

To edit the success status, you can **click the pencil** or directly on the badge to edit it (Successful or Failed).

COMPARING EXERCISES



While viewing the traces of a completed exercise, you can click "**Compare**" to display the traces of a second exercise performed by your patient.



Select the desired period and exercise from the history. The two exercises are displayed side by side (the most recent on the right).

You can export the traces by clicking **Export Comparison PDF** at the bottom right.

EXERCISES AND INSTRUCTIONS

Here are the instructions for each rehabilitation exercise and for each environment:

Smooth pursuits

The patient must precisely follow the spaceship/fish as indicated in the instructions.

Adjustable parameters in custom mode:

- Object position: from 0.4 m to 10 m.
- Fixed object size: from 0.05 m to 0.4 m.
- Moving object size: from 0.01 m to 0.1 m.
- Relative speed of the moving object: from x0 to x4.
- Mode:
 - Auto:** the object moves on its own
 - Visually guided:** The patient must follow the moving graphic element to progress through the exercise.



Instruction: " Follow the spaceship/fish precisely with your eyes without moving your head "

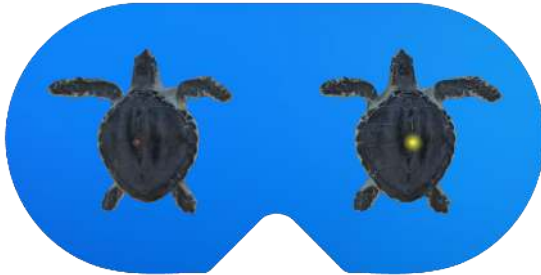
Saccades

Two static objects are displayed, and a dot lights up alternately at the center of each object. The patient must fixate on the lit dot alternately, keeping the rhythm.

Adjustable parameters in custom mode:

- Object position: from 0.5m to 2m.
- Distance between objects: from 0.1m to 1m.
- Object size: from 0.005m to 0.05m.
- Tilt: from -90° to 90°.

- Lighting duration: from 1s to 5s.
- Lit object : **Auto** : Automatic switching of the illuminated dot based on the configured activation duration.
Random : the lighting duration varies randomly between 0.5 and 2 seconds, in increments of 0.1s.
Visually guided: the alternance of the illuminated dot occurs if the patient fixates it for a duration of 0.5s.
Left / Right : the illuminated dot appears on the side chosen by the practitioner, during the configured activation duration.
- Dot color: allows you to choose the color of the lit dot between yellow, white or red.



Instruction: " Fixate successively on the lit dot of each planet/turtle without moving your head "

NPC

The patient must precisely fixate on and follow the center of the planet/turtle until the end of the test, making the effort not to see double.

Based on the conventional NPC test, an object (planet or turtle) with a central fixation point progressively moves closer to the distance defined by the level.

The approach speed decreases and the return to the initial position is gradual, to make the end of the exercise more comfortable.

Adjustable parameters in custom mode:

- Object distance: from 0.05 m to 5 m
- Responsiveness: from 1 s to 20 s
- Light color: allows you to choose the color of the lit dot between yellow, white or red.



Instruction: " Fixate on the central point on the planet/turtle, trying not to see double "

Physiological diplopia

Two objects are placed at different distances, on the same axis (one behind the other: a spaceship in front and a planet behind, or a turtle in front of a fish).

The patient must look at them alternately: the object not being looked at is in shadow and appears double, while the object being looked at is lit and should be seen unique.

Adjustable parameters in custom mode:

- Object: planet/spaceship/rocket or fish/turtle/jellyfish.
- Distance to the front object: 0.1 m to 1 m.
- Size of the front object: from 0.015 m to 0.1 m.
- Distance to the back object: from 0.5 m to 4 m.
- Size of the back object: from 0.05 m to 0.4 m.
- Speed: from 1 s to 5 s.
- Choice of lit object: automatic, front or back.



Instruction: " Fixate on the planet/turtle, then the spaceship/fish, following the rhythm. The lit element should be seen unique; you should feel like you are "cross-eyed". It is normal for the dark element to appear double. "

Head-eye coordination

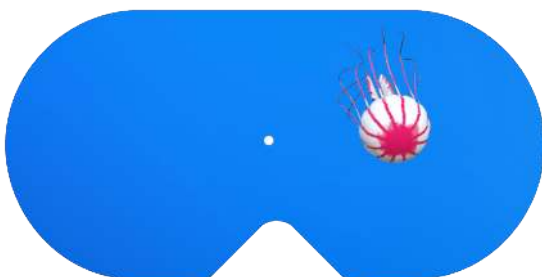
Objects (planets or jellyfish) appear successively at random locations within the visual field, but at a fixed distance. By moving their head, the patient must position the cursor on the object to trigger the appearance of the next one.

Every other object is positioned at the center of the visual field in order to recenter the gaze.

In level-based exercises, a score counts the number of graphic elements selected.

Adjustable parameters in custom mode:

- Object: planet/spaceship/rocket or fish/turtle/jellyfish.
- Object size: from 0.02m to 1m.
- Distance to object: from 0.4m to 3.5m.
- Display mode: random, left field, right field or manual.



Instruction: " Find and successively select each planet/jellyfish using the white dot, aiming with your eyes AND your head "

Eye-hand coordination

Objects (planets or jellyfish) appear successively at random locations within the visual field, but at a fixed distance. Using the controller, the patient must position the cursor on the object and select it to trigger the appearance of the next one.

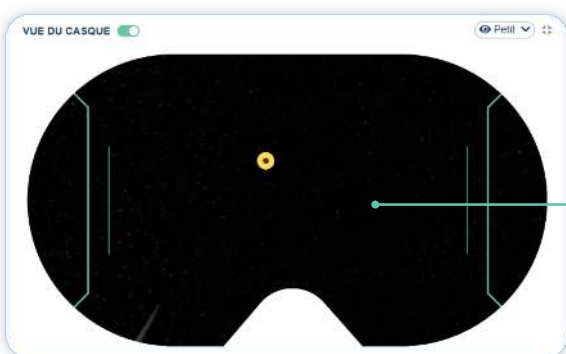
Every other object is positioned at the center of the visual field in order to recenter the gaze. In level-based exercises, a score counts the number of graphic elements selected.

Adjustable parameters in custom mode:

- Object: planet/spaceship/rocket or fish/turtle/jellyfish.
- Object size: from 0.02m to 1m.
- Distance to object: from 0.4m to 3.5m.
- Display mode: random, left field, right field or manual.



Instruction: " Find and successively select each planet/jellyfish using the controller, by pressing the trigger "



A yellow circle is positioned behind the object to look at, allowing you to locate it even when it is small ($\leq 10\text{cm}$), so you can guide your patient if they cannot find the object.

This circle is visible only to the practitioner on the headset's video feed.



In the coordination exercise in custom mode, you can freely switch between selecting the object with the reticle (head-eye) and selecting with the controller (eye-hand). To switch between the two, use the **Activate/Deactivate controller** button on your interface.

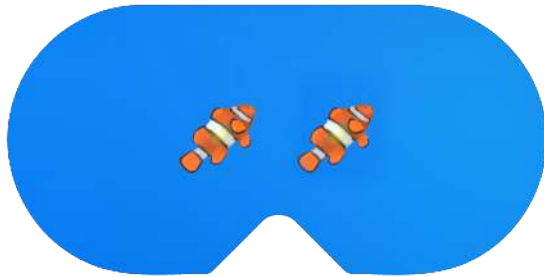
Convergence / divergence fusion

Two identical images, one for each eye, are placed on the same plane. They move symmetrically, outward for convergence and inward for divergence. The patient must keep the image single at the center.

The difference corresponds to the theoretical desired amplitude of convergence or divergence (in prism diopters). Bright, saturated colors are used for the objects to stimulate vision, equally for each eye.

Adjustable parameters in custom mode:

- Object: Space: cat/star/rocket or Aquatic: fish/crustacean/diver.
- Vergence angle (slider): from -20D to 80D.
- Vergence angle (increments): -5, -2, -1, +1, +2 and +5D.
- Responsiveness: from 1s to 20s.
- Relative object size: from x0.5 to x1.5.



Instruction: " Fixate on and keep the image at the center throughout the exercise. "

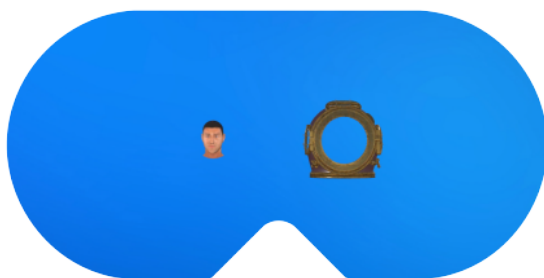
Voluntary vergence

A different image is projected for each eye (for example, a rocket for one eye and an astronaut for the other). These images are always placed on the same plane. They move symmetrically, outward for convergence and inward for divergence. The patient must superimpose the two images as instructed.

The distance corresponds to the theoretical desired amplitude of convergence or divergence (in prism diopters). Bright, saturated colors are used for the objects of interest to stimulate vision, equally for each eye.

Adjustable parameters in custom mode:

- Vergence angle (slider): from -20D to 80D
- Vergence angle (increments): -5, -2, -1, +1, +2 and +5D
- Responsiveness: from 1s to 20s
- Relative object size: from x0.5 to x1.5
- Image inversion: OD/OG (right eye/left eye)



Instructions:

Voluntary convergence: " Each eye sees a different image. You must make a voluntary effort to bring them back together! "

Voluntary divergence: " Each eye sees a different image. Your eyes must relax to bring them back together! "

Stereoscopic fusion

Two almost identical images are projected onto each eye, on the same plane, differing only by a single detail (for example, a planet with a ring for one eye, and the same planet with a satellite for the other).

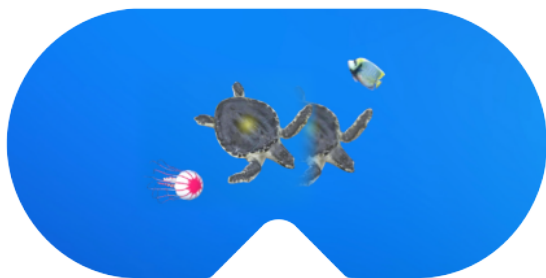
The images move symmetrically, outward for convergence and inward for divergence. The patient must superimpose the two images as instructed.

The difference corresponds to the theoretical desired amplitude of convergence or divergence (in prism

diopters).

Adjustable parameters in custom mode:

- Vergence angle (slider): from -20D to 80D
- Vergence angle (increments): -5, -2, -1, +1, +2 and +5D
- Responsiveness: from 1s to 20s
- Relative object size: from x0.5 to x1.5
- Image inversion: OD/OG (right eye/left eye)



Instructions:

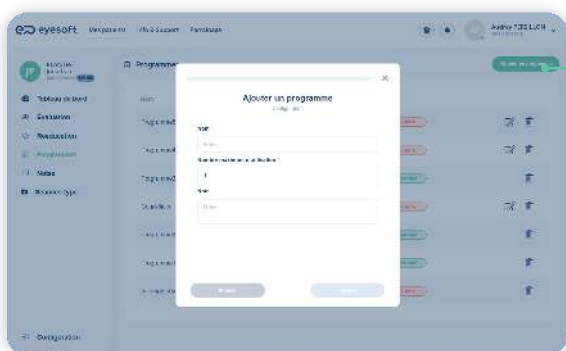
Convergence stereo fusion: " Try not to see double. You may feel that the image is changing size, position, or becoming blurry. "

Divergence stereo fusion: " The image should not be seen double. Your eyes must relax to maintain fusion. "

4.11. Scheduled sessions / Tele-rehabilitation (EMAA Home)

PROGRAM MANAGEMENT

To start a session, go to the profile of the patient in question, then to the  **Programs** tab.



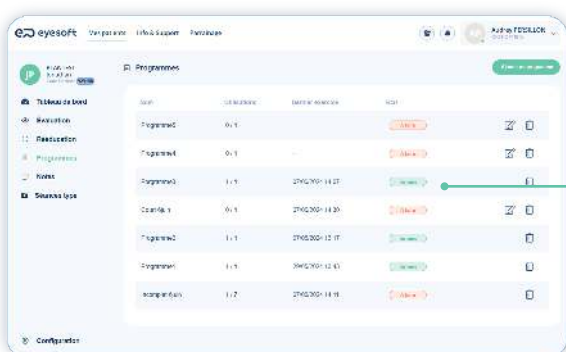
Click "**Add a program**".

Give the session a name, then a maximum number of authorized uses.

Choose the exercises from the list. Then select the levels for each exercise, in the same way as an in-office session, then click "**finish**".



A maximum of 5 programs can be added per patient. These are displayed in order of entry, with the most recent first in your interface. Within the headset, the display order is reversed, with the first program entered displayed first.



Once the program is created, it appears in the program list. You can then view its status (**To do** or **Completed**), the completion date, or delete it.

NOTIFICATIONS OF COMPLETED PROGRAMS

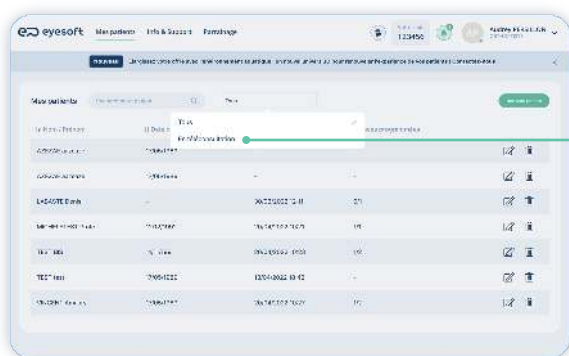
When a program is completed by one of your patients, you are informed in the "notification" tab on the main page of your interface. These can appear as one of 3 types:

- **Incomplete session:** the patient started a program and completed fewer than 3 exercises
- **Partial session:** the patient started a program, did not finish the entire program, and completed 3 or more exercises
- **Completed session:** the program was completed in full by the patient



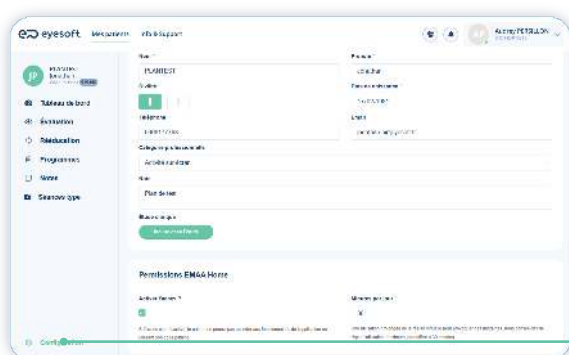
The results are integrated into the progress shown in the patient's history!

FILTERING REMOTE CONSULTATIONS PATIENTS



In " My patients ", you can filter patients receiving remote care.

TIME LIMIT

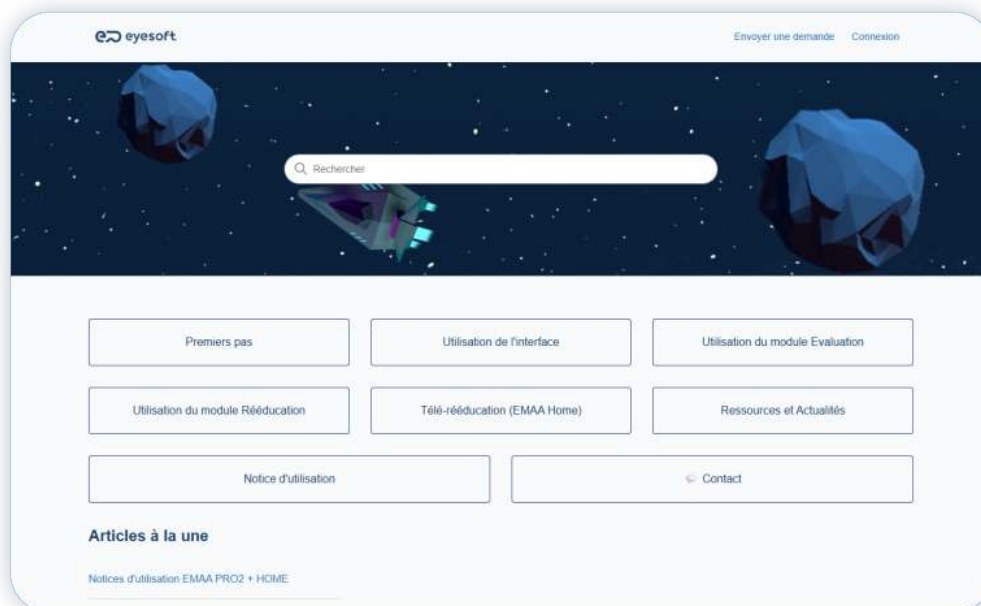


The headset usage time* for HOME rehabilitation programs is set to 30 min by default. You can increase or decrease the usage time for each patient.

*Prolonged use of virtual reality can cause migraines; we recommend setting the maximum daily usage to 30 minutes.

4.12. Info & Support

In the Info & Support section, you will find numerous useful pieces of information grouped by topic for using your EMAA Pro 2 solution:



 **Contact**, where you will find the various ways to contact Eyesoft support and let us know about any difficulties you encounter with your EMAA Pro 2 solution.

 **Getting started with EMAA Pro 2 and Q&A** to help you get started and make the best use of the available features.

 **Using EMAA modules** to view all the manuals for your EMAA Pro 2 solutions, for online or PDF consultation.

 **Clinical studies and Videos** to keep you informed of tips, read clinical studies and discover the clinical benefits of Eyesoft in practice. Long-format videos of previous webinars hosted by Eyesoft are also available.

 **History of manuals and updates** containing summaries of the latest features included in each software update of your EMAA Pro 2 solution.

