



Practitioner's instructions for use

EMAA PRO - EMAA HOME

EMAA Pro User Guide

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33800 BORDEAUX - FRANCE

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

1. Important - Read Before Use

1.1. Before First Use

Welcome to the user guide for your EMAA Pro solution.

Before starting your first use of the solution and platform, please read the following information carefully:

- Keep the original packaging and manufacturer's instructions so that you can refer to them for advanced headset features.
- Digital instructions are available online. You can access them by visiting the [support portal](#).
- Paper instructions are available free of charge upon request. To obtain them, use the contact form on the support portal. Delivery time: 7 calendar days.
- A (stable) WiFi connection is essential to connect the headset (mobile hotspot sharing can be used if necessary).
- Secure the immediate environment to avoid falls or impacts; seated use is recommended.
- Any damage (breakage, scratches, or optical exposure to the sunlight) caused by improper use will be your responsibility.
- Cleaning the leather before or after each use: prefer a gentle solution (alcohol-free disinfectant wipes) to limit premature wear.
- Recharge the headset every two hours of use.
- 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 case of device malfunction, please contact Eyesoft.



Never expose the optics 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.

WEB BROWSER

The EMAA Pro solution equipped with the Android operating system is compatible with Chrome (V≥88), Firefox (V≥87) and Safari (V≥15.6) browsers.

1.3. Recommended Internet Speed

- Upload (outgoing): Minimum **5 Mbps**
- Download (incoming): Minimum **5 Mbps** for basic interface usage, though some data visualization may be delayed. **25 Mbps** is recommended for an optimal experience.
- Latency (Ping): Should not exceed 60 ms.

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



Eyesoft cannot ensure smooth performance with speeds below the stated requirements. Unstable connections may also disrupt use despite sufficient speed. Testing network stability on dedicated platforms is advised.

1.4. Port Configuration

- **Protected and private WiFi 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 **port 1883 and 8883 (MQTT)**
- **websocket.iot.fr-par.scw.cloud** available on **port 80 and 443 (Websocket)**
- **www.eyesoft.fr** available on **port 443 (HTTPS)**

2. Purpose and Indications

EMAA Pro is a software as a medical device (SaMD) using extended reality designed for the assessment and rehabilitation of visual and oculomotor functions.

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

Its use is indicated for assistance in the evaluation and rehabilitation of patients suffering from oculomotor imbalances, aged over 8 years (under adult supervision for minors), whose cortico-retinal correspondence is normal (NRC). 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 susceptible to the side 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 potential side effects related to their history.

Before using the Platform in telecare as part of the EMAA Home offer, the orthoptist acknowledges being aware of Amendment No. 14 relating to the use of telecare, an amendment to the National Convention organizing relations between Orthoptists and the National Union of Health Insurance Funds. The notice of this Amendment No. 14 dated October 28, 2021 was published in the Official Journal No. 0254 on October 30, 2021.

3. First Start



3.1. Headset Ergonomics

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

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

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

You will save time and avoid wrong manipulations leading this step by yourself.



When removing the headset, be careful with the patient's glasses, if necessary ask them to hold them.

3.2. Turning On



Press and hold the on/off button on top of the headset for 5 seconds.

i This is the same procedure to turn off the headset.

3.3. Headset LED Indicator



Headset on (solid blue)



Headset shutting down (blinking blue)

When the headset is **off and plugged in**:



Full battery - between 98% and 100% (green)



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



Low battery - below 20% (red)

If the headset is not plugged in and below 20% battery, you will see a blinking red light 



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

3.4. VR Realignment

If the display is misaligned, press the side button to recenter the view.



You can simply realign it in front of you by long pressing the bottom button on the side of the headset.

You can also realign the environment during the session directly from your [interface](#).

3.5. Navigation and Interaction in 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 mode that your patient will need to understand to use EMAA Pro.

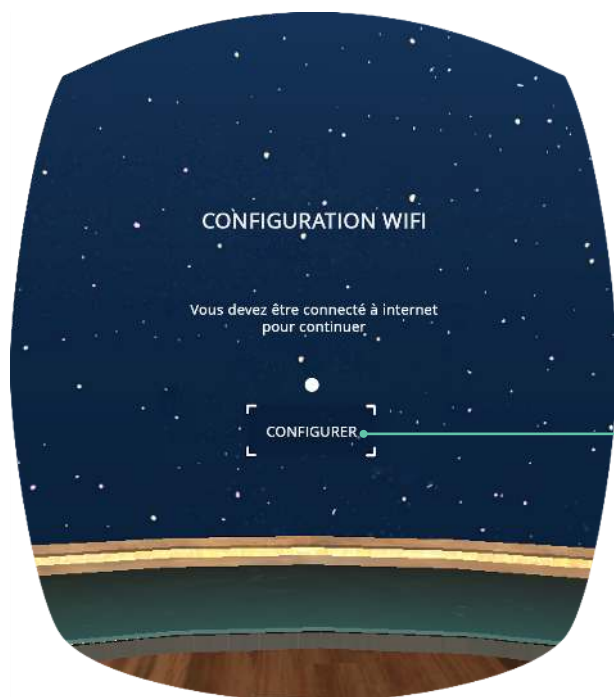


Or by aiming (directing the white pointer towards the tab) then click the main button on the right side of the headset.

This will be used mainly for WiFi configuration during the initial configuration.

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 (main headset button).

Select your network, enter the Wi-Fi password, confirm, then exit the menu by pressing the (-) button once (top button on the side of the headset).

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



To manage your WiFi connections, you can find them by going to the "Settings" tab in the headset's waiting room.

3.7. Practitioner code setup

Using intuitive selection, enter your 6-digit code (present on your web interface dashboard) then validate by hovering "continue".



You will then arrive at the headset positioning phase (preliminary step before each use).

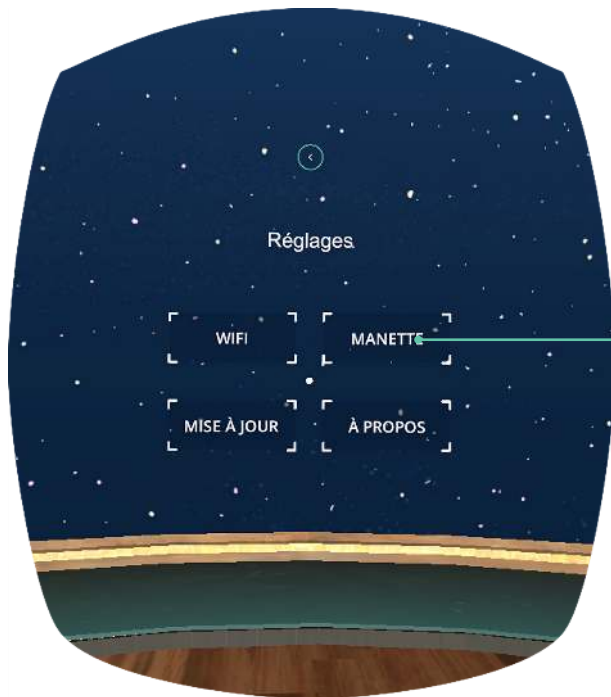
3.8. Controller Configuration



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



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



In the headset, when you are in the waiting room, go to the settings tab (gear icon at the top) then select "Controller".

Using the [headset selection button](#), select the "Controller" tab on the left, and follow the in-headset guidance to pair / un-pair the controllers.

To use the controllers, after initial pairing:

Exit by pressing the "-" button on the headset or on the controller you paired to return to the Eyesoft environment.



You can enable / disable the controller directly from your interface during the session, by clicking the **Enable/Disable game controller** button (see [Session Management](#))

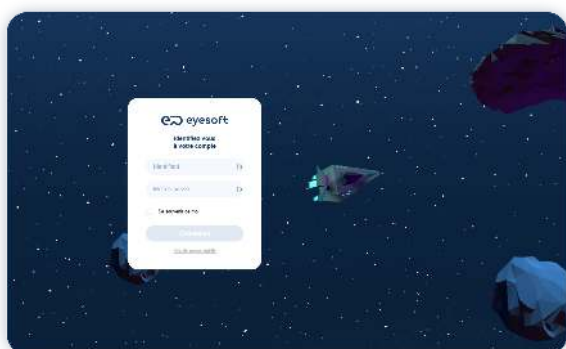
Congratulations! You are now ready to use EMAA Pro!

4. Interface use



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.

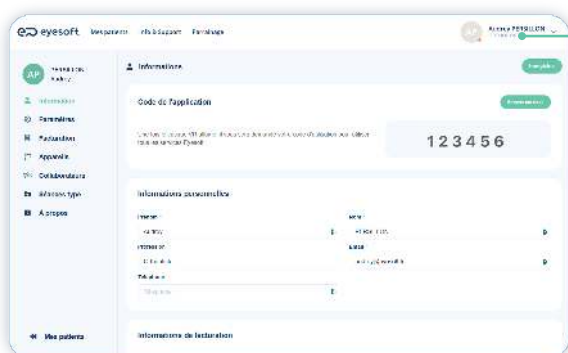


Enter your username (email address) and your password then validate.

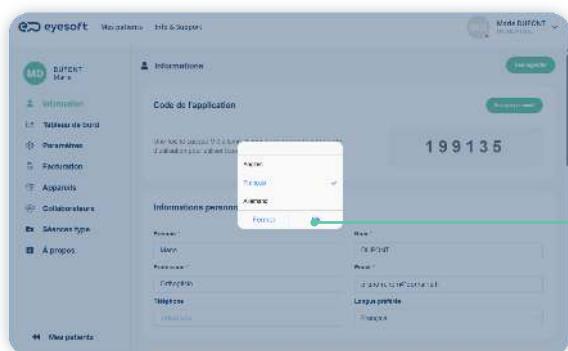


Only one session should be active at a time, do not log into your interface on another tab or computer simultaneously.

4.2. My profile



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

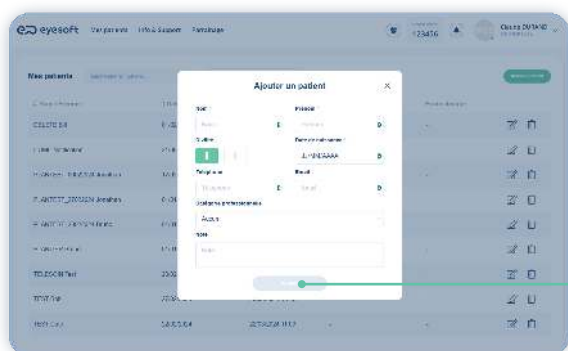


You can change the language used on the platform : choose the desired language in the **Favorite language** dropdown menu, then click **Save** at the top right of the page.

This change also modifies the language used in the headset. This modification takes effect after restarting the headset.

4.3. Patient List

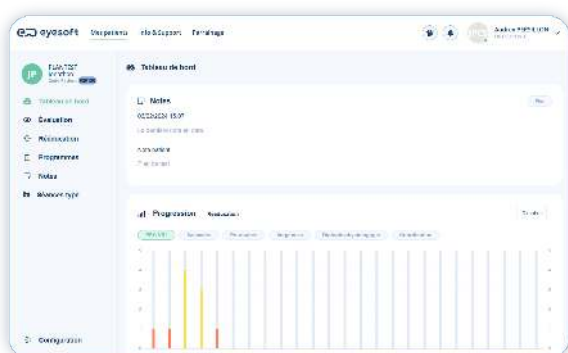
After logging in, you have access to your patient list.



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

4.4. Dashboard

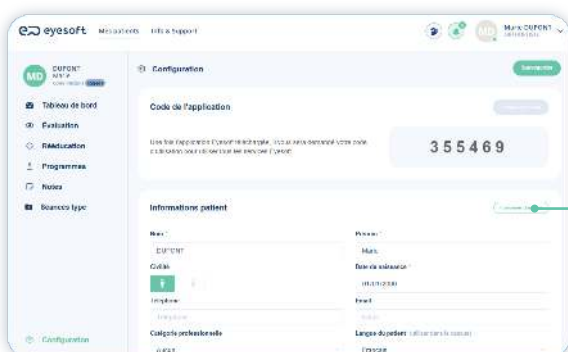
For each patient, by clicking on  **Dashboard**, you find the following information:



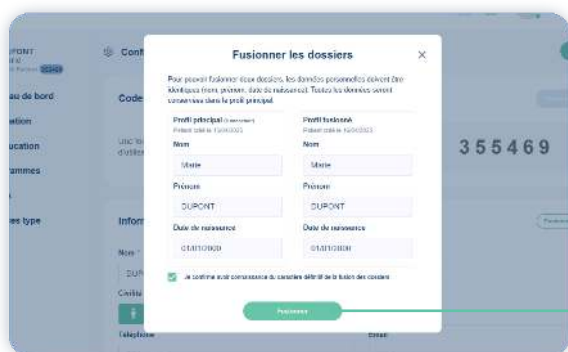
- Overview of recent history
- Patient progress
- List and duration of all completed sessions

4.5. Merging Two Patient Records

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

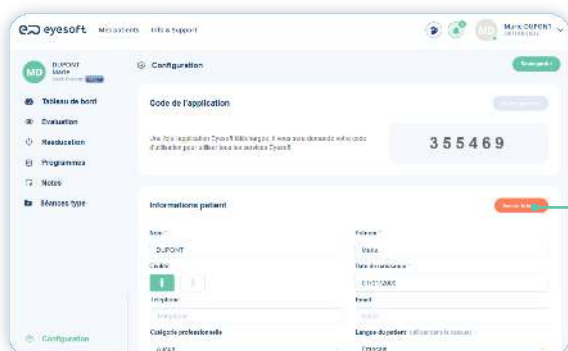


Click on **Merge records**.



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

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



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

If the same patient is present more than 2 times in your list, the operation will need to be performed several times. Additionally, merges are performed asynchronously, overnight.

4.6. EMAA Pro Welcome Environment (in the headset)

HEADSET POSITIONING

This is the preliminary step before each use. It allows optimal headset positioning.



Once the headset is placed on their head, the patient must align their head and see the drawing of the head with the headset correctly. **If they see part of the drawing as blurry**, the headset needs to be better positioned.

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



*Remember to **align the menus** (See Session Management) so that the patient starts the session with the menus facing them.*



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



Purpose of the sticker

It allows you to keep the headset out of sleep mode. When getting started, or if you want to do tests yourself (without a patient), **put the sticker on the photoreceptor between the optics**, this allows you to avoid the systematic return to calibration.

HEADSET FEATURES



1. Exit 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 or fish icon tab to switch between environments.

3. Access settings:

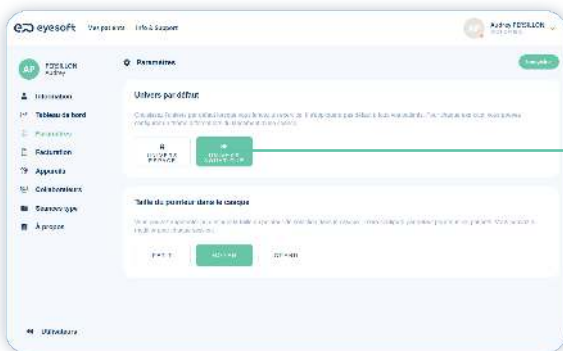
Select the gear icon tab to access settings (controller, Wi-Fi, or updates).

4. Reposition / Recalibrate:

Select the right tab to return to "headset positioning".

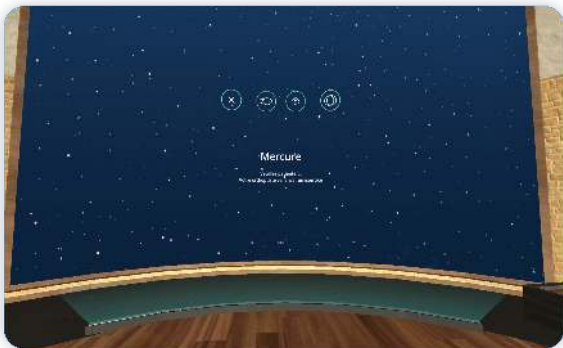
DEFAULT ENVIRONMENT

You can set your headset's default environment. The choice of environment affects the scenery as well as the objects appearing during exercises.



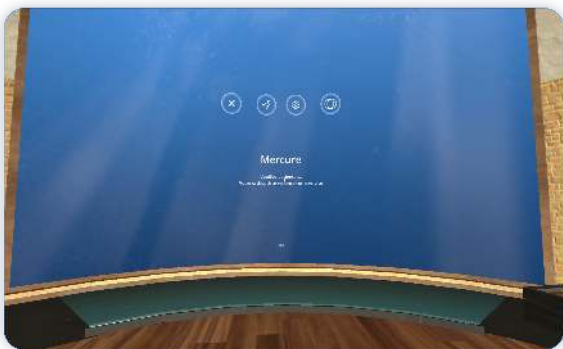
Go to your profile and click on the  **Settings** tab. Select a universe from those offered.

This choice will apply 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 "historic" environment of the EMAA Pro solution, it offers marked contrasts and simple geometric shapes.

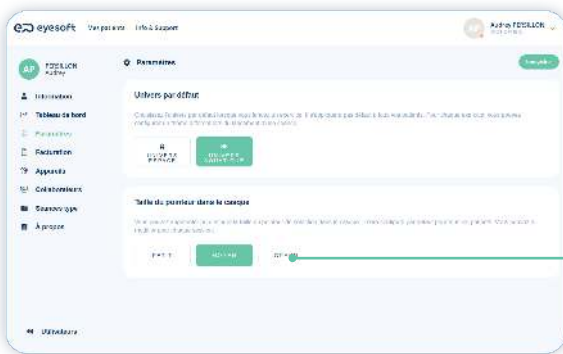


→ Aquatic universe

This environment offers more organic shapes and softer colors.

INTUITIVE SELECTION POINTER SIZE

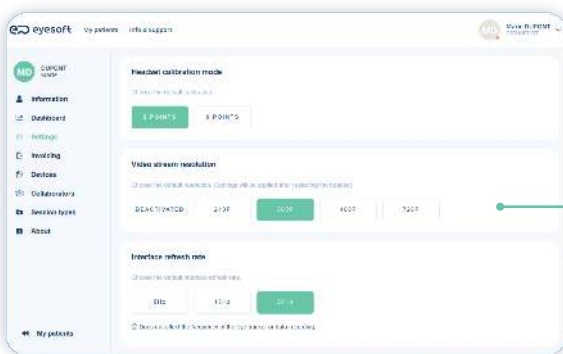
You can also set the default size of the intuitive selection pointer in the headset. This setting will be applied to all patients but you can change it for each session.



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

IMPROVING INTERFACE FLUIDITY

Depending on the performance of your hardware and network configuration, the application may present fluidity issues.



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

By adjusting the following two parameters, you can optimize:

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

The interface offers degraded 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 parameter does not affect the eye tracker frequency.

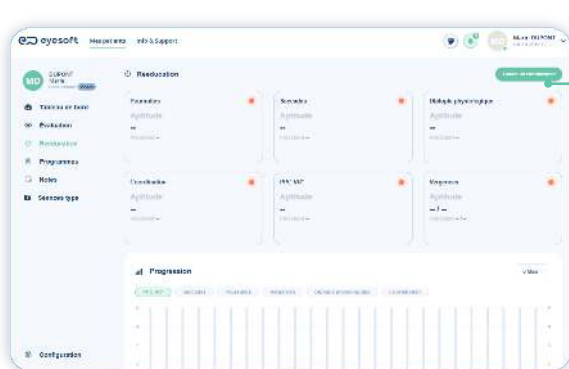
4.7. Session Management

To start a session, go to the relevant patient's profile then to the  **Rehabilitation** tab.

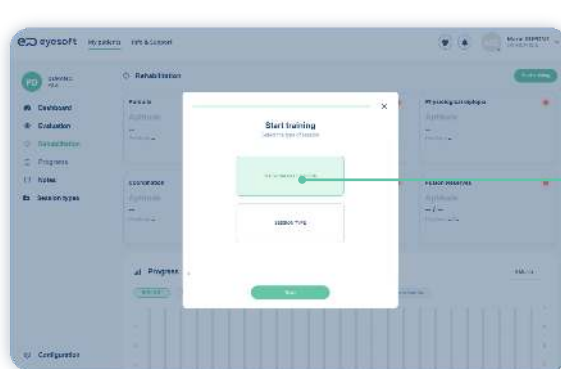
STARTING A SESSION

Rehabilitation

Click on **"Start rehabilitation"**



then choose **"Personalized session"** or **"Predefined rehabilitation"**.

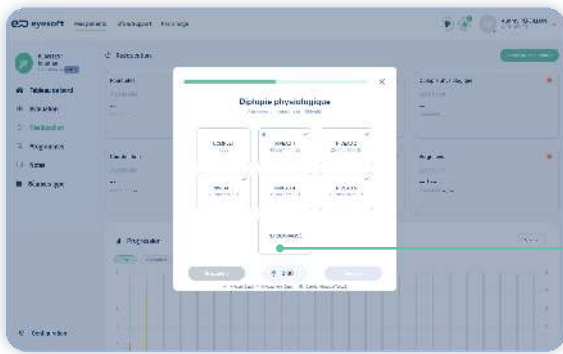


When choosing **"Exercise choice"** or **"Personalized session"**, the next page will invite you to select the desired exercises from the list.

 For more information on exercises and their instructions, see [Rehabilitation module exercises](#).

Note that exercises will launch **in the order in which you selected them** (modifiable in the exercise summary and then during the session).

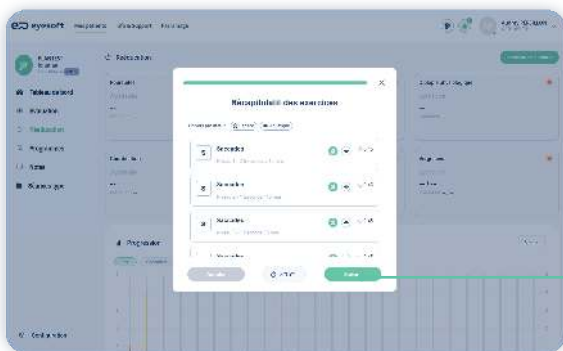
SELECTING LEVELS/REPETITIONS



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

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

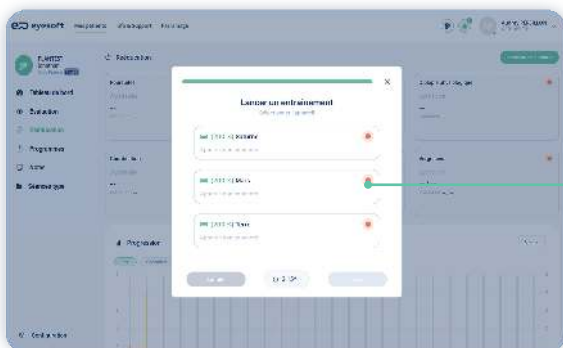
EXERCISE SUMMARY



Check your choices in the **summary**: you can **add, delete or modify exercises/levels, choose themes** and order exercises by dragging them.

Click "**Next**".

DEVICES LIST



The device(s) appear(s) along with their availability and battery level, choose your headset then click "**Start**".

HEADSET STATUS

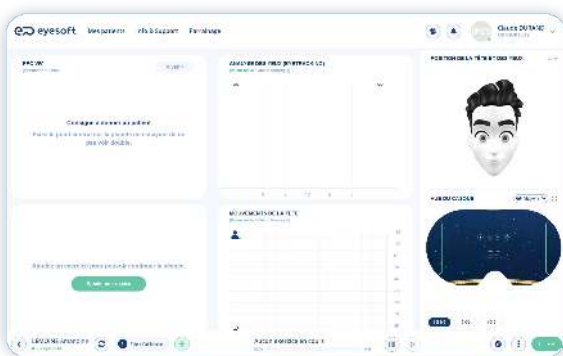
The headset status appears when starting the session (in the device selection tab), as well as at the top of the current exercise page, it can be:

- Device not connected (red) if asleep or off
- Calibration in progress (yellow)
- Device available (blue)
- Active connection when tests are launched (blue)



You can select a headset even if it is not connected or in calibration, it will become available once positioning is validated by the patient. Make sure you have selected the correct device!

START THE SESSION



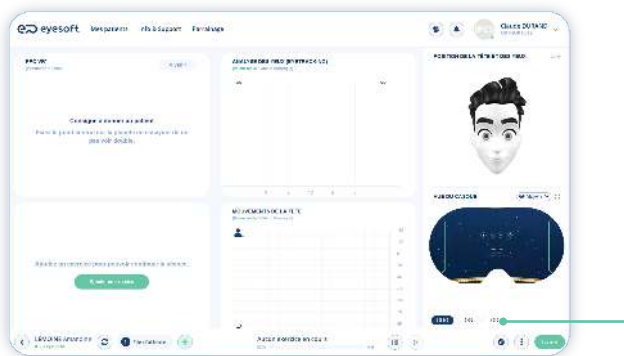
Once the connection is active, start the session by clicking "**Start**" at the bottom right.

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's normal for patients to perceive the white dot as double (transitory) after a fusion or convergence exercise.

REAL-TIME MONITORING



You can monitor and visualize in real time everything the patient sees in the headset. You can display both eyes, or only OD/OS.

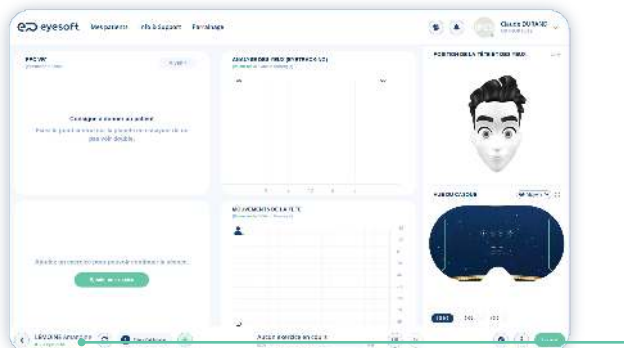
For rehabilitation exercises, each exercise ends with the question "Did you complete the exercise successfully?". You can ask the patient to answer themselves using intuitive aiming, or you can click on the answer yourself. Once the answer is validated, the next exercise launches automatically.

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



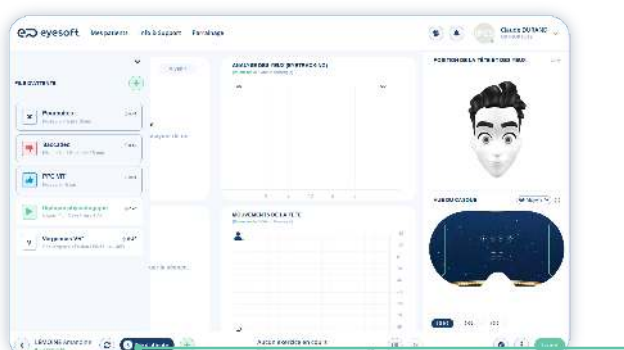
Do not power off the device until all data has been transmitted.

REFRESH / SEARCH DEVICE



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

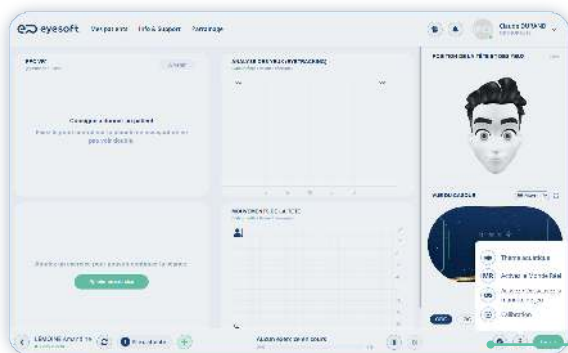
QUEUE



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

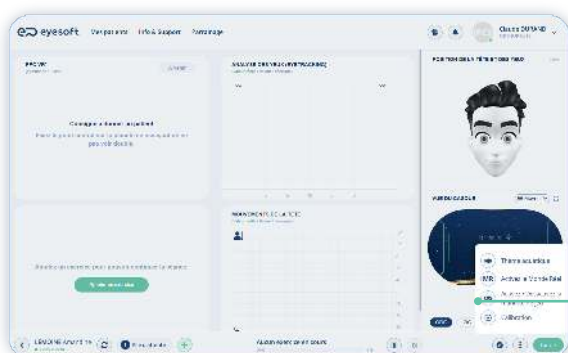
- **Green "play" triangle:** Exercise in progress
- **Cross:** Skipped/not performed exercise
- **Blue thumb:** Exercise performed and successful
- **Red thumb:** Exercise performed but failed
- **Letter:** Upcoming exercise (order modifiable)

HEADSET REALIGNMENT



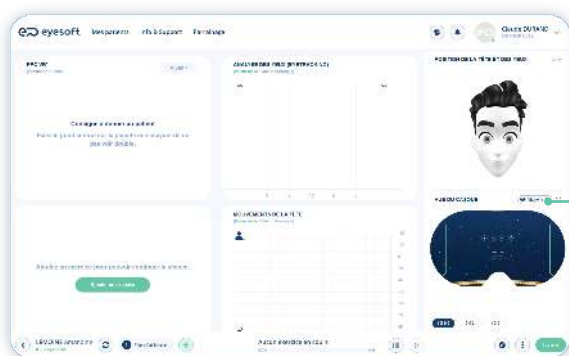
To avoid any drift in the VR environment, you can recenter the view directly from your interface during the session by clicking on the compass button.

CONTROLLERS



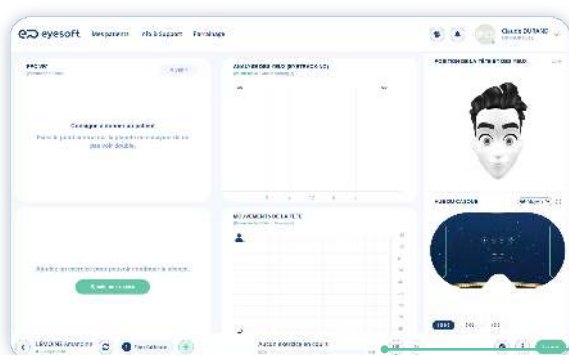
You can enable / disable the controller(s) directly from your interface during the session, by clicking the corresponding button.

VR ZOOM



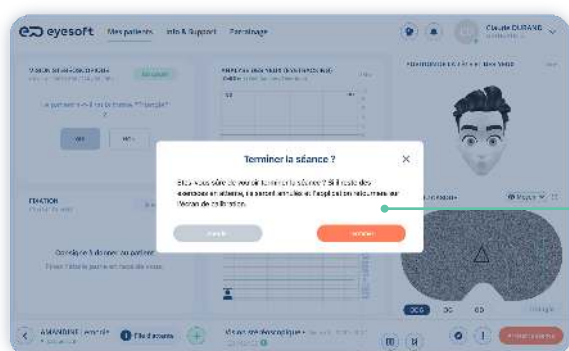
You can modify the VR preview by clicking on the Headset view mode button.

PAUSE



You can pause the current exercise by clicking the "pause" icon. To continue the exercise, click "pause" again.

STOP SESSION



→ Cancel

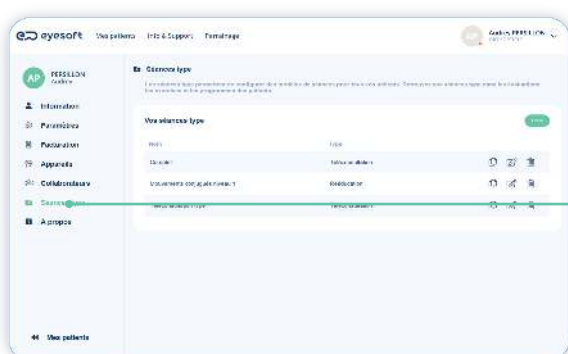
Returns to the current session.

→ Finish

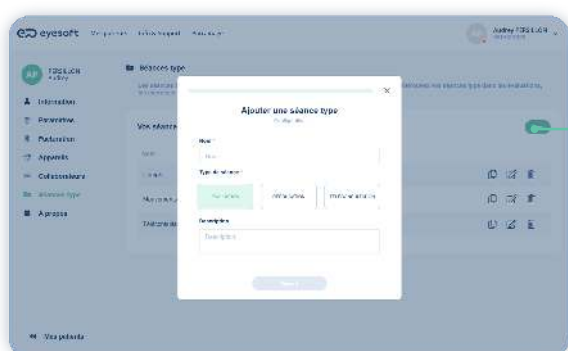
Cancels the entire current exercise series (the patient will be redirected to the welcome room).

4.8. Standard Assessments / Trainings

CREATING PREDEFINED SESSIONS (ACCESSIBLE TO ALL PATIENTS)



Go to your profile (by clicking on your name at the top right in your interface), and select the **"Predefined sessions"** tab.



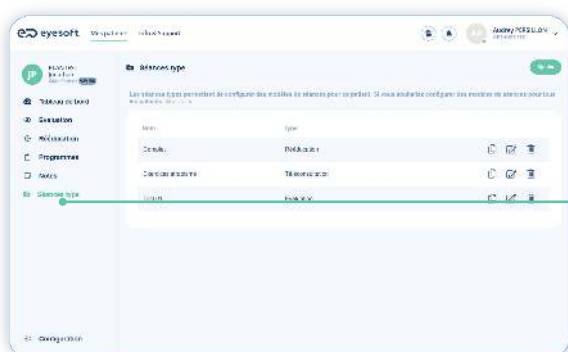
Click "Create", choose the name of your predefined session, then its destination (rehabilitation / telecare).

You can also add a description if you wish.

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

i Personalized modes are not accessible for telecare.

CREATING A PREDEFINED SESSION DEDICATED TO A SPECIFIC PATIENT

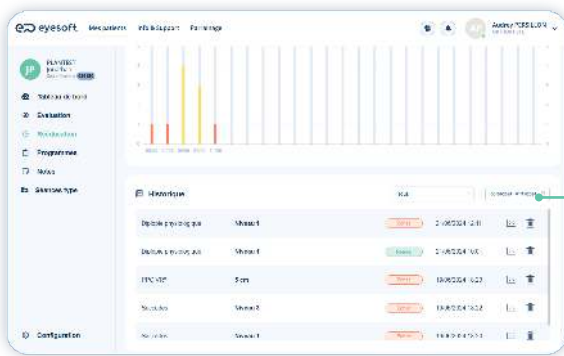


You can create predefined sessions dedicated to a patient. Note that they will only be accessible to the patient concerned.

To do this, go to the patient file, select **Predefined sessions** in the left tabs. The procedure is the same as previously described.

HISTORY

Accessible in the **Rehabilitation** tab, the **History** block lists all sessions and exercises completed, with their success or failure, as well as the recording of "custom fusion" scores. It allows you to track the evolution and progress of your patients.



You can filter the information you're interested in for a given exercise, or for a given period, for better visibility.

4.9. Exercises

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

PURSUIITS

"Follow the spaceship precisely with your eyes without moving your head"

"Follow the fish precisely without moving your head"

SACCADES

"Fix successively on the light point of each planet without moving your head"

"Fix successively on the light point of each turtle without moving your head"

NPC

"Fix on the central point on the planet trying not to see double"

"Fix on the central point on the turtle trying not to see double"

PHYSIOLOGICAL DIPLOPIA

"Fix on the planet, then on the spaceship following the rhythm. The illuminated element should be seen single, you should have the impression of "cross-eyed". It is normal for the dark element to be double."

"Fix on the turtle, then on the fish following the rhythm. The illuminated element should be seen single, you should have the impression of "cross-eyed". It is normal for the dark element to be double."

HEAD-EYE COORDINATION

"Search for and select each planet successively using the white point, aiming with your eyes AND head"

"Search for and select each jellyfish successively using the white point, aiming with your eyes AND head"

EYE-HAND COORDINATION

"Search for and select each planet successively using the controller, pressing the trigger"

"Search for and select each jellyfish successively using the controller, pressing the trigger"

FUSION CONVERGENCE / DIVERGENCE

"Fix and maintain the image in the center throughout the exercise."

VOLUNTARY CONVERGENCE

"Each eye sees a different image. You must make the voluntary effort to recenter them!"

STEREO FUSION CONVERGENCE

"Try not to see double. You may have the impression that the image changes size, position, or becomes blurry"

VOLUNTARY DIVERGENCE

"Each eye sees a different image. Your eyes must be relaxed to recenter them!"

STEREO FUSION DIVERGENCE

"The image should not be seen double. Your eyes must be relaxed to maintain fusion"

CUSTOM MODE

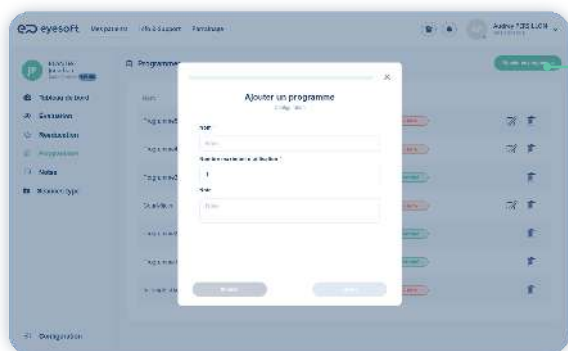
Each exercise offers a custom mode variation. It allows you to perform the exercise by adjusting the size, distance or speed parameters according to your convenience.

When you perform a custom exercise, it will not be recorded in the history (only custom mode fusion allows recording scores).

4.10. Scheduled Sessions / Telecare (EMAA Home)

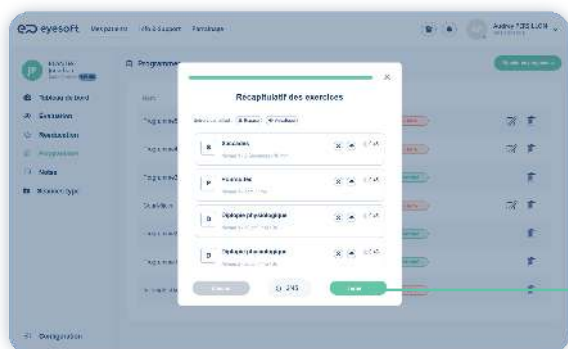
PROGRAM MANAGEMENT

To start a session, go to the relevant patient's profile then to the  **Programs** tab.



Click on **"Add a program"**.

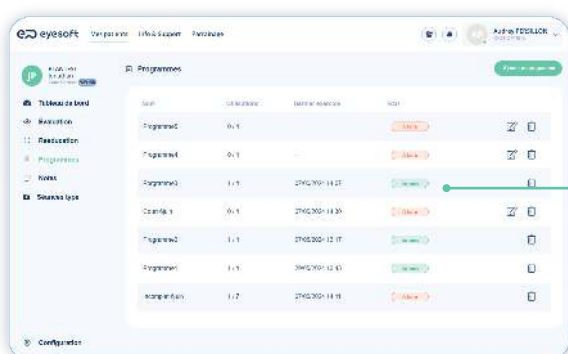
Give the session a name, then a maximum number of authorized uses.



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



The number of programs that can be added is a maximum of 5 per patient. These are displayed in order of entry with the last one first in your interface. Within the headset the display is reversed with the first entered program displayed first.

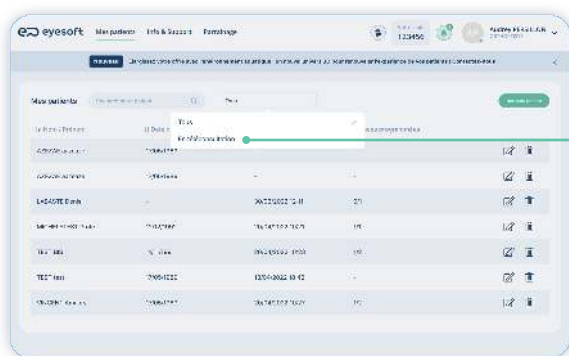


Once the program is created, it appears in the program list. You can then view their status (**To do** or **Completed**), the completion date, or delete them

NOTIFICATIONS FOR COMPLETED PROGRAMS

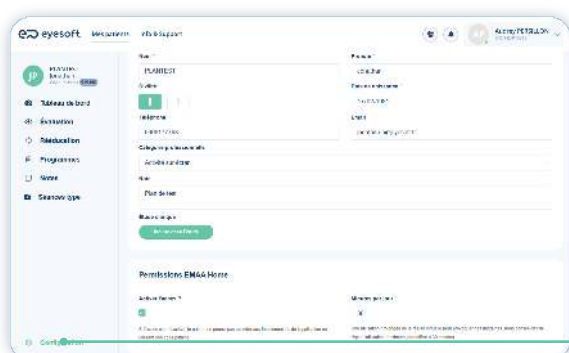
When a program is completed by one of your patients, you are notified in the "notification" tab of your interface's main page. These can be displayed according to 3 types:

TELECARE FILTERING



In "My patients", you can filter patients in telecare.

DAILY USAGE LIMIT

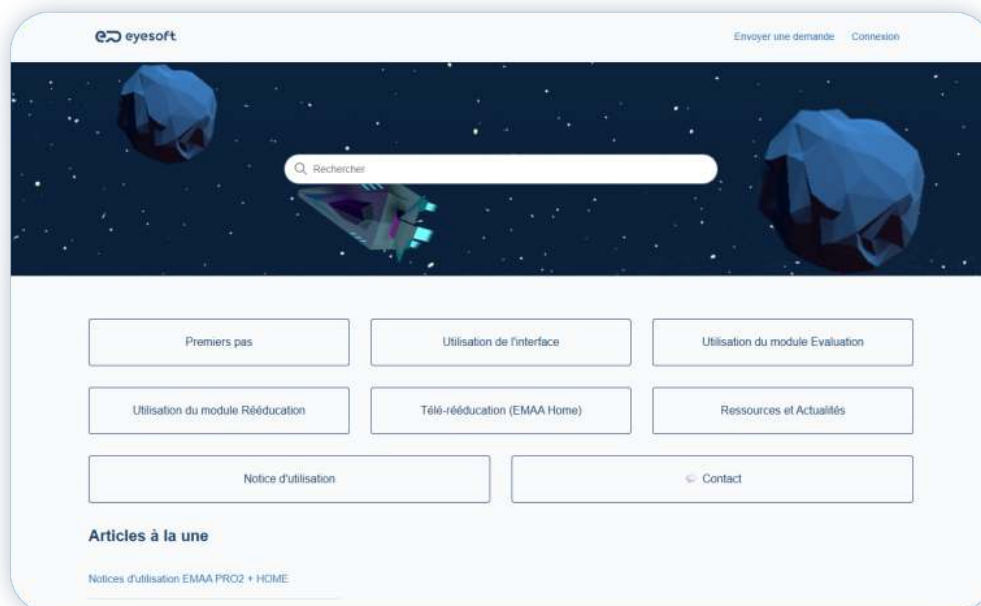


The usage time of headsets* during HOME rehabilitation programs is set by default to 30min. You can increase or decrease the usage limit for each patient.

*Prolonged use of virtual reality can cause headaches, we recommend setting the maximum daily use to 30 minutes.

4.11. Info & Support

In the Info & Support section, you will find many useful information grouped by theme for using your EMAA Pro solution:



 **Help Center** where you can contact us to inform us of any difficulties you encounter with your EMAA Pro solution.

 **User Manuals** and all the documentation for your EMAA Pro solution, available for online consultation or in PDF format.

 **First step tips** to help you get started and make the best use of the available features.

 **Resources and news** to inform you of clinical studies, read about tips and the clinical benefits of Eyesoft in practice. Long-format videos of previous webinars offered by Eyesoft are available.

 **Updates** to read summaries of the latest features integrated into each software update of your EMAA Pro solution.

