

Retiplus®

RETIPLUS v2.0

RCO Manual

(RETIPLUS Certified Optometrist)

[Manual de usuario](#)[Inicio](#)[Acceso a la aplicación](#)[Seleccionar idioma](#)[Recuperar contraseña](#)[Recuperar contraseña](#)[Lista de usuarios](#)[Nuevo paciente](#)[Borrar paciente](#)[Búsqueda y ordenación](#)[Seleccionar paciente](#)[Menú de paciente](#)[Evaluar FV](#)[Calibrar](#)[Datos del paciente](#)[Conexión con las gafas](#)[Primera conexión \(cargar las "gafas vírgenes" \)](#)[Opciones al realizar la conexión](#)[Test orientativos de función visual](#)[Test orientativos](#)[Optotipos digitales](#)[Rejilla de Amsler](#)[Agudeza visual](#)[Contraste](#)[Plantillas de Campo y Rastreo visual](#)[Ajustes](#)[Lista de calibraciones](#)[Calibraciones activas](#)[Activar/Desactivar calibraciones](#)[Nueva/Editar Calibración](#)[Calibrar](#)[Perfil del paciente](#)[Control de las gafas \(Petaca\)](#)[Cargar la "graduación digital" en las "Gafas Vírgenes " que ha adquirido el paciente](#)[Indicaciones en la Pantalla](#)[Incidencias](#)

Start



EN | ES

[Recuperar contraseña](#)

Access to the application

Fill in the fields indicating the user's email address and password and click on the button to enter the application.

(The email of the last registered user is shown by default)

Select language

Select the language before entering the application: English / Español

Password Recovery



[VOLVER](#)

Password Recovery

Enter user's eMail address. An email with instructions to restore your password will be sent to your eMail address

Patients List

Pacientes (2)	ID Paciente	Última visita	Borrar	+ NUEVO PACIENTE
Manuel Casas	2	23/5/2018		SELECCIONAR
María López	3	23/5/2018		SELECCIONAR

New Patient

Complete the form to create a new patient.

There are 3 Mandatory Fields: First Name, Last Name and Gender. Name and surnames will appear in capital letters to standardize Patient List. The last field gathers the patient information and allows to SAVE it.

Delete patient

The patient record is deleted along with all related information

Search and sort

The list can be sorted by The list can be sorted by Name, Last visit or Patient ID (in this example "Name"), and allows to search by **name** ("Search" field), **Last visit** or **Patient ID** (in this example "Name"), and allows to search by **name** ("Search" field")

Select patient

Enter the menu to work with this patient.

3 action buttons appear: Evaluate Visual Function, Calibrate and Patient Profile.

Patient menu



1.- EVALUATE VF button (see page 8)

Run indicative tests to evaluate patient's visual function.

2.- CALIBRATE button (See page 11)

Manage the calibrations of the patient's glasses.

3.- PATIENT PROFILE button (See page 13)

Check or edit the patient data.

Show your history with the usage data of the glasses calibrations.

Show your visual field and visual tracking templates

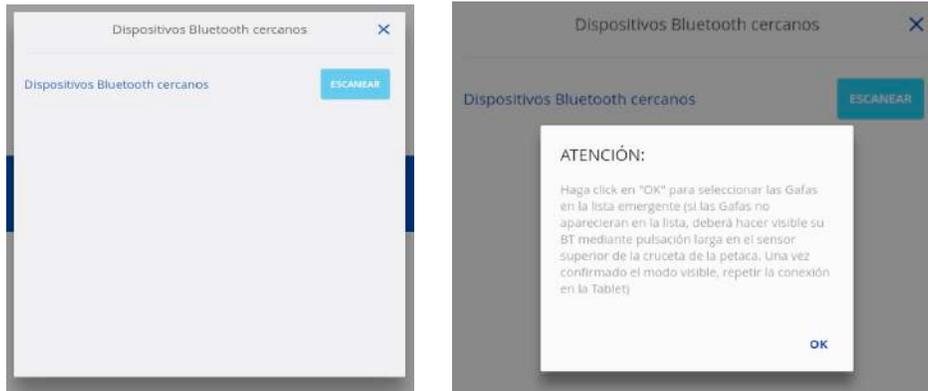
Connection with glasses

It shows the state of the glasses and allows you to Connect / Disconnect them by pressing the button.



First connection (for example to load the "digital calibration" in the pair of new, non-calibrated glasses acquired by the patient)

If this is the first time you connect a pair of glasses to your tablet, the list of devices detected by the Bluetooth of the Tablet will appear empty. Click on "Scan".



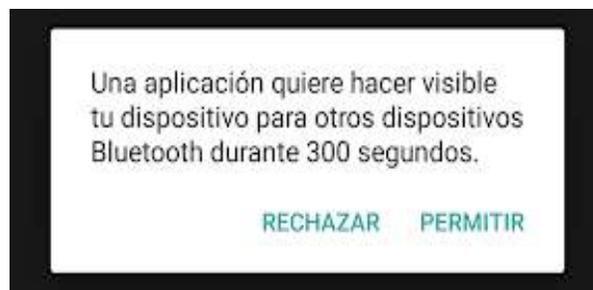
An ATTENTION message will appear to indicate that if, after pressing "OK", the Glasses do not appear in the list of devices detected by the Tablet's Bluetooth, you must set the Glasses' Bluetooth to visible mode.

Accept the warning on the tablet by pressing OK to start scanning for BT devices.

If the glasses do not appear in the list of detected devices, it is because they do NOT have their BT set to visible mode for other devices.

Only in this case, you must proceed to set them in visible mode (discovery of your BT) as shown in the ATTENTION message:

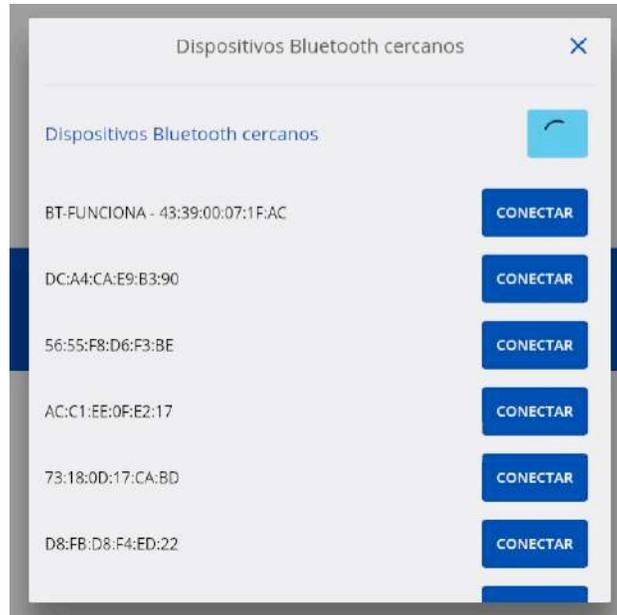
To put the Bluetooth of the Glasses in visible mode, make a long press (10s) on the upper section of the circular sensor around the main button of the controller until you feel a strong vibration (see photo below).



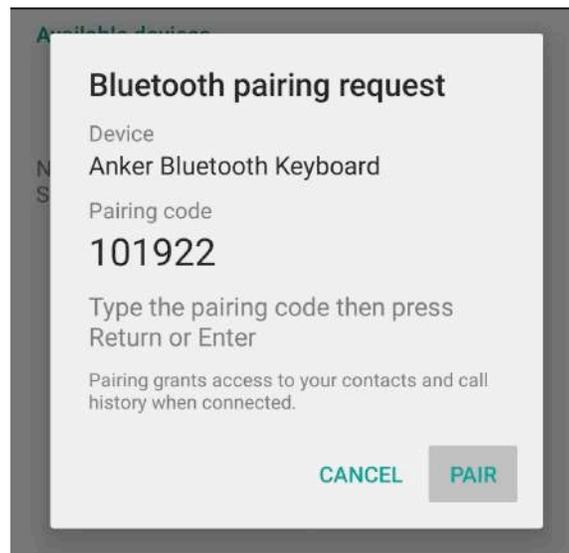
WEAR THE GLASSES TO SEE THE INSTRUCTIONS ON ITS SCREEN, and accept the confirmation message by selecting "ALLOW" by touching the circular sensor of the controller + OK with the central round button.

Caution: Before pressing the center button to OK, make sure that the "ALLOW" button is selected with a white frame. If not, press the lower part of the circular sensor.

Once we have pressed OK in the previous message, all the different devices of your environment that have their visible BT (open) will appear. Wait until your glasses appear and click on "Connect". Find them by the BT name of the device (which will always start with BT) or by the MAC numeric address.



If it is the first time, the message of confirmation of pairing by Bluetooth will appear, you must confirm on the tablet and on the glasses.



The glasses have been paired for the future, and you will not have to go through this process again with these glasses.

The glasses have been connected and thus appears in the upper right corner of the tablet.

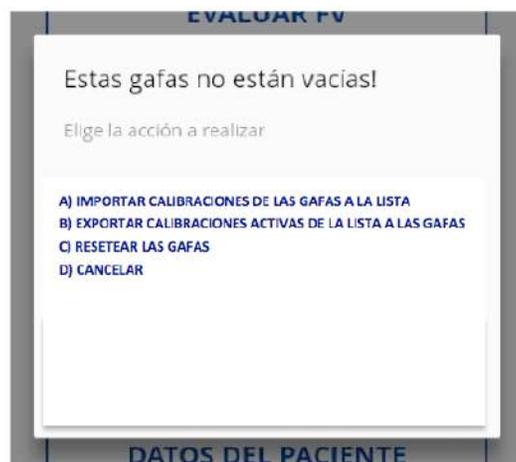


When the BT connection is made again on subsequent occasions, options will appear to connect directly with the **latest glasses used with this patient** or with the **most used glasses** (those of the RETIPLUS OPTOMETRIST KIT).



Options when connecting the glasses

When connection with the glasses is made, some particular cases may occur.



a) Import calibrations of the glasses to the list of calibrations on the Tablet.

The calibrations that are in the glasses will go to the list of calibrations of the patient, marked with blue background = Active Calibrations..

The rest of the views that were on the tablet remain, but on a white background = non-active calibrations, with the possibility of being activated, recalibrated or eliminated (trash can)

b) Export calibrations of the list to the glasses.

The active calibrations of the list of user calibrations will go to the glasses. The calibrations of the glasses will be lost. This is the option to load the "digital graduation" in the non-customised glasses acquired by the Patient

c) Reset the Glasses.

The views recorded in the glasses are emptied and, consequently, all calibrations in the patient list will go to the disabled state (white background). An icon of an eye with a diagonal bar appears on the screen.

Note.- If, the connection with the glasses seems too long, wait for the connection failure to appear and repeat the procedure up to 3 attempts. Each attempt can last several minutes.

If the Bluetooth connection continues for a long time and no connection failed appears, put the glasses' Bluetooth in "discovery" mode, as explained at the end of page 5.

Disconnecting the Bluetooth for energy saving

After 5 minutes of connection without any interaction with the tablet, the Bluetooth of the glasses is disconnected to save energy. To reconnect them, simply click on the tablet connection button.

A.- EVALUATE FV button:

Visual function indicative tests



These tests serve as orientation to check the adaptation of the patient to the glasses in their binocular use. **They do not have a diagnostic function, and it is recommended to perform them as a binocular exercise.**

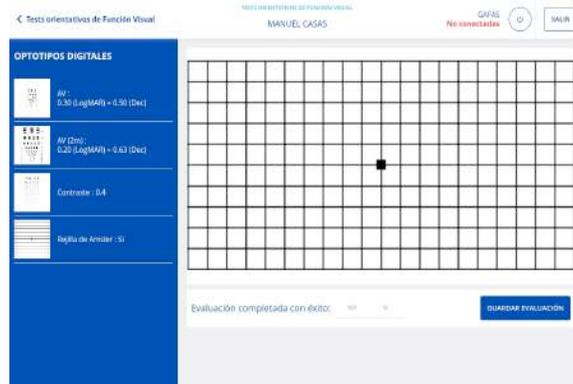
To perform the tests, it is necessary to connect the glasses

1.- Digital optotypes

The patient will see the selected optotype represented on his glasses in full screen.

The patient will follow the indications of the optometrist no actions on the device required.

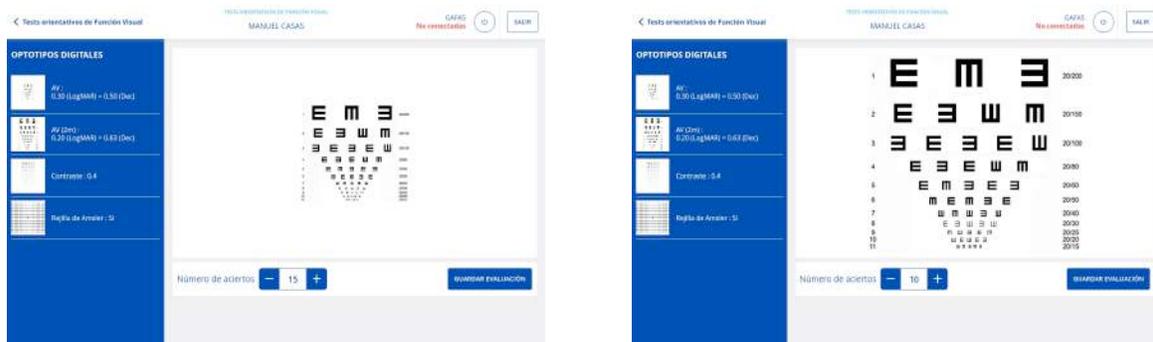
1.1.- Amsler grid



Evaluate the same way that this test is traditionally done, and simply mark whether OK was passed or not. Finish by pressing "SAVE EVALUATION".

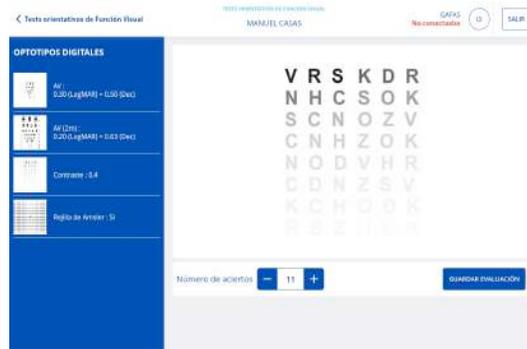
This test is also useful to verify that the glasses are horizontal and the visual accommodation is adjusted.

1.2.- Visual Acuity Test (optotypes equivalent to 4m and 2m distance)



The optometrist will increase the number of hits for each line displayed correctly. The equivalent values will be reflected in logMAR and decimal. Finalize by pressing "SAVE EVALUATION".

1.3.- Peli-Robson Contrast Test



The optometrist will increase the number of correct answers for each letter displayed. Finish by pressing "SAVE EVALUATION".

2.- Field Template and

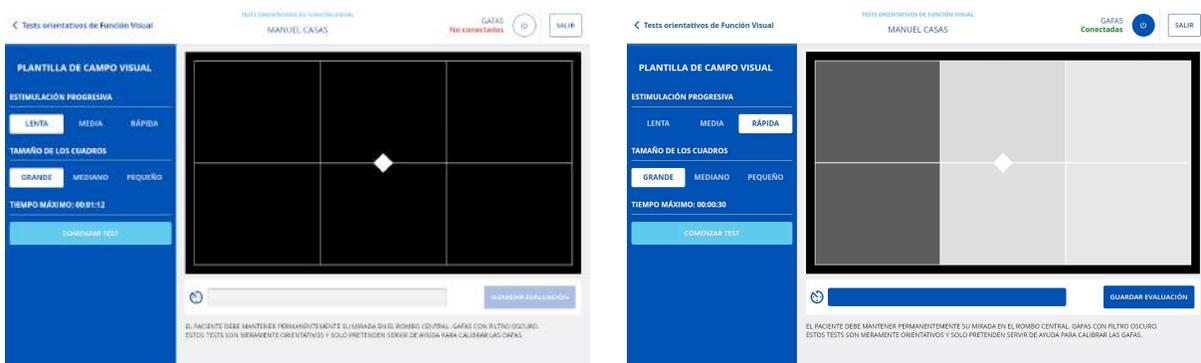
3.- Visual Tracking Template

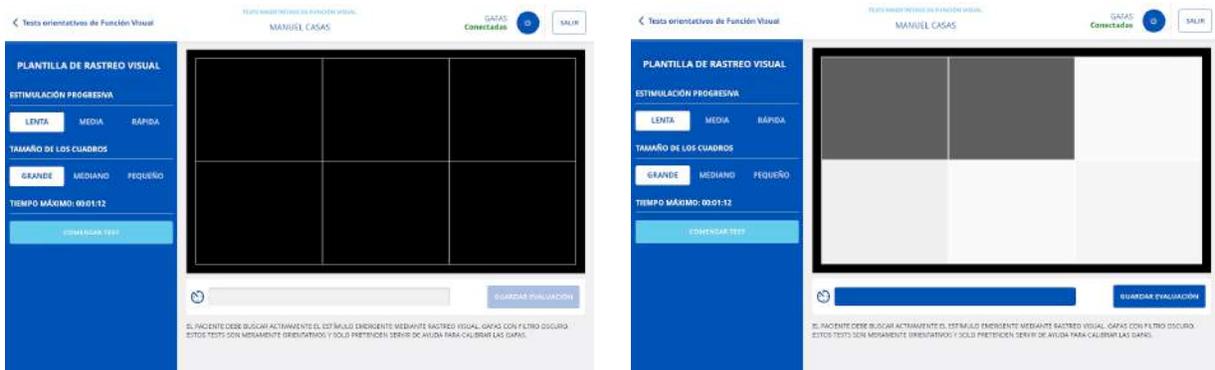
Set external the black filter on the glasses or place a black background screen.

The patient will see a diamond located in the center of the screen in case of the field template, and you will not see anything in the case of the tracking template.

Make sure the patient sees the above described before pressing on start test.

This set of tests are active, the patient must press the center button of the flask when you see a luminous stimulus.





Adjustments

"**PROGRESSIVE STIMULATION**" allows you to select 3 brightness progress speeds of the light stimulus., From black to total white..

Both tests can be paused or canceled with two buttons. Once the tests are finished, they are saved with the button "**SAVE EVALUATION**" allows you to obtain a coarse, medium or fine adjustment template.

Variation of the 6 possible parameters determines the duration of the test between a minimum of 30 sec and a maximum of 15 min, approximately.

Both tests can be paused or canceled with two buttons.

Once the tests are finished, they are saved with the button "SAVE EVALUATION".

B.- CALIBRATE Button Calibration List

a) If it is a new patient, **seven predefined calibrations are presented**.

The optometrist can decide to "ACTIVATE ALL" or initiate a "NEW CALIBRATION" with the corresponding buttons. Or on the contrary, reconfigure any of the calibrations (Views) by pressing its "CALIBRATE" button.

b) If it is an existing patient, all calibrations previously made will be shown, distinguishing in blue background those activated in the glasses and in white background those not activated.

← Menu de paciente

LISTA DE CALIBRACIONES
MANUEL CASAS

GAFAS Conectadas  SALIR

TODAS LAS CALIBRACIONES				CALIBRACIONES ACTIVADAS EN GAFAS			
Calibración	Nombre	dd/mm/aaaa			ACTIVAR TODAS	NUEVA CALIBRACIÓN	
Vista 1		Izquierda Arriba	23/5/2018	↑	↓	 DESACTIVAR CALIBRAR	
Vista 2		Centro Arriba	23/5/2018	↑	↓	 DESACTIVAR CALIBRAR	
Vista 3		Derecha Arriba	23/5/2018	↑	↓	 ACTIVAR CALIBRAR	
Vista 4		Derecha Abajo	23/5/2018	↑	↓	 ACTIVAR CALIBRAR	
Vista 5		Derecha Centro	23/5/2018	↑	↓	 ACTIVAR CALIBRAR	

Active calibrations

The calibrations loaded in the glasses are shown with blue background and not can be modified without connecting the glasses.

Activar/Desactivar calibraciones

With the glasses connected, click on activate / deactivate.

It is possible to activate all the calibrations at the same time with "ENABLE ALL".

CALIBRATE / NEW CALIBRATION



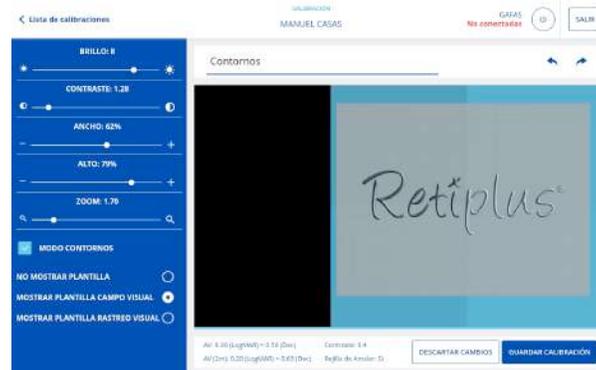
Calibrate

If the glasses are connected, the patient will see in real time the video images captured by the camera of the glasses with the adjustments made in the calibration.

The calibration can be done by moving with your finger and making a grip with 2 fingers. Also through the 5 parameter bars (width, height, zoom, brightness and contrast).

To help the optometrist to locate the view, the results of the previously performed templates can be visualized.

There is also a button to activate the contour highlighting mode.



There are buttons for the backward / forward arrow, as well as for "DISCARD CHANGES".

Use the "SAVE CALIBRATION" button to save calibrations to the tablet.

C.- PATIENT PROFILE button

Menú de paciente

PERFIL DEL PACIENTE
MONICA NAVARRO

CONECTADO COMO: RAFAEL

SALIR

Monica Navarro
Última visita 8/6/2018

Fecha de nacimiento: *Campo vacío*

Dirección: *Campo vacío*

Sexo: Mujer

Patologías:
Campo vacío

AV (4m): 0.82 (LogMAR) = 0.151 (Dec)

AV (2m):

Contraste: 0.2 (LogCS)

Rejilla de Amsler: Si

Notas: *Campo vacío*

DATOS DE USO DE LAS GAFAS (HORAS:MINUTOS) EDITAR

TODO 3 MESES MES DOS SEMANAS ÚLTIMA SEMANA

- Izquierda Arriba - 00:09
- Centro Arriba - 00:09
- Pantalla Completa - 00:07
- Extremo bajo Caminar - 00:15
- Efecto contorno - 00:04
- Izquierda Abajo - 00:05

Extremo bajo Caminar - 00:15

CAMPO VISUAL

RASTREO VISUAL

EDITAR

Patient data is presented on the left.

The historical use data (in hours: minutes) of the different views loaded in the glasses is shown on the right. You can select the period of time to be displayed as well as the format of the graph, sector and bar diagram. Clicking on each sector shows the time of use.

Below we find the values of the digital optotypes and the visual field and visual tracking templates.

Up and down to the right. There is a button to Edit new annotations in the patient's profile.

GLASSES' CONTROL UNIT (Controller)



1 - Screen STAND BY button and ON / OFF

Normal press: sets the screen to standby for energy saving. Immediate reactivation when pressed again.

Long press: for ON and OFF connection. (Another mode for OFF: Press for 1s + button 2 for 1s)

2 - PAUSE button for the image

Normal press: Freezes the image of the View in "photo" mode.

Long press: locks all the buttons on the controller.

3 - Switch (+ --)

Normal click: switch the views or increase (+) / decrease (--) the functions set with the button 5.

In basic mode it only switches the views clockwise (+) or counter-clockwise (--)

4 - Sensor for Amsler Grid

Long click: shows the Amsler Grid. To cancel the grid t click shortly on sensor 4 (1s).

5 - Function button

Normal click: changes the operating mode: Views (V), Zoom (Z), Effect Contours (E), Brightness (B) and Contrast (C). Rotating change of the functions Vista, Zoom, Effect, Brightness and Contrast, with differentiated vibration in each of them.

Long click: resets the View on the screen to the values (Z, E, B and C) that were calibrated by the optometrist.

6 and 7 - Sensors for Bluetooth

Long click: shows on the screens of the Glasses the dialogue to put your Bluetooth in Discovery mode (visible to other devices)

8 - Sensor for Basic / Advanced Modes

Long click: alternates Modes Basic / Advanced depending on the training of the Patient. The Basic Mode cancels the button 5.

(NOTE.- Long clickes (L) of 10s are accompanied by prolonged vibrations)

LOAD the "DIGITAL GRADUATION" performed with the RETIPLUS KIT in the non-customized glasses that the Patient acquires.

The Tablet must have selected the Patient who acquires the Glasses.

Click on "Connect glasses" and scan to find the "virgin glasses" that Patient has acquired.

Click in option "Export active calibrations of the list to the glasses"

(See full description on page 5)

INDICATIONS on the SCREEN

Eye with diagonal bar = The glasses do not have Calibrations (Views) loaded, by default the View is shown in the maximum size of the screen. This situation appears in the first use connection of the glasses or when they are reset (see page 8).

Pop-up padlock when clicking any button = The controller is blocked. To unblock click round button # 2.

INCIDENTS

Problems when registering (login) with the Tablet.

After making sure that the user email and password are correct, check that the WIFI connection is in ON position, dragging down with the finger the top of the screen of the Tablet. You only need WIFI connection for the act of starting with your KIT.

The glasses do not connect with the Tablet. (BT connection unpaired)

Make sure that the controller is sufficiently charged. When the controller battery is too low or flashing, the BT connection may not occur.

In addition, it must be taken into account the BT connection can sometimes be disconnected due to interference with other surrounding devices of greater power. In this case, try the connection 2 or 3 consecutive times by clicking the Glasses connection button on the upper right corner of the Tablet. Be patient, as the search for the Bluetooth protocol connection may take up to a maximum of 3 minutes.

If the connection is not yet established, activate the Bluetooth discovery in the glasses by a long click (10 s) on the upper sensor of the crosshead (6) More details on page 5.

If the BT connection problem continues, turn off the BT on the Tablet and activate it again.

The glasses have unexpectedly been disconnected from the Table.

After 5 minutes without any activity with the Tablet, the glasses' Bluetooth is disconnected to save energy. Just click the connection button on the Tablet to reconnect the glasses.

The screen of the Tablet has been turned off or is paused.

The tablet is set to go to sleep after 10 minutes without activity.

To recover it just double click on the screen or on the required icon.

The screen of the Tablet does not respond when you click with your finger.

Sweat or grease from the fingertip can cause the screen to not respond. Clean the screen well with an appropriate cloth. To keep the screen clean, it is recommended to use a rubber pencil for touching it.

Malfunction of the glasses by overheating.

It is normal that the controller is heated during use. Ensure good ventilation.

When the device is used and at the same time the USB power cable is connected, the heating is increased.

If the heating becomes excessive, the processor automatically goes into sleep mode as self-protection, and the In-service functions could suffer delays or malfunction. Turn off and let the controller and allow it to cool down before restoring its use.

Battery charge doesn't last long

The duration of the power depends on the functions in use. The vibration of the buttons of the controller consumes battery, nevertheless these buttons have been programmed with "language of vibration" to accompany or avoid the texts in the screen. Another important consumer of batteries is the "Effects" mode (silhouetted), due to the strong consumption of the algorithms.

Tanto los cambios en la petaca como el uso del modo "Efectos" son de gran utilización en la consulta, por lo que se recomienda al eoptometrista tener la petaca conectada a alimentación o laptop para que se cargue durante las pruebas con pacientes.

Para un uso normal del paciente, se recomienda poner la pantalla en reposo mientras no se utilice.

Both the changes in the controller and the use of the "Effects" mode are of great use in the consultation. It is recommended to have the controller connected to power or laptop to be charged during tests with patients.

For the patient's regular use, it is recommended to put the screen on PAUSE while it is not being used.

A "Powerbank" battery can be connected via standard USB cable as an external power supply. This can be done in use when the controller is on half-load or when it is completely discharged. However, to achieve an efficient load, the "Powerbank" must be at least 5,000 mAh.