

Binocular Autorefractor



reddot award 2014
winner



Short Manual 4

“Viewing measurement results”

Plusoptix GmbH
Neumeyerstrasse 48
90411 Nuremberg
Germany
www.plusoptix.com

Table of Contents

| | | |
|---|---|---|
| 1 | Viewing measurement results..... | 3 |
| 2 | “Measurement values” results page..... | 4 |
| 3 | “Camera image” results page | 6 |
| 4 | “Database” results page (only plusoptiX A12C and A16) | 7 |
| 1 | Performing the next measurement..... | 8 |

List of figures

| | | |
|-----------|--------------------------------------|---|
| Figure 1: | Overview of the results pages | 3 |
| Figure 2: | Viewing the measurement values | 4 |
| Figure 3: | Result page „Camera image“..... | 6 |
| Figure 4: | Enlarged view of the pupils..... | 6 |
| Figure 5: | “Database” results page | 7 |



This manual is a supplementary short manual. For general information about your Plusoptix device, such as its intended use, basic handling, technical information, maintenance, service, and warranty information, please refer to the user manual that was delivered with your device. This user manual can also be downloaded on our homepage (plusoptix.com), under “Support”.

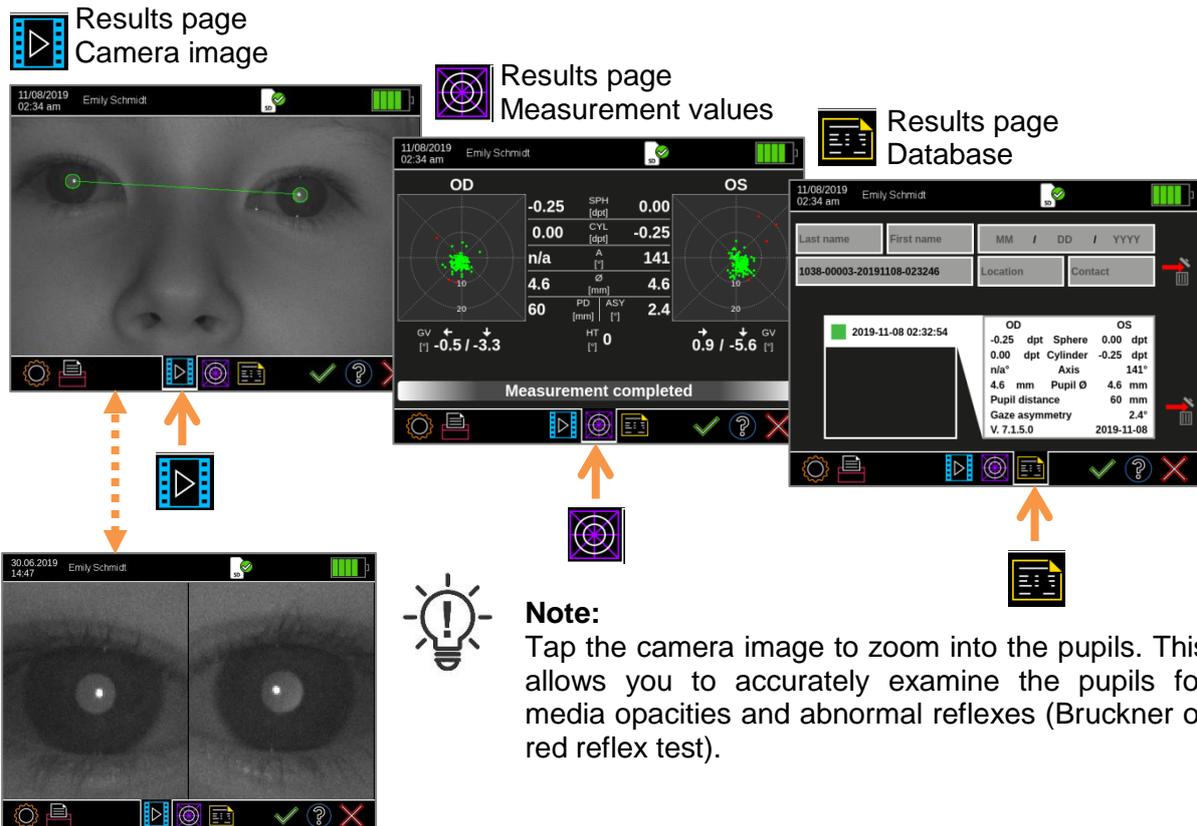
List of further supplementary short manuals

1. Checking scope of delivery and learning about the device
2. Adjusting settings and setting up WLAN
3. Preparing and performing a measurement
4. Viewing the measurement results
5. Entering, retrieving or deleting patient data
6. Documenting measurement results electronically
7. Documenting measurement results on paper
8. Exporting back-ups and reports (only plusoptiX A12C and A16)
9. Downloading software updates
10. Troubleshooting malfunctions and measurement interruptions

1 Viewing measurement results

As space on the screen is limited, the measurement results are spread across a total of two (plusoptiX A12R), or three screens (plusoptiX A12C and A16) respectively. After the measurement, you will first see the “camera image” results page. By touching the appropriate button in the middle of the navigation bar, you can access each of the three results pages.

Figure1: Overview of the results pages



If an anonymous measurement has been taken, a consecutive ID number will be displayed in the header. Touch the button with the printer (1) to assign patient data, and/or document the measurement results (see supplementary short manual 6 and 7).

If the patient data was entered, retrieved or imported from the EMR software before the measurement, the measurement values are saved automatically. If you see the status message “Try again”, the Measurement report must be saved manually.

- 1)  2) 



Attention:

Following an anonymous measurement, a Measurement report is not saved automatically. As soon as you return to the home page without previously saving, the Measurement report can no longer be saved and printed. However, even the measurement values of an anonymous measurement will be saved in the patient database under a consecutive ID number (only A12C and A16). A self-adhesive label can be printed anytime afterwards from the patient database.

After viewing the measurement results, you can return to the home page by touching the red “X” (2) and continue with the operation. You can find more information about this in Chapter 1 “Performing the next measurement“.

2 “Measurement values” results page

The measurement values are shown separately for the right eye (OD) and the left eye (OS):

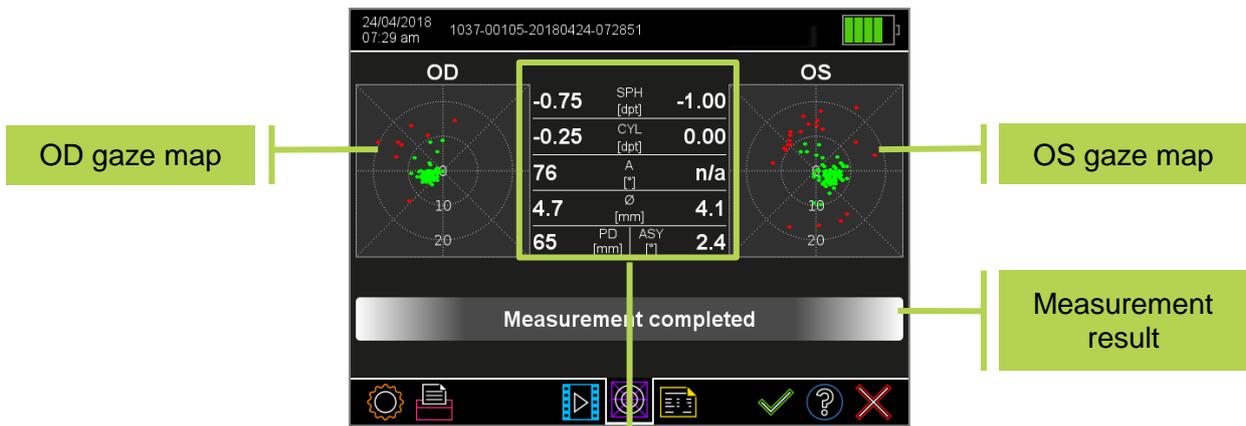


Figure 2: Viewing the measurement values



In addition to the measurement values, a measurement result is displayed:

- Measurement completed!** The measurement has been successfully completed.
- Measurement inconclusive** The measurement has been stopped inconclusively.
- Pupils not found!** If applicable, a red error message is also displayed: If a red error message is displayed above the screening result, please refer to short manual 10.

If the measurement values are outside the measuring range, “HYP” (for hyperopia) or “MYO” (for myopia) is displayed as the measurement of the sphere instead of a quantitative numerical value.

You can see the gaze map for each eye on the left and right edges of the screen. This illustrates the lines of vision of the eyes during the measurement. As soon as one eye is focussed more than 10 degrees away from the camera (this relates to the inside of both circles), the points on the gaze map are shown in red. Hence, a measurement is not possible and it will be interrupted inconclusively.

The device compares the lines of vision of both eyes and calculates the asymmetry of the lines of vision (ASY). An asymmetry of 0° is equivalent to perfect symmetry. Asymmetrical lines of vision can be caused by strabismus or decentralised fixation.



Attention:

The displayed asymmetry of the line of vision is not equivalent to the squint angle.



Note:

If a child is not looking at the nose of the smiley face during the measurements, this can cause an inconclusive measurement. Knees and nose of the child always have to point towards the device.

Beginning with software version 7.1.4.0, additional measurement values for gaze asymmetry are displayed. These are:

- Gaze vector (GV) for the left (OS) and right (OD) eye
- Head tilt (HT)

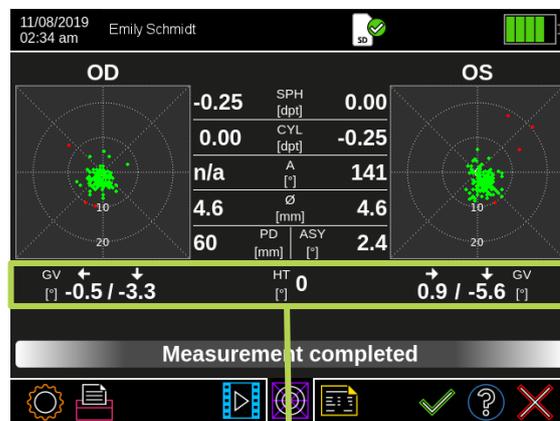
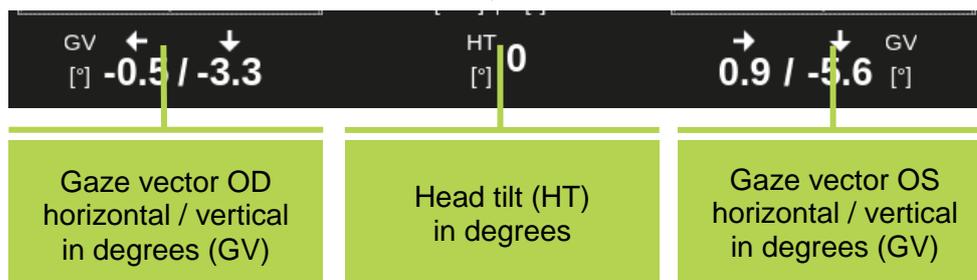


Abbildung 1: Messwerte zur Blickabweichung



Die jeweils neueste Software Version finden Sie im Downloadbereich auf unserer Homepage (plusoptix.de), unter Support.

3 “Camera image” results page

After the measurement you will first see the result page “camera picture”, including the screening result “pass” or “refer”. Checking the last camera image helps you detecting media opacities, which did not lead to a measurement interruption.



Note:

After every measurement, check on the “Camera image” results page whether both pupils are the same lightness and whether structures can be seen within the pupils. If differences in lightness or structures can be seen, the eye must undergo a comprehensive eye examination by an eye care professional.

Touch the camera picture on the screen, to zoom in the pupils. This feature enables you to check for visible media opacities and abnormal reflexes more accurately. The feature which enables you to zoom in the picture of the pupils is available as of software version 7.1.4.0.

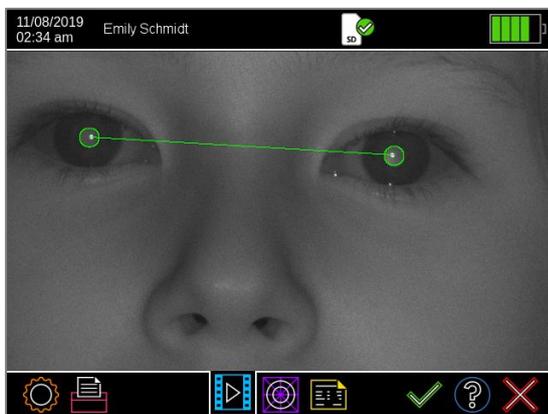


Figure 3: Result page „Camera image“

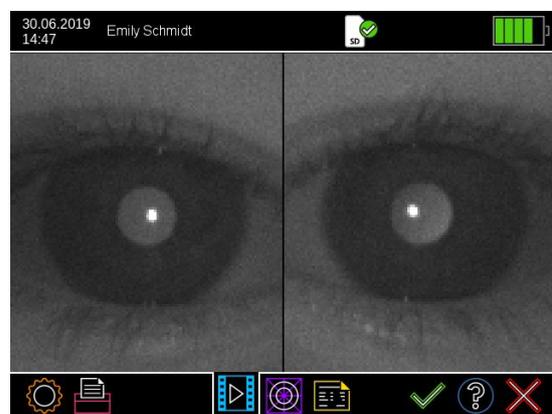


Figure 4: Enlarged view of the pupils



Note:

If only one of the two pupils is shown enlarged when touching the screen, the device has recognized only one of the two pupils. For more information on inconclusive measurements, please refer to short manual 10.

4 “Database” results page (only plusoptiX A12C and A16)

Every successful measurement is automatically documented in the database in chronological order. Green entries indicate successful measurement results. Inconclusive measurements are not saved.

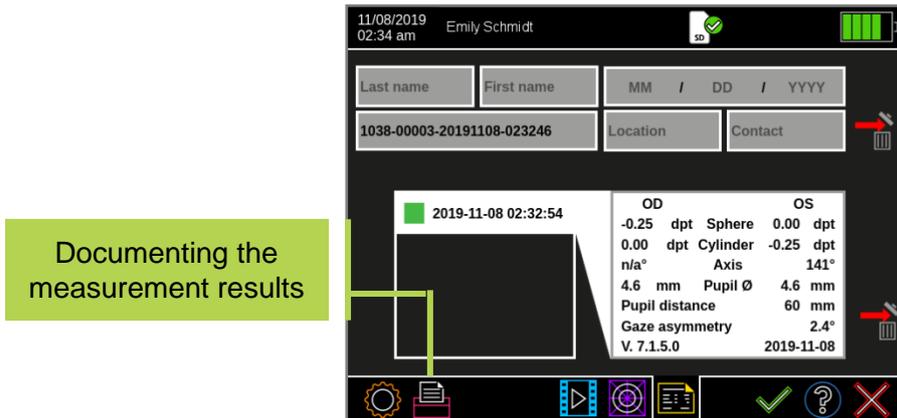


Figure 5: “Database” results page

After a measurement, the measurement values can be saved as a measurement report and printed as a label. Touch the printer (1) button in the navigation bar of a results page to assign patient data, and to send the print job via the infrared interface and save a measurement report on the SD card (plusoptiX 12) / USB stick (plusoptiX 16). For more information about the documentation of measurement results, please see supplementary short manual 5 and 6.



Attention:

All print jobs in print spooler are deleted once device is switched off or switches off for power saving automatically. Measurement reports saved to a SD-card / USB stick are not deleted when device is switched off or switches off for power saving.

1 Performing the next measurement



Attention:

Following an anonymous measurement, a measurement report is not saved automatically. As soon as you return to the home page without previously saving, the measurement report can no longer be saved and / or printed.

The measurement values, on the other hand, are saved under a consecutive number when you take an anonymous measurement. This is shown in the header. If you take a note of this consecutive number, you can access the measurement values in the database at a later point in time and print the label.

After a measurement has been completed, irrespective of the “Measurement completed” or “Measurement inconclusive!” measuring result, you can:

| | |
|---|--|
|  | <p>Measure the same patient again in the pre-selected measurement mode by pressing the trigger.</p> |
|  | <p>Carry out another measurement of the same patient in another measurement mode (e.g. monocular). To do this, touch the green checkmark in the navigation bar to carry over the previously entered or selected patient data for the next measurement.</p> |
|  | <p>Return to the home page by touching the red “X” button. Previously entered or selected patient data is discarded.</p> |