



Digital PD Meter



Instruction Manual

Contents

1. Uses and Characteristics.....	3
2. Technical Specifications.....	4
3. Description of Machine and Parts.....	5
3.1 Front Panel.....	5
3.2 Rear Panel.....	7
3.3 Viewing from Measuring Window.....	8
3.4 Viewing from Observation Window.....	9
4. Operational Instructions.....	10
4.1 Batteries.....	10
4.2 Start Up.....	10
4.3 Measuring Distance PD.....	10
4.4 Measuring Monocular PD.....	12
5. Maintenance.....	13

NOTE: Remember that when you are measuring someone's PD that their right is on your left as you face them, and vice versa. This is why eye Rx values are written for the right eye first, then the left eye.

1. Uses and Characteristics

1.1 Uses

This Adnuo® PD meter is a precise optical instrument used to measure the distance between pupils. PD (pupillary distance) is a necessary measurement in order to properly fit eyeglasses. This instrument measures both distance PD (total distance between your pupils), and monocular PD (distance from the center of your nose bridge to each pupil, displayed as 2 numbers).

1.2 Characteristics

This PD meter is a scientific machine, consisting of a measurement system, optical system, and computer software.

- Meter features direct point-sampling, consecutive measurement, and high accuracy of orientation, with mechanical hairspring being leveled at the reflecting point of human cornea.
- Meter uses high-precision line-shaped sensors, intellectualized electronic systems, and a digital display which allows for better accuracy and easier legibility of the results.
- Prolonged battery life through the use of LED and low power consumption.

2. Technical Specifications

- Effective range of measurement:
 - Binocular PD: 45 – 82 mm
 - Monocular PD: 22.5 – 41 mm (per eye)
- Absolute value of indicated error: ≤ 0.5 mm
- Absolute value of asymmetrical error: ≤ 0.5 mm
- Absolute value of rounding error: ≤ 0.5 mm
- Distance of target: 30 cm - ∞
- Power source:
 - Voltage: DC 3V
 - Specification: 2 AA batteries
- Automatic shut off:
1 minute after last use. Meter may be shut off manually as well.
- Size (in mm): 221 (L) x 164 (W) x 63 (H)
- Weight (in kg): 0.66

3. Description of Machine and Parts

3.1 Front Panel

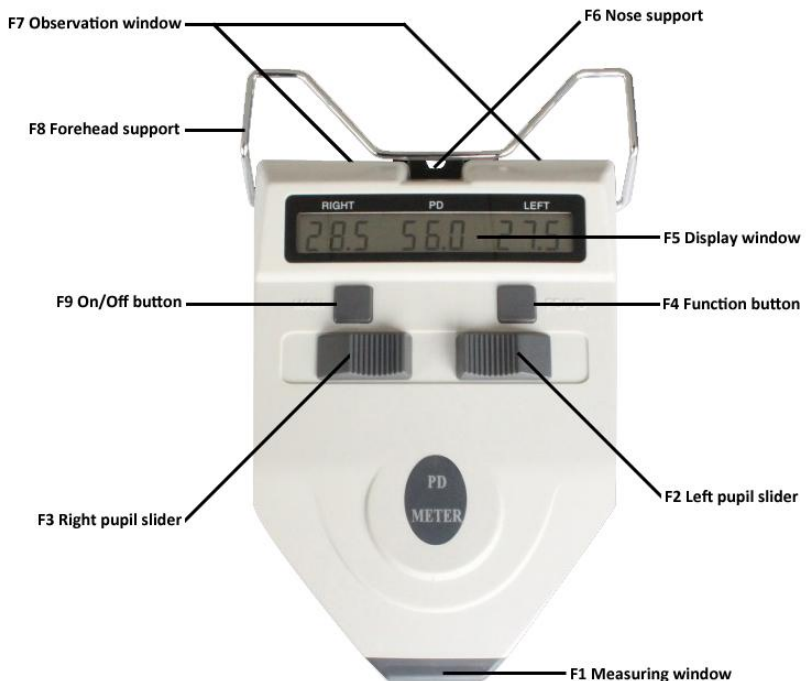


Figure 1

F1 Measuring Window

Window used by the person measuring the PD.

F2 Left Pupil Slider

Used to measure the left eye; slide the button from left to right and notice the numbers change on the display. When viewing from the observation window and moving the slider, a thin vertical line will move left and right as directed by the slider.

F3 Right Pupil Slider

Used to measure the right eye; slide the button from left to right and notice the numbers change on the display. When viewing from the observation window and moving the slider, a thin vertical line will move left and right as directed by the slider.

F4 Function Button

The function button scrolls through the estimated PD at various distances. Viewing distance will be displayed on the left in the display window (expressed in centimeters), and the estimated PD is displayed on the right. Visio-Rx will not ask for any measurements other than the ones displayed in the main function.

F5 Display Window

Shows the various measurements obtained (right monocular PD, distance PD, left monocular PD).

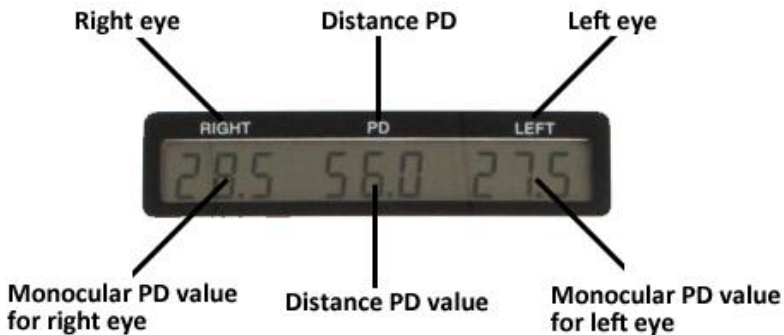


Figure 2

NOTE: *Values under “Right” and “Left” denote the distance from the center of the nose bridge to the pupil in millimeters. The value under “PD” denotes the distance PD.*

F6 Nose Support

The person being measured will rest this part on top of his or her nose.

F7 Observation Window

The person being measured will look at a lit up green dot through these windows.

F8 Forehead Support

The person being measured will place their forehead against this bar to properly align his or her head.

F9 On/Off Button

Press to power on and off.

3.2 Rear Panel (see figure 3 on next page)

B1 Battery Lid

Open here to replace batteries.

B2 Monocular Covering Switch

Move the switch to cover the left or the right eye of the person being measured.

B3 Compensating Ocular Key

Allows for a +2 dioptre eyesight compensation.



Figure 3

3.3 Viewing from Measuring Window (see figure 4 on next page)

C1 Benchmark Hairspring

The benchmark hairspring is the black vertical line seen in front of the pupils of the person being measured. The left and right pupil sliders (fig. 1) move the benchmark hairsprings from left to right. Place hairspring directly over the white dot in the pupils.

C2 Observation Window

The pupils of the person being measured are visible in this area. Place the hairspring directly over the white dot in their pupil.

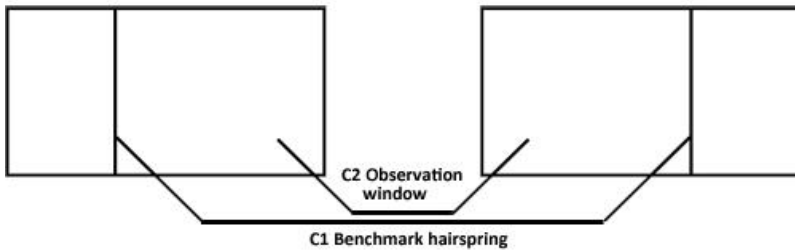


Figure 4

3.4 Viewing from Observation Window (see figure 5 below)

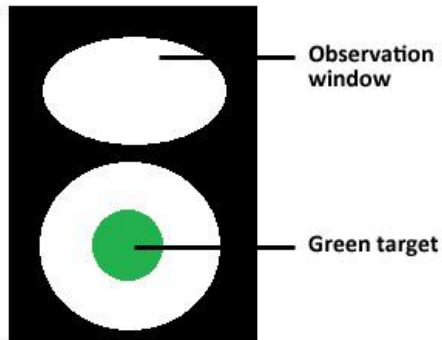


Figure 5

The person being measured (looking through the observation window) should focus both eyes on the green target for an accurate measurement.

4. Operational Instructions

4.1 Batteries

- Before use, please check that there are 2 AA batteries in the battery compartment.
- Use only alkaline batteries.
- Follow the instruction in the battery compartment for proper polarity alignment.
- Always dispose of batteries in a manner that avoids environmental pollution.

4.2 Start Up

Turn the device on by using the “On/Off” button (marked with “Main” on the device). Once data is shown in the display window, it is ready to be used.

4.3 Measuring Distance PD

1. Turn the device on.
2. The observer (person measuring the PD) will place the PD meter against the face of the person being measured. Make sure the forehead rests comfortably against the forehead support, and the nose support is gently resting on the nose. Keep the PD meter horizontal. See figure 6 on the next page.



Figure 6

3. Have the person being measured stare ahead at the green target.
4. The observer will move the black vertical line for each eye (fig. 7a) directly over the reflecting spot (white dot) in the pupil using the sliders on top of the device (fig. 7b).

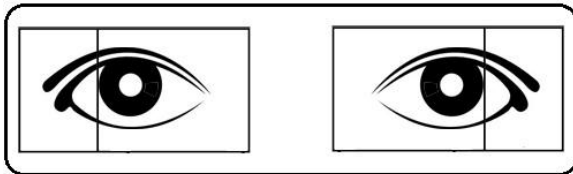


Figure 7a: Vertical lines are not yet moved.

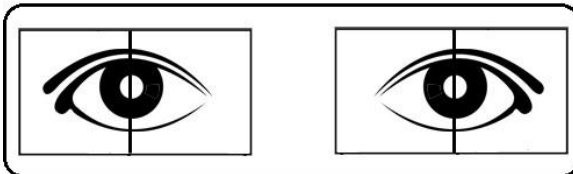


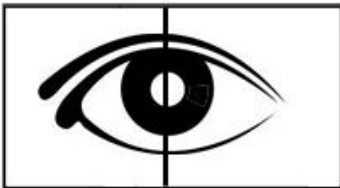
Figure 7b: Vertical lines are placed directly over pupils of the person being measured.

5. Read the information off the display window. The number below “PD” is the distance PD for the person being measured.

NOTE: *In order to get the most accurate result, always remind the person being measured to stare at the green target without moving his or her eyes around!*

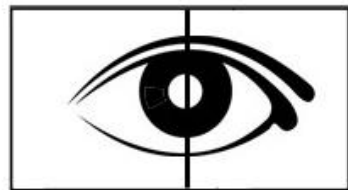
4.4 Measuring Monocular PD

1. When measuring monocular PD, use the Monocular Covering Switch to cover either the left or the right eye completely, as to get an accurate measurement (fig. 9a and fig. 9b).



Figure

9a: Measuring a person’s right monocular PD.



Figure

9b: Measuring a person’s left monocular PD.

2. Person being measured should stare at the green target. Observer will move the vertical lines to go over the reflecting spot (white dot) in the pupils.

3. The values under “Right” and “Left” (from 22.5 to 41 mm) are a person’s monocular PD. It is perfectly normal to have different values for your right and for your left eye! Verify that when you add the numbers together, you get the same value as your distance PD.
4. Be sure to write the value for the right eye down first, and the value for the left eye second (for example, 31/32.5).

5. Maintenance

1. This device is calibrated on a regular basis. Please do not take it apart, this will ensure your measurement is accurate.
2. Device should be stored in a cool and dry place.
3. Device should be protected from potential falls and vibration.
4. Keep device clean and do not touch the glass on the measurement window. Fingerprints, dust, or stains should be cleaned off with a soft cloth.
5. Do not use corrosive chemicals to clean the device.
6. In case of malfunction, please do not attempt to fix device yourself. Instead, please contact Visio-Rx. Our contact information can be found at <http://www.visio-rx.com/contact>
7. If the device will not turn on, please check that the batteries are inserted correctly, and that the batteries are not empty.