

DEAN PUPILLOMETER

Operating Instructions



Quick Start

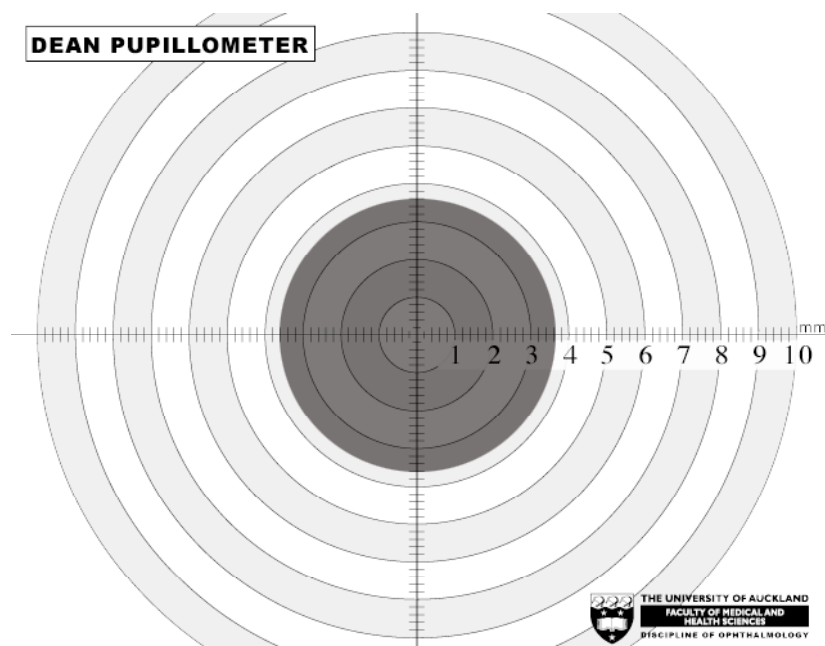
- Your pupillometer comes pre-calibrated and ready to plug in and use.
- Remove from box. Note camera device is already plugged into the monitor unit (A and B in Fig 1.)
- Plug power adaptor into mains (240VAC) and into monitor as illustrated (C in Fig 1.)
- Turn on with power button.
- You should now see an illuminated magnified view of whatever is placed in front of the camera. Note – this is infrared illumination and will not affect pupil size.
- The very shallow depth of field allows precise determination of the correct distance to hold the camera, therefore only measure when the image is nicely in focus.
- The scale should be centred on the pupil, and the diameter taken from the number on the right hand horizontal axis. You can check this with a ruler to practice initially.
- Vertical measurements can be made with the aid of the circular rings – follow the ring around to the corresponding number on the horizontal axis.



Figure 1. Rear Panel of Dean Pupillometer

Helpful Hints

- The rubber nose-cone can be pulled further out to help steady the unit whilst taking measurements. Take care not to bend the IR light-emitting-diode located inferior to the lens aperture.
- Replace the lens cap after use to prevent dust degrading the optics.
- The camera and monitor units are robust and will withstand large variations in light intensity, however, it is unwise to point this unit directly at the sun.
- Avoid exposure of the instrument to harsh shocks or excessive humidity and/or heat. Transport the unit in the protective foam carry-case.
- The controls at the rear of the monitor are pre-set and changing the brightness/contrast may alter image size a small amount if taken to their extreme. If these controls are altered, check calibration against a finely marked steel ruler to ensure the instrument remains accurate.
- Practice to get the pupil centred as in the diagram below. This example illustrates a pupil diameter of 3.6mm.



Specifications

Camera

Pick-up element	1/3" Samsung IR sensitive solid state CCD
Resolution	500 x 582 pixels, 380 TV lines
S/N Ratio	>46 dB
Electronic Shutter	1/60 to 1/10 0000 sec (auto)
Power source	12VDC
Current Consumption	120mA
Minimum Illumination	0.5 Lux/F2.0
Load Impedance	75 Ohm

Monitor

Display	High resolution 6" square B&W CRT
Input	RCA Composite video with sound
Number of Channels	2 manual or auto switchable
Output	1 x RCA Video and 1 x RCA Sound Out
Power consumption	< 20 Watts