NIDEK

Optical Biometer

AL-Scan

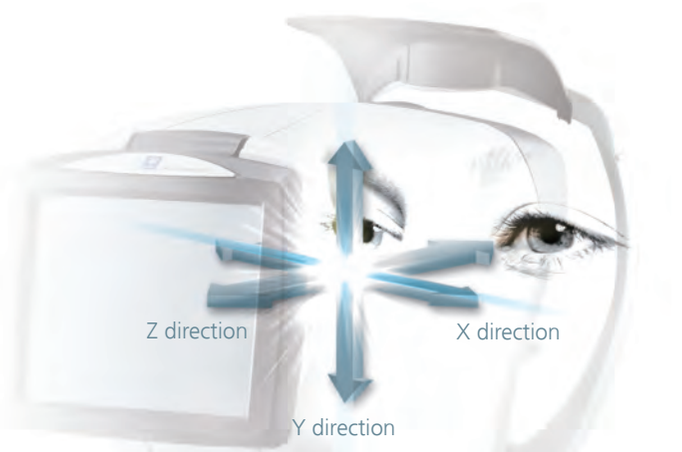
U.S. Edition

THE ART OF EYE CARE

Effortless Measurement of 6 Clinical Parameters in 10 Seconds

NIDEK's solution is the state of the art optical biometer - the AL-Scan. In 10 seconds, six values for cataract surgery are measured:

- Axial length
- Corneal curvature radius
- Anterior chamber depth
- Central corneal thickness
- White-to-white distance
- Pupil size



3-D Auto Tracking and Auto Shot

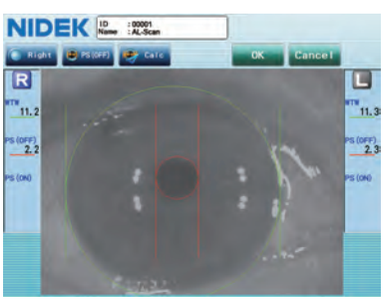
The AL-Scan incorporates NIDEK's much acclaimed 3-D auto tracking and auto shot, enabling accurate measurement with ease and comfort. The 3-D auto tracking follows eye movements along the X-Y-Z directions to ensure accurate alignment of the eye. Once correct alignment is completed, the auto shot immediately captures the image and data.

Anterior Segment Observation with Scheimpflug Imaging and Double Mire Ring Keratometry

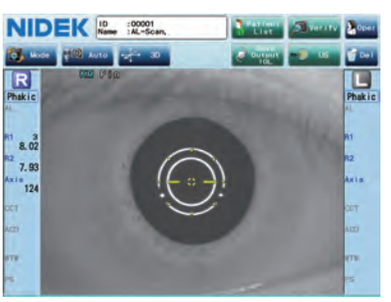
The AL-Scan provides sectional lens image, pupil image, and reflected image of double mire rings projected onto the cornea.

The sectional lens image assists in the evaluation of the severity of the cataract. The pupil image assists in the assessment for multifocal IOL. The reflected image of mire rings assists in detecting an irregular corneal surface.

Sectional lens image (Scheimpflug image)



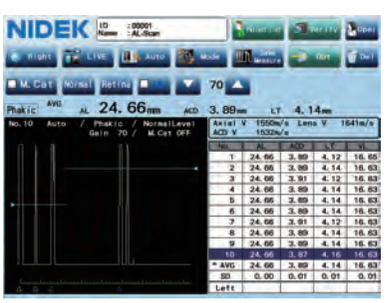
Pupil image



Reflected image of double mire rings

Optional Built-in Ultrasound Biometer

In cases where the optical biometer cannot measure an eye with an extremely dense cataract, the AL-Scan provides an optional built-in ultrasound biometer, allowing measurement of virtually any cataractous eye with a combined model.
The AL-Scan requires no connection with an external ultrasound unit.



Ultrasound biometry

IOL Power Calculation and IOL Constants Optimization

The IOL power is automatically calculated after measurement.
Calculation of a personalized IOL constant improves postoperative accuracy.

IOL power calculation formula on AL-Scan
Nine IOL calculation formulas are incorporated in the AL-Scan.
Once measurement is completed. the IOL power is automatically calculated using its own measured data.

+

Additional Barrett formulas available for the NAVIS-EX AL-Scan Viewer
Barrett Universal II, Barrett True-K, Barrett Toric Calculator

AL-Scan Viewer for NAVIS-EX

AL-Scan Viewer is software used for viewing and working with AL-Scan data via NAVIS-EX.
This function enhances the capability of the AL-Scan with additional features and increases the efficiency of any clinic.

NAVIS-EX
Nidek Advanced Vision Information System
EXTRA

NAVIS-EX is an image filing software that enables data from the NIDEK diagnostic devices to be centralized in the NAVIS-EX database. It was initially developed for NIDEK's retinal products and has been expanded to network with the AL-Scan.

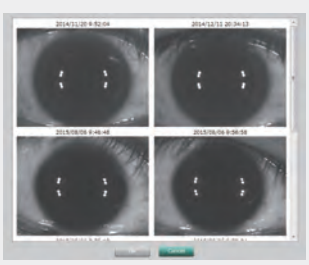
* NAVIS-EX is optional software and is required for use of the AL-Scan Viewer.

Data Management and IOL Power Calculations

The large storage capacity of the NAVIS-EX database is available for review on the AL-Scan Viewer. The basic functions of the AL-Scan can also be performed with the AL-Scan Viewer including IOL power calculations and optimization of IOL constants.

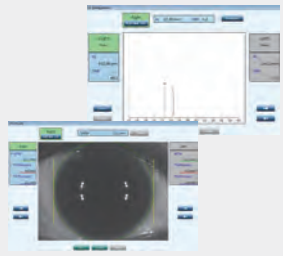
Toric Lens Assist Function

Acquisition of multiple toric lens assist images allows selection of the optimal image for digitally marking the astigmatic axis. These images allow better surgical planning for accurate toric IOL alignment.



Recalculation of Measured Values

The AL-Scan Viewer allows recalculation of modified axial length, white-to-white, and pupil size data for accurate calculations.



Product/Model name: Image Filing Software NAVIS-EX

AL-Scan Specifications

Optical measurement		
Axial length	Measurement range	14 to 40 mm
	Display increments	0.01 mm
	Measurement method	Low-coherence interferometry (LCI)
Corneal curvature radius	Measurement range	5.00 to 13.00 mm
	Display increments	0.01 mm
Anterior chamber depth	Measurement range	1.5 to 6.5 mm
	Display increments	0.01 mm
Central corneal thickness	Measurement range	250 to 1,300 µm
	Display increments	1 µm
White-to-white distance	Measurement range	7 to 14 mm
	Display increments	0.1 mm
Pupil size	Measurement range	1 to 10 mm
	Display increments	0.1 mm
Ultrasonic measurement (optional)		
Axial length	Measurement range	12 to 40 mm
	Display increments	0.01 mm
Corneal thickness	Measurement range	200 to 1,300 µm
	Display increments	1 µm
IOL power calculation formula		
Conventional		Regression, Regression II, Formula/T, Binkhorst, Hoffer Q, Holladay 1, Haigis, Camellin-Calossi
Post-LASIK		Camellin-Calossi, Shammas PL
Auto tracking		X-Y-Z directions
Auto shot		Available
Display		Tiltable 8.4-inch color LCD touch screen
Printer		Thermal line printer with automatic paper cutter
Interface		LAN, USB
Power supply		AC 100 to 240 V 50/60 Hz
Power consumption		100 VA
Dimensions/Mass		283 (W) x 504 (D) x 457 (H) mm / 21 kg 11.1 (W) x 19.8 (D) x 18.0 (H)" / 46 lbs.

AL-Scan Viewer for NAVIS-EX*

IOL calculation formula		
Conventional		Regression, Regression II, Formula/T, Binkhorst, Hoffer Q, Holladay 1, Haigis, Camellin-Calossi, Barrett Universal II
Post-LASIK		Camellin-Calossi, Shammas-PL, Barrett True-K
Toric calculator		Barrett Toric Calculator
Additional features		
IOL registration		Maximum data entry for 100 IOLs
Surgeon registration		Maximum of 50 Surgeons
Surgeon-specific constant optimization		Available

* NAVIS-EX is optional software and is required for use of the AL-Scan Viewer.

Product/Model name: OPTICAL BIOMETER AL-Scan
Caution: U.S. Federal Law restricts this device to sale, distribution, and use by or on the order of a physician or other licensed eye care practitioner.
Specifications may vary depending on circumstances in each country.
Specifications and design are subject to change without notice.

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