HAND-HELD AUTO REFRACTOMETER HAND-HELD AUTO REF/KERATOMETER

AR-20/ARK-30

Eye & Health Care

NIDEK

AR-20 / ARK-30
Lightweight & Multifunctional

Lightweight and Portable

The design, similar in size and weight to a video camera, weighs only 980g/2.16lbs, (including battery), and allows easy portability.

Data Memory for 30 Persons

Data for up to 30 persons (60 eyes) are stored in the main body. Measurement data can be printed out later.

Compact Station

Even the docking station is compact. The footprint is only 249mm(W) x220mm(D)/9.8(W)"x 8.7(D)", permitting use on a refraction table.

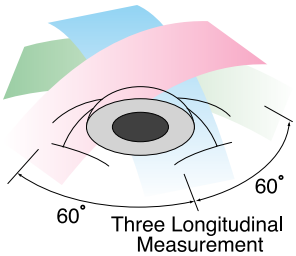
Wireless Communication

Infrared wireless communication connects the main body to the station printer, eliminating troublesome cord connection.

AR-20 / ARK-30
Excellent Accuracy

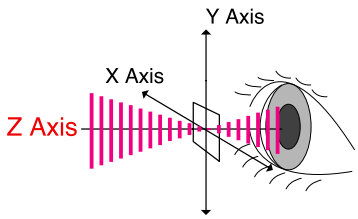
Accurate and Speedy Measurement

A newly developed three meridian phase difference measuring technique is adopted to attain accurate and speedy measurement.



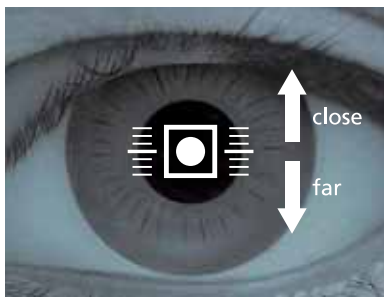
Auto-Shot Function

Both centering (XY derection) and focusing (Z direction) can be detected. Auto measurement starts when the eye is in the optimal position.



AI Measuring Function

Measuring frequency is determined by the reliability of measurement data. Typical values are calculated with optimum measuring frequency.

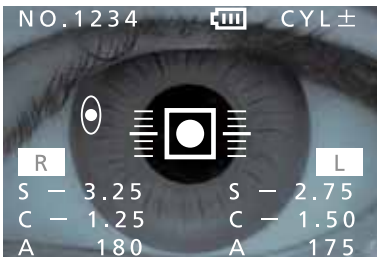


Focusing Indicator

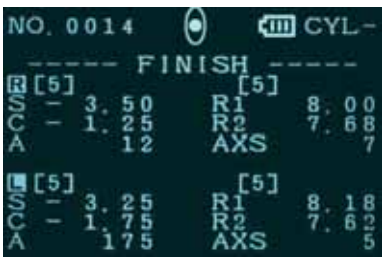
The focusing indicator on the monitor screen shows Z-direction focusing.

Clear Monitor Display

A 2.5inch color LCD allows comfortable operation at a non-intrusive distance between physician and patient.

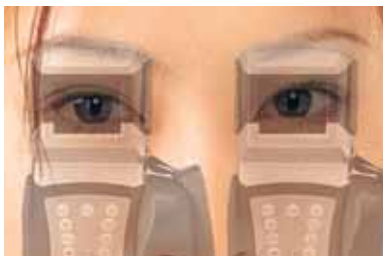


Both R and L data are displayed in large and colored screen.



R/L Auto Selection

The Right/ Left (R/L) eye being measured is detected automatically.The data is automatically determined to be R/L to prevent accidental omission of measuring the other eye.



Quick Mode

Select the quick mode to rapidly measure eyes of children and patients who blink frequently.

IOL Mode Auto Selection

IOL Mode is automatically selected to measure eyes with I.O.L. (intraocular lens) after cataract operation, a condition which can possibly cause an error. Measuring is smoothly accomplished without embarrassment to the patient.

Built-in Forehead Rest

The built-in forehead rest stabilizes the instrument for easier alignment (aiming).

AR-20 /ARK-30
For Optimum Use

90° Correction Function

When measuring the eyes of a patient lying on a couch, the astigmatic axis is corrected by 90°.

System Upgrade

In combination with Nidek's auto optometric systems AOS-2100/800/660, the usefulness of the conventional optometric system can be enhanced.

Eye Mask & Target

The eye mask covers the unmeasured eye, permitting the patient to naturally fixate the subject eye on the target (scenery chart).

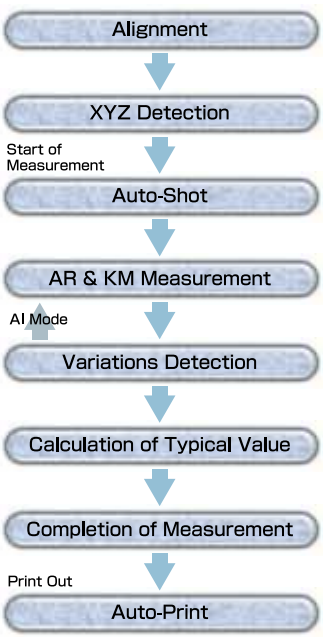
Simple Battery-Charging System

The fully charged high-performance lithium ion battery can be used for approx. 60 minutes.
Insert it into the battery slot located on the side of the station for easy recharging. (Charging time: approx.120 minutes)
*The battery in the measurement unit can be also recharged by connecting the measurement unit to the station with a power cord.

ARK-30
More Advanced Functions

Auto Shot & AI Mode

Auto shot (XYZ detection) & AI Mode make it easy to perform high precision measurements.



Reliable Measurement Accuracy

A corneal curvature radius of 5.00 to 13.00mm can be measured. The measurement data can be displayed in 0.01mm increments and 0.12/0.25D increments for corneal curvature radius and corneal refractive power, respectively.

Instant Selection Button

The desired measuring mode is selected through one-button operation in the order of

R/K mode
AR/KM
continuous measurement

↓

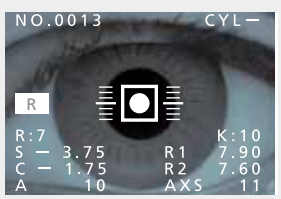
R mode (AR measurement)

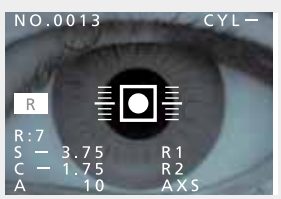
↓

K mode (KM measurement)

↓

R/K mode.





AR-20/ARK-30 Specifications

Measurement of Refractive Power		AR-20	ARK-30
Spherical Power	Measurable Range	-20.00D~+22.00D (V.D.=12mm)	-20.00D~+22.00D (V.D.=12mm)
	Indication Step	0.12D / 0.25D	0.12D / 0.25D
Cylindrical Power	Measurable Range	0D~±2.00D	0D~±12.00D
	Indication Step	0.12D / 0.25D	0.12D / 0.25D
Cylinder Axis	Measurable Range	0~180°	0~180°
	Indication Step	1° / 5°	1° / 5°
Minimum Pupil Diameter Measurable		φ2.6mm	φ2.6mm
Measurement of Corneal Curvature			
Radius of Corneal Curvature	Measurable Range		5.00mm~13.00mm
	Indication Step		0.01mm
Corneal Refractive Power	Measurable Range		25.96D~67.50D (n=1.3375)
	Indication Step		0.12D / 0.25D
Corneal Cylindrical Power	Measurable Range		0D~ ±12.00D
	Indication Step		0.12D / 0.25D
Corneal cylinder Axis	Measurable Range		0~180°
	Indication Step		1° / 5°
KM Measurable Area			3.3mm dia. on cornea (for corneal curvature radius of 7.7mm)
Measuring Time	Measurement of Refractive Power	0.2sec	0.2sec
	Measurement of Corneal Curvature		0.1sec
	Continuous Measurement		0.2sec
Chart		Scenery chart	Scenery chart
Observation and indications		2.5inch color LCD monitor	2.5inch color LCD monitor
Station Unit			
Printer		Thermal line printer	
Interface		RS-232C	
Power Source		AC100-120V±10% / AC200-240V±10% 50VA 50/60Hz	
Dimensions/Weight	Station alone	249(W)x220(D)x102(H)mm / 2.5kg 9.8 (W)x8.7(D)x4.0(H)" / 5.5lbs	
	Station+measuring unit	284(W)x220(D)x216(H)mm / 3.5kg 11.2(W)x8.7(D)x8.5(H)" / 7.7lbs	
Standard Accessories		Spare fuses, Spare printer paper, Dust cover, Power cord, Battery, Interface cable, Hand strap	
Optional Accessories		Carrying case with portable stand, IC card system, Neck strap, Battery, Carrying case	

Carrying Case

Carrying Case with Portable Stand

Example of Installation

*Specifications and design are subject to change without notice for improvement.

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