#### One vision, Two sharp eyes with Our Innovation

# RT-7000

Auto Ref-Topographer





- Three Functions in One Instrument
- Easy & Speedy
- 6.4 inch color TFT LCD
- Auto Alianment / Auto Shot
- Dual CCD technology for Refractometry
- IOL / Cataract Mode
- New Indices for Keratometry: KAI, KRI
- TSAS (Tear Stability Analysis System)

#### **RT-7000 SPECIFICATIONS**

#### **Measurement Ranges**

#### **Refraction Measurement**

-25.00D to +22.00D(VD=12.0mm) . Cylinder 0D to ±10.00D(VD=12.0mm) 0 to 180°

**Corneal Curvature** 

Measurement 5.00mm to 11.00mm

(Measurement Zone:  $\phi$  3mm, R:8.00mm)

**Corneal Mapping** 

9 to 100 D Display Range

— Normal Mode

 $\phi$  1.0 to 8.0mm(R:8.0mm) - Special Mode  $\phi$  0.9 to 7.0mm(R:8.0mm)

**Measurement Time** 

0.2 seconds KRT 0.1 second

**Minimum Pupil Diameter**  $\phi$  2.2mm

**Minimum Measurement Step** 

**Refraction Measurement** 

Sphere 0.01D Cylinder 0.01D Axis

**Corneal Curvature** 

Measurement 0.01 mm

PD(Pupil Distance) 50mm to 86mm

Recording Built-in Thermal Printer

**Vertex Distance** 0mm, 12.0mm, 13.5mm, 14.0mm,

15.5mm,16.0mm

**Exterior Output** LAN port / 4USB ports

**Dimensions** 

502mm or 20 inches High 307mm or 12 inches Width Depth 490mm or 19 inches Weight Approx. 20.00kg(44.4lbs) **Display** 6.4 inch color liquid crystal display

**Power Supply** 

Voltage AC 100 to 240V 50/60Hz Frequency Consumption Power 120VA to 150VA **Temperature**  $+ 10C^{\circ}$  to  $+ 40C^{\circ}$ **Display** 30% to 75 %



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# Three Functions in One Instrument

# Auto Ref-Topographer



- Dual CCD technology for Refractometry
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- New Indices for Keratometry: KAI, KRI
- TSAS (Tear Stability Analysis System) MODE for Dry eye



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# Three Functions in One Instrument

#### Three Functions in One Instrument

Refractometer, Keratometer and Topographer only in 1 unit. Senior citizens and children can also get the inspection without any trouble because they don't have to move the seat for three measurements.

Switch from Ref-Kerato Mode to Corneal topography Mode with only ONE TOUCH. The light cone appears with only one button from the measuring head and the Ref-Keratometer is transformed to the Topographer.



# **Auto Alignment / Auto Shot**

Anyone can easily capture measurements with Auto Alignment and Auto Shot. The measurement variation is significantly reduced no matter what the skill level is of the operator.



## Keratometory

#### New Indices for Keratometry : KAI, KRI

The Corneal Irregular Astigmatism display function is installed to expand the possibility of Keratometer. This is the new function to measure the level of Corneal Irregular Astigmatism, which was difficult in the past.

The Indices of KAI and KRI that show the Corneal Irregular Astigmatism are displayed with its three levels(A·B·C) at Keratometry.

#### **KAI:** (Kerato-Asymmetry Index)

The Index indicating the asymmetry of cornea. This index becomes larger when the corneal shape is asymmetric.

#### Case1:Keratoconus Cornea TMS Fourier analysis RT-7000 KAI/KRI KAI 123.2C KRI 4.1A The KAI of RT-7000 is Asymmetry of TMS Fourier analysis (Map(1)) is dis-

#### **KRI:** (kerato-Regularity Index)

RT-7000

KAI/KRI

**KAI 2.3A** 

KRI 6.0C

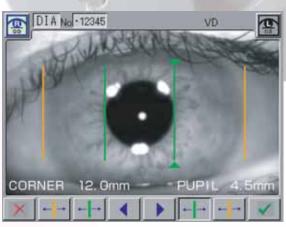
is displayed.

The Index indicating the regularity of the cornea (higher-order irregular astigmatism). This index becomes larger when the corneal surface is not smooth.

# Case1:After Keratoplasty TMS Fourier analysis The KRI of RT-7000 is High order irregularity of TMS Fourier analysis (Map(2))

# **Diameter Measurement of Cornea and Pupil**

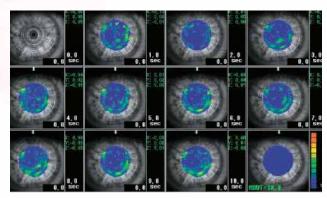
The measurement can be done easily by moving the two cursors on the display to the boundary of Cornea or Pupil. This is useful for deciding the diameter of a contact lens.



## **Corneal Topography**

#### **TSAS** (Tear Stability Analysis System) MODE for Dry eye

TSAS is the system for analyzing the tear stability using the light cone system. The mire ring is projected onto the cornea of the patient's eye for 6 seconds and the image of the mire ring is captured at a specific interval. The system interprets the tear layer that changes as time passes as distortion of the mire ring image, analyzes the mire ring, and shows the position and time where the tear layer changes in the color code map.



Break up MAP & Ring Break Up Time

### Various Color Maps

Absolute and Normalized color maps can be viewed.

### **CL Fitting Simulation**

A pseudo-fluorescein pattern of the contact lens selected from the built-in data base can be confirmed, and the fitting can be simulated before the patient wears the Trial Lens.

#### Corneal Eccentricity Index for "Ortho-K Lens" (CEI)

The index of CEI(Corneal Eccentricity index indicates the ratio of flattening in percentage from the central cornea the periphery.