

Corneal Topography

●Auto Alignment / Auto Shot

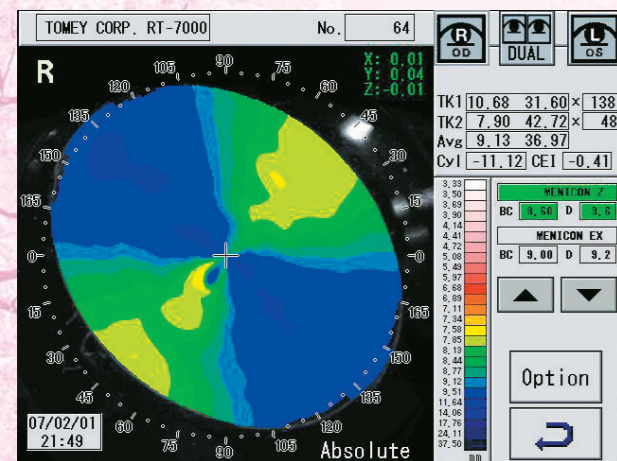
Anyone can easily capture measurements with Auto Alignment and Auto Shot.

The measurement variation is significantly reduced no matter what the skill level is of the operator.

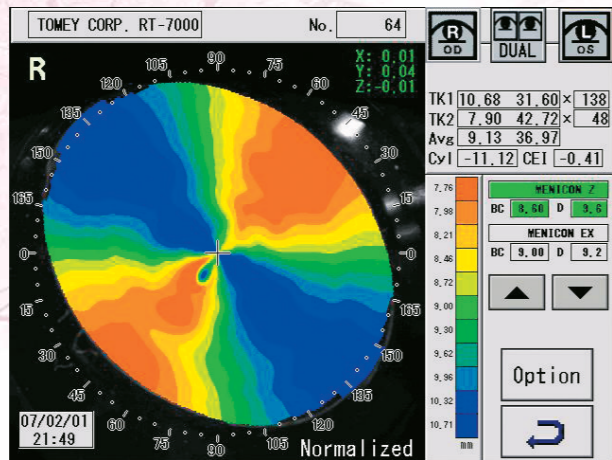


Various Color Maps

Absolute and Normalized color maps can be viewed.



Absolute Map



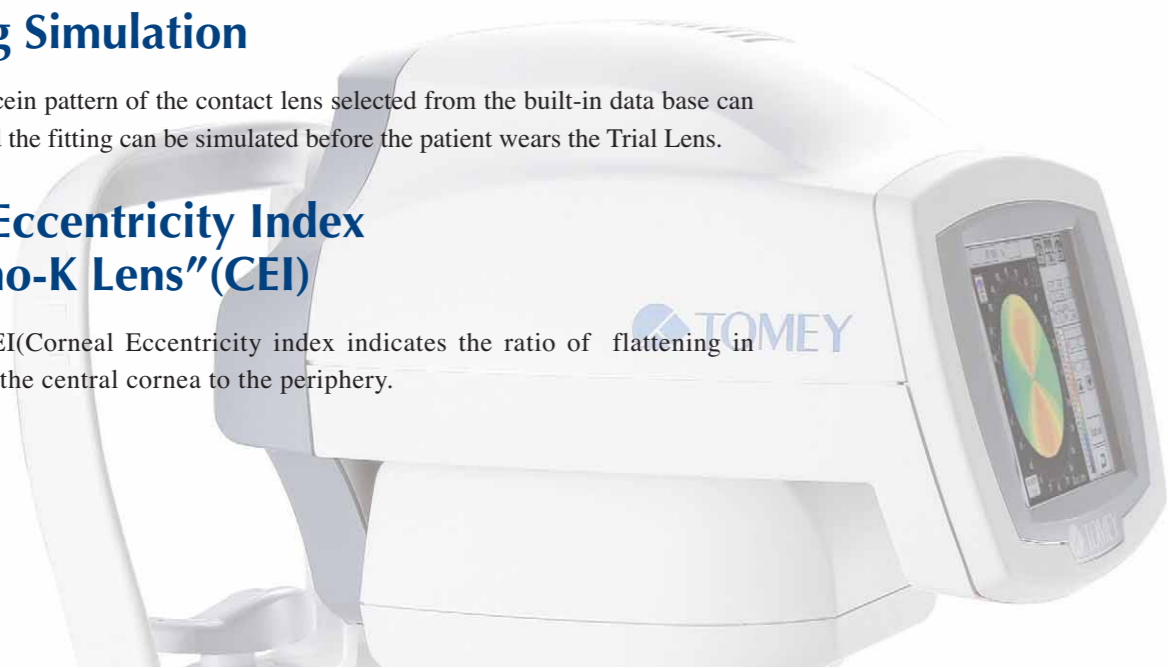
Normalized Map

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 to the periphery.



One vision, Two sharp eyes with Our Innovation

RT-7000

Auto Ref-Topographer



- Three Functions in One Instrument
- Easy & Speedy Touch Screen Alignment
- 6.4 inch color TFT LCD
- Dual CCD technology for Refractometry
- IOL / Cataract Mode
- New Indices for Keratometry: KAI, KRI
- Auto Alignment / Auto Shot for Topography

RT-7000 SPECIFICATIONS

Measurement Ranges

Refraction Measurement

Sphere	-25.00D to +22.00D(VD=12.0mm)
Cylinder	0D to $\pm 10.00D$ (VD=12.0mm)
Axis	0 to 180°

Corneal Curvature Measurement

	5.00mm to 11.00mm (Measurement Zone: ϕ 3mm, R:8.00mm)
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Corneal Mapping

Display Range	9 to 100 D — Normal Mode ϕ 1.0 to 8.0mm(R:8.0mm) — Special Mode ϕ 0.9 to 7.0mm(R:8.0mm)
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Measurement Time

REF	0.2 seconds
KRT	0.1 second

Minimum Pupil Diameter

	ϕ 2.2mm
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Minimum Measurement Step

Refraction Measurement

Sphere	0.01D
Cylinder	0.01D
Axis	1°

Corneal Curvature Measurement

	0.01 mm
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PD(Pupil Distance)

	50mm to 86mm
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Recording

	Built-in Thermal Printer
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Vertex Distance

	0mm, 12.0mm, 13.5mm, 14.0mm, 15.5mm, 16.0mm
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	LAN port / 4USB ports
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Exterior Output

Dimensions

High	502mm or 20 inches
Width	305mm or 12 inches
Depth	493mm or 19 inches

Weight

	Approx. 20.00kg(44.4lbs)
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Display

	6.4 inch color liquid crystal display
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Power Supply

Voltage	AC 100 to 240V
Frequency	50/60Hz
Consumption Power	120VA to 150VA

Temperature

	+ 10C° to + 40C°
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Display

	30% to 75 %
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RT-7000

Three Functions in One Instrument

Auto Ref-Topographer



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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.

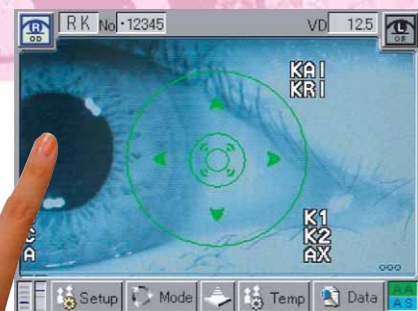
Ref-Kerato Mode

Topo Mode

Easy & Speedy Touch Screen Alignment

The Touch Alignment of the RT-7000 quickly aligns the eye center with the center of the screen by simply touching the eye shown on the screen. The Auto Alignment and Auto Shot functions then start measurement immediately.

Step1



Simply touch the pupil center shown on the screen to roughly align the eye center with the center of the screen.

Step2

Lightly press the center of the screen to move the measuring head toward the patient. The Auto Alignment and Auto Shot functions will then quickly complete measurement.



6.4 inch Color TFT LCD

The 6.4 inch big color TFT LCD can be seen from anywhere, up, down, right and left of the display it is easy to measure while either sitting or standing.

One vision, Two sharp eyes with Our Innovation

RT-7000
Auto Ref-Topographer

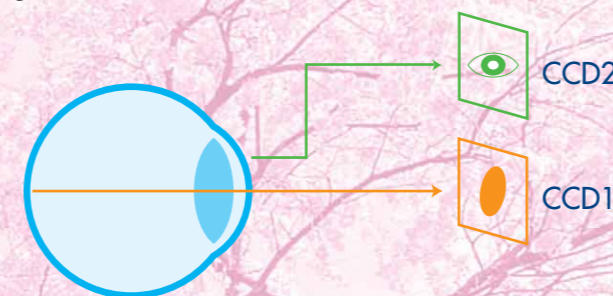
Three Functions in One Instrument

Refractometry

●Dual CCD technology for Refractometry

Two CCD cameras are used to capture images for observation and for measurement while providing highly accurate measurement data.

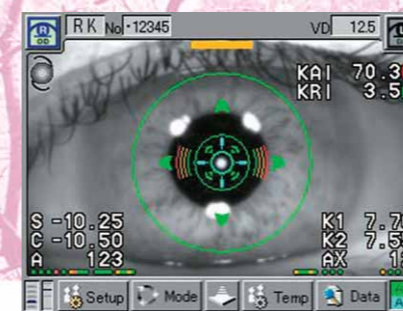
The viewing angle of the fixation target is wider to make patient relaxed during fixation to avoid accommodation.



●IOL/Cataract Mode

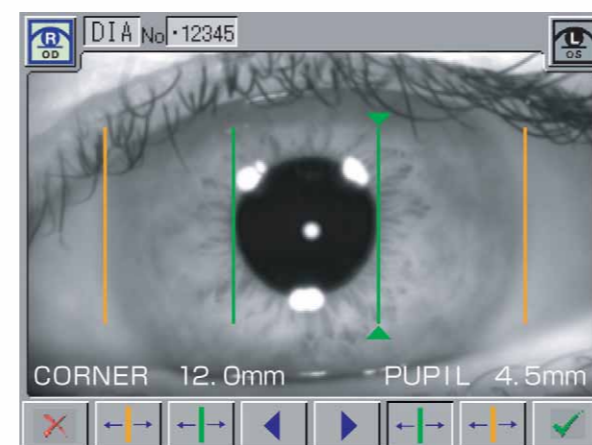
When it is difficult to measure pseudophakic or cataract eyes in normal mode, it can be switched to the IOL or Cataract Mode to match the state of examination eyes being examined.

It switches into the Cataract Mode automatically, too.



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.

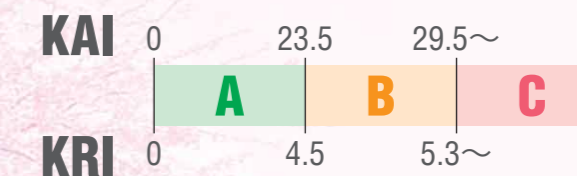


Keratometry

●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.

KRI: (kerato-Regularity Index)

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

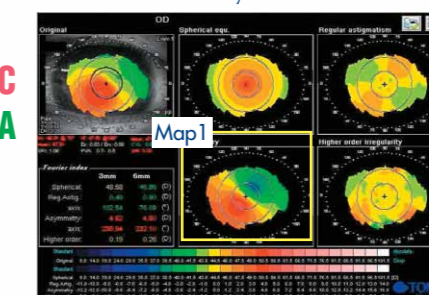
It is possible to confirm the detail of the corneal shape with Topographer by switching to the Topography Mode with only **“ONE TOUCH”** if irregular astigmatism is suspected with KAI and KRI.

Case1:Keratoconus Cornea

RT-7000
KAI/KRI

KAI 123.2C
KRI 4.1A

TMS Fourier analysis



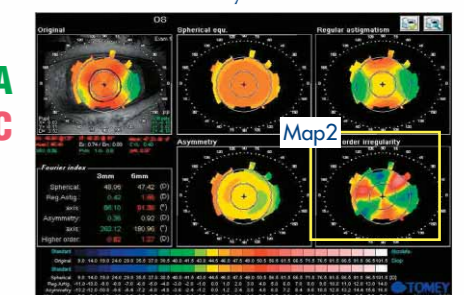
The KAI of RT-7000 is Asymmetry of TMS Fourier analysis (Map1)) is displayed.

Case1:After Keratoplasty

RT-7000
KAI/KRI

KAI 2.3A
KRI 6.0C

TMS Fourier analysis



The KRI of RT-7000 is High order irregularity of TMS Fourier analysis (Map2)) is displayed.

Fourier analysis of TMS separates and quantifies the refracting power on the surface of the cornea to “Spherical”, “Regular Astigmatism”, “Asymmetry” and “Higher-order irregularity” show the Corneal Irregular Astigmatism.