Corneal Topography

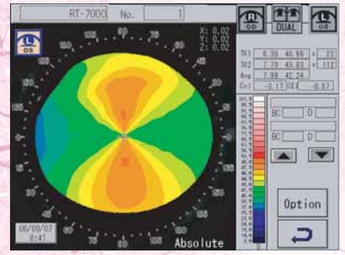
●Auto Alignment / Auto Shot

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

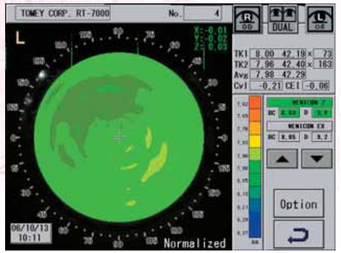
The measurement variation is significantly reduced no matter what the skill level is of the operator.

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 ±10.00D(VD=12.0mm)
Axis	0 to 180°
Corneal Curvature Measurement	5.00mm to 11.00mm (Measurement Zone: φ3mm, R:8.00mm)
Corneal Mapping	
Display Range	9 to 100 D — Normal Mode φ1.0 to 8.0mm(R:8.0mm) — Special Mode φ0.9 to 7.0mm(R:8.0mm)
Measurement Time	
REF	0.2 seconds
KRT	0.1 second
Minimum Pupil Diameter	φ2.2mm
Minimum Measurement Step	
Refraction Measurement	
Sphere	0.01D
Cylinder	0.01D
Axis	1°
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	
High	466mm or 18 inches
Width	307mm or 12 inches
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
Frequency	50/60Hz
Consumption Power	120VA to 150VA
Temperature	+ 10C° to + 40C°
Display	30% to 75 %

TOMEY®

Tomey Corporation [Asia-Pacific]

2-11-33 Noritakeshinmachi
Nishi-Ku, Nagoya, 451-0051, Japan
Tel: ++81-52-581-5327
Fax: ++81-52-561-4735
E-Mail: intl@tomey.co.jp

Tomey GmbH [Europe]

Am Weichselgarten 19a
D-91058 Erlangen-Tennenlohe, Germany
Tel: ++49-9131-77710
Fax: ++49-9131-777120
E-Mail: info@tomey.de

For more information, visit our web site **http://www.tomey.com**

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Three Functions in One Instrument

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TOMEY®

One vision, Two sharp eyes with Our Innovation

RT-7000
Auto Ref-Topographer

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.

Easy & Speedy Touch Screen Alignment

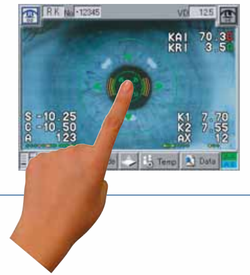
The Touch Alignment of the RT-7000 quickly aligns the eye center with the center of the screen by simply touching the eye shown on the screen. The Auto Alignment and Auto Shot functions then start measurement immediately.

Step1

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

Step2

Lighly 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

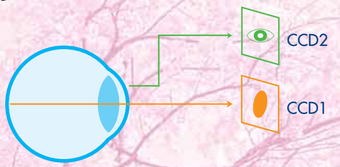
The 6.4 inch big color TFT LCD can be seen from anywhere, up, down, right and left of the display it is easy to measure while either sitting or standing.

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.



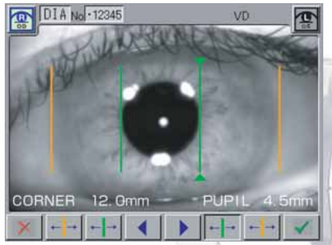
●IOL/Cataract Mode

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.

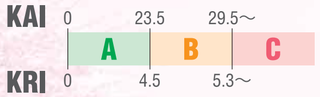


Keratometory

●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.

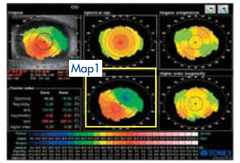
KRI: (kerato-Regularity Index)
The Index indicating the regularity of the cornea (higher-order irregular astigmatism).This index becomes larger when the corneal surface is not smooth.

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 TMS Fourier analysis

KAI 123.2C
KRI 4.1A

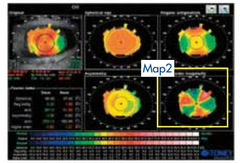


The KAI of RT-7000 is Asymmetry of TMS Fourier analysis (Map(1)) is displayed.

Case1:After Keratoplasty

RT-7000 KAI/KRI TMS Fourier analysis

KAI 2.3A
KRI 6.0C



The KRI of RT-7000 is High order irregularity of TMS Fourier analysis (Map(2)) 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.