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Space

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**POLAREX**

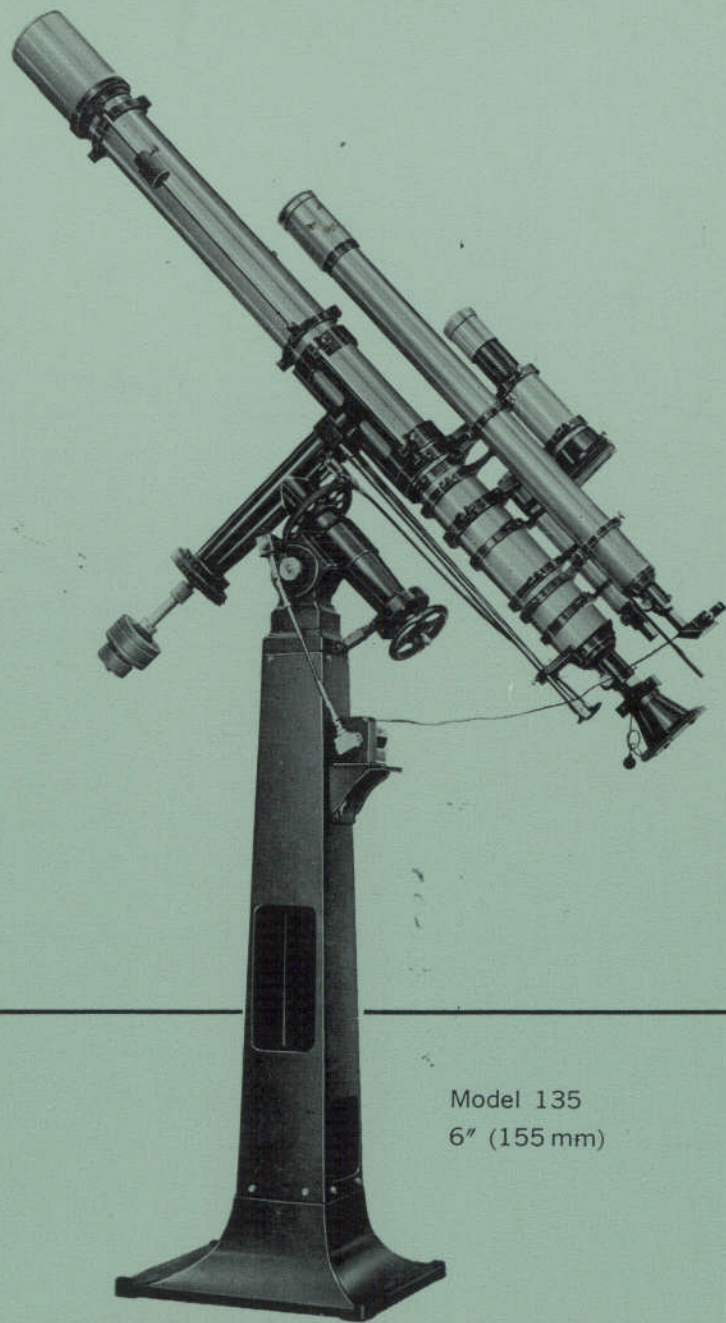
ASTRONOMICAL TELESCOPE  
& ACCESSORIES

**UNITRON**<sup>®</sup>

Manufactured by

**NIHON SEIKO KENKYUSHO, LTD.**

Tokyo, Japan



Model 135  
6" (155 mm)



# Seiko Scope POLAREX · UNITRON

## CONSTRUCTION:

Altazimuth Refractors are composed of:— Body Tube, Altazimuth Mounting with slow motion controls in azimuth and altitude, Wooden Tripod, and the components and accessories detailed in these specifications.

Equatorial Refractors are composed of:— Body Tube, Equatorial Mounting with declination and right ascension setting circles and verniers, Wooden Tripod (or Metal Pier in some models), and the components and accessories detailed in these specifications.

Photo-Equatorial Refractors, in addition, have a Guide Telescope, a Clock Drive of motor driving or weight driving and an Astro-Camera as standard instruments, and an Astrographic Camera may be available on request. Special mechanism objective lens centering adjuster for all telescopes, except model 114 and 129.

## CONSTRUCCION:

Los refractores Altacimutales se componen de:— el Tubo Visual, la Montadura Altacimutal con los controles de velocidad reducida en el acimut y la altitud, el Tripode de Madera, y los otros componentes y accesorios detallados en estas especificaciones.

Los Refractores Ecuatoriales se componen de:— el Tubo Visual, la Montadura Ecuatorial con los circulos y vernieres de declinación y de ascención recta, el Tripode de Madera (o el Pilar de metal en unos modelos), y los otros componentes y accesorios detallados en estas especificaciones.

Los Refractores Foto-Ecuatoriales tienen adicionalmente un Telescopio de Guia, un Mecanismo Horario del movimiento por motor o del por pesa y una Cámara de Astros como los instrumentos normales, y una Cámara Astrográfica se puede suministrar a solicitud.





# Seiko Scope POLAREX · UNITRON

## ALTAZIMUTH REFRACTOR

### SCOPE: ALTAZIMUTH REFRACTORS

#### "Senior Series"

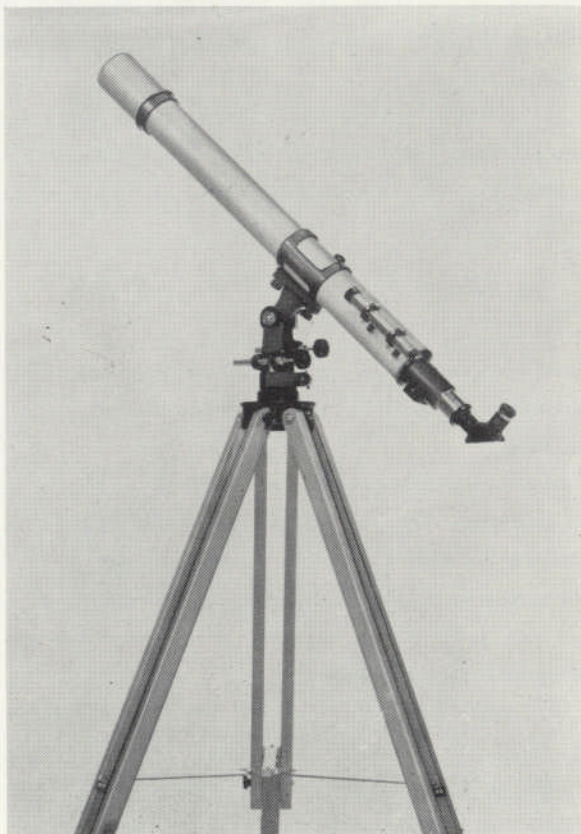
MODEL 114	2.4"
MODEL 129	3"
MODEL 134	4"

#### EQUATORIAL REFRACTORS

MODEL 128	2.4"
MODEL 131	3"
MODEL 132	4"
MODEL 132E, F	4"
MODEL 136E, F	5"
MODEL 135	6"
MODEL 144	8"

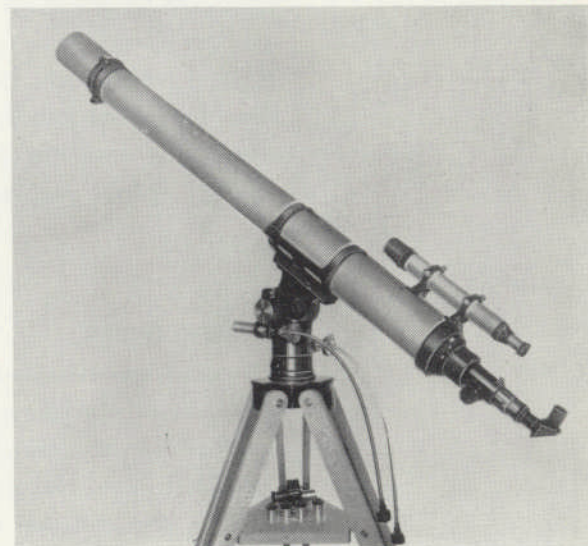
#### Model 114 2.4"

Objective lens: D 60 mm, F 900 mm  
Eyepieces: 9 mm, 12.5 mm, 18 mm, 25 mm  
Magnifications: 36× to 100×  
Accessories: Viewfinder 4× 19 mm, Star diagonal,  
Sunglass, Erecting prism



#### Model 134 4"

Objective lens: D 100 mm, F 1500 mm  
Eyepieces: 6 mm, 7 mm, 9 mm, 12.5 mm, 18 mm and  
25 mm  
Magnifications: 60× to 250×  
Accessories: Viewfinder 10× 40 mm, Star diagonal,  
Sunglass, Erecting prism



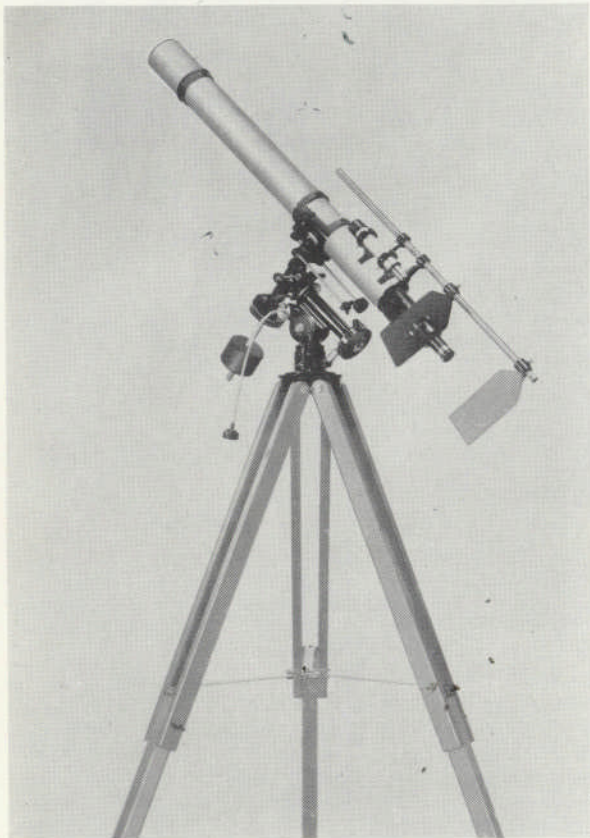


# Seiko Scope POLAREX · UNITRON

## EQUATORIAL REFRACTOR

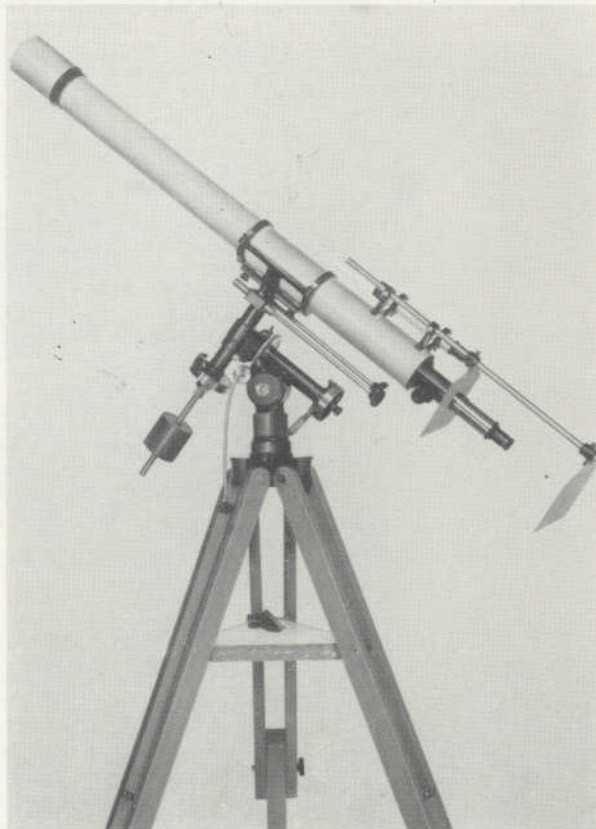
### Model 128 2.4"

Objective lens: D 60 mm, F 900 mm  
Eyepieces: 7 mm, 9 mm, 12.5 mm 18 mm, 25 mm  
Magnifications: 36× to 128×  
Accessories: Viewfinder 6× 23.5 mm, Star diagonal,  
Sunglass, Erecting prism, Sun projection apparatus



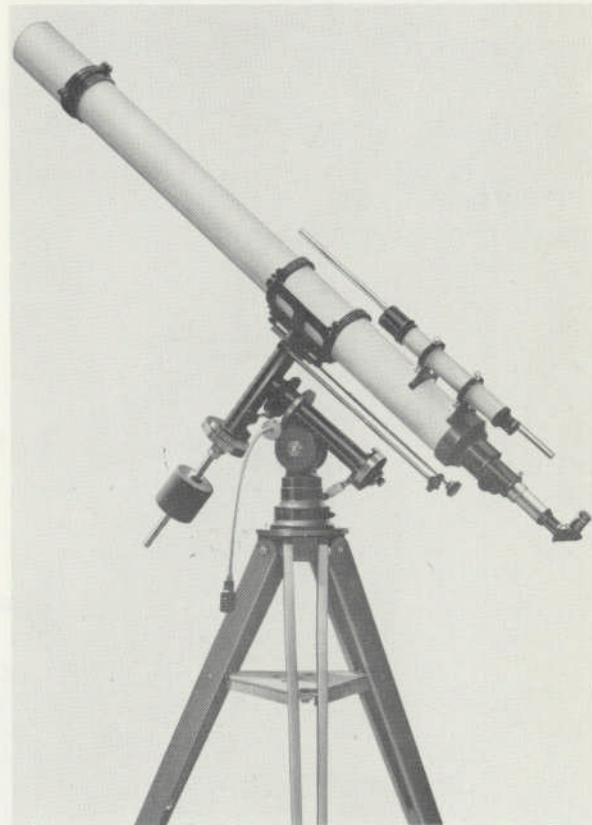
### Model 131 3"

Objective lens: D 75 mm, F 1200 mm  
Eyepieces: 6 mm, 7 mm, 9 mm, 12.5 mm 18 mm,  
25 mm  
Magnifications: 48× to 200×  
Accessories: Viewfinder 8× 30 mm, Star diagonal,  
Sunglass, Erecting prism, Sun projection apparatus



### Model 132 4" Tripod Model

Objective lens: D 100 mm, F 1500 mm  
Eyepieces: 6 mm, 7 mm, 9 mm, 12.5 mm 18 mm,  
25 mm, 40 mm  
Magnifications: 37× to 250×  
Accessories: Viewfinder 10× 40 mm, Star diagonal,  
Sunglass, Erecting prism, Sun projection apparatus







# Seiko Scope POLAREX · UNITRON

## PHOTO-EQUATORIAL REFRACTOR

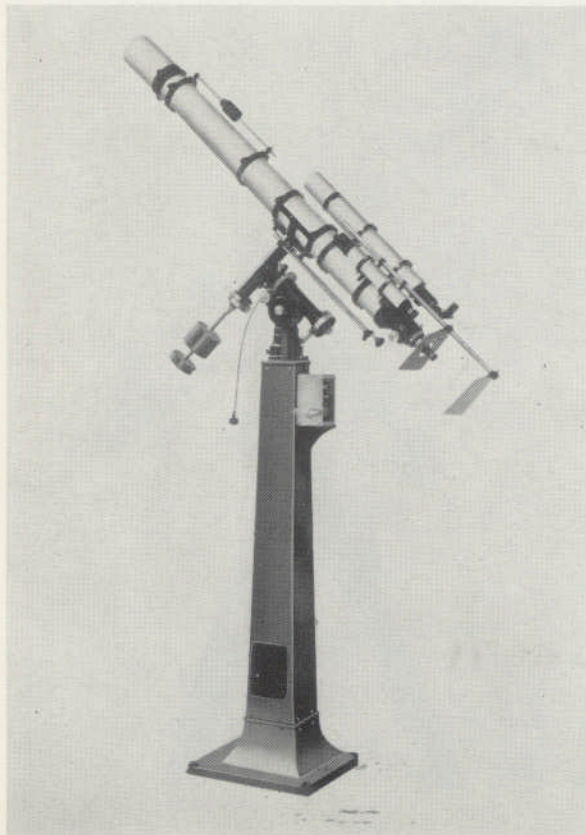
### Model 132F 4" : Pier Model

Objective lens: D 100 mm, F 1500 mm

Eyepieces: 6 mm, 7 mm, 9 mm, 12.5 mm, 18 mm,  
25 mm, 40 mm, 60 mm

Magnifications: 25× to 250×

Accessories: Guide telescope (D 60, F 700), Weight driven clock drive, Astro-camera, Viewfinder 10× 40 mm, Star diagonal, Sunglass, Erecting prism, Sun projection apparatus, Solar aperture diaphragm



### Model 136F 5" : Pier Model

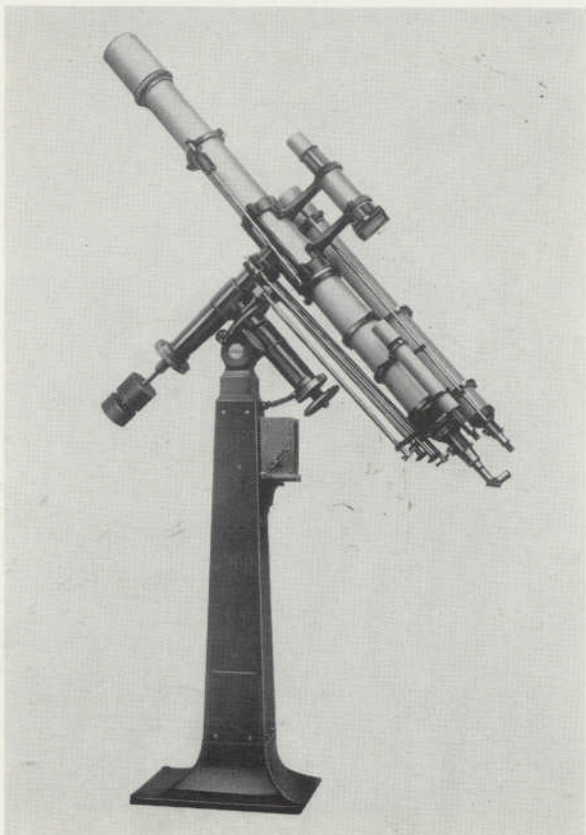
Objective lens: D 127 mm, F 2000 mm

Eyepieces: 6 mm, 7 mm, 9 mm, 12.5 mm, 18 mm,  
25 mm, 40 mm, 60 mm

Magnifications: 33× to 330×

Accessories: Viewfinder 10× 40 mm

Guide telescope D 75 mm, F 1000 mm w/9 mm eyepiece, Star Diagonal, Sunglass, Erecting Prism, Sun Projection Apparatus, Solar Aperture Diaphragm



### Model 135 6" : Pier Model

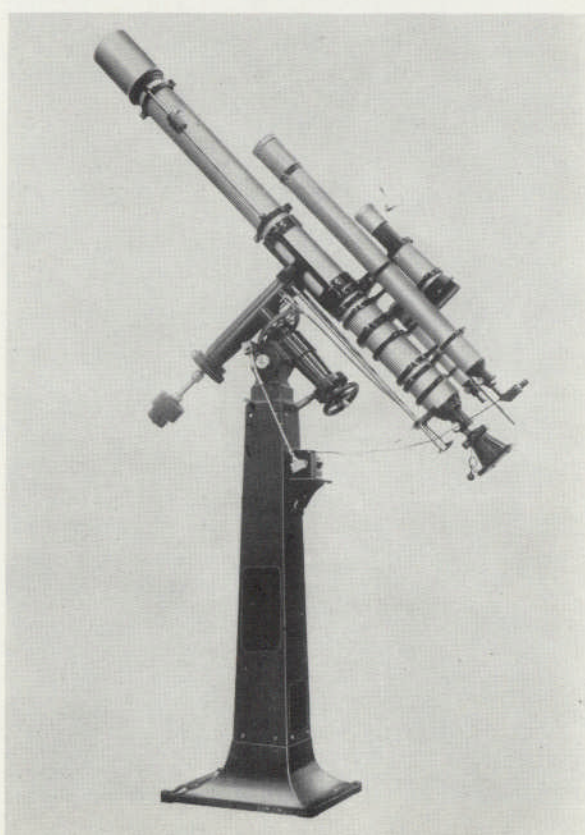
Objective lens: D 155 mm, F 2500 mm

Eyepieces: 6 mm, 7 mm, 9 mm, 12.5 mm, 18 mm,  
25 mm, 40 mm, 60 mm

Magnifications: 41× to 410×

Accessories: Viewfinder 12.5× 60 mm.

Guide telescope D 100 mm, F 1500 mm w/9 mm eyepiece, Star diagonal, Sunglass, erecting prism, Sun projection apparatus, Solar aperture diaphragm.

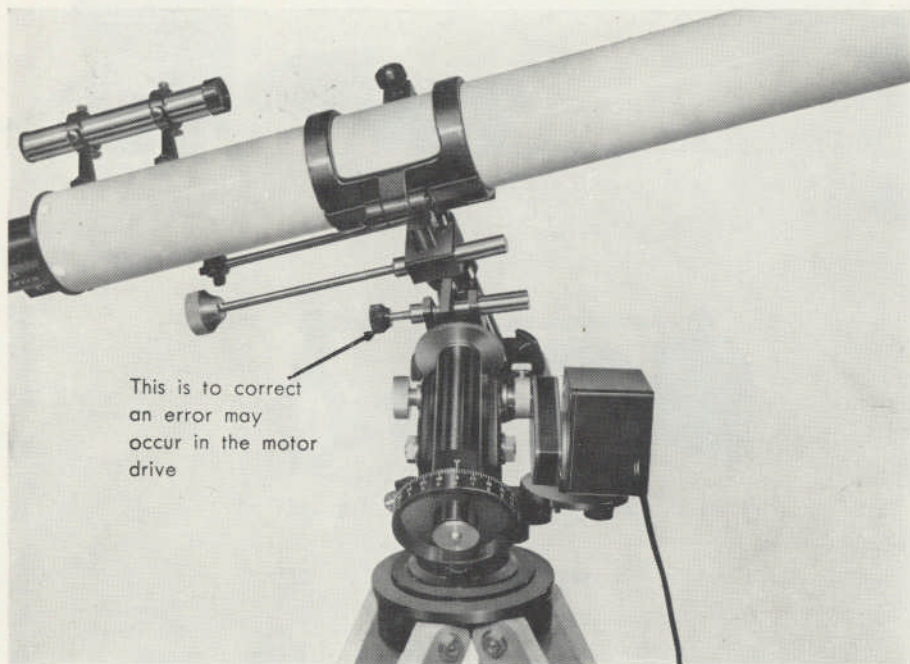






# Seiko Scope POLAREX · UNITRON

## Motor drive available in POLAREX Equatorial telescope



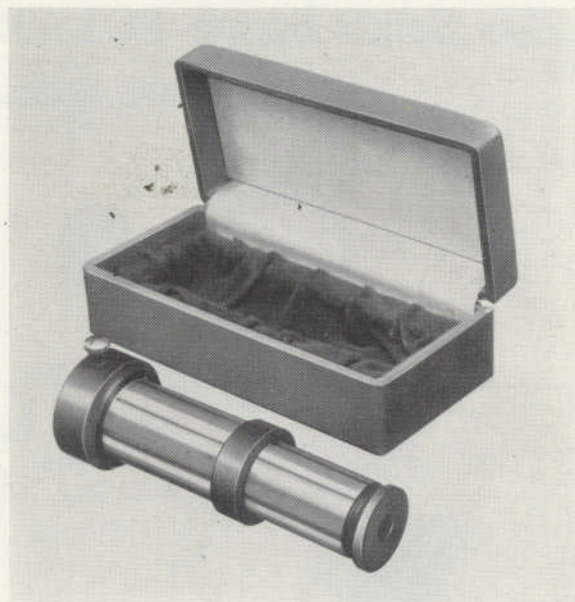
This is to correct  
an error may  
occur in the motor  
drive

Model NS 128 (2.4")~131(3")~132(4")

Photo. 1

### Motor Drive Installation

Turn the polar axis of the equatorial telescope toward the polestar (the Southern Cross in the Southern hemisphere) and install the motor on its right (Photo. 1). Fix clamp (A) at the arrow-marked spot independently (as shown in Photo 2) so that disk (B) of the motor rest will be on the right side of the polar axis (Photo 1). Remove the nut in the motor bottom, get the turning shaft of the motor (hexagonal) in the hole (hexagonal) of the fine adjustments by shifting the position of the clamp, rotating the disk and turning the gear box forward or backward so that the fixing screw in the bottom of the motor will fall in the disk groove. Finally, lift the disk to ensure close contact with the motor bottom, then fix the motor, and fix the disk shaft.



STAR SPECTROSCOPE

### CLOCK DRIVE

with weights  
and  
coupling device

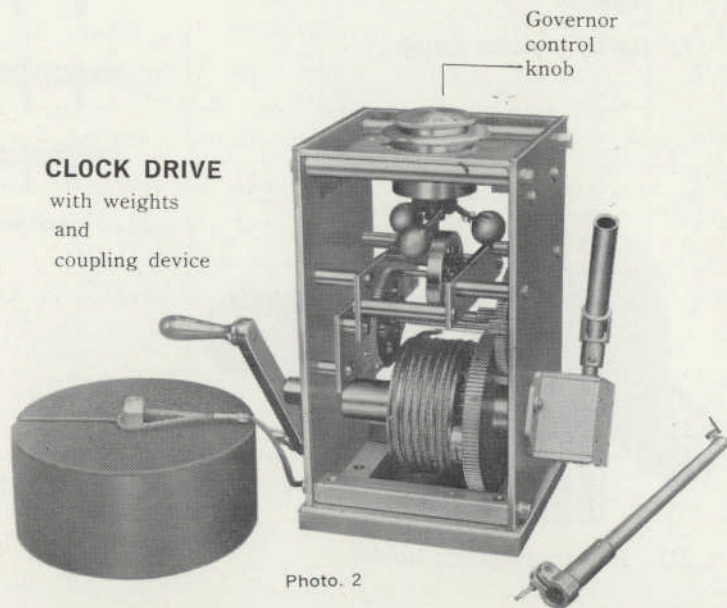


Photo. 2



# Seiko Scope POLAREX · UNITRON

## — TELESCOPE ACCESSORY —



1. Objective lens



2. Eyepiece



3. Star diagonal



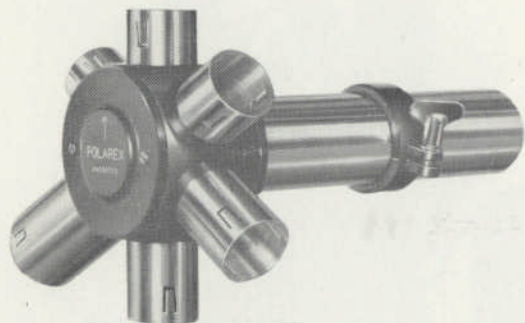
4. Sunglass



7. Herschel solar wedge



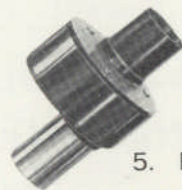
11. Viewfinder



10. Rotary eyepiece holder



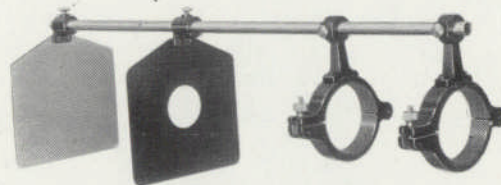
8. Solar aperture diaphragm



5. Erecting prism



9. Achromatic amplifier (Barlow lens)



6. Sun projection apparatus



12. Synchronous motor



13. Astro-camera





# Seiko Scope POLAREX · UNITRON

## STANDARD ACCESSORIES

	Model No.	Objective lens m/m	F m/m	View-finder m/m	Eye-piece m/m	Resolving			
						Magnification	Power sec.	Minimum magnitude observable	Field of view
Altazimth telescopes	127	40	700	4×19	3 pcs. 9—12.5—18	38×—77×	3	10	7° 12'
	105	50	700	4×19	3 pcs. "	"	2.3	10.5	"
	133N-II	60	"	"	4 pcs. 7—12.5—18—25	28×—100×	2.3	11	"
	114	60	900	"	" 9—12.5—18—25	36×—100×	2	11	"
	129	75	1200	8×30	5 pcs. 7—9—12.5—18—25	48×—171×	1.6	11.8	4° 22'
	134	100	1500	10×40	6 pcs. 6—7—9—12.5—18—25	60×—250×	1.2	12	3° 22'
Equatorial telescopes	128	60	900	6×23.5	5 pcs. 7—9—12.5—18—25	36×—128×	2	11	6° 00'
	131	75	1200	8×30	6 pcs. 6—7—9—12.5—18—25	48×—200×	1.6	11.8	4° 22'
	132	100	1500	10×40	7 pcs. 6—7—9—12.5—18—25 —40	37×—250×	1.2	12	3° 22'
Equatorial telescopes with clock	132 E, F	100	1500	10×40	8 pcs. 6—7—9—12.5—18—25 —40—60	25×—250×	1.2	12	"
	136 E, F	127	2000	10×40	" "	33×—330×	1	12.8	"
	135	155	2500	12.5×60	" "	41×—410×	0.87	13.2	3° 10'
	144	205	3000	12.5×60	" "	50×—500×	0.7	14	"

The above magnifications are without Achromatic Amplifier (Barlow lens), accordingly if you use the amplifier the magnifications will double.





# Seiko Scope POLAREX · UNITRON

## GUIDE TELESCOPE: (Photo-Equatorial only)

Model 132 E, F	Objective Dia. 60mm. Focal Length 700mm. with 9mm eyepiece w/cross hair.
Model 136 E, F	Objective Dia. 75mm. Focal Length 1000mm. with 9mm eyepiece w/cross hair.
Model 135	Objective Dia. 100mm. Focal Length 1500mm. with 9mm eyepiece w/cross hair.
Model 144	Objective Dia. 100mm. Focal Length 1500mm. with 9mm eyepiece w/cross hair.

## ACCESSORIES:

Accessory	Model	Altazimuth Refractors			Equatorial Refractors		
		Junior Series			Senior Series 114, 129, 134	Equatorial 128, 131, 132	Photo-Equatorial
		127	105	133 N-II			
Star diagonal		○	○	○	○	○	
Sunglass		○	○	○	○	○	
Erecting prism		※	※	※	○	○	
Sun projection apparatus		※	※	※	※	○	
Herschel solar wedge		※	※	※	※	※	
Solar aperture diaphragm		※	※	※	※	○	
Achromatic amplifier (Barlow lens)		※	※	○	※	※	
Rotary eyepiece holder		×	×	×	※	※	
Double eyepiece holder		×	×	×	※	※	
Special attachment					× 114		
With objective lens		×	×	×	○ 134	○	
Centering adjuster					× 129		

- included as a standard accessory
- ※ can be obtained as an extra accessory
- × not available

**NIHON SEIKO KENKYUSHO, LTD.**

11-10, 2-chome, Nozawa, Setagaya-ku, Tokyo, Japan  
Tel. (421) 0995, 1685 Cable Add.: SEIKOSCOPE TOKYO