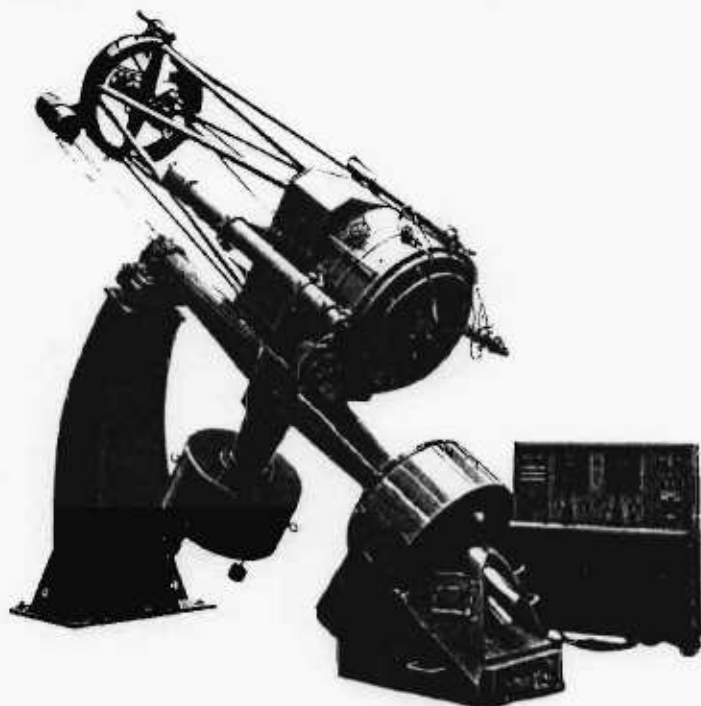


GUIDE BOOK OF
JAPANESE OPTICAL
PRECISION INSTRUMENTS
1966—1967

TELESCOPES





**NIKON 36 INCH REFLECTOR FOR ASTRO
PHOTOGRAPHY**
NIPPON KOGAKU K.K.

Main Telescope

Effective Diameter: 914 mm
Focal Length: 4.6 m
Aperture Ratio: F/5
Cassegrain Focal Length: 16.5 m
Cassegrain Aperture Ratio: F/18
Minimum Diameter of iris Diaphragm Openings: 700 mm
Weight of the Main Mirror: 290 kg

Photo Equipment

- (A) Prime Focus Photo Equipment.
Picture Size: 82 × 107 mm, or 1.0" × 1.3"
Travel Range of Double Slide Carrier: 20 mm
Shutter: Time & Bulb.
Diameter of Ross Lens (Detachable): 170 mm
- (B) Cassegrain Focus Photo Equipment.
Picture Size: 82 × 107 mm, or 0.3" × 0.4"
Double Slide Carrier: Moved by hand operated micrometer screw.
Shutter: Time & Bulb.
Rotating Sector: Used to decrease excessive brightness of an adjacent star.
Eyepiece Magnification: 10 ×, 20 × interchangeably mounted.

Finder Telescope:

Diameter of Objective Aperture: 150 mm
Focal Length of Objective: 2.25 m
Eyepieces: Focal Length: 25 mm, 80 mm
Magnification: 90 ×, 38 ×
View Field: 30', 1.35'

Elbow shaped Finder:

Diameter of Objective Aperture: 50 mm
Magnification: 15 ×
View Field: 3' 21"

Dimension of the Equipment

Length of Main Telescope: 5.6 m
Maximum Height: 7.0 m
Weight: 10 ton

Other Features: Equatorial mount driving device to catch the star in the view field, manual operation safety device, control board

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Telescopes

TELESCOPES



ASAHI PENTAX TELESCOPES
ASAHI OPTICAL CO., LTD.

ASAHI PENTAX 60mm ASTRONOMICAL TELESCOPE with Micro-Moving Attachment.

Magnification: 40 \times - 132 \times
Diameter of Objective Lens: 60 mm
focal Length of Objective Lens: 800 mm
length: 300" (79 cm)
Minimum Height: 657" (167 cm)
Weight: 10 1/2 lbs (4.6 kg)

Accessories: 4 - finder facilitates quick positioning of the telescope, erecting prism for easy terrestrial observation diagonal prism for astronomical observation, wooden tripod with chains for steady positioning, 4 different eyepieces and one sunglass.



EQUATORIAL TELESCOPE ET3
TOWA OPTICAL MFG. CO., LTD. ※

Equatorial Telescope
Magnification: 45 \times , 90 \times , 100 \times , 150 \times , 200 \times , 300 \times .
Diameter of Objective Lens: 60 mm
Focal Length: 900 mm
Eyepieces: H6mm, H9mm, H20mm
Tripod: 2 section metal tripod.

Accessories: 6 \times 30 mm finderscope, diagonal prism, erecting prism, sunglass, sun screen, declination & hour axis, 2 \times Barlow lens



TELESCOPE AT7
TOWA OPTICAL MFG. CO., LTD. ※

Astronomical Telescope
Magnification: 35 \times , 70 \times , 117 \times , 234 \times
Diameter of Objective Lens: 60 mm
focal Length: 700 mm
Eyepieces: H6mm, H20mm
Tripod: 2 section wooden tripod.

Accessories: 5 \times 24 mm finderscope, 2 \times barlow lens, diagonal prism, sunglass, accessory tray.



TERRESTRIAL TELESCOPE VT2
TOWA OPTICAL MFG. CO., LTD. ※

Terrestrial Telescope
Magnification: 15 \times , 30 \times , 45 \times , 60 \times .
Diameter of Objective Aperture: 60 mm.
Rack and Pinion Focusing.
Tripod: 2 section wooden tripod.
Weight: 7 1/2 lbs (3.58 kg)
Length: 24 1/2" (628 mm)

*Telescopes*TELESCOPES
COIN-OPERATED TELESCOPES

ASAHI PENTAX 50mm TELESCOPE
ASAHI OPTICAL CO., LTD.

Magnification: 50x
Diameter of Objective Lens: 50 mm
Length: 237" (60 cm)
Height: 157" (40 cm)
Weight: 4 1/4 lbs (2.22 kg) (with metal tripod)



ASAHI PENTAX 40mm TELESCOPE
ASAHI OPTICAL CO., LTD.

Magnification: 30x
Diameter of Objective Lens: 40 mm
Length: 240" (61 cm)
Weight: 1 1/4 lbs (930 gr) (with metal tripod)



KOWA
KOWA CO., LTD.

Type: 20x120 coin-operated observation binocular, by electric power supply.
Diameter of Objective Aperture: 12 cm
Magnification: 20x
Real Field of View: 3°
Exit Pupil: 6 mm
Diopter Adjustment: fixed, -1 D.
Weight, Binocular: 36 3/4 lbs (16.5 kg). Holding arm: 19 1/2 lbs (9.0 kg).
Conical stand: 61 1/2 lbs (27.8 kg)
Length: 53" (1,350 mm)

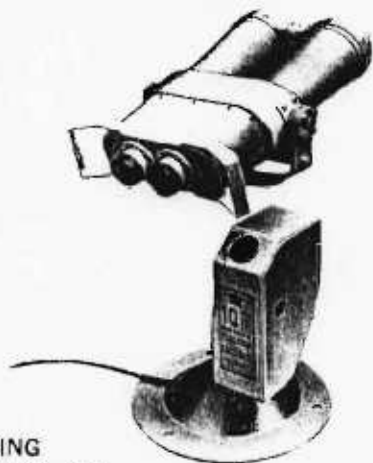


VIEW-KING
KOKI-SHA CO., LTD.

Type: Model ST 20x80
Diameter of Objective Aperture: 80 mm
Magnification: 20x
Real Field of View: 35' (104.8 m at 1,000 m)
Exit Pupil: 4.0 mm
Weight: 100 lbs (45.5 kg)
Length: 24 3/4" (620 mm)
Width: 15" (380 mm)
Height: 59" (1,500 mm)

Telescopes

COIN-OPERATED TELESCOPE
OBSERVATION TELESCOPES



VIEW-KING
KOKI-SHA CO., LTD.

Type: Model PT 20 x 70
Diameter of Objective Aperture: 70 mm
Magnification: 20 x
Real Field of View: 35' (104.8 m at 1,000 m)
Exit Pupil: 3.5 mm
Weight: 44 1/2 lbs (20 kg)
Length: 15 1/2" (400 mm)
Width: 9" (240 mm)
Height: 16" (420 mm)



8cm OBSERVATION BINOCULAR TELESCOPE
NIPPON KOGAKU K.K.

Type: Binocular; straight eyepiece.
Magnification: 15 x
Diameter of Objective Aperture: 3.15" (80 mm)
Angle of View: 4"
Exit Pupil: 5.3 mm
Focusing: Separate dioptic adjustment to each eye in the range of +2 to -4 dptr.
Mount: York type rigid mount with azimuth and elevation circles divided in 1 degree.
Weight: 41 lbs (18.5 kg) with mount.
Length: 20.2" (505 mm)
Height: 15.6" (415 mm) with mount.
Width: 13.9" (348 mm)

12cm OBSERVATION BINOCULAR TELESCOPE
NIPPON KOGAKU K.K.

Type: Binocular; straight eyepiece.
Magnification: 20 x
Diameter of Objective Aperture: 4.8" (120 mm)
Angle of View: 3"
Exit Pupil: 6 mm
Focusing: Separate dioptic adjustment to each eye in the range of +2 to -4 dptr.
Mount: York type rigid mount with azimuth and elevation circles divided in 1 degree.
Weight: 60 lbs (27.5 kg) with mount.
Length: 27.7" (692 mm)
Height: 18" (450 mm) with mount.
Width: 18.9" (473 mm)





KOWA
KOWA CO., LTD.

Magnification: 25x
Diameter of Objective Aperture: 60 mm
Real Field of View: 2°
Exit Pupil: 2.45 mm
Relative Brightness: 5.75
Dioptric Adjustment: -4 ~ +10 dptr.
Interchangeable Eyepieces: 15x, 20x, 40x, 60x
Weight: 2 3/4 lbs (1.05 kg)
Length: 17 1/2" (440 mm)
Height: 5 1/4" (155 mm)



PLUM ZOOM SPOTTING SCOPES
OMORI SOGO KOGAKU KOGYO CO., LTD.

Type: Zoom Spotting scope.
Diameter of Objective Aperture: 60 mm
Magnification: 15x ~ 60x
Real Field of View: 1°30' ~ 40'
Exit Pupil: 4 mm ~ 1 mm
Weight: 5 1/4 lbs (2.7 kg)
Length: 17 3/4" (440 mm)
Width: 3 1/4" (85 mm)



TAMRON ZOOM SPOTTING SCOPE
TAISEI OPTICAL CO., LTD.

Magnification: Perfect zoom type 15x ~ 60x
Objective Diameter: 60 mm
Lens Composition: 14 elements in 9 groups.
Field of View: 3' (at 15x) ~ 45' (at 60x)
Exit Pupil: 4 mm (at 15x) ~ 1 mm (at 60x)
Focus Range: 8 meters (24 ft.) to infinity.
Length: 17 1/2" (447 mm)
Weight: 3 1/2 lbs (1.4 kg)
Other Feature: Available for telephotography by using extra adapter.



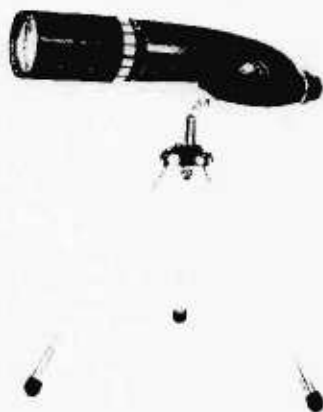
SPOTTING SCOPE SS3
TOWA OPTICAL MFG. CO., LTD. ※

Magnification: 20x, 30x, 40x, 60x
Diameter of Objective Aperture: 60 mm
Tripod: Metal tripod equipped with fine adjustment.
Weight: 4 1/2 lbs (2 kg)
Length: 16 1/2" (409 mm)

※ For address, see page 170

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*Telescopes*HAND TELESCOPES
BINOCULARS

**CARTON PRISMATIC
TELESCOPE 20 × 40**
CARTON OPTICAL IND., LTD. ※

Diameter of Objective Lens: 40 mm
Magnification: 20 ×
Real Field of View: 2.5°
Focusing: Eyepiece
Type: Metal
Weight: 1/4 lbs (395 gr)
Length: 10 1/4" (270 mm)



**ZOOM HAND TELESCOPES
BZ40-1**
TOWA OPTICAL MFG. CO., LTD. ※

Magnification: 15 × ~ 40 ×
Diameter of Objective Aperture: 40 mm
Weight: 7/8 lbs (430 gr)
Length: 14 1/4" (368 mm)



**ASAHI PENTAX 10 × 50
COATED**
ASAHI OPTICAL CO., LTD.

Focusing: Central focusing.
Magnification: 10 ×
Diameter of Objective Lens: 50 mm
Diameter of Exit Pupil: 5 mm
Angle of View: 5.5°
Field of View at 1000 yds.: 289 ft
Weight: 2 1/2 lbs (1.015 kg)
Height: 6 1/2" (173 mm)
Width: 8" (203 mm)



**FUJICA MEIBO 10 × 50
(MARINE TYPE)**
FUJI PHOTO FILM CO., LTD.

Focusing: Individual focusing.
Magnification: 10 ×
Diameter of Objective Aperture: 50 mm
Real Field of View: 7°
Weight: 2 1/2 lbs (1.26 kg)
Height: 6 1/2" (175 mm)
Width: 7 1/2" (200 mm)



TOPCON 10 × 50 IF
TOKYO OPTICAL CO., LTD.

Focusing: Individual focusing.
Magnification: 10 ×
Diameter of Objective Aperture: 50 mm
Effective Field of View: 7.1°
Exit Pupil: 5 mm
Brightness: 25
Weight: 2 1/2 lbs (1.2 kg)
Height: 6 1/2 lbs (175 mm)



**ASAHI PENTAX 7 × 50 COATED
INTERFERENCE FILTER**
ASAHI OPTICAL CO., LTD.

Focusing: Central focusing.
Magnification: 7 ×
Diameter of Objective Lens: 50 mm
Diameter of Exit Pupil: 7.1 mm
Angle of View: 7.1°
Field of View at 1000 yds.: 372 ft
Weight: 2 1/2 lbs (1.1 kg)
Height: 7" (178 mm)
Width: 8" (203 mm)

Telescopes

BINOCULARS



**FUJICA MEIBO 7 × 50
(MARINE TYPE)**
FUJI PHOTO FILM CO., LTD.

Focusing: Individual focusing
Magnification: 7×
Diameter of Objective Aperture: 50 mm
Real Field of View: 7.10°
Weight: 2½ lbs. (1.22 kg)
Height: 7" (178 mm)
Width: 7½" (200 mm)



FUJICA MEIBO 7 × 50
FUJI PHOTO FILM CO., LTD.

Focusing: Central focusing
Magnification: 7×
Diameter of Objective Aperture: 50 mm
Real Field of View: 7.10°
Weight: 2½ lbs. (990 gr)
Height: 7½" (180 mm)
Width: 8" (210 mm)



**SIRIUS 7 × 50 BWCF FULLY
COATED**
ITABASHI OPTICAL MFG. CO., LTD.

Focusing: Central focusing
Magnification: 7×
Diameter of Objective Aperture: 50 mm
Real Field of View: 11°
Exit Pupils: 7.1 mm
Relative Brightness: 50.4
Weight: 2½ lbs. (1.15 kg)
Height: 6½" (160 mm)
Width: 8½" (210 mm)



NIKON 7 × 50 COATED
NIPPON KOGAKU K.K.

Focusing: Central focusing
Magnification: 7×
Diameter of Objective Aperture: 50 mm
Real Field of View: 7.16°
Exit Pupils: 7.1 mm
Relative Brightness: 50.4
Weight: 2½ lbs. (970 gr)
Height: 7½" (180 mm)
Width: 7½" (190 mm)



NIKON 7 × 50 COATED
NIPPON KOGAKU K.K.

Focusing: Individual focusing
Magnification: 7×
Diameter of Objective Aperture: 50 mm
Real Field of View: 7.16°
Exit Pupils: 7.1 mm
Relative Brightness: 50.4
Weight: 2½ lbs. (1.24 kg)
Height: 7½" (180 mm)
Width: 7½" (190 mm)



TOPCON 7 × 50 IF
TOKYO OPTICAL CO., LTD.

Focusing: Individual focusing
Magnification: 7×
Diameter of Objective Aperture: 50 mm
Effective Field of View: 7.1°
Exit Pupils: 7.14 mm
Brightness: 51
Weight: 2½ lbs. (1.2 kg)
Height: 6¾" (173 mm)

BINOCULARS



**ASAHI PENTAX 8x40
COATED (Wide Angle)**
ASAHI OPTICAL CO., LTD.

Focusing: Central focusing
Magnification: 8x
Diameter of Objective Aperture: 40 mm
Diameter of Exit Pupil: 5.0 mm
Type of View: 9.5
Field of View at 1000 yds.: 49.3 ft.
Weight: 1 1/2 lbs. (680 gr)
Height: 5 1/2" (142 mm)
Width: 7 1/2" (193 mm)



FUJICA MEIBO 8x40
FUJI PHOTO FILM CO., LTD.

Focusing: Central focusing
Magnification: 8x
Diameter of Objective Aperture: 40 mm
Real Field of View: 7-10'
Weight: 1 3/4 lbs. (700 gr)
Height: 5 1/4" (145 mm)
Width: 7 1/4" (180 mm)



NIKON 9x35 COATED
NIPPON KOGAKU K.K.

Focusing: Central focusing
Magnification: 9x
Diameter of Objective Aperture: 35 mm
Real Field of View: 7-20'
Exit Pupil: 3.9 mm
Relative Brightness: 15.2
Weight: 1 3/4 lbs. (530 gr)
Height: 4 1/4" (119 mm)
Width: 6 1/2" (175 mm)



**ASAHI PENTAX 7x35
COATED**
ASAHI OPTICAL CO., LTD.

Focusing: Central focusing
Magnification: 7x
Diameter of Objective Aperture: 35 mm
Diameter of Exit Pupil: 5 mm
Type of View: 7.0
Field of View at 1000 yds.: 36.7 ft.
Weight: 1 1/2 lbs. (589 gr)
Height: 5" (130 mm)
Width: 6" (151 mm)



FUJICA MEIBO 7x35
FUJI PHOTO FILM CO., LTD.

Focusing: Central focusing
Magnification: 7x
Diameter of Objective Aperture: 35 mm
Real Field of View: 7-30'
Weight: 1 1/4 lbs. (500 gr)
Height: 5" (125 mm)
Width: 6 1/4" (175 mm)



**SIRIUS 7x35 BWCF FULLY
COATED**
ITABASHI OPTICAL MFG. CO., LTD.

Focusing: Central Focusing
Magnification: 7x
Diameter of Objective Aperture: 35 mm
Real Field of View: 12-5'
Exit Pupil: 5 mm
Relative Brightness: 25
Weight: 1 1/2 lbs. (690 gr)
Height: 6 1/4" (175 mm)
Width: 7 1/4" (180 mm)



KOWA 7×35 W COATED
KOWA COMPANY, LTD.

Focusing: Central focusing.
Magnification: 7×
Diameter of Objective Aperture: 35 mm
Real Field of View: 10°
Exit Pupil: 5 mm
Relative Brightness: 25
Weight: 1½ lbs (790 gr)
Height: 5¼" (133 mm)
Width: 7½" (190 mm)



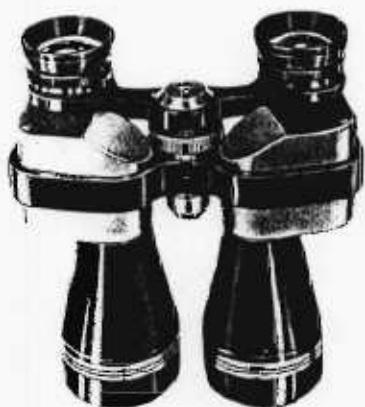
NIKON 7×35 COATED
NIPPON KOGAKU K.K.

Focusing: Central focusing.
Magnification: 7×
Diameter of Objective Aperture: 35 mm
Real Field of View: 7-20°
Exit Pupil: 5 mm
Relative Brightness: 25
Weight: 1¼ lbs (500 gr)
Height: 4¾" (109 mm)
Width: 6¼" (175 mm)



ZUIHO 7×35 ZWCF
ZUIHO OPTICAL INSTRUMENT CO., LTD.

Focusing: Central Focusing.
Magnification: 7×
Diameter of Objective Aperture: 35 mm
Real Field of View: 12°
Exit Pupil: 5 mm
Relative Brightness: 25
Weight: 1½ lbs (750 gr)
Height: 4¼" (122 mm)
Width: 7¾" (185 mm)



MENAN 10×30 COATED
MEIJI SEIKO CO., LTD.

Focusing: Central focusing.
Magnification: 10×
Diameter of Objective Aperture: 30 mm
Real Field of View: 6.5°
Exit Pupil: 3 mm
Relative Brightness: 9
Weight: 1¾ lbs (440 gr)
Height: 4¾" (122 mm)
Width: 4½" (115 mm)



ASAHI PENTAX 8×30 COATED
ASAHI OPTICAL CO., LTD.

Magnification: 8×
Diameter of Objective Aperture: 30 mm
Diameter of Exit Pupil: 3.7 mm
Angle of View: 7.5°
Field of View at 1000 yds.: 394 ft.
Weight: 1¾ lbs (519 gr)
Height: 4¾" (111 mm)
Width: 8¾" (168 mm)



CARTON 8×30 WIDE ANGLE SHORT MODEL
CARTON OPTICAL IND., LTD.

Focusing: Central Focusing
Magnification: 8×
Diameter of Objective Aperture: 30 mm
Real Field of View: 8.5°
Exit Pupil: 3.7 mm
Relative Brightness: 14
Weight: 1¼ lbs (525 gr)
Height: 4" (102 mm)
Width: 6¾" (165 mm)

Ⓜ For address, see page 170

Binoculars

BINOCULARS



NIKON 8 × 30 COATED
NIPPON KOGAKU K.K.

Focusing: Central focusing
Magnification: 8×
Diameter of Objective Aperture: 30 mm
Real Field of View: 8° 30'
Exit Pupil: 3.8 mm
Relative Brightness: 14.4
Weight: 1 1/4 lbs (500 gr)
Height: 3 1/4" (87 mm)
Width: 6 1/4" (175 mm)



TOPCON 8 × 30CF
TOKYO OPTICAL CO., LTD.

Focusing: Central focusing
Magnification: 8×
Diameter of Objective Aperture: 30 mm
Field of View: 7° 5'
Exit Pupil: 3.75 mm
Relative Brightness: 14.1
Weight: 1 1/4 lbs (510 gr)
Height: 4 1/2" (113 mm)



FUJICA MEIBO 6 × 30
(MARINE TYPE)
FUJI PHOTO FILM CO., LTD.

Focusing: Individual focusing
Magnification: 6×
Diameter of Objective Aperture: 30 mm
Real Field of View: 8° 30'
Weight: 1 1/4 lbs (640 gr)
Height: 4 1/2" (120 mm)
Width: 6 1/2" (170 mm)



COMET 7 × 25 COATED
TOA OPTICAL CO., LTD.

Focusing: Central focusing
Magnification: 7×
Diameter of Objective Aperture: 25 mm
Real Field of View: 10°
Exit Pupil: 3.75 mm
Relative Brightness: 12.75
Weight: 1 1/4 lbs (500 gr)
Height: 3 1/4" (85 mm)
Width: 2 1/4" (65 mm)



ASAHI PENTAX 6 × 25
COATED (WIDE ANGLE)
ASAHI OPTICAL CO., LTD.

Magnification: 6×
Diameter of Objective Aperture: 25 mm
Diameter of Exit Pupil: 4.1 mm
Angle of View: 13°
Field of View at 1000 yds.: 577 ft.
Weight: 1 lbs (459 gr)
Height: 2 1/4" (67 mm)
Width: 4 1/4" (116 mm)



MENAN 8 × 20 COATED
MEIJI SEIKO CO., LTD.

Focusing: Central focusing
Magnification: 8×
Diameter of Objective Aperture: 20 mm
Real Field of View: 5° 3'
Exit Pupil: 2.5 mm
Relative Brightness: 6.2
Weight: 3/4 lbs (200 gr)
Height: 2 3/4" (72 mm)
Width: 3 3/4" (95 mm)



COMET 7×18 COATED
TOA OPTICAL CO., LTD.

Focusing: Central focusing
Magnification: 7×
Diameter of Objective Aperture: 18 mm
Real Field of View: 7°
Exit Pupil: 2.57 mm
Relative Brightness: 6.6
Weight: ½ lbs (225 gr)
Height: 2½" (58 mm)
Width: 1¾" (40 mm)



NIKON 6×18
NIPPON KOGAKU K.K.

Dust and moisture-proof, internal focusing.
Central focusing with individual eyepiece adjustment.
Magnification: 6×
Effective Diameter of Objective Lens: 18 mm
Angle of View: 8°
Field of View at 1000 yds.: 140 yds.
Exit Pupil: 3 mm.
Relative Brightness: 9
Weight: ½ lbs (230 gr)
Width: 3¾" (93 mm) Height: 3" (77 mm)



NIKON 7×15 COATED
NIPPON KOGAKU K.K.

Focusing: Central focusing.
Magnification: 7×
Diameter of Objective Aperture: 15 mm
Real Field of View: 8°
Exit Pupil: 2.1 mm
Relative Brightness: 4.4
Weight: ½ lbs (120 gr)
Height: 1¾" (44 mm)
Width: 3¾" (100 mm)



SIRIUS 8×~15×50 BCF
FULLY COATED
ITABASHI OPTICAL MFG. CO., LTD.

Focusing: Central focusing.
Magnification: 8×~15×
Diameter of Objective Aperture: 50 mm
Real Field of View: 6°~4.5°
Weight: 2¾ lbs (1.18 kg)
Height: 7¾" (195 mm)
Width: 8¼" (205 mm)



UNISCOPE 8×~14×50
COATED
KOKI-SHA CO., LTD.

Focusing: Central focusing.
Magnification: Zooming 8×~14×
Diameter of Objective Aperture: 50 mm
Real Field of View: 5°03'~4°50'
Exit Pupil: 6.2 mm~3.5 mm
Weight: 2¾ lbs (1.3 kg)
Height: 7¼" (180 mm)
Width: 8" (205 mm)



SIRIUS 7×~12×40 FULLY
COATED
ITABASHI OPTICAL MFG. CO., LTD.

Focusing: Central focusing.
Magnification: 7×~12×
Diameter of Objective Aperture: 40 mm
Real Field of View: 7.5°~5.5°
Weight: 2¾ lbs (1.05 kg)
Height: 6½" (160 mm)
Width: 7¾" (185 mm)

Telephoto

ZOOM BINOCULARS FIELD GLASS
SPORTS GLASS OPERA GLASS



**UNISCOPE 7x ~ 12x 40 ZCF
COATED**

KOKI-SHA CO., LTD.

Focusing: Central focusing
Magnification: Zooming 7x ~ 12x
Diameter of Objective Aperture: 40 mm
Real Field of View: 6.2° at 7x (323 feet at 1000 yds)
Exit Pupil: 5.7 mm at 7x
Weight: 2 1/4 lbs (1185 gr)
Height: 5 1/2" (130 mm)
Width: 2 1/2" (65 mm)
Length: 7" (175 mm)



**SIRIUS 7x ~ 14x 35 BCF
FULLY COATED**

ITABASHI OPTICAL MFG. CO., LTD.

Focusing: Central focusing
Magnification: 7x ~ 14x
Diameter of Objective Aperture: 35 mm
Real Field of View: 7° to 4.9°
Weight: 2 1/2 lbs (930 gr)
Height: 6 1/4" (160 mm)
Width: 7 1/4" (180 mm)



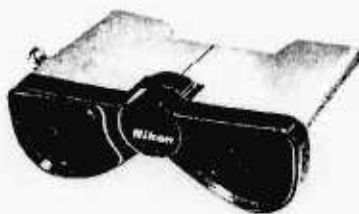
**FUJICA MEIBO VARIOMATIC
FUJI PHOTO FILM CO., LTD.**

Focusing: Central focusing
Magnification: 5x ~ 10x
Diameter of Objective Aperture: 35 mm
Real Field of View: 8° ~ 5°30'
Exit Pupil: 7 mm ~ 3.5 mm
Weight: 2 3/4 lbs (1109 gr)
Height: 5 1/2" (138 mm)



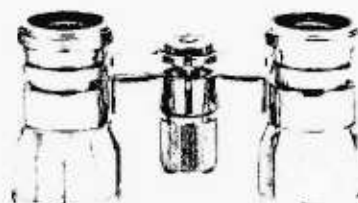
**FIELD GLASS No. 112-C
CARTON OPTICAL IND., LTD.**

Focusing: Central focusing
Magnification: 4x
Diameter of Objective Lens: 40 mm
Weight: 1 1/2 lbs (400 gr)
Height: 5 1/2" (130 mm)
Width: 2" (50 mm)



**NIKON SPORTS GLASS 3 X
NIPPON KOGAKU K.K.**

Focusing: Central focusing
Magnification: 3x
Diameter of Objective Lens: 26 mm
Angular Field of View: 9°
Linear Field at 1,000 yds: 158 yds
Exit Pupil: 8.6 mm
Relative Brightness: 74
Weight: 3/4 lbs (180 gr)



**OPERA GLASS 10-G
CARTON OPTICAL IND., LTD.**

Focusing: Central focusing
Magnification: 2.5x
Diameter of Objective Lens: 23 mm
Weight: 3/4 lbs (180 gr)
Height: 1 3/4" (45 mm)
Length: 3 3/4" (97 mm)
Width: 1 1/4" (30 mm)

Teloscopio

RIFLE SCOPES



KOWA
KOWA CO., LTD.

Type: American type
Magnification: 3x~9x zoom
Diameter of Objective Aperture: 42 mm
Real Field of View: 7°~3°
Exit Pupil: 14~4.7 mm
Eying Distance (from the eyelens): 3.9~2.6" (99 mm~66 mm)
Diameter of Tube: 1.004" (25.5 mm)
Overall Length: 12" (304.8 mm)
Weight: 3/4 lbs (415 g)
Besides the above model, rifle scopes of the following magnifications are available: 2.5x, 3x, 4x, 6x, 8x, 10x

PLUMB RIFLE SCOPE
OMORI SOGO KAGAKU KOGYO CO., LTD.

Type: Zoom Rifle Scope
Magnification: 3x~7x
Diameter of Objective Aperture: 32 mm
Real Field of View: 5°~3°20'
Exit Pupil: 10.3 mm~4.4 mm
Eying Distance (from the eyelens): 104 mm~80 mm
Diameter of Tube: 1" (25.4 mm)
Weight: 9/16 lbs (380 gr)
Overall Length: 12 3/4" (315 mm)



TAMRON RIFLE SCOPE
TAISEI KOGAKU KOGYO CO., LTD.

SPECIFICATION	2-3/4x21mm	4x22mm	6x32mm	8x-9x38mm	8.5x-10x48mm
Magnification	2-3/4x	4x	6x	8x-9x	8.5x-10x
Clear aperture of Objective lens	21mm	27mm	32mm	38mm	48mm
Exit pupil	7.6mm	8.8mm	5.3mm	12.7mm-14.7mm	18.0mm-21.0mm
Field of view at 100 yds (at 100 meters)	14 ft (4.3 m)	30 ft (9.1 m)	30 ft (9.1 m)	38 ft-44 ft (11.6 m-13.4 m)	36 ft-42 ft (11.0 m-12.8 m)
Field of view (degrees)	8°20'	5°40'	7°30'	7°10'-7°30'	7°-7°50'
Eyepiece	3 in	3 in	3 in	3 in	3 in
Overall length	10-2/8 in	11-4/8 in	12-6/8 in	12-6/8 in	12-5/8 in
Tube diameter	1 in	1 in	1 in	1 in	1 in
Net weight	8.3 oz	9.5 oz	9.5 oz	11.5 oz	15.5 oz
Internal adjustment mechanism on movable turrets at 100 yds	1 in	1 in	1 in	1 in	1 in
Reticle adjustment	Internal Image Moving	Internal Image Moving	Internal Image Moving	Internal Image Moving	Internal Image Moving
Accuracy & Entrance illumination	more than ±20'	more than ±20'	more than ±20'	more than ±30'	more than ±20'
M. & E. Dial	1°	1°	1°	1°	1°
Lens element	5	5	5	12	12
Sealing	Perfect fog proofed nitrogen gas filled and sealed	Perfect fog proofed nitrogen gas filled and sealed	Perfect fog proofed nitrogen gas filled and sealed	Perfect fog proofed nitrogen gas filled and sealed	Perfect fog proofed nitrogen gas filled and sealed
Finish	Surface ultra hard anodizing	Surface ultra hard anodizing	Surface ultra hard anodizing	Surface ultra hard anodizing	Surface ultra hard anodizing

TRADE MARKS

OF MANUFACTURERS

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TRADE MARKS OF MANUFACTURERS



ASAHI OPTICAL
CO., LTD.

B.S.D

BUNSHODO
CO., LTD.



CABIN INDUSTRIAL
CO., LTD.

Canon

CANON CAMERA
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CO., LTD.
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FUJI ELECTRIC LAMP
INDUSTRIAL CO., LTD.



FUJI OPTICAL MFG.
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FUJI PHOTO FILM
CO., LTD.



FUJI PHOTO OPTICAL
CO., LTD.



FUJI SOKURYOKI
SEIZO K.K.



FUJIMI OPTICAL
CO., LTD.



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KOBAYASHI SEIKI
SEISAKUJO, CO., LTD.



KOIZUMI SOKKI MFG.
CO., LTD.



KONGO SURVEYING
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CO., LTD.



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CO., LTD.



MEIJI SEIKO
CO., LTD.



MINOLTA CAMERA
CO., LTD.



NAKAMURA OPTICAL
WORKS LTD.



NIPPON KOGAKU K.K.



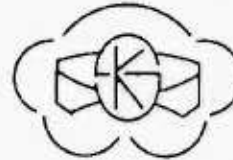
NIPPON MICROSCOPE
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TAISEI KOGAKU
KOGYO CO., LTD.



TAMAYA & CO., LTD.

TIYODA OPTICAL
CO., LTD.TOA OPTICAL
CO., LTD.TOKYO MICROSCOPE
CO., LTD.TOKYO OPTICAL
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INSTITUTE (TOKYO
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CO., LTD.UNION OPTICAL
CO., LTD.

Ushikata

USHIKATA MFG.
CO., LTD.WORLD SOKKI
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SEISAKUSHO

YASHICA CO., LTD.

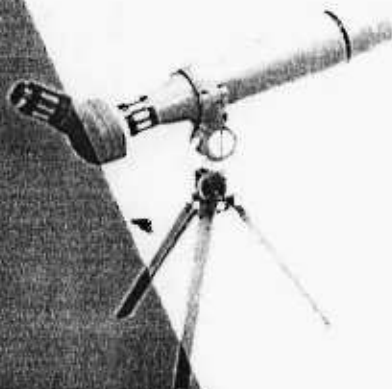
YASHIMA OPTICAL
CO., LTD.

ZOOM Spotting Scopes
16 to 50

MODEL 10R Z

200mm (8")
10x50mm
10x50mm
10x50mm
10x50mm
10x50mm
10x50mm
10x50mm

SEIKO
SCOPE



UNITRON

UNITRON SEIKO RENKYUSHO, LTD.

100-10-KOBE-NOHYACHO, SETAGI-KU, TOKYO, JAPAN
GARET ADDRESS: SEIKO CO. TOKYO
PHONE: 91019-9171

Spotting Scopes
Diana Type

Spotting Scopes
Equatorial Models

Spotting Scopes
Motor Driven
Weight Driven

16 to 10

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5mm

15

Nikon

Historical Background

The Nippon Kogaku K.K. is the oldest optical company in Japan, and enjoys a very high reputation throughout the world. The history of the Nippon Kogaku K.K. is also the history of the development of Japan's optical industry, for the foundation of the Company dates back to July, 1917, when the country's optical industry was still in its infancy.

Quality First and Diversity of Products

The Company has always in its business policy placed quality before everything else with the result that this doctrine of quality first is deeply rooted in the minds of its technicians, who maintain a most rigid standard of tests and inspection, which allows no second class articles to be included in the array of the Company's commodities. Such a quality-consciousness characterizes the enterprise of the Nippon Kogaku, which is always mindful of betterment of its merchandise through quality control.

Another outstanding feature of the Company's enterprise is that it has taken up manufacture of a variety of items. Such a many-sided manufacturing policy is typical of the Company, and allows it to cater to the diversified demands of the market, and at the same time affords it an opportunity to foster and preserve the wide range of its technical knowledge and efficiency.

Glassmaking

The company's executives in its early days may justly be given credit for their insight in deciding to undertake the melting of its own optical glass, for that decision had a far-reaching effect on the current success of the Company in turning out the high grade products which have received high commendation everywhere.

NIPPON KOGAKU K.K.

TOKYO, JAPAN

RIFLE SCOPE

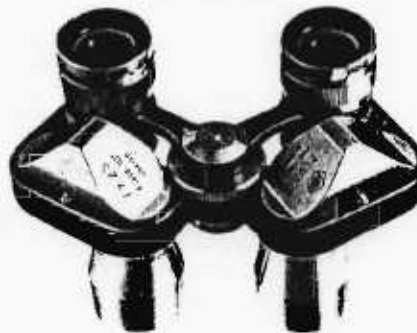
FIXED			ZOOM		
2.5 × 20	4 × 20	4 × 32	1 × ~ 4 × 20	1.5 × ~ 4 × 20	2 × ~ 7.5 × 20
6 × 32	4 × 40	6 × 40	3 × ~ 7 × 32	2.5 × ~ 10 × 32	
9 × 40	12 × 40	20 × 40	4 × ~ 9 × 40	3 × ~ 12 × 40	

ZOOM
SPOTTING SCOPE

15 × ~ 50 × 60
20 × ~ 60 × 80
15 × ~ 60 × 101

ZOOM
TELE SCOPE

MICRO BINOCULAR



6 × 15 7 × 15 6 × 18
7 × 18 8 × 20 10 × 20

WIDE ANGLE

7 × 25 8 × 30 10 × 40 12 × 50

TYPE: Individual or Central focusing

13 × ~ 40 × 40
13 × ~ 50 × 50
15 × ~ 60 × 60
20 × ~ 90 × 60



OMORI SOGO KOGAKU KOGYO CO., LTD.

No. 202, Ikegami-honcho, Ota-ku, Tokyo, Japan.

Tel: Tokyo (752) 2641~3

Fine Quality



School Microscope
100x, 200x, 300x
w/illumination

Telescope
Microscope
Trial Lenses
Reading Glass
Linen Tester
Slide Set
Dissecting Kit
and
Other Goods



Zoom Spotting Scope
20x ~ 60x 60mm



Cine Tripod
3 Westergaard Hand Stop

TOWA OPTICAL MFG. CO., LTD.

Head Office: 13-21, 4-chome, Daito, Daito-ku, Tokyo, Japan

Main Factory: 16-1, 6-chome, Higashi-Ogu, Arakawa-ku, Tokyo, Japan

Cable: TOWAYAMAMOTO



SYMBOL OF EXCELLENCE

Combining the letters L and J (standing for Light Machinery of Japan), the J-symbol has become a hallmark of unfailing quality, the stamp of approval on which Japan's entire binoculars industry is staking its reputation throughout the world. You will find this hallmark on the shoulder hinges or support strut of all approved binoculars manufactured in Japan since November, 1959.

The Japan Binoculars Export Promotion Association takes unqualified pride in recommending the purchase of these high quality, moderately priced optical instruments.



The Japan Binoculars Export Promotion Association was established in 1959 under the "Law Concerning Promotion of Export Light Machinery." Two factors prompted its establishment: One was the desire of manufacturers to offer high quality products at reasonable prices. The other was the recommendation of the Japanese Government to build confidence in the quality of Japanese products, to encourage the development of the optical industry, and to improve the standard of living of the people.

The Association's main objective is to promote the export of Japanese binoculars, but serves the binoculars industry as a whole, including exports.

Your inquiry to any one of them will receive prompt attention

JAPAN BINOCULARS EXPORT PROMOTION ASSOCIATION

Japan (Head Office):

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Telex: JAPBINOC 3190 JPN

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Dusseldorf

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145, Park Lane, London, W.1
England