

## Field Ranger 7 (#82020)

The Field Ranger 7 is based on the acclaimed Questar 7-inch design. The combination of unsurpassed optics with a simple and rugged design contributes to making it the ideal high-magnification field surveillance lens. The Field Ranger 7 is light, compact and well balanced. The EFL and aperture give it 2 times the power and 4 times the light grasp of its smaller brother, the Field Ranger 3.5. Its configuration makes it perfect for use with eyepieces, video, and night vision equipment.

### **Performance:**

Working Range:	16M (50ft) to infinity
Optical Resolution:	0.5 arc second
Clear Aperture:	178 mm (7 inches)
Effective focal Length (EFL)	2100 mm video/2400 mm with Image Erector
F-number:	f/12 @ 2100mm EFL
Spectral Response:	0.35 – 1.5 micron (other on request)

### **Optical:**

Design Type:	Maksutov Cassegrain Catadioptric
Corrector:	BK7/MgF12 178 mm CA (7 inches) diameter
Primary Mirror:	Pyrex substrate, aluminum coated, SiO overcoat, 193 mm (7.6 inches) diameter
Secondary Mirror:	Aluminum coating on corrector, SiO overcoat, 47 mm (1.85 inches) diameter
Baffling:	Wire helix in central tube, precision threaded

### **Mechanical:**

Barrel:	Aluminum heat-treated tube with precision machined and matching lens cell
Rear Closure Plate:	Aluminum; machined and matched to barrel
Central Tube:	Centerless ground stainless steel and 6 inch Ø mount plate
Mirror mount/focusing tube:	Precision linear roller bearing matched to central tube, integrated with mirror mounting thimble
Focus Mechanism:	32 pitch ground stainless steel focus rod: Direct acting on mirror thimble, spring loaded
Focus Control:	25 mm (1 inch) diameter straight knurled aluminum knob
Finish:	Aluminum parts: anodized; Exterior surfaces: Polane T polyurethane, putty color; Hardware and fasteners: stainless steel
Mounting:	Tripod mount with 1/4" – 20 & 3/8" – 16 Female threads

### **Dimensions:**

Length with C Mount:	48.7 cm (19.2 inches)
Length with Image Erector and 16 mm Eyepiece	53.0 cm (20.9 inches)
Maximum Height:	20.4 cm (9.53 inches)
Maximum Diameter:	20.4 cm (8.03 inches)

#### Case (outside) – ATA Type:

Length	71 cm (28 inches)
Depth	45 cm (18 inches)
Height	30 cm (12 inches)

#### Eyepiece

Magnifications:	(1 1/4 type or Threaded)
9 mm	266 X
12 mm Brandon	200 X
16 mm	150 X
18 mm	133 X
24 mm	100 X
32 mm	78 X

#### Weight:

Bare Lens with C mount	7.7 kg (17 lbs.)
Lens with Image Erector and Eyepiece	8 kg (17.6 lbs.)
Standard package complete, In case	21 kg (46 lbs.)

*All magnifications calculated with Image Erector in place. Refer to Questar price lists for individual components or option packages to complement use. 2" type Eyepieces can be used, but will not adapt to an Image Erector.*