

The Field Ranger 3.5" **Lightweight** telescope has been designed and configured to be more rugged and durable in a lighter package than any other Questar system to date. The Field Ranger 3.5" **Lightweight** will deliver under the most demanding situations. Its new lower profile and weight will make using this unit a standard item for all surveillance applications.



The newly designed low profile mount has strengthened the overall package while adding two basic built-in zero power sight mechanisms. The new single-piece aluminum tube construction together with the Questar integrated lens cell increase the ruggedness and hold the optical alignment under extreme conditions. The rear backplate assembly has also been improved to increase ruggedness and reduce weight.

Uniformity of product allows this unit to be utilized with other Questar optional accessories to make it more versatile and user friendly. Its configuration makes it perfect for use with eyepieces, video, night vision, and digital equipment.

The Field Ranger 3.5" **Lightweight System** includes:

- * the instrument
- * a 5-piece extension tube set
- * swivel coupling
- * protective soft caps
- * c-mount
- * 35mm adapter
- * waterproof case

Performance:

Working Range: 6M (20ft) to infinity
 Optical Resolution: 1.0 arc second
 Clear Aperture: 90 mm (3.5 inches)
 Effective Focal Length (EFL) 1175 mm video/1475 mm with Image Erector
 F-number: f/13.2 @ 1175 mm EFL
 Spectral Response: 0.35 – 1.5 micron (other on request)

Optical:

Design Type: Maksutov Cassegrain Catadioptric
 Corrector: BK7/MgF₂ 90 mm CA (3.5 inches) diameter
 Primary Mirror: Pyrex substrate, aluminum coated, SiO overcoat, 96 mm (3.78 inches) diameter
 Secondary Mirror: Aluminum coating on corrector, SiO overcoat, 29 mm (1.14 inches) diameter
 Baffling: Wire helix in central tube, anti-reflective black painted

Mechanical:

Barrel: Aluminum, single piece construction, I.D. thread baffled
 Rear Closure Plate: Aluminum, single piece precision machined pilot ϕ and lightened
 Central Tube: Centerless ground stainless steel; threaded into rear closure plate
 Mirror mount/focusing tube: Stainless steel sliding tube matched to central tube, integrated with mirror mounting thimble
 Focus Mechanism: 24 pitch ground stainless steel rapid focus rod: directly acting on mirror thimble, spring loaded, light weight mirror nut
 Focus Control: 13 mm (1/2 inch) diameter straight knurled aluminum knob
 Finish: Aluminum parts: anodized. Exterior surfaces: Polane T polyurethane.
 Color: sand (white, black, camouflage are optional).
 Hardware and fasteners: stainless steel

Mounting

Mounting: Low profile and **Lightweight** tripod mount with 1/4" – 20 & 3/8" – 16 Female threads
Built-in zero power finder tube and rifle sight

Length with C-Mount: 26.3 cm (10.35 inches)
Length with Image Erector and 16 mm Eyepiece 30.6 cm (12.05 inches)
Maximum Height: 11.9 cm (4.70 inches)
Maximum Diameter: 10.6 cm (4.20 inches)

Case (outside) – ABS plastic:

Length 47 cm (18.5 inches)
Depth 37 cm (14.6 inches)
Height 14.5 cm (5.7 inches)

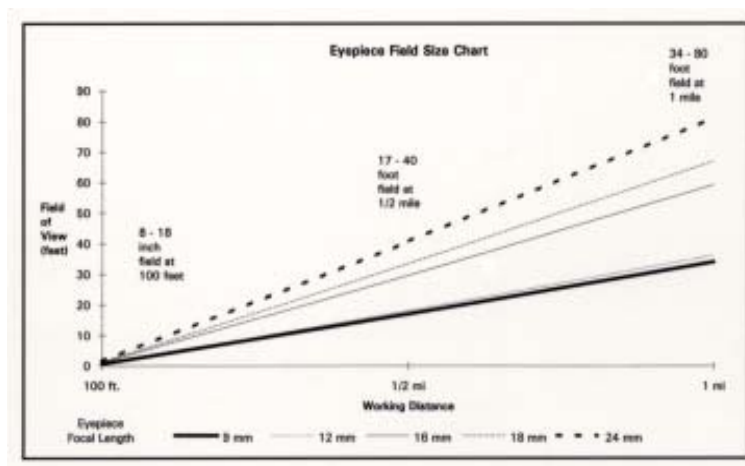
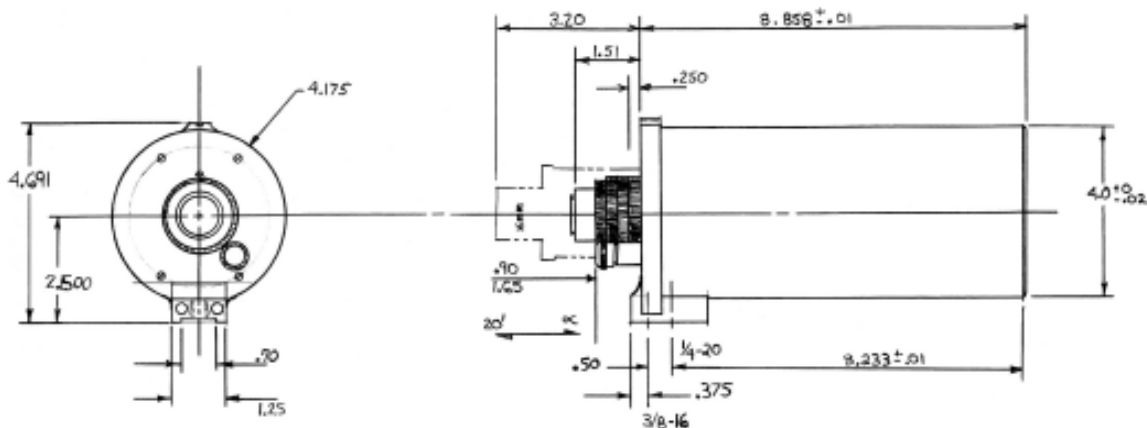
Eyepiece Magnifications:

(1 1/4 type or Threaded)
8 mm Brandon 184 X
12 mm Brandon 123 X
16 mm Brandon 92 X
24 mm Brandon 61 X
32 mm Brandon 46 X

Weight:

Bare Lens with C-mount 1.0 kg (2.1 lbs.)
Lens with Image Erector and Eyepiece 1.3 kg (2.8 lbs.)
Standard package complete, in case 4.7 kg (10.3 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.



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