

Orion® GrandView™ Vari-Angle 20-60x60mm and 20-60x80mm Zoom Spotting Scopes

#40908 20-60x60mm

#40909 20-60x80mm



Congratulations on your purchase of a GrandView Vari-Angle Zoom spotting scope! Please review this brief manual to familiarize yourself with the features and functionality of your spotting scope before using it.

WARNING: *Do NOT look at the Sun without a professionally made solar filter on the telescope; serious eye damage may result if you look at the Sun with any unfiltered optical instrument. Do not leave the telescope unsupervised around children. Always cover the lenses when leaving the telescope in direct sunlight.*

Refer to **Figure 1** for the following description on how to use the spotting scope.

1. To attach the spotting scope to a tripod (sold separately), thread the ¼"-20 post on the tripod's mounting plate into the threaded hole on the bottom of the Mounting Foot (**E**) until tight.
2. Remove the protective caps on both the front of the scope and the eyepiece. The front cap is threaded on, so turn it counterclockwise to unthread it.
3. Turn the Eyepiece Angle Adjustment Wheel (**D**) counterclockwise to allow positioning of the Eyepiece (**A**) at the desired angle, from 0 to 90 degrees. Then retighten the Eyepiece Angle Adjustment Wheel.
4. Focus the image by looking into the Eyepiece (**A**) and turning the large grooved Focus Ring (**H**) clockwise or counterclockwise until the image is sharp.

5. To vary the magnifying power, rotate the knurled Zoom Ring (**B**) until the desired power – from 20x to 60x – lines up with the white pointer. The focus may have to be adjusted once
6. The spotting scope can be rotated within its Rotation Collar (**F**) by loosening the Rotation Collar Thumbscrew (**G, see inset**), then rotating the scope to a comfortable viewing orientation. Then retighten the thumbscrew.
7. The 80mm model has a twist-up Eyeguard (**C**), while the 60mm model has a pop-up/down rubber Eyeguard. In the extended position the eyeguard can help block out ambient light while observing. However, for eyeglass wearers we suggest keeping the eyeguard retracted so the eye can be positioned closer to the eyepiece lens, to prevent restriction of the field of view.
8. The Glare Shield (**I**) can be extended by simply sliding it forward until it stops. In the extended position the Glare Shield will shade the objective lens, improving the image contrast. Retract the Glare Shield by sliding it inward.

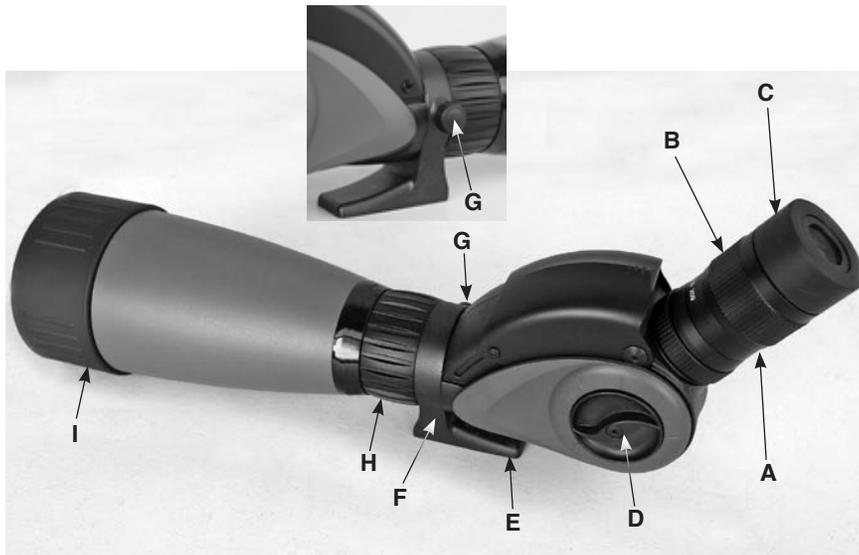


Figure 1.

SPECIFICATIONS

GrandView Vari-Angle 20-60x60mm

Housing Materials	Aluminum, PC/ABS
Objective lens	Doublet, 60mm diameter
Lens coatings	Fully multi-coated
Prism type	BK7
Prism coatings	Multi-coated
Internal baffling	Multiple baffle rings
Eyepiece	Integrated (thread-on), 20x-60x zoom, multi-coated optics
Magnification	20x to 60x, continuous
Field of view (degrees)	1.8 ~ 1.0
Field of View (linear)	92 ft. ~ 40 ft. @ 1000 yds. 28m ~ 12m @ 1000m
Exit Pupil	3 ~ 1mm
Eye Relief	31 ~ 18.5mm
Focuser	Helical ring
Minimum Focusing Distance	20 ft. / 6m
Eyepiece angle	0 (straight through) to 90 degrees (right angle), continuous
Scope rotation	360 degrees
Eyeguard	Pop-up, rubber (60mm); Twist-up (80mm)
Glare shield	Extendable
Mounting	1/4"-20 socket
Case	Hard case
Weight	3.6 lbs. / 1.6kg
Dimensions, spotting scope	15.3" x 3.0" x 4.5"
Dimensions, case	19" x 8.3" x 5"

GrandView Vari-Angle 20-60x80mm

Housing Materials	Aluminum, PC
Objective lens	Doublet, 80mm diameter
Lens coatings	Fully multi-coated
Prism type	BK7
Prism coatings	Multi-coated
Internal baffling	Multiple baffle rings
Eyepiece	Integrated (thread-on), 20x-60x zoom, multi-coated optics
Magnification	20x to 60x, continuous

Field of view (degrees)	1.8 ~ 1.1
Field of View (linear)	104 ft. ~ 63 ft. @ 1000 yds. 32m ~ 20m @ 1000m
Exit Pupil	4 ~ 1.3mm
Eye Relief	25 ~ 15mm
Focuser	Helical ring
Minimum Focusing Distance	30 ft. / 9m
Eyepiece angle	0 - 90 degrees (straight to right angle), continuous
Scope rotation	360 degrees
Eyeguard	Pop-up, rubber (60mm); Twist-up (80mm)
Glare shield	Extendable
Mounting	1/4"-20 socket
Case	Hard case
Weight	4.4 lbs. / 2kg
Dimensions, spotting scope	18" x 4.5" x 4"
Dimensions, case	21.3" x 8.5" x 6.5"

One-Year Limited Warranty

This Orion product is warranted against defects in materials or workmanship for a period of one year from the date of purchase. This warranty is for the benefit of the original retail purchaser only. During this warranty period Orion Telescopes & Binoculars will repair or replace, at Orion's option, any warranted instrument that proves to be defective, provided it is returned postage paid. Proof of purchase (such as a copy of the original receipt) is required. This warranty is only valid in the country of purchase.

This warranty does not apply if, in Orion's judgment, the instrument has been abused, mishandled, or modified, nor does it apply to normal wear and tear. This warranty gives you specific legal rights. It is not intended to remove or restrict your other legal rights under applicable local consumer law; your state or national statutory consumer rights governing the sale of consumer goods remain fully applicable.

For further warranty information, please visit www.OrionTelescopes.com/warranty.

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