

INSTRUCTION MANUAL

Orion® Dakota™

#9379 20-60x62mm Zoom Spotting Scope

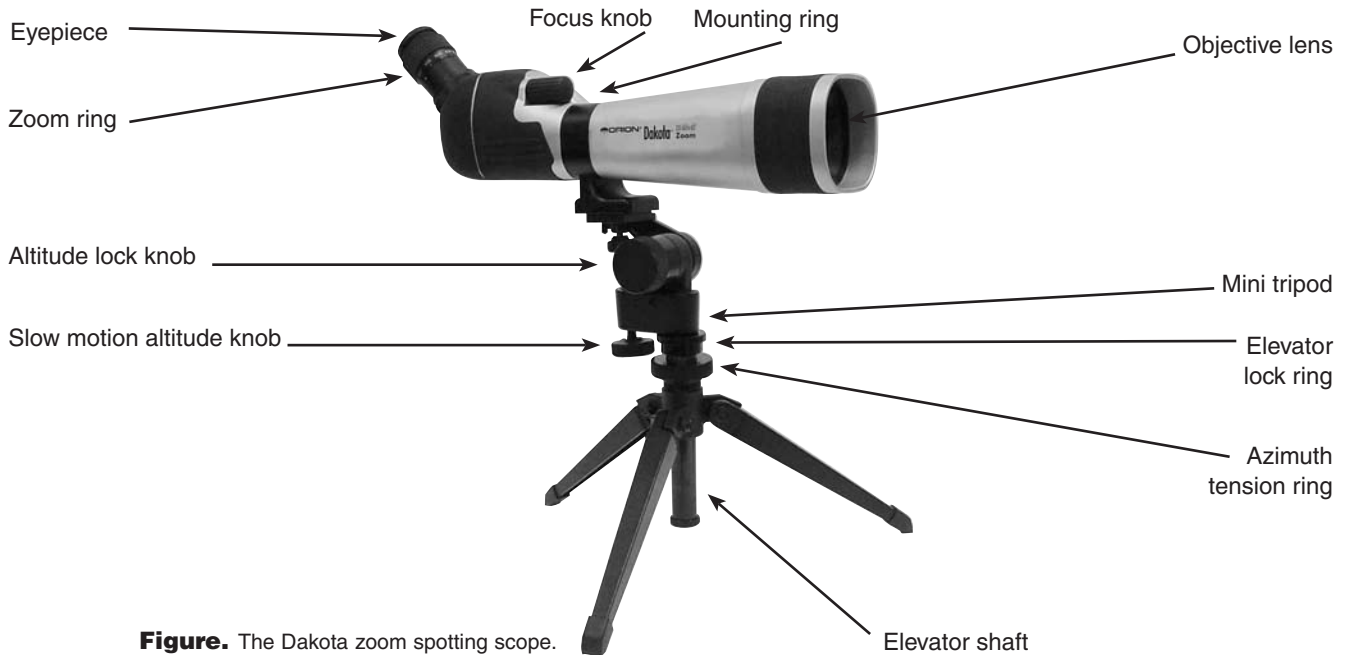


Figure. The Dakota zoom spotting scope.

Congratulations on your purchase of a quality Orion spotting scope. Your Dakota zoom spotting scope is a high-quality optical instrument for viewing birds, wildlife, sports events, or anything else you want to see more closely. It will provide many years of superb, enjoyable viewing. Before using your Dakota spotting scope, we recommend that you read through the following instructions.

Mounting the Dakota Spotting Scope to the Mini-Tripod

The Dakota Zoom Spotting scope comes complete with a mini-tripod. This tripod will allow you to immediately enjoy using your spotting scope. Attach the spotting scope to the mini-tripod by threading the 1/4"-20 stud on the tripod into the 1/4"-20 threaded hole on the spotting scope's mounting ring.

Using the Mini-Tripod

Once the spotting scope has been mounted to the mini-tripod, it can be precisely aimed in altitude (up/down) by the use of the slow motion altitude knob. For large movements in alti-

tude, loosen the altitude lock knob and raise or lower the spotting scope to the desired level. Retighten the altitude lock knob. To move the tripod in azimuth (left/right), simply take hold of the tripod with one hand and turn the body of the telescope with your other hand. If you find that there is too much or too little resistance to the azimuth movement, then loosen or tighten the knurled azimuth tension ring until you reach the desired tension level.

The spotting scope can also be raised using its elevator shaft. Loosen the azimuth tension ring all the way to allow height adjustment with the elevator shaft. When you reach the desired height, slide the elevator lock ring down to meet the azimuth tension ring. Then tighten the azimuth tension ring. Note that when you change the height of the elevator shaft, you may need to slide the elevator lock ring to make the adjustment.

Mounting the Dakota to a Tripod (optional)

Your Dakota spotting scope can be attached to a sturdy camera tripod by use of the 1/4"-20 threaded hole located in the mounting ring on the spotting scope's body. This hole accepts 1/4"-20 mounting studs that are standard on most camera tripods.

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Rotating the Scope in the Mounting Ring

The spotting scope can be rotated relative to the mounting ring, should you wish to change the orientation of the eyepiece for more comfortable viewing. With the mounting ring attached to the tripod, just grasp the body of the spotting scope and rotate it to the desired position.

Focusing the Spotting Scope

Point the spotting scope in the general direction of an object at least 24 feet away. Turn the focus knob with your fingers until the object comes into sharp focus. Make certain that you are turning the focus knob and not turning the zoom eyepiece. Go a little bit beyond sharp focus until the image just starts to blur again, the reverse the rotation of the knob, just to make sure you've hit the exact focus point.

Using the Zoom Eyepiece

The Dakota spotting scope provides continuous zoom magnification from 20x to 60x. The magnification is adjusted to the desired level by rotating the zoom ring on the eyepiece. The arrow indicator and magnification scale show the magnification setting. Changing the magnification may also require a slight refocusing to achieve the sharpest image.

For general use, it's a good idea to start viewing at the lowest magnification (20x) until you've acquired your viewing target. Then you can zoom in to a higher magnification to see more detail. Note that as magnification increases, the images will not be as bright as they are at lower powers.

Roll-Down Eyecups

Your spotting scope features a roll-down eyecup on the zoom eyepiece. This eyecup is usually left in the up position for use without eyeglasses. To use the spotting scope with eyeglasses, simply roll down the eyeguard by folding it down on one side, then sliding your fingers around the eyeguard's rim.

Care and Maintenance

Although the Dakota spotting scope is durable, it should avoid prolonged exposure to the elements. Keep the Dakota in its hard case and indoors when not in use.

All optics, when exposed to excessive temperature changes or high humidity, have the potential to fog up. In cold weather, allow the optics to adjust slowly to the outdoor temperature prior to use by storing the spotting scope (in its case) in a cool area, such as an unheated garage or the trunk of a car. Before bringing the spotting scope back inside a warm house after use, again store it in a cool area for an hour or two, then open the case, remove the spotting scope, take off the dust caps, and let everything dry overnight. Store the instrument in a cool, dry place; storage in a humid environment will result in mold growth that destroys the optical coatings. This is not covered by the warranty.

Cleaning the Lenses

The lens surfaces of the Dakota are coated with anti-reflection coatings, which can be damaged with careless handling. Avoid touching lens surfaces with your fingers or any coarse material. Clean the lenses if they get noticeably dirty. The dust that builds up on them promotes mold growth, which etches the glass and destroys the coatings. Always use lens cleaning tissue and fluid designed specifically for telescope optical coatings. Do not use

regular tissue or fluids made for eyeglasses or household use. Do not disassemble the spotting scope to clean it.

To clean the lenses, first blow air on the lens with a blower bulb or compressed air to remove any large particles. Then brush the lens with a soft lens brush and blow air again to remove any dislodged particles. Put two drops of lens cleaning fluid on a sheet of lens tissue (never directly on the lens). Wipe the lens gently with a circular motion, taking care to avoid undue pressure or rubbing. Quickly remove the excess fluid by wiping with a clean, dry lens tissue. On the objective lens, clean only a small area at a time, using a fresh lens tissue on each area.

Using an Optional Camera Adapter

An optional camera adapter (#5223) is available for the Dakota zoom spotting scope. This adapter, along with an optional, brand-specific T-ring and 35mm SLR camera, can be used to take pictures through your spotting scope. To properly use the spotting scope and camera adapter, you must remove the lens from the camera and thread the T-ring in place of the lens. Remove the zoom eyepiece from the body of the spotting scope and replace it with the camera adapter. Then thread the camera and T-ring onto the camera adapter. When photographing, center the image in the camera's viewfinder, and focus using the spotting scope's focusing knob.

Specifications

Objective lens diameter: 62mm

Coatings: Fully coated with multi-coatings on objective lens

Magnification range: 20x to 60x continuous zoom

Field of view: 1.6° to .8°

Eye relief: 28.4mm - 19mm

Exit pupil: 3.1mm - 1.03mm

Close focus: 24 ft.

Tripod attachment: Mounting ring accepts 1/4"-20 mounting studs, spotting scope can rotate within mounting ring

Weight: 3 lbs. 3 oz.

Length: 16"

Tripod: Mini-tripod included

Case: Hard carry case included

Camera adapter: optional (#5223)

One-Year Limited Warranty

This Dakota spotting scope 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 post-paid to: Orion Warranty Repair, 89 Hangar Way, Watsonville, CA 95076. If the product is not registered, proof of purchase (such as a copy of the original invoice) is required.

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, and you may also have other rights, which vary from state to state. For further warranty service information, contact: Customer Service Department, Orion Telescopes & Binoculars, 89 Hangar Way, Watsonville, CA 95076; (800) 676-1343.