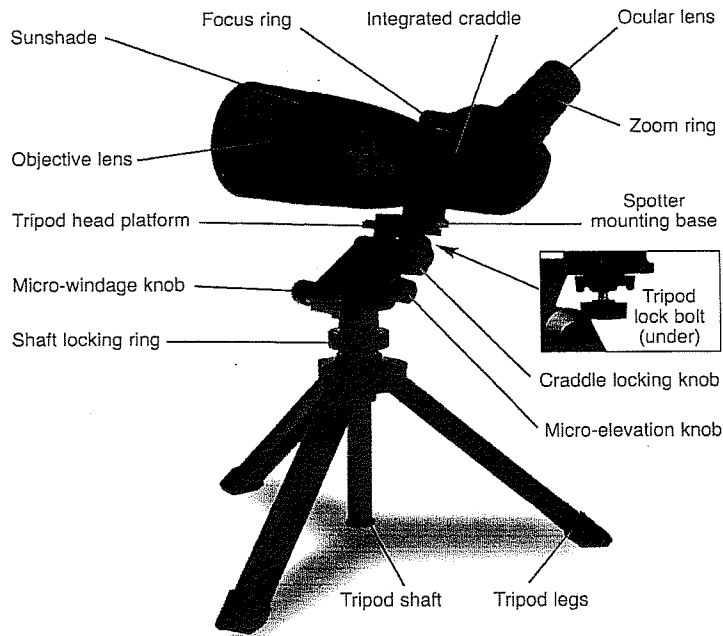


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CAUTION: DIRECT VIEWING OF THE SUN CAN CAUSE PERMANENT EYE DAMAGE. DO NOT ATTEMPT TO VIEW THE SUN WITH EITHER THIS PRODUCT OR THE NAKED EYE.

1. FUNDAMENTALS OF A SPOTTING SCOPE.

A) Objective lens.

This lens is responsible for creating the first image and above all it's responsible of the resolution, brightness, and general quality of the image. It is also the first step of the magnification process.

B) Prisms.

The first function of the prisms is to erect the image created by the objective lens. The second is to properly capture and transfer the largest amount of light possible. The prisms also reduces the actual focal lens making the scope smaller and compact.

C) Ocular lenses or eyepiece.

Is a combination of two to five elements depending on the eyepiece design. The standard eyepiece consist of a double lens or an achromatic and a single element. These lenses are responsible for the final magnification and the eye relief of the spotter. In some ocular designs the zoom and focus functions are added to the eyepiece. In these cases the amou of lenses increase and two helical adjusting mechanisms in the form of knobs or rings are incorporated to the ocular assembly.

D) Focus

This is a mechanical and optical function. Focus in a spotter is obtained usually by turning a knob or a ring, this action regulates the adjusting lenses in order to create a clear and sharp image. In a spotter the focus mechanism may be a helical, worm or screw type.

2. SPOTTER TYPES AND USE.

The spotters are grouped in two different families Porro prism and Roof prism.

The Porro prisms are always used in high quality spotting scopes. This system has better light transmission and resolution than the Roof prism type because the prism receiving surfaces are bigger and the light transmission is shorter and more direct. This means that the light travels through less surfaces and reaches the ocular in more quantity and intensity.

This system is used in astronomy, hunting, surveillance, general use, and photography.

The Roof prism spotters are usually compact, but in some cases this system is used in high powered scopes. The image in this optical design needs to travel through more surfaces inside the prism cluster in order to provide the proper focal length and desired magnification, and at the same time maintain a proper unit size. The image quality may be affected in a negative way since some of the light is lost during its transit through the different surfaces of the prism, but with BSA we have corrected this minor problem with the use of high density and transmission glass and the most modern and advanced coatings.

These spotting scopes are mainly used in hunting, sporting events, surveillance general use and photography.

The Porro and Roof prisms are subdivided in two quality groups. BK7 low density or light transmission (lower quality) and the BAK4 high density or light transmission.

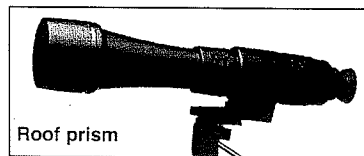
3. HOW TO USE THE SPOTTING SCOPE.



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Porro prism



Roof prism

Assembly

Remove the tripod from the package, spread the legs, and set on a firm level surface. Position spotting scope mounting base on tripod head platform. Thread tripod lock bolt into spotter mounting base.

Micro Adjustable tripod

Point the spotting scope in the desired position. Adjust height by rotating the shaft locking ring counter-clockwise to loosen and manually raise the shaft to the proper height.

Loosen the cradle locking knob to make basic elevation adjustments. Lock the shaft in position by turning the locking ring clockwise.

Once the elevation clamp screw is retightened, micro-adjustments can be made using the windage and elevation micro-adjustment knobs.

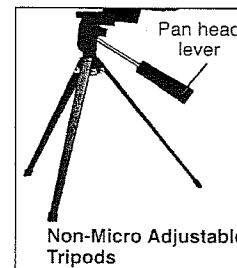
Non-Micro Adjustable Tripods

Twisting the handle of the pan head lever counter-clockwise to unlock the tripod head and make windage and elevation adjustments. Once the scope is set in position rotate the pan head lever handle clockwise to retighten.

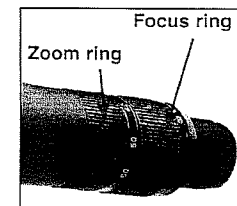
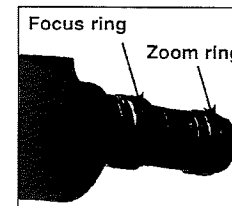
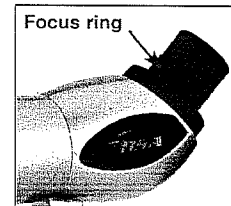
Focusing

With the scope in the desired position look through the eyepiece and start focusing by turning the focus ring until the image is clear and sharp.

Focusing should be done at the lower power, after this operation is completed the magnification can be increased by turning the zoom ring.



Non-Micro Adjustable Tripods

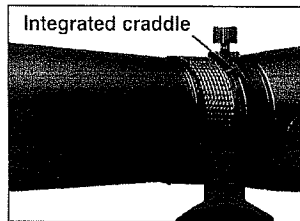


Zoom ring

Minor focus adjustments are necessary as the magnification increase. The zoom ring will be always located closest to the eyepiece. The focus ring may be located just forward of the zoom ring or at the central portion of the unit. Some spotters have a third adjusting ring closest to the objective, this ring has the same function as the Macro-adjustment in a telephoto lens. Refer to the illustration to locate the proper adjustments in the spotting scope.

Integrated cradle in the scope.

The scopes with the eyepiece in an angle come some times with and integrated cradle this allows an axial rotation of the scope to accommodate the eyepiece to the viewer necessities. To use this feature loosen the cradle lock knob (N) reposition the unit then retighten the cradle lock knob.



Telephotography

Some spotting scopes may be equipped to be used for long range photography. To make use of this option locate the photo adapter threads at the ocular end of the unit.

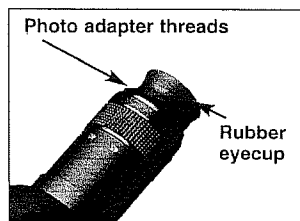
In some models it is necessary to remove the rubber eyecup or guard of the unit to locate these threads.

Thread the photo adapter tube onto the photo adapter threads.

Thread the Camera T-mount adapter (must be purchased separately) that is appropriate for your particular camera.

Attached the camera to the assembly as is usually done with any interchangeable lens.

Adjust the scope focus as was instructed before.



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HOW TO MAINTAIN YOUR SPOTTING SCOPE

Do not attempt to disassemble or clean the scope internally. This will invalidate the warranty. If the scope requires repairs or adjustment, complete instructions may be found in the warranty.

The external optical surfaces should occasionally be wiped clean with the lens cloth provided, a soft lint less cloth, or an optical quality lens paper. Keep the protective lens covers in place when the scope is not in use. Remove any external dirt or sand with a soft brush to avoid scratching the finish. Wipe the scope with a damp cloth, following with a dry cloth. Store the unit in a moisture-free environment.

SPECIFICATIONS

Model	Magnification & Obj. Lens	Prism System	Prism Glass	Lens Coating	Field of View ft.@1000 yards	Tripod Adapter	Weight oz.
DX2060X60	20 - 60x60mm	Porro	BAK-7	Fully	80 - 40	Yes	21.75
KDH2060X60	20 - 60x60mm	Porro	BAK-7	Fully	80 - 40	Yes	21.75
SP1545X50	15 - 45x50mm	Porro	BAK-4	Fully-Multi	110 - 60	Yes	23.79
SP2575X70	25 - 75x70mm	Porro	BAK-4	Fully-Multi	64 - 43	Yes	31.62
SP2060X60	20 - 60x60mm	Porro	BAK-4	Fully-Multi	86 - 43	Yes	27.00

FOR RETURNING PRODUCTS

Return products following the warranty guidelines.

A brief description is included below.

1. Remove any accessories and rings
2. Include a note with a brief description of the problem, address, telephone number, and email address
3. A \$10 check for return shipping and processing fees and proof of purchase.
4. We recommend using a shipping method with a tracking number(Fedex,UPS ect.). BSA optics cannot be held liable for lost or damaged items.

*Please note if your product is not registered you must have proof of original purchase, or you will be subject to repair fees.(see warranty)

Ship Products To:

BSA Optics
1475 S. Sam Houston Blvd.
Houston, MO 65483