The BSA Catseye™ Series Scopes are fit for any application. Clear objectives provide great light transmission for dusk-to-dawn use and they deliver ultra-high resolution and performance.
The Catseye™ Rifle Scopes have an adjustable side parallax (excluding the CAT3510x50). This new feature is convenient and user friendly, allowing for easy and precise parallax adjustment. A durable and reliable design, with an integrated slanted “hood” on the objective, functioning as a built in sun shade. The Windage and Elevation turrets are an advanced push/pull system with a zero reset with “Allen” screw.

Models available in the Catseye™ series:
CAT312x44SP, CAT3510x50, CAT416X44SP, CAT624X44SP.

Illuminated Models available in the Catseye™ series:
CAT3510X50RGBE,
CAT312X44RGBGE (*RGB: Red Green, Blue illuminated center dot).

Each Catseye™ Model Scope Includes:
Hex Wrench, Micro Fiber Lens Cloth, and Metal dust covers.

1. FOCUSING YOUR SCOPE
2. MOUNTING
3. PRE-ZEROING
4. ZEROING
5. ILLUMINATED MODELS
6. PARALLAX CORRECTION
7. MAINTENANCE

-------------------

**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.) FOCUSING YOUR SCOPE
Catseye™ scopes are “fast focus” and the standard eye relief is 4”. The magnification ring has clear engraved markings in gold. The engraved objective and ocular dust covers have an easy-to-grip handle for easy and quick removal.

![Diagram of Catseye scope](image)

**KEY:**
A.) Fully Multi-Coated Lens
B.) Objective Bell with Integrated Sunshade
C.) Windage Knob with Push/Pull Zero Reset
D.) 1” Tube
E.) Elevation Knob with Push/Pull Zero Reset
F.) Magnification Power Ring
G.) Fast Focus
H.) Ocular Bell
I.) Parallax Knob
Hold the scope and look through the eye piece at a flat, featureless well lit area. The reticle should appear sharp and well defined. To make adjustments rotate the ocular bell focus in either direction. Look through the scope again. If the focus of the reticle has improved but is not perfect, continue to rotate in the same direction. If the condition has worsened you will need to rotate the bell in the opposite direction.

**CAUTION:** BE SURE THAT THE FIREARM IS NOT LOADED. PRACTICE SAFE FIREARM HANDLING AT ALL TIMES.

2.) MOUNTING
Catseye™ scopes have a one-inch tube diameter. Depending on your rifle you will need to purchase the correct base dimension to insure fitment of mount and rail. Using a rest or gun vise is highly recommended. (One piece or two piece mounting rings can be used.)

- Separate the upper and lower halves of your ring(s).
- Install the lower half of your ring(s) on the rifle rail.
- Set the scope in the cradle.
- Replace the tops loosely (do not tighten).

Position the scope as far forward as possible and rotate the elevation turret to be vertical. Slowly pull the scope backward until your full FOV (field of view) is visible, check to make sure the reticle is aligned both vertically and horizontally with the bore axes of the firearm.

Once properly positioned, tighten the top halves of your ring(s) mount using a non-permanent thread lock.

**CAUTION:** BE SURE THAT THE FIREARM IS NOT LOADED. PRACTICE SAFE FIREARM HANDLING AT ALL TIMES.

3.) PRE-ZEROING
Locate an appropriate location to fire your rifle and set up a target at a distance of 100 yards from your shooting location. You should use a comfortable gun rest to eliminate as much human error as possible. Make certain the rifle is empty with no cartridge in the chamber and the breech open. Rotate the parallax ring to 100 yards. (CAT3510x50 parallax fixed 100 yards).
Manual: The Catseye™ series is equipped with push/pull locking turrets. Pull turret knob away from scope body to UNLOCK.

For windage adjustment turn counter-clockwise to move the point of impact right, and clockwise to move the point of impact left. For the elevation adjustment turn clockwise to lower the point of impact and counterclockwise to raise the point of impact.

Using a boresighter: Follow the instructions that came with your boresighter and install the boresighter in the muzzle of your rifle lining it up with the scope as close as possible.

Looking through the scope as though you were going to shoot you should see (2) two sets of crosshairs. One set is a plain crosshair (this is the one in the scope itself) and another set which is graduated or on a grid (this is the one in the boresighter). These crosshairs should line up with each other vertically, horizontally and in complete alignment. If the vertical and horizontal crosshairs are not parallel with each other, adjust the boresighter in the direction it needs to turn in order to achieve this.

Make sure the crosshairs cross or meet at precisely the same location. Proceed to adjust your scope right, left, up, or down until the cross-hairs match. Remove the boresighter from the muzzle. Push turret knob toward scope body to LOCK setting.

⚠️ CAUTION: BE SURE THAT THE FIREARM IS NOT LOADED. PRACTICE SAFE FIREARM HANDLING AT ALL TIMES.

4.) ZEROING
The next step is to test ammunition. No two ammunitions will behave in the same manner when fired from the same rifle. This may be one of the most important steps in sighting in any firearm and is the one that is most frequently omitted. DO NOT bypass this step.
• Holding the crosshairs steady on the target, squeeze off a round.
• Repeat this two more times to get a three shot group.
• Retrieve your target and triangulate the shots to get an average point of impact. Measure from that POI to the bulls eye where you aimed.
• This measurement can now be adjusted by unlocking and rotating the turret knobs.
• The arrows on the dial show which direction they will move the bullet. Turn according to the MOA scale on the dial.

The Catseye™ is 1/4 MOA, that means one click will move the bullet 1/4” at 100 yards. (Note, if you zero at a different yardage, say 50 yards, one click will move the bullet only 1/8” at 50 yards.)

Once you have adjusted the windage and the elevation, you are now ready for another 3 shot group. Repeat this process until you are satisfied with the results.

Note: It is important to allow the barrel to cool down in between the three shot groups as heating of the barrel can cause bullet flight to vary. It is also recommended to swab the bore between shots with a dry patch to reduce buildup. DO NOT use any cleaning fluid or oil on the swab as this can affect bullet flight. If you are sighting in the firearm for hunting deer, you may want to adjust the elevation an inch or two above bulls eye at 100 yards. This will give your firearm extended range and still keep you in the kill zone at 100 yards and less. After zeroing, use the hex wrench provided to loosen the three adjustment screws on both the windage and elevation knobs and reposition them so that the (“0”) lines up with the indicator line. Any further windage and elevation adjustments can be made more precisely by calculating the amount of clicks from the zero point.

5.) ILLUMINATED MODELS

Located at in the turret housing opposite the windage there is a rheostat knob, which controls the degree of illumination. The lower the number the dimmer the setting. The “0” position indicates the illumination is off.

Included with illuminated models is a 3v Lithium battery, type 2032. TO INSTALL: Remove the battery cover and insert the battery positive side up. Replace the cover. (NOTE: If the reticle dims or does not light at all, replacing the batteries may be necessary).
6.) PARALLAX CORRECTION
Parallax is a condition that occurs when the image of the target is not focused precisely by misalignment of shooters eye on the reticle plane. This condition exists in all scopes and accounts for more enlarging of rifle group sizes than anything else. Parallax is visible as an apparent movement between the crosshairs and the target when a shooter moves their head and changes eye alignment in the scope. The higher the magnification the more visible this is.

The side parallax knob is located opposite the windage knob on the other side of the scope for models with adjustable parallax. (On models with Illumination the rheostat battery knob will be located in this position and the parallax will be fixed at 100 yards).

Without touching the rifle, move your eye around behind the scope. Do the crosshairs appear to move on the target? If they do, the parallax is not set for the range of the target you are using. Catseye™ rifle scopes equipped with an adjustable parallax knob can correct this at all yardages.

If your crosshairs move to the right on the target’s image when you move your head to the left, the image plane must be further away than the crosshairs. To pull the image plane in by screwing the objective bell in so that the objective moves closer to you. In this set up, the image is essentially tied to the objective so moving the objective 0.1 mm moves the image 0.1 mm. Adjust outward to pull back.

7.) MAINTENANCE
DO NOT ATTEMPT TO DISASSEMBLE OR CLEAN THE SCOPE INTERNALLY. IF THE SCOPE REQUIRES REPAIRS OR ADJUSTMENT, SEE WARRANTY CARD FOR INSTRUCTIONS.

Start by brushing away dust and dirt particles from the lenses of the scope. Using the included lens cloth designed to clean optical surfaces brush dust or dirt particles away from the center of the lens towards the outside edges.

To remove minor smudges or fingerprints, start in the middle of the lens and using a circular motion clean towards the outside edges of the lens. If more aggressive cleaning is needed put a few drops of liquid lens cleaner on the cloth. Store the rifle scope in a moisture-free environment.

(Note: Not all cloth material like a handkerchief will remove smudges or fingerprints. Round fibers found in many cloth materials will tend to spread smudges and fingerprints. Use cleaning tools specifically designed for rifle scope cleaning).