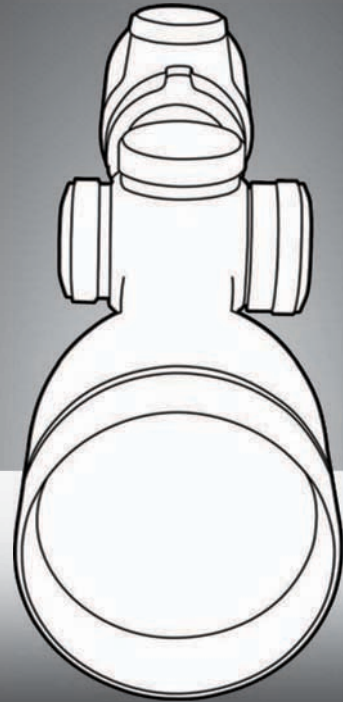


HAWKE[®]
SPORT OPTICS



www.hawkeoptics.com

RIFLESCOPE
USER MANUAL

MOUNTING THE RIFLESCOPE



CAUTION: Be sure that the firearm is NOT loaded. Always practise safe firearms handling.

Always check that the diameter of the riflescope body tube matches the diameter of the scope rings that you wish to use. There are two body tube diameters, 1" (25mm) & 30 mm. Always purchase the best mounts that you can afford making sure that the base of the mount will fit your rifle. Hi-recoil rifles may require mounts to be fitted with a recoil stop pin. All Hawke Match Mounts are fitted with a recoil stop pin.

- Fix the rings to the rifle base - do not tighten.
- Lay the riflescope into the rings. The scope should be mounted as low as possible without touching either the barrel or the receiver.
- Before tightening the rings, look through your scope in your normal shooting position. Adjust the scope (either forward or backward) until you find the furthest point forward (to ensure maximum eye relief) that allows you to see a full field of view.
- Rotate the scope in the rings until the reticle pattern is perpendicular to the bore and the elevation turret is on top.
- Tighten the screws evenly on each side.

WARNING: AVOID OVER-TIGHTENING THE RINGS. THIS CAN DAMAGE THE SCOPE AFFECTING PERFORMANCE OR RENDERING IT INOPERABLE.

WHEN INSTALLING A RIFLE SCOPE TO A RIFLE WITH HIGH LEVELS OF RECOIL, ALWAYS ENSURE THAT THERE IS ADEQUATE EYE RELIEF. THIS WILL AVOID EYE INJURY.

OCULAR LENS ADJUSTMENT



All Hawke riflescopes are fitted with an adjustable ocular focus. To focus your personal eye characteristics to the riflescope, giving a crystal clear picture of the reticle, carry out the following adjustment.

Focus with lock ring



Focus without lock ring



- Hold the scope about three or four inches from your eye and look through the eyepiece at a featureless, flatly lit, bright area such as a wall or open sky.
- If the reticle is not sharply defined instantly, loosen the eyeball lock-ring (if fitted). Turn the eyepiece (either direction) a few turns. Quickly glance through the scope again. If the focus has improved, but is still not perfect, continue focusing.
- If the focus became worse, turn it the opposite way.
- When the reticle appears in sharp focus, retighten the lock-ring (if fitted).

WARNING: NEVER LOOK AT THE SUN WITH A RIFLESCOPE – IT MAY PERMANENTLY DAMAGE YOUR EYES



TURRETS

Before mounting the scope remove the windage and elevation caps (where fitted) to expose the adjusters. Typical examples of turrets are shown below:

1. Low profile resettable.
2. Finger Resettable
3. Posi-grip resettable style.
4. Low profile resettable
5. Locking and resettable.
6. Turret reset to zero



Turret Adjustment:

Each click of adjustment is measured in minutes of angle on the target. One click of movement equates to 1/4" of movement on a target set at 100 yds distance. Therefore at different ranges, each click of adjustment changes:

Example: One click at:-

-50 yds	-100 yds	-200 yds	-300 yds
1/8"	1/4"	1/2"	3/4"



PRE-ZEROING

Pre-zero sighting can be done either visually or with a bore sighting collimator. Bore sighting collimators such as the "Hawke Shot Saver" are the best way to pre-zero. If a Bore sighting collimator is not available, it is recommended to pre-zero visually.

To bore sight visually:

- With the firearm in a steady rest position open the action of the firearm and look along the bore to a predetermined target (at approximately 50 yards distance).
- Scopes fitted with an adjustable objective or side focus should be adjusted to the 50 yds position. Set a variable power scope to mid-power.
- Remove the caps from the windage and elevation turrets. Adjust the windage and elevation adjusters to position the reticle on the center of the target.
- For windage adjustment, turn the windage adjustment turret clockwise to move the point of impact left and counter clockwise to move the point of impact right. In the same manner, adjust the elevation by turning the elevation adjustment clockwise to lower the point of impact and counter clockwise to raise the point of impact.

NOTE: When using windage-adjustable rings, make major windage correction with them. In certain shooting situations such as close range air gunning when specialised elevation adjustable rings are not available, the rings may have to be shimmed. Only final precision adjustment should be made with the scope's adjustment turrets.

ZEROING WITH LIVE AMMUNITION



WARNING: ALL SHOOTING SHOULD BE CARRIED OUT AT AN APPROVED RANGE OR OTHER SAFE AREA. EYE AND EAR PROTECTION IS RECOMMENDED.

Final sighting-in of your rifle should be carried out with live ammunition, based on your preferred target distance.

DANGER: If a bore sighting collimator or any other bore obstructing device was used, it must be removed before zeroing with live ammunition. An obstruction can cause serious damage to the gun and possible personal injury to yourself and others nearby.

Sighting in should be at the distance that you are normally going to shoot. The parallax should be set to this distance during the sighting in process. Set variable-power scope to highest power then from a steady rest position fire three rounds at target. Observe point of impact on the target and adjust windage and elevation adjusters as needed to correct aim. Repeat until on target zero is correct.

NOTE: Each click of adjustment changes bullet strike at a shooting distance of 100 yards by the amount shown on the windage and elevation screw dials (see page 3)

Resettable turrets:

After zeroing, loosen the two Phillips screws on the turret top about 1/2 turn, take care not to disturb your zero by "losing" a click or two when loosening the screws. Rotate the turret top/drum (which should now turn freely) to align the "o" with the index line on the turret body (see page 3 fig.6). Retighten the screws in the windage and elevation adjustment turrets.

SCOPES WITH ILLUMINATED RETICLES



If your rifle scope is equipped with an illuminated reticle, the rheostat is located at either the top of the eyepiece (fig.1) or on the "third turret" (fig.2). If you have purchased a Hawke digital scope the illumination buttons can be found on the top of the eyepiece (fig.3).



The rheostat provides adjustment for varying degrees of reticle brightness. When using the illuminated reticle, the highest brightness settings are recommended for daytime use where the ambient light is bright. This will allow the reticle to be visible against dark backgrounds such as woods. At times of low light such as dawn or dusk, the lowest brightness settings are recommended. These settings will not obscure the target. For digital illumination see separate instructions.

NOTE: The lower settings may not be visible during bright daylight.

The batteries are CR2032 coin style lithium batteries. To insert a battery unscrew the battery compartment cap on the top of the rheostat adjustment turret, and then insert a new one "+" up (fig.4).



PARALLAX ADJUSTMENT

Hawke riflescopes feature two types of parallax adjustment.

Objective front



Sidewheel



When mounting riflescopes with sidewheel parallax adjustment it is good practice to check the scope rings do not squeeze the scope too tightly. An over tightened front ring may cause binding or backlash of the sidewheel mechanism. Over tightening the rings can cause damage to the rifle scope tube. This is not covered under warranty.

To give the best accuracy all riflescopes should be parallax error-free at the required target distance. Non parallax adjustable riflescopes are set at 100 yds to be parallax error-free. Crossbow optics are set to be parallax error-free at 50 yds. Any other distance can cause a parallax error, this will show itself as a movement of the reticle on the target. Riflescopes with parallax adjustment allow the shooter to correct this error for any target distance. After the zero-in process, we recommend that the parallax adjustment is checked.

The rifle scope has printed pre-set distance markings on the parallax adjuster, these are only a guide to get you started. Shooters should test and adjust the parallax settings by using a measured distance target to set the optical system to your personal eye condition. It is best to first bench rest your rifle, set the rifle scope magnification to the maximum setting, then proceed to check the parallax markings, if required be prepared to re-mark the adjuster to your own personal settings.

Always set the parallax first, then after setting, adjust the reticle focus at the eyepiece. Parallax is a critical adjustment when shooting small game or paper targets over long distances. For hunting large game at closer distances the parallax error is not so critical.



MAINTAINING YOUR RIFLESCOPE

Each Hawke rifle scope is a precision instrument that deserves a high level of care. During manufacture the scope is purged with dry nitrogen and sealed to give a lifetime of reliability. Do not attempt to disassemble or clean the scope internally.

Keep the protective lens covers in place when the scope is not in use.

The external lens coatings should occasionally be wiped clean with the lens cloth provided or an optical quality lens paper. Remove any external dirt or sand with a soft brush to avoid scratching the lens coating.

Warning: Unnecessary rubbing or use of a coarse cloth may cause permanent damage to lens coatings

To clean the external surface of the scope it is recommended that a silicone impregnated cleaning cloth is used to protect the scope against corrosion.

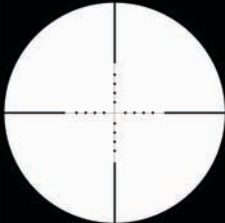
Tips for safe storage:

- Always store in a moisture-free environment.
- Never store the scope in places such as the passenger compartments of vehicles on hot days; the high temperatures could adversely affect the lubricants and sealants.
- It is recommended that the battery is removed if storing for long periods of time.
- Avoid direct sunlight that can enter the objective or the ocular lens, damage may result from the concentration (burning effect) of the sun's rays.

RETICLE TYPES



Hawke has many exclusive reticle designs. To view the full range of reticles available from Hawke visit www.hawkeoptics.com.



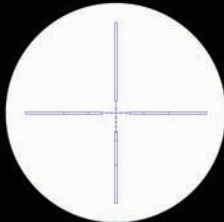
Mil Dot



30/30 Duplex



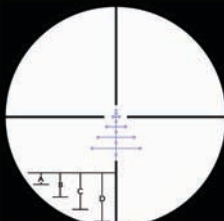
10x Half Mil Dot



MAP 6A



SR6



SR12

BALLISTIC RETICLE CALCULATOR



HAWKE BRC SOFTWARE - ADVANCED SOFTWARE DESIGNED TO ENSURE THE SHOOTER IS ALWAYS ON TARGET

All Hawke reticles are designed to give greater accuracy. The Hawke BRC is a free to use ballistic reticle calculator that is available to all shooters on www.hawkeoptics.com

This enables easy set-up of the additional aim points, and other advantages such as flip-up lens cover print-outs labels and trajectory graphs. The BRC works with all calibres and on all magnifications. It is simple to use and free to download.

With BRC you can:

- Browse a list of preset aim points suitable for your own calibre
- Choose a preferred reticle for your shooting calibre and requirements
- Adjust the presets to work either in metric or imperial measurements
- Change zero distances, muzzle velocity, magnification & Estimated Deterioration/Ballistic Coefficient value (ED/BC)
- Plot your rifle trajectory and find aim points
- Carry out advanced range finding calculations



ACCESSORIES

1. Haze filter caps (elasticated lens covers):
Haze filter caps are quick to install and remove, ideal for storage, transport and field use.
2. Flip-up lens caps:
Flip-up lens caps made from semi-flexible rubber and high quality clear and amber see-through lenses.
3. Screw-in lens covers:
Screw-in lens covers are designed to protect the lenses when not in use (will not fit sunshades).
4. Sunshades:
Hawke sunshades (sold separately) ensure that any stray light is kept to a minimum.
5. Honeycomb sunshades:
1/4" (6mm) Honeycomb sunshades reduce lens glare as effectively as a standard length sunshade.



WARRANTY

Your new riflescope has a limited lifetime warranty (restricted to 10 years in Europe) against premature failure due to defects in materials and/or workmanship, subject to the following conditions:

- The warranty does not cover failure due to damage caused by abuse.
- The warranty does not cover failure from excessive wear and tear even within the warranty period.
- A cash register or computer generated proof of purchase must accompany your claim.
- Should any original defect appear, please log your warranty claim with your retailer or at www.hawkeoptics.com

This warranty is limited to the original purchaser and is in addition to your statutory rights