

Endurance 30 FD 3-18x44 SF

SKU: 16433 • Riflescope

Basics

Mounting the Riflescope

Warning: 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 riflescope rings that you wish to use. Always make sure that the base of the rings will fit your rifle. High recoil rifles may require rings fitted with a recoil stop pin.

- 1 Fix the rings to the rifle base – do not completely tighten.
- 2 Remove the ring tops and lay the riflescope into the rings. The riflescope should be mounted as low as possible without touching the barrel, rear sight, or the receiver.
- 3 Before tightening the rings, look through the riflescope in your normal shooting position. Adjust the riflescope (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.
- 4 Rotate the riflescope in the rings until the reticle pattern is upright and the elevation turret is on top.
- 5 Tighten the base screws evenly, securing the mounts to the rifle base and tighten the ring top screws evenly on each side.

Warning: Avoid over tightening the rings. This can damage the riflescope affecting performance or rendering it inoperable.

16 in/lbs (1.33 ft/lbs, or 1.8 Nm) for ring top screws and 30 in/lbs (2.5 ft/ lbs, or 3.4 Nm) for ring base screws.

Warning: When installing a riflescope to a rifle with high levels of recoil, always ensure that there is adequate eye relief. This will avoid eye injury.

Turret Type

Exposed Locking Turrets

1

Before adjusting the turrets, you must first unlock them; this is achieved by pulling them outwards. They will now click when rotated.

2

The turrets can then be adjusted until the point of aim matches the point of impact. To lock the turrets, simply push them back down.

3

When a satisfactory zero is achieved, the turrets can be reset. To do this, remove the screws on the top of the turret with the turret in the down and locked position. The turret cover can then be removed and rotated to the “0” position. Re-install the screws. The riflescope is now “zeroed”.

Click Value

1/4 MOA

Each click of adjustment is measured in MOA (Minutes Of Angle) on the target.

1 click = 1/4 MOA = 1/4 in at 100yds, or 7mm at 100m.

Therefore at different ranges, each 1/4 MOA click of adjustment changes: 50yds = 1/8 in, 100yds = 1/4 in, 200yds = 1/2 in, 300yds = 3/4 in. 50m = 4mm, 100m = 7mm, 200m = 15mm, 300m = 22mm.

Parallax

Side Focus

To give the best accuracy all riflescopes should be parallax error-free at the required target distance. Most non-parallax adjustable riflescopes are set at 100 yards (91 meters) to be parallax error-free. Any other distance can cause a parallax error; this will show itself as a movement of the reticle relative to

the target when you move your eye position. 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 riflescope has printed preset distance markings on the parallax adjuster, these are only a guide to get you started. Check the parallax markings by setting the riflescope on maximum magnification, then proceed to check the printed markings against known target distances. If required be prepared to re-mark the adjuster to your own personal settings.

Ocular Lens

Ocular Lens Adjustment

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

1

With the riflescope set to roughly half magnification, hold the riflescope about three or four inches from your eye and look through the eyepiece at a blank, flatly lit, bright area such as a wall or open sky.

2

If the reticle is not sharply defined instantly, turn the eyepiece (either direction) a few turns. Quickly glance through the riflescope again. If the focus has improved, but is still not perfect, continue focusing.

3

If the focus becomes worse, turn it the opposite direction until correct.

Warning: Never look at the sun with a riflescope, it may permanently damage your eyes.

Zeroing

Rimfire & Centerfire (Live Ammo)

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.

Warning: 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 rifle

and possible injury to yourself and others nearby. Sighting in should be at the distance that you are normally going to shoot. On side focus models, the parallax should be set to this distance during the sighting in process.

1

Choose an appropriate magnification power for the target distance.

2

From a steady rest position fire three rounds at a target. Observe point of impact on the target and adjust windage and elevation turrets as needed to correct aim. For left/right adjustment, turn the windage turret clockwise to move the point of impact left and counter-clockwise to move the point of impact right. For up/down adjustment, turn the elevation turret clockwise to lower the point of impact down and counter-clockwise to raise the point of impact up. E.g. if the round has landed below where aimed, then the point of impact needs to be raised. This is done by adjusting the elevation turret counter-clockwise in the direction of "Up".

3

Repeat until point of aim and point of impact are the same.

Air Rifle

Zeroing can be done either manually or with a bore sighting collimator. If a bore sighting collimator is not available, it is recommended to zero manually.

1

For air rifles start by taking aim at a nearby target (at approximately 20 yards/meters).

2

On side focus models, the parallax should be set to this distance during the sighting in process.

3

Choose an appropriate magnification power for the target distance.

4

From a steady rest position fire three rounds at a target. Observe the point of impact on the target and adjust windage and elevation turrets as needed to correct aim and position the reticle on the center of the target. For left/right adjustment, turn the windage turret clockwise to move the point of impact left and counter-clockwise to move the point of impact right. For up/down adjustment, turn the elevation turret clockwise to lower the point of impact down

and counter-clockwise to raise the point of impact up. E.g. if the round has landed below where aimed, then the point of impact needs to be raised. This is done by adjusting the elevation turret counter-clockwise in the direction of “Up”.

5

Repeat until point of aim and point of impact are the same.

Note: if the point of impact is significantly off target after firing your initial rounds, inspect the mounting of the riflescope to ensure it is not poorly aligned or positioned. If required try removing the riflescope from the mounts and mounts from the rifle and starting again. This may remove any error in initial mounting.

Focal Plane

Second Focal Plane (SFP)

Second focal plane optical systems have their reticles positioned toward the eyepiece of the scope. The reticle pattern, as you see it, does not change size with alteration to the scope's magnification. This is useful, as it means the reticle pattern is not large and does not obstruct your view when on higher magnifications.

Each reticle is designed with its aim points calibrated on a specific magnification.

Accessories

Sunshade

The sunshade can be attached to the riflescope by screwing it into the objective thread. Multiple sunshades can be combined to create a larger sunshade.

Zoom Lever

All models are supplied with a removable zoom lever for fast and precise adjustment of your riflescope magnification with minimum effort. To install the zoom lever you must first remove the blanking screw in the zoom ring using the supplied 2mm Allen wrench.

Flip-up Covers

Metal flip-up covers are supplied to protect the lenses when not in use. Each cover has a key for attaching it to the scope. Open the flip-up cover and place it at the desired angle.

Locate the correct size key and insert into the grooves. The grooves are located on the inner thread of the covers. Turn the key until the cover is securely in place. If the cover is not in the correct position

the covers. Turn the key until the cover is securely in place. If the cover is not in the correct position, loosen slightly and adjust position. The opening and closing resistance of the flip-up cover can be adjusted by loosening or tightening the screw in the hinge.

Note: Ensure the ocular focus has been adjusted before installing the flip-up cover to the eyebell. The cover may not end up in the desired position if the ocular is adjusted after the flip-up cover is installed.

Note: The flip-up cover can also be installed on the sunshade.

Warranty

No Fault Lifetime Warranty

Hawke products are covered by our lifetime warranty. For full details and conditions or to make a claim please see hawkeoptics.com/warranty or contact your in-country distributor. **Please note:** your proof of purchase should accompany any warranty claim.

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