

X<sup>50</sup>

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## Basics

1 - **Objective end.** Contains the objective lens assembly and objective lens hood. The supplied sunshade threads into the objective hood.

2 - **Ocular end.** This is threaded for adjustment, sometimes referred to diopter correction or 'European style fast focus eyepiece'. See 'Guidance For Use' for instructions on how to adjust this to your eye.

3 - **Eyepiece section.** Houses the ocular lens assembly

4 - **Magnification ring.** This rotates to adjust the magnification setting.

5 - **Side parallax adjustment turret.** Sometimes referred to as 'side focus' or 'SF'. This turret is used to adjust/remove parallax.

6 - **Elevation and Windage turrets.** These are used to adjust the position of the reticle and 'zero in'. Compensate for windage and adjust to engage targets at different ranges with these.

7 - **Saddle section.** This houses the elevation, windage and side parallax turrets. To the front and rear of the saddle section is the 30mm main tube.



## What's Included?

Flip up lens covers x 1 set

Lens cleaning cloth x 1

Hex key for windage/elevation turret caps x 1

Threaded sunshade x 1

## Guidance For Use

### Fast Focus Ocular Lens / Diopter Adjustment

- It's important that the reticle appears sharp and is correctly set to your eye.
- Use the fast focus eyepiece to adjust the sharpness of the reticle to suit your eyesight, by pointing the scope at a featureless bright area such as a white wall or open sky. Do not look at the sun!
- Turn the fast focus eyepiece clockwise and anticlockwise until the reticle appears as sharp and defined as possible.
- If the above is not carried out correctly then parallax error may become a problem. Do this first, before the scope is even mounted.
- Once the eyepiece is set then don't adjust it.

### Mounting the riflescope

CAUTION : Ensure the firearm is not loaded when mounting the riflescope.

- All Falcon models are built around a 30mm tube/saddle section of one-piece construction.
  - Always use good quality mount rings. Poor quality mount rings may damage your scope and will almost certainly hinder performance.
  - Be careful not to crush the scope tube by over tightening the mount rings. Refer to literature supplied with the mount rings to ensure the correct torque settings are used on both the top screws and base screws. Each set of mount rings and supplied screws should be built to a specific tolerance that will determine the correct torque setting. Typically this will be measured in inch/lbs.
  - Equally, under-torqued mount rings can also be an issue, especially in combination with heavy recoil. If the mount ring manufacturer does not identify any torque settings for ring and rail screws then consider a different brand that does.
- X50 has a relatively low adjustment range of around 50MOA total due to the 5x magnification ratio and high top end magnification. As a result we recommend the use of adjustable mounts/rings and or a tapered rail/base in conjunction with this scope.**
- Use the lowest ring height that will give total clearance of scope and rifle, making sure to avoid contact with the barrel, receiver, pellet magazine, bolt or any other part of the set-up. A lower mounting position will help establish a proper cheek weld and **correct head position** - crucial for accurate and **consistent ranging** in Field Target use.

## Guidance For Use

### Windage / Elevation Turret Adjustment

- X50 has an adjustment value of 1/8MOA per click. This equates to just over 1/16" @ 50 Yards and 1/8" @ 100 Yards. The total elevation range is around 50MOA, this translates to 5 full turns of the elevation turret.

- X50 will be preset to mechanical centre (midway point of adjustment range) out of the box. Try and keep both the windage and elevation turrets as close to mechanical centre as possible when zeroing. Optical standard and adjustment consistency may suffer at the extremes of any scopes adjustment range. This is why we recommend the use of a tapered base or adjustable mounts/rings to aid zeroing and ensure X50 gives the best possible performance. - You will feel a positive resistance 'stop' once the scope reaches the extreme of its elevation or windage adjustment. Don't be tempted to force the turret any further as this will damage the mechanism.

- X50 features elevation and windage turret caps that are secured using a single top mounted holding screw. The turret caps can be repositioned as required, normally to display '0'. To do this then slacken the holding screw using the key provided in the box. Then disengage the turret cap by easing it off the internal shaft. A little upward force may be required to break the O-ring seal. Reposition the turret cap as desired, applying downward force to re-engage the turret with the spline and make the O-ring seal. Finally, retighten the holding screw to secure.

### Side Parallax Adjustment

-X50 has been designed to enable accurate range finding capability out to 55 yards via the use of the side parallax turret. Careful use of the side parallax turret will appear to bring targets in and out of focus.

- Generally speaking, the higher the magnification setting that is used, then the easier it will be to determine if the target and image is in or out of focus.

- To enable greater range finding precision then an additional side-wheel can be used with X50. For the most accurate results when using an additional side-wheel then its very important that the ranging method remains **consistent**.

- The start position at the wheel before ranging should always be the same, pick either infinity **or** minimum parallax distance as the start point and stick to the location of your choosing.

- Adjust the side-wheel in a smooth continuous motion **in one direction** until the target snaps into sharp focus. If you go too far and the target slips out of focus again, then return to the start point and repeat the process. For the most accurate results then its important to eliminate any **back and forth motion** at the wheel.

- To range the next target then return to the start point you have chosen, then repeat the process.

### Magnification Adjustment

- X50 has a 5x magnification optical system, adjustable from 10-50x power. There are indicator circles on the magnification ring at 12.5, 25 and 50 magnification. These correspond to the MOA accuracy of the reticle at those given magnification settings. For more information see the reticle diagram.

- To adjust the magnification simply rotate the ring by hand to the desired setting.
- **CAUTION : Do not tamper with the hex screw on the magnification ring, this does not adjust the ring tension.**
- The zeroed point of impact (POI) should remain unchanged across the entire magnification range, but additional aim points that may be used for holdover/under and windage will change. This is because the reticle is installed in the second focal plane (SFP).

#### Sunshade

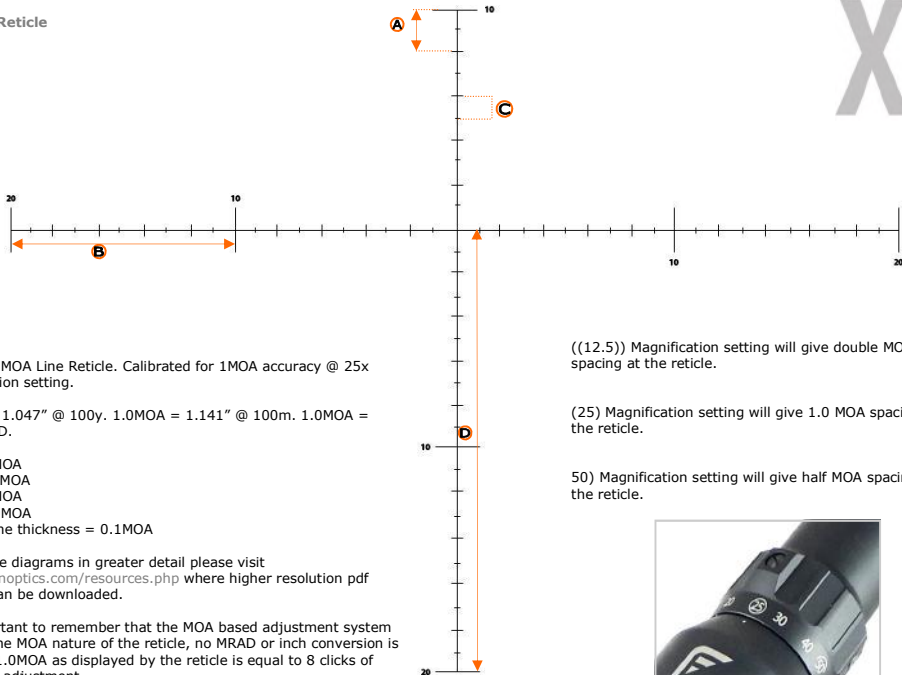
- X50 is supplied with an additional sunshade. When shooting in low winter sun, or very sunny days then you may find this to be useful. To install then simply thread into the objective end of the scope.

#### Care and Maintenance

- With the exception of repositioning the turret caps along with adding/removing sunshades then do not attempt to disassemble the scope.
- Do not tamper with the screw on the magnification ring, nor the nitrogen port screw on the base of the saddle.
- Do not attempt to 're-parallax' the scope by adjusting the position of the front lens assembly. In doing so you run the risk nitrogen loss and moisture ingress over time.
- You will feel a positive stop at the end of the travel ranges for the windage and elevation turrets, focus eyepiece and side parallax adjustment turret. Don't be tempted to apply more force once you reach the stop.
- When mounting the scope always be sure to check the torque settings for the mounts/rings that you plan to use.
- The external lens surfaces can be wiped clean with the lens cloth provided. Remove any noticeable particles of dirt or sand in advance using a lens blower or a very soft brush. Take care in doing this to ensure the outer lens coatings do not get scratched.
- Store the scope in a moisture free environment.
- Don't leave the scope in direct sunlight whereby the sun's rays can enter either the objective or ocular ends.
- Avoid storing the scope in areas that will reach very high temperatures for long periods of time.
- **CAUTION : Never use the scope to look at the sun!**

**MOA200 Reticle**  
**@25x**

X<sup>50</sup>



- MOA200 MOA Line Reticle. Calibrated for 1MOA accuracy @ 25x magnification setting.

1.0MOA = 1.047" @ 100y. 1.0MOA = 1.141" @ 100m. 1.0MOA = 0.291MRAD.

- A = 2.0MOA
- B = 10.0MOA
- C = 1.0MOA
- D = 20.0MOA
- Reticle line thickness = 0.1MOA

- For reticle diagrams in greater detail please visit [www.falconoptics.com/resources.php](http://www.falconoptics.com/resources.php) where higher resolution pdf versions can be downloaded.

- Its important to remember that the MOA based adjustment system matches the MOA nature of the reticle, no MRAD or inch conversion is required. 1.0MOA as displayed by the reticle is equal to 8 clicks of 0.125MOA adjustment.

((12.5)) Magnification setting will give double MOA spacing at the reticle.

(25) Magnification setting will give 1.0 MOA spacing at the reticle.

50) Magnification setting will give half MOA spacing at the reticle.



## Troubleshooting

### Can't zero the scope, running out of windage and/or elevation adjustment

- Rule out common alignment issues such as: barrel alignment and shift, barrel threaded at an angle, rail/receiver install, rail alignment, mount/rings install and alignment.
- It might be that a tapered (inclined) rail is necessary in order to gain the desired elevation adjustment.
- Adjustable mount/rings are also available, often these are windage and elevation adjustable.

### I'm seeing a dark shadow around the image edges, it seems to disappear at higher magnification but return at lower magnification

- Windage and/or elevation turrets are dialled to far from mechanical centre. Return them closer to mechanical centre and the shadow will ease.
- If your having to dial in that much windage/elevation in order to zero then we would recommend the use of a tapered rail or adjustable mounts/rings.

### My group size has opened up after shooting well in the past / Shift in point of impact

- Recent change of ammunition?
- Pellet/round clipping silencer/moderator?
- Inconsistent head position?
- Barrel shift?
- Warped stock fouling barrel?
- Change to focus eyepiece setting?
- Scope appear to be shifting in the mount/rings?
- Play/movement between the rings/rail/receiver?
- Parallax being dialled out correctly?
- Windage and/or elevation turrets are dialled to far from mechanical centre? Loss of tension on erector spring. Return closer to mechanical centre.

### **Side parallax turret difficult to turn after mounting the scope or suddenly develops stiffness / Difficulty in dialling out parallax / Inconsistent range finding**

- Torque setting on the mount/ring screws could be too high. Drop the level of torque applied with particular concern to the front mount/ring.
- Mount/ring could just be out of tolerance, applying uneven force to the tube and putting strain on the side parallax mechanism.
- Try shifting the front mount/ring further forward, closer to the objective end.
- If after removing the mount/rings altogether and the side parallax turret still feels stiff to rotate then contact Falcon Optical Systems

### **Optical standard suddenly seems noticeably poorer**

- Recent changes to zero and elevation/windage setting? Optical standard may suffer at the extremes of any scopes adjustment range.
- Check for changes to focus eyepiece setting and that parallax is being correctly dialled out.
- Head alignment consistent?
- Shooting in low sun? Use the sunshade.
- Check for any obstructions on exterior lens surfaces such as dust, dirt and condensation.
- Mirage on a hot day? Only way to combat this is to drop the magnification setting.
- Any debris visible within the scope? Any signs of moisture ingress? If so then contact Falcon Optical Systems

### **Scope does not seem to track and shift the point of impact as it should**

- If you dialling for elevation then check the position of the windage turret. If the windage turret is too far from mechanical centre then this will impact on the consistency of the elevation adjustment and vice versa. In this scenario it will even limit the total elevation adjustment range available to you.
- If you are dialling adjustment and the scope is reaching the end of its adjustment range then you may notice a drop-off in the accuracy of each click.

### **Windage and Elevation turrets feel mushy and don't give much of a 'click'**

- Remove the offending turret cap and you will notice an O-ring on the lower portion of the turret internal. Its this O-ring that is providing the friction and hindering the feel and 'click'. You can try re-lubricating the O-ring with a silicone based grease or spray and you should notice an improvement.



## Warranty

Your new Rifle Scope has a 10 year warranty that covers defects in materials and or workmanship.

The warranty does not cover instances of abuse, user error, improper use or should the scope be dismantled by anyone other than Falcon Optics or its representatives.

The warranty is limited to the original person that purchased the scope and is non transferable.

The original proof of purchase is required in the event of a warranty claim. No guarantee can be given if a dated proof of purchase can not be provided.

If you are concerned that the Rifle Scope has developed a fault or defect then either contact Falcon Optical Systems directly or contact the Falcon Optical Systems representative from which the scope was purchased.

In cases where the Rifle Scope does need to be returned then details of where to return to will be given at the time of contact. Do not send the scope without contacting either Falcon Optical Systems or its representative in advance and obtaining return authorisation.

The original proof of purchase must be sent with the scope being returned, along with full name, address and contact details. A letter with as much information on the fault as possible should also be included. The scope should be well packaged, pre-paid and fully insured against damage or loss.

After returning, the unit will be inspected then repaired or replaced at the option of the guarantor.

For more details on the returns procedure please consult the resources section of the Falcon Optics website - [www.falconoptics.com](http://www.falconoptics.com) or contact Falcon Optical Systems directly. **The returns procedure will differ if you are outside of the United Kingdom.**

Please do not return any items to us without authorisation - unauthorised returns cannot be accepted.

The terms and conditions above set out the minimum that we will provide and are in addition to your statutory rights.

## Export Notice

**This Rifle Scope is classified as a Strategic Military Item ML1d. It can't leave the United Kingdom without a valid export license.**

Do not attempt to export this scope from the UK without written permission from the Export Control Organisation of BIS (Department for Business, Innovation and Skills).

If you are outside the UK then similar rules may apply, consult with your Export Control equivalent before taking/sending the scope abroad.

<b>10-50x60 SFP</b>	
MAGNIFICATION RANGE	10-50x
FIELD OF VIEW @ 100M	3.0m - 0.71m
EYE RELIEF	115mm - 97mm

TOTAL ELEVATION ADJUSTMENT RANGE	>50.0MOA
ADJUSTMENT VALUE PER CLICK	0.125MOA
ADJUSTMENT PER TURN	10.0MOA
MINIMUM PARALLAX DISTANCE AT FULL POWER	9m (FT) 10m (LR)

RETICLE CHOICES	MOA200 MOA Line Reticle
RETICLE INSTALL	Second Focal

TOTAL LENGTH	429mm
WEIGHT	850g
TUBE DIAMETER	30mm
CONSTRUCTION	1 Piece Tube/Saddle/Objective
OBJECTIVE LENS DIAMETER	60mm
OUTER OBJECTIVE DIAMETER	69mm
OUTER OCULAR DIAMETER	42.5mm

ADDITIONAL SUNSHADES	1 Supplied
FLIP UP LENS COVERS	Yes, Supplied

CONFIGURATIONS AND ORDER CODES	<b>X503FT</b> - FT configuration with 9m parallax <b>X504LR</b> - LR configuration with 10m parallax
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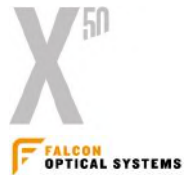
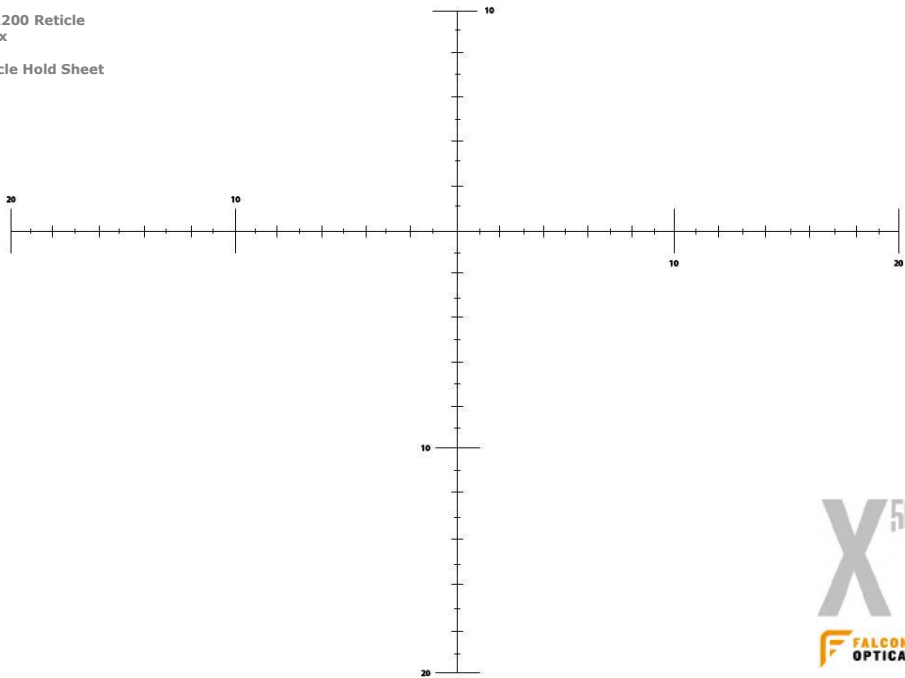
X<sup>50</sup>

**F** FALCON  
OPTICAL SYSTEMS

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MOA200 Reticle  
@25x

Reticle Hold Sheet



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