

# ELEMENT<sup>®</sup>



## IRIS 4-12x44

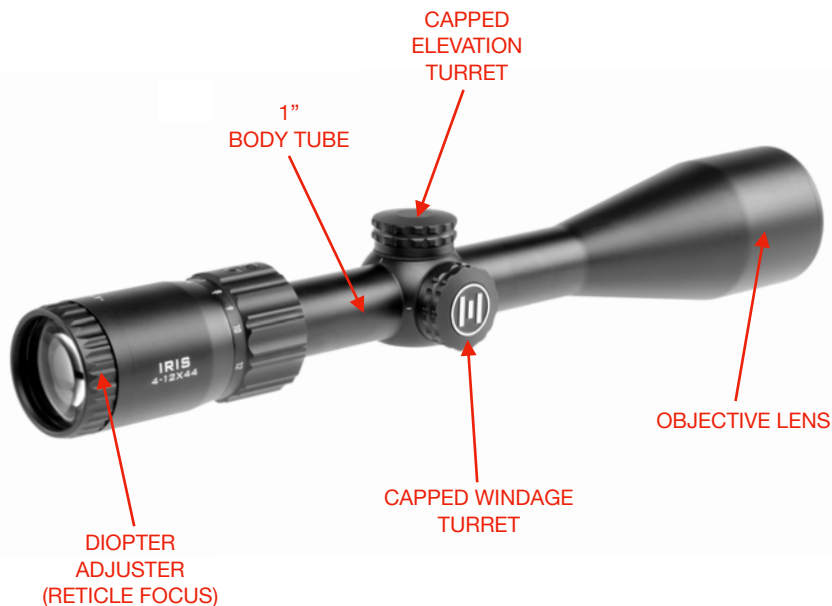
OWNER'S MANUAL  
& RETICLE INFORMATION

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## MEET THE IRIS: RELIABILITY IN SIMPLICITY

It doesn't get more classic than this! The IRIS family of riflescopes gives you everything you need in a hunting optic, providing a crystal clear image in a lightweight & compact package. The 1" body tube and 40mm objective allow for low-profile mounting on classic hunting rifles, with the 4-12 zoom range proving over many decades to be a great choice for hunting at close to intermediate ranges. Capped turrets keep critical components sealed and shielded, and as with all Element Riflescopes, our Platinum Warranty has you covered for life!



Your rifle system is only as good as its weakest point, and so mounting of a riflescope is a very critical process that requires time and precision. If you feel uncomfortable doing this yourself we suggest visiting a gunsmith, as incorrect mounting can cause many issues down the line.

## Choosing Rings

The IRIS requires 1" rings. When purchasing rings for this riflescope, choose a quality product - Inferior rings may not align correctly and can damage your scope.

Ensure that your rings are the correct height above the bore & action for safe clearance and a comfortable cheek weld.

**NEVER USE SCOPE SHIMS**, as these can cause damage to your body tube and void your warranty. DO NOT torque the rings down using more than **18 in-lbs (2 NM)** of force, as this can also cause damage to the body tube or affect internal components.

Element XT Mounts are a great fit for the IRIS, and are available in Picatinny or Dovetail.

### **Alignment & Eye Relief**

1) When fitting the riflescope to your rifle, ensure that the rings are firmly attached to the rifle **BEFORE** you tighten the top screws down.

2) With the riflescope in place, torque the screws down until you begin to feel some resistance, but make sure you are still able to move the riflescope back and forth.

3) Get behind the rifle in a shooting position and move the riflescope forward or backward until the eye relief is best suited to your position.

4) With the eye relief set, use a set of bubble levels or a plumbline to ensure that the riflescope is level. A canted reticle will cause point of impact drift to the left or right, and affect accuracy.



5) Once you are happy with the position of your riflescope, begin to torque down your rings in a criss-cross pattern, moving between screws and turning small amounts at a time. Use a torque of 15-18 in-lbs. This will ensure that the riflescope does not shift position while tightening.

## Diopter - Focusing the Reticle

Everybody's eye is different, and the ocular lens will need to be adjusted for your eye in order for the reticle to appear in focus.

To do this, point the riflescope towards a blank or featureless background (i.e. a white wall or blue sky) and turn the ocular adjustment ring clockwise and counter-clockwise until the reticle appears in optimum focus.



Your IRIS will need to be zeroed after it has been fitted to your rifle. The first step is to remove the turret caps to expose the turrets.

## Remove the Turret Caps

The IRIS is fitted with turret caps that protect the turret mechanisms. Turn counterclockwise to remove.

## Adjusting the Turrets

Your IRIS has turrets that use Minutes of Angle (MOA). These are angular units of measurement. For in-depth information on these different units, see the guide on page 12 - But to keep things simple, this is all you need to know when zeroing: At 100yds, 1 click will move your point of impact 1/4"

- To move your Point of Impact UP, turn ANTI-CLOCKWISE on your ELEVATION TURRET.
- To move your Point of Impact DOWN, turn CLOCKWISE on your ELEVATION TURRET.
- To move your Point of Impact RIGHT, turn ANTI-CLOCKWISE on your WINDAGE TURRET.
- To move your Point of Impact LEFT, turn CLOCKWISE on your WINDAGE TURRET.

## Boresighting

The IRIS is optically zeroed at the factory, so it should be close to centre when fitted. Even so, it is important to check that you are "on paper" to avoid frustration. Bore-sight your rifle to ensure that your reticle is roughly aligned before fine-tuning. If using an airgun or rimfire, shoot a large target at a close distance to check basic alignment.

### Fine-Tuning your Zero

You will need to fine-tune your zero after bore sighting, and this is done by putting shots on paper at a set distance. You can then assess the point of impact and adjust the turrets to shift your POI (point of Impact) back to centre.

We recommend taking a 3-shot group to confirm your zero before continuing to the next step. We also recommend a zero distance of 100yds/m for centerfire rifles, 50yds/m for rimfires and 20-50yds/m for airguns. If you cannot boresight your rifle, start at a closer distance to get on paper, and then move out further to make precise adjustments.



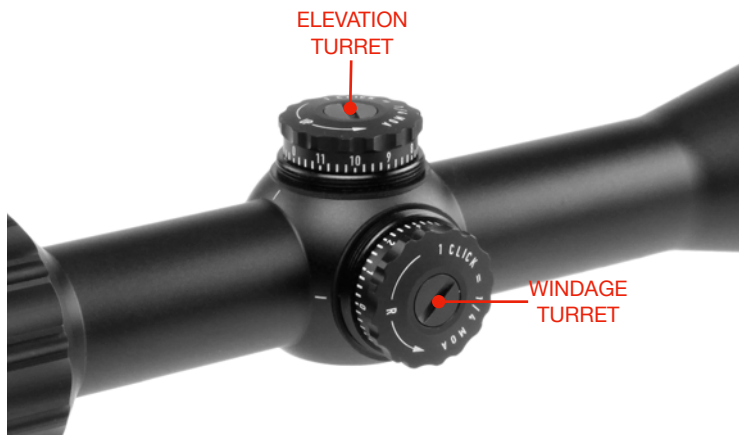
### Slipping your Turret back to Zero

Once zeroed, you may want to set your turret housings so that the "0" on your turrets line up with the indicator.

- 1) There is a locking screw on top of each turret holding the outer cap in place. Using the rim of a cartridge, a coin or a screwdriver, loosen this screw and lift the turret housing off.
- 2) Line up the "0" on the turret housing with the indicator line and push it down into position. The teeth on the turret housing will match up with the teeth on the turret rod.
- 3) With one hand holding the turret firmly in



- place, turn the locking screw clockwise to lock the turret housing in place.
- 4) The windage turret can be reset in the same way.
  - 5) Replace protective turret caps.

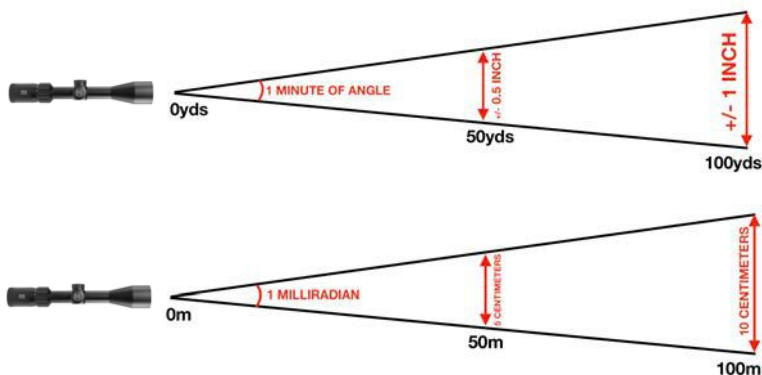


With your turrets set, you will now be able to use data from ballistics calculators and dial your turrets for long-range shooting instead of using reticle holdover!

While it is possible to use your riflescope without understanding how these systems work, it is best to know the basic concepts, as they are an integral part of “Shooting Education”, and will help you get the best out of your riflescope.

The two units we use in the shooting world are Milliradians (MRAD or MIL for short) and Minutes of Angle (MOA for short). The concept behind these two is very similar: They are angular units of measurement, meaning they can be used at any distance to quantify the distance between turret clicks and reticle markings. Technically speaking, one MRAD = 1/1000 of a Radian, and one MOA = 1/60 of a Degree. But that doesn't help us.

In simple terms, ONE MRAD = 10cm at 100m, and ONE MOA = 1.047” at 100yds. This makes these two units very useful, because we can relate them to units of measurement we use every day.



Most riflescope turrets are divided up into smaller units for more precise adjustments. **The IRIS features 1/4 MOA click adjustments.**

The 4-12x44 IRIS features the RAPTR-1S Reticle.

**RAPTR** stands for **RAP**id **TR**ajjectory, and is a BDC (Ballistic Drop Compensation) reticle, which means that the hold marks are designed to align with a bullet's trajectory instead of with a specific set of angular units.

With the IRIS being designed around the needs of hunters, we've designed the RAPTR-1S to be as simple and uncluttered as possible while providing hold data for Centerfire hunting cartridges that we expect most shooters to use.

If you don't plan to shoot much further than your zero distance, then you can simply ignore the hold points and use the centre dot. However, if you do plan to use the hold markings, then there are a few things you should know:

- 1) Every hunting rifle/cartridge combination has a slightly different trajectory. Things like scope height, barrel length, muzzle velocity and even the weather can change the way the bullet drops, and therefore it is impossible to create a BDC reticle that perfectly matches the trajectory of every rifle.
- 2) If you are using a cartridge other than .308 Win (which the reticle was designed around), You can work out the distance that corresponds with each hold point and draw up your own drop card.
- 3) The WIDTH of the BDC Hashes correspond with a 5mph crosswind. Once again, this may not be exact for your cartridge every bullet is affected differently by wind, but these markings can be used as a baseline for your estimations.

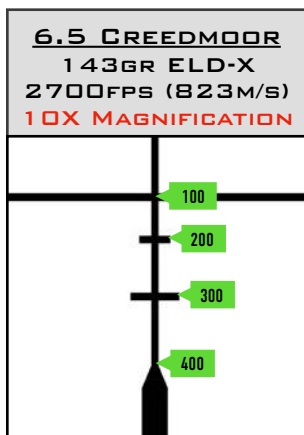
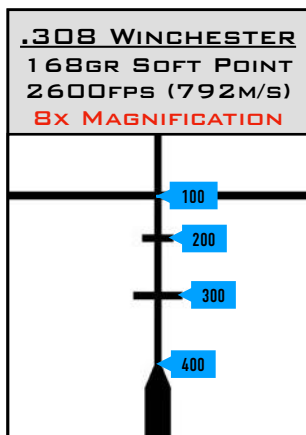
The RAPTR-1 Hold Marks are designed to correspond at **8x** with the drop data for a **.308 Winchester** shooting a 168gr Bullet at 2600fps, at sea level. Of course, this is rather specific, but the spacings between each hash mark are such that they should still match pretty closely when using other centrefire cartridges with similar muzzle velocities.

We include "Cheat Sheet" stickers in the box, which can be stuck to the inside of your ocular flip cap. Write down your drop data on each hold point.

For those who want to make use of the smart features of the holdover markings, here's what you need to know:

- 1) The hash marks below the reticle centre are spaced to follow the trajectory of a rifle bullet, with the gap increasing each time to better match fixed distances (e.g. 200, 300, 400 Meters/Yds)
- 2) The width of these hash lines roughly indicate wind drift at these intercept points, assuming a 5mph crosswind at 90 degrees (halve the wind hold for a half value wind, etc)
- 3) Adjusting your magnification higher or lower changes the subtensions of the reticle relative to your target, allowing you to CALIBRATE your reticle to roughly match your bullet's trajectory.

Reticle Subtensions (8x)			
Distance (m)	200	300	400
Drop (MOA)	2.4	5.8	9.6
Windage (MOA)	0.9	1.4	NONE



The IRIS includes a number of accessories right out the box:

## TRANSPARENT LENS CAPS:

All IRIS models include lens covers as part of the package, however as a 'hunting scope', we recognise that you may want to keep them fitted in poor weather conditions to keep the lens dry. The transparent caps allow you to still use the scope with caps fitted, although you probably want to take the extra second to remove them before a shot to get the best possible clarity!

## FLIP CAPS:

Springloaded caps for ocular and objective lenses.

## LENS CLOTH:

Give your lenses a wipe from time to time!

## THROW LEVER:

This can be threaded into the magnification ring to help gain extra grip when using gloves, or in slippery conditions.

## SPARES:

What if you lose a turret cap or throw lever out in the field?

Don't worry, we have you covered! We keep stock of spares for this very reason, and also have bits & pieces available on our web shop for purchase.

As shooters, we know that there is nothing worse than being let down by your equipment. We have made every effort to build a rugged, reliable product that will not break under any normal circumstances, and have implemented some of the strictest quality control measures in the industry. However, we know that things can go wrong, and therefore ALL ELEMENT Riflescopes are covered by our PLATINUM LIFETIME WARRANTY. This includes lifetime cover for any riflescopes damaged through normal use, and requires no registration, proof of purchase or transfer. If you have a problem, we will fix it - It's that easy!

For any warranty claims, please contact [support@element-optics.com](mailto:support@element-optics.com) or complete a claim form on our website.



The Element Optics PLATINUM LIFETIME WARRANTY applies to riflescopes only, and does not cover accessories. Theft, loss, deliberate damage and cosmetic damage that does not hinder the operation of the riflescope is not covered. If your product can not be repaired and a replacement model is no longer in production, a model of equal value will be substituted. For more details, visit [www.element-optics.com/warranty](http://www.element-optics.com/warranty)

RECORD YOUR DROP DATA HERE:

CARTRIDGE: _____		BULLET: _____	
MV: _____		TEMP: _____	ALT: _____
SCOPE HEIGHT: _____			
ZERO	HASH 1	HASH 2	BASE

CARTRIDGE: _____		BULLET: _____	
MV: _____		TEMP: _____	ALT: _____
SCOPE HEIGHT: _____			
ZERO	HASH 1	HASH 2	BASE

CARTRIDGE: _____		BULLET: _____	
MV: _____		TEMP: _____	ALT: _____
SCOPE HEIGHT: _____			
ZERO	HASH 1	HASH 2	BASE

# SPEC SHEET

MAGNIFICATION RANGE	4-12x	
TUBE DIAMETER	1 Inch	
OBJECTIVE LENS DIAMETER	44mm	
EXIT PUPIL	11-3.6mm	
EYE RELIEF	101.6mm (4")	
FIELD OF VIEW	26ft - 8.6ft @100yds	
CLICK VALUE	1/4 MOA (12 MOA / REV)	
ELEVATION ADJUSTMENT RANGE	65 MOA	
WINDAGE ADJUSTMENT RANGE	65 MOA	
PARALLAX	FIXED 100yd	
LENGTH	13.3"	337mm
WEIGHT	16.1oz	456g



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