OSPREY 2.5 – 10 X 40mm Scope with Green Laser

Know your Scope

PARTS OF THE SCOPE

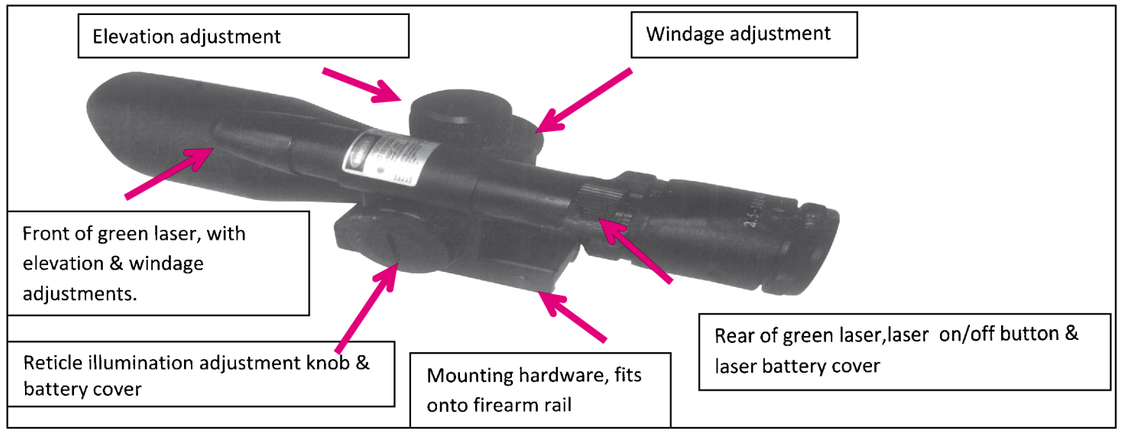
Rifle scopes have become far more sophisticated over the years, but the four most basic parts have remained the same. Working from front to back, they are:

1. The objective lens (or front lens) is critical to a superior image.
2. The internal erector lenses which right the image.
3. The reticle, often referred to as the crosshair, provides the aiming point.
4. The ocular lens, (or eyepiece lens) works with the other lenses to magnify the image, provide correct eye relief, and make diopter corrections.

This 2.5 – 10 x 40mm scope, uses a standard CR2032 battery to illuminate the reticle.
The reticle is illuminated in either green, or red, and each color has 5 steps of brightness.
This scope includes a green laser, which uses 1 CR2 battery. The laser can be adjusted for windage & elevation, using the enclosed wrench. (Elevation adjustment is on the top/windage is on the side of the laser)
This scope is pre-mounted on hardware, which fits on most standard firearm rails, with easy on-off screws.

HOW SCOPES WORK:

As light passes through and beyond the objective lens, the resulting upside down image issent to the internal lenses. Known as erector lenses, these internal lenses return the image to a right-side-up position. Finally, the ocular lens makes a final enlargement of that image, and sends it on to your eye.



This scope was designed, manufactured, and tested to ensure that, when properly mounted and sighted-in on your firearm, you will enjoy exceptional performance. A scope mounted close to the rifle ensures proper cheek weld on the stock for a stable firing position and allows for rapid target acquisition. It is recommended to use the lowest possible ring height. This scope's mounting hardware is ready to install directly on the firearm's rail, no rings or additional are required for mounting.

NOTE: The windage and elevation adjustments on new scopes are centered as part of the assembly process. If you are mounting a scope that was previously mounted on another rifle, you should center the adjustments.

ESTABLISHING EYE RELIEF ON RIFLES AND SHOTGUNS

Because of the safety considerations associated with proper eye relief, it is recommended that you mount your scope as far forward as possible. Beyond that, follow these steps:

1. With the scope as far forward in the mounts as Possible, hold the rifle in your normal shooting position. (Variable power scopes should be set at the highest magnification for this process.)
2. Slowly move the scope to the rear just until you can see a full field-of-view.
3. Position your scope here for maximum eye relief .
4. Proceed to COMPLETING THE INSTALLATION.

NOTE: To confirm that your scope is mounted in the best possible position, try assuming various positions: kneeling,seated, prone, and aiming both uphill and downhill. Remember that aiming uphill typically reduces eye relief. Wearing hunting/shooting specific clothing is recommended as this may alter eye relief considerations slightly.

WARNING

If a scope is mounted too far to the rear, the eyepiece can injure the shooter's brow. Shooting at an uphill angle also in creases this hazard because it shortens the distance between the brow and the rear of the scope. For this.reason, Osprey scopes are engineered to provide generous eye relief. Therefore, when mounting your scope, we recommend positioning it as far forward in the mounts as possible to take full advantage of this generous eye relief.

This scope is engineered with approximately a 3-5"eye relief.

FOCUSING THE EYE LENS/RETICLE

1. Hold scope about three inches from your eye.
2. Quickly glance through the scope at a featureless area. Such as a wall or the open sky. CAUTION-DO NOT LOOK AT THE SUN AS PERMANENT EYE DAMAGE. EVEN BLINDNESS MAY RESULT.
3. If the reticle did not instantly appear in sharp focus. loosen the eye bell locking ring or fast focus eyepiece

COMPLETING THE INSTALLATION

1. without disturbing the optical eye relief position,rotate the scope until the elevation adjustment dialis at the top of the scope.
2. From a firing position, check to be sure that the vertical hair of the reticle aligns with the vertical axis of the firearm. Misalignment will not affect accuracy at moderate distances but it can diminish long range accuracy.
3. When you are satisfied,tighten the ring screws evenly and securely.

If your scope is one of our models with an eyepiece that has a lock ring, follow these simple steps:

1.grasp the eyepiece with your hand and back it away from the lock ring. once the lock ring is foute evepiece, turn it clockwise away from the eyepiece to keep it out of the way during the adjustment.

2.If you tend to hold things away from yourself to see them clearly (you are farsighted) turn the eyepiece counterclockwise a couple of turns. If you hold things close to yourself to see them clearly (you are nearsighted) turn the eyepiece clockwis e a couple of turns .

3.Looking through the scope when pointed at the sky, take a few quick glan ces at the reticle . The focus of the reticle should be noticeably different from when you started. Continue this process until the reticle appears clear and sharp.

4.When you are satisfied with the image of the reticle, turn the lock ring so that it rests firmly against the eyepiece.

Using a Bore-Sighting Collimator

To save time and ammunition, start out in your shop or gun room with a bore-sighting collimator . Follow the directions included with the collimator for specific instructions on its proper use. Remember when possible, it i s better to make the initial windage adjustments to the mount base before using the scope's windage adjustment . **NOTE**: Bore-sighting alone is not sufficient to sight-in a scope. You must make final adjustments by shooting the firearm using the same ammunition you use in the field.

Pre- zeroing

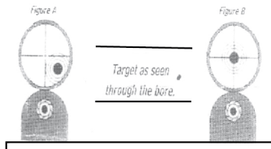
If available,use a bore sighter collimator to pre-zero your rifle, At an approved range,or other safe area,bench rest the rifle.Remove the windage and elevation caps.If you have a bolt action rifle, remove bolt.if you have a lever, pump.or semi-auto loading rifle,use a mirror type bore sighting device,available form you gun retailer.

If you have a zoom power scope,turn the power change ring to the highest setting.If your scope model is equipped with an adjustable objective lens mount for a parallax correction,rotate the focusing ring/side knob to the appropriate setting

TRADITIONAL BORE-SIGHTING(BOLT ACIONS)

Preliminary sighting-in can also be accomplished by bore-sighting at the firing range using a target from 20 to 50 yards away.

1. Position the firearm on the bench, using sandbags to steady the firearm.
2. Remove the bolt from the firearm.
3. Looking through the bore itself, move the firearm to center the bull's-eye of the target in side the barrel , as shown in Fingure A
4. Hold the rifle steady. With the buss's-eye centered when viewed through the bore, make windage and elevation adjustments to the scope until t he very center of the reticle is aligned with the bull's-eye of the target, as shown in Figure B.



The next steps are the same on the firing range. To ensure reliable results always fire from a rested position when performing these steps. If you are using an adjustable objective or side focus model scope, perform a correction for parallax before continuing.

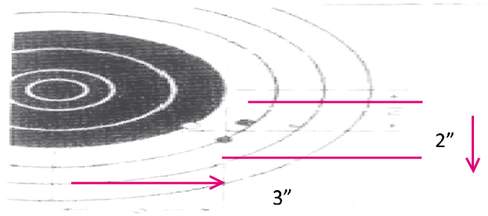
1.Fire a shot or two.

2. If you are several inches off center, make an appropriate amount of adjustment to move the reticle to the center of the target.

3. Carefully fire a three-shot group.

4. Use the center of that troup as reference point for the final adjustments to windage and elevation.

On the sample target below, the center of the group is two inches low and three inches right. Assuming you are sighting-in at 100 yards, you should make a 2-MOA adjustment up, and a 3-MOA adjustment left. Your next three- shot group should be very close to the center of the target. To learn about making final adjustments, proceed to the section on windage and elevation.



Minute Of Angle (MOA)

Minute of Angle:the Industry's stendard unit of measure for weapons mounted, optic sight adjustments is the minute of angle of MOA.Minute of angle definition:

There are 360 degrees in a circle and there are sixty minutes in each degree. If a minute of angle is extended to 100 yards it will be 1.047 inches high. some manufacturers refor to a minute of angle as 1 inch at 100 yards. it is important to be aware that there is actually a 5% error in this statement. At 1000 yards this amounls to 10.47 inches for each MOA.

For example the (308 Win) travels a trajectory approximately 400 inches at 1000 yards which sighted in at 100 yards. A five percent error at this distance is 20 inches. This is really significant if the target is a 12 inch steel plate.

Sighting:Choose a safe target that will help you spot your bullet impacts. Begin at a close range.from 25~50 yards, aim and shoot at this targel.if the point of impact deviates from the aiming point,remove target turret caps and turn the windage and elevation knobs in the indicated directions to adjust the reticle.Note: the indications or click value for the knobs arc for1/4 MOA at 100 yards.You will have to compensate your click adjustment calculation for the appropiate target distance. At 25 yards,1 click=1/6I.I,at 50 yards=1/8□ etc. Repeat this process until the aim point and the point of impact are the same.Move the target out to a distance of approximately 100 yards and repeat this process,until the aim point and the bullet impact point are the same.continue to the target out to an appropriate distance for the application of the rifle this scope is mounted on and repeat this sighting process to properly "ZERO" the rifle with the scope.

Pelformance parameter table:

Actual Magnification	Obj-lens Aperture(mm)	Fleld of view(ft.)	Weight (ozs)	Length (in.)	Eye Relief(in.)	Exit Pupil(mm)	Click value at 100yds(in.)
4-12x	40	27.73~10.47	17.60	12.60	2.67~2.91	3.5~10	0.25
6-24x	60	30~10.5	40.39	15.75	3.5	15~5	0.25
3.5-10x	40	27.78~10.47	19.20	13.73	2.67~2.91	3.5~10	0.25
3.5-10x	50	23~6.81	20.50	14.20	3~3.9	3.6~11	0.25
8-32x	44	14.6~3.6	26.45	16.20	3.50	5.5~1.4	0.25