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Athlon Optics 216010

Athlon Optics Neos 4-12x40 Second Focal Plane Riflescope User Manual

Model: 216010 | Brand: Athlon Optics

INTRODUCTION

This manual provides comprehensive instructions for the proper use, setup, operation, and maintenance of your Athlon Optics Neos 4-12x40 Second Focal Plane Riflescope. Please read this manual thoroughly before using your riflescope to ensure optimal performance and longevity. The Athlon Neos 4-12x40 is designed for precision and durability, featuring a 1-inch tube and a 22 RimFire SFP reticle, making it suitable for various shooting applications.



Image: The Athlon Optics Neos 4-12x40 Second Focal Plane Riflescope, showcasing its sleek black finish and robust construction.

PRODUCT OVERVIEW AND KEY FEATURES

The Athlon Optics Neos riflescope is engineered with several features to enhance your shooting experience:

- **0.25 MOA Click Value:** Provides precise adjustments for windage and elevation.
- **60 MOA Total Adjustment:** Offers ample adjustment range for various distances.
- **10 Yards to Infinity Parallax Adjustment:** Ensures a clear, parallax-free image at different ranges.
- **Fully Multicoated Optics:** Reduces reflected light and increases light transmission for brighter, clearer images.
- **Waterproof:** Protects the scope in harsh weather conditions.
- **Heat Treated One-Piece Tube:** Enhances strength and prevents moisture ingress, ensuring fog-proof performance.
- **Reticle Etched on Glass:** Provides durability and high shock resistance to recoil.
- **Second Focal Plane (SFP) Reticle:** The reticle size remains constant regardless of magnification, with subtensions accurate at a specific magnification (typically highest).
- **Nitrogen Purged:** Dramatically reduces moisture inside the tube, maintaining fog-proof and waterproof integrity.
- **Aircraft Grade Aluminum Tube:** Ensures robust and lightweight construction.



Image: Diagram illustrating the main components of the riflescope, including the ocular lens, magnification adjustment, parallax side focus, elevation adjustment, windage adjustment, and objective lens.



KEY FEATURES

SECOND FOCAL PLANE
NON ILLUMINATED RETICLE
FULLY MULTI-COATED LENSES
AIRCRAFT GRADE ALUMINUM TUBE
NITROGEN PURGED
WATERPROOF
FOGPROOF
SHOCKPROOF

**BEST
USED FOR**



Image: Graphic highlighting key features such as Second Focal Plane, Non-Illuminated Reticle, Fully Multi-Coated Lenses, Aircraft Grade Aluminum Tube, Nitrogen Purged, Waterproof, Fogproof, and Shockproof.



NITROGEN PURGING

Nitrogen purging dramatically reduces the moisture inside the tube and helps maintaining fog proof and waterproof.



Image: Visual explanation of nitrogen purging, showing how it prevents internal fogging compared to a non-purged optic.

INCLUDED COMPONENTS

Your Athlon Optics Neos Riflescope package includes the following items:

- Athlon Optics Neos 4-12x40 Riflescope
- Cleaning Cloth
- Allen Wrench
- Instruction Manual (this document)
- Battery (if applicable for illuminated reticle models, though this model is non-illuminated)

SETUP

Mounting the Riflescope

The Athlon Neos riflescope is designed for use with Picatinny or Weaver mounts. Ensure your chosen rings are compatible with a

1-inch tube diameter. Follow the mounting instructions provided with your scope rings for proper installation. Ensure the scope is level and eye relief is set correctly for your shooting position.

Initial Adjustments

- **Eye Relief:** Position the scope so that you have a full, clear field of view without any black rings (vignetting) around the edges. The eye relief for this model is approximately 3.13 inches.
- **Diopter Adjustment:** Look through the scope at a plain, light-colored surface (like a wall or the sky). Rotate the diopter adjustment ring (located on the ocular lens) until the reticle appears sharp and clear. Do not look at a target during this adjustment.

OPERATING THE RIFLESCOPE

Magnification Adjustment

The Neos 4-12x40 features a variable magnification range from 4x to 12x. Rotate the magnification adjustment ring, located just forward of the ocular lens, to select your desired magnification level. For Second Focal Plane (SFP) reticles, the reticle's subtensions are accurate at a specific magnification, typically the highest (12x for this model).

Parallax Adjustment

Parallax is the apparent movement of the reticle in relation to the target when the shooter's eye moves. The side focus knob on your Neos riflescope allows you to adjust for parallax from 10 yards to infinity. Rotate the parallax knob until the target and reticle appear to be in the same focal plane and there is no apparent shift when moving your head slightly.

Windage and Elevation Adjustments

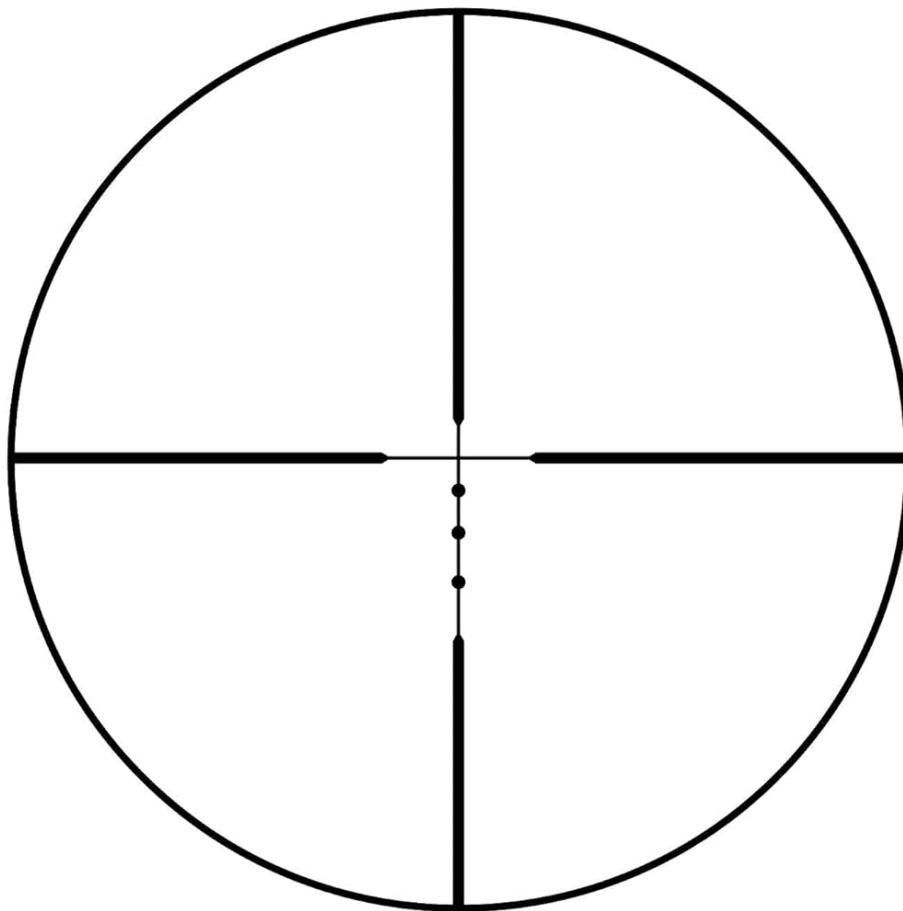
The windage and elevation turrets are located on the top and right side of the scope, respectively. Each click of the turret adjusts the point of impact by 0.25 MOA. To adjust, remove the turret caps and rotate the turrets as needed. "UP" and "R" (Right) markings indicate the direction of impact shift. After zeroing, replace the turret caps to protect the mechanisms.

Reticle: BDC 22 Rimfire

This riflescope features a BDC 22 Rimfire reticle. This reticle is designed with specific holdover points to compensate for bullet drop at various distances when using common .22LR ammunition. Familiarize yourself with the reticle's subtensions and practice at different ranges to understand its application for your specific ammunition and rifle.



BDC 22 RIMFIRE



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Image: Diagram of the BDC 22 Rimfire reticle, showing its design for bullet drop compensation.

MAINTENANCE

Cleaning the Lenses

Use the provided cleaning cloth or a soft, lint-free cloth to gently wipe dust and debris from the lenses. For stubborn smudges or fingerprints, use a lens cleaning solution specifically designed for optical surfaces. Apply the solution to the cloth, not directly to the lens, and wipe gently in a circular motion. Avoid using harsh chemicals or abrasive materials.

General Care and Storage

Store your riflescope in a cool, dry place away from direct sunlight and extreme temperatures. Keep the lens caps on when not in use to protect the lenses. Avoid dropping or subjecting the scope to severe impacts, as this can affect its internal components and zero.

TROUBLESHOOTING

If you encounter issues with your riflescope, consider the following common troubleshooting steps:

- **Blurry Image:**

- Adjust the diopter for reticle clarity.
- Adjust the parallax for target clarity at different distances.
- Ensure lenses are clean and free of smudges or condensation.

- **Point of Impact Shift:**

- Check that the scope rings and mount are securely tightened.
- Verify that the barrel and action of your firearm are stable.
- Ensure consistent cheek weld and shooting form.
- Confirm that the scope has not been subjected to severe impact.

- **Turret Adjustments Not Responding:**

- Ensure turret caps are removed before attempting adjustments.
- Confirm that the turrets are not overtightened or jammed.

If problems persist after attempting these steps, please refer to the warranty and support section for further assistance.

SPECIFICATIONS

Brand	Athlon Optics
Model Name	Neos
Model Number	216010
Style	22 RimFire SFP
Magnification	4-12x
Objective Lens Diameter	40 mm
Tube Diameter	1 inch
Eye Relief	3.13 inches
Click Value	0.25 MOA
Total Adjustment	60 MOA
Parallax Adjustment	10 yards to infinity
Reticle Type	BDC 22 Rimfire
Material	Aluminum
Item Weight	17.6 Ounces
Mounting Type	Picatinny or Weaver Mount



PRODUCT SPECS

MAGNIFICATION

4-12 Power

TUBE DIAMETER

1"

LENGTH

12.4"

OBJ. LENS DIAMETER

40 mm

FOV @100 YDS

27.3-8.9 ft

ADJ. PER ROTATION

15 MOA

EYE RELIEF

3.11-3.15"

PARALLAX ADJ.

10 yds - ∞

WEIGHT

18.1 oz

Image: Graphic summarizing key product specifications including magnification, tube diameter, length, objective lens diameter, FOV, adjustment per rotation, eye relief, parallax adjustment, and weight.

WARRANTY AND SUPPORT

Athlon Optics stands behind its products with a **Lifetime Warranty**. This warranty covers defects in materials and workmanship for the lifetime of the product. For warranty claims, technical support, or any other inquiries, please contact Athlon Optics directly through their official website or customer service channels. Keep your purchase receipt as proof of ownership.