

OUTRIDER 2-12x42



ARKEN OPTICS



Ensure your firearm is unloaded before proceeding. If you pause use and then resume later, reconfirm that the chamber is still empty.

WARNING

- **INGESTION HAZARD:** This product contains a button cell or coin battery.
- **DEATH** or serious injury can occur if ingested.
- A swallowed button cell or coin battery can cause **Internal Chemical Burns** as little as **2 hours**.
- **KEEP** new and used batteries **OUT OF REACH of CHILDREN**
- **Seek immediate medical attention** if a battery is suspected to be swallowed or inserted inside any part of the body.





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Safety Instructions

- Do not look through your scope towards the sun or laser sources to avoid potentially serious eye injuries.
- Do not attempt to disassemble the device. If the device malfunctions, contact our customer support for help.

INTRODUCTION

Built for versatility, the OUTRIDER scope delivers fast target acquisition and precision aiming in one compact, rugged design. Its bright, multi-coated lenses ensure clear views even in low light, while the hydrophobic coating keeps your sight picture sharp in any weather. Lightweight yet durable, with a large eye box for quick alignment, this scope is the perfect companion for hunters and tactical shooters who demand reliability and performance in every shot.

PACKAGE CONTENTS

- Scope
- Sunshade (M46*0.75 mm thread)
- L-shaped wrench
- Battery cap tool
- Rubber scope cover
- User manual
- Lens cloth
- ARKEN stickers

SPECIFICATIONS



Model: 2-12x42 mm

Magnification	2-12x	FOV	58.83-9.73 ft@100 yards
Focal Plane	SFP (Second Focal Plane)	Reticle	DLR / FDR
Eye Relief	3.5 inches / 88.9 mm	Reticle Illumination	Red (FDR model only)
Tube Diameter	30 mm	Turret Rotation	Counter Clockwise (CCW)
Objective Diameter	42 mm	Recoil Proof	.50 BMG
Length	12.1 inches / 307 mm	Waterproof/Fog Proof	Yes, Nitrogen Purged
Weight	DLR 22.4 oz / 635 g FDR 23.8 oz / 675 g	Battery Model	CR2032

Turret Adjustments	MOA
Adjustment Graduations	0.25 MOA
Max Elevation Adj. Range	90 MOA
Max Windage Adj. Range	80 MOA
Elevation Adj. Per Revolution	15 MOA
Windage Adj. Per Revolution	15 MOA



USER INSTRUCTIONS

Understanding the Controls





Ocular Focus/Diopter

- 1 Adjust the magnification ring to the max magnification.
- 2 Look through the rifle scope at a clear sky or a blank white wall away from the sun or other reflective surfaces.
- 3 Slowly adjust your ocular focus until the reticle is clear and in focus (this must be done in short intervals, and if you look at the reticle for more than 2 seconds, your eyes will compensate for it).
- 4 Look away for a few seconds and repeat step 3 until the reticle is crisp and clear as soon as you bring the scope up to your eye.
- 5 Mark the position of the ocular focus in reference to the scope.



Magnification Ring

To set the desired magnification power for the scope, simply rotate the magnification ring until it aligns with the corresponding marking.





Turret Adjustments

Elevation and windage turret adjustments allow you to align the point of impact (POI) with the point of aim (POA), compensating for ballistic drop and environmental factors.

Each adjustment is known as a "click". For Minute of Angle (MOA) scopes, each click is 0.25 MOA or 1/4 inch at 100 yards.

The elevation turret adjusts the POI vertically in relation to the POA:

Turning clockwise (14 → 0) moves the POI downward.

Turning counterclockwise (0 → 14) moves the POI upward.

The windage turret adjusts the POI horizontally in relation to the POA:

Turning clockwise (0 → 7L) moves the POI left.

Turning counterclockwise (0 → 7R) moves the POI right.





Units of Measurement

MRAD (Milliradian): 1/1000th of 1 radian of arc

1 MRAD=3.438 MOA

1 MRAD=3.599 inches @100 yards

1/10 MRAD=0.359 inches @100 yards

MOA

100 yds	200 yds	300 yds	400 yds	500 yds	600 yds	700 yds	800 yds
1"	2"	3"	4"	5"	6"	7"	8"

MRAD

100 yds	200 yds	300 yds	400 yds	500 yds	600 yds	700 yds	800 yds
3.6"	7.2"	10.8"	14.4"	18"	21.6"	25.2"	28.8"



Steps for Zeroing Your OUTRIDER

- 1 Pre-align your rifle to ensure initial shots are close to the Point of Aim (POA).
- 2 Fire 3-5 rounds at your target.
- 3 Measure the difference between your Point of Aim (POA) and Point of Impact (POI) using reticle measurements or other measuring tools.
- 4 Adjust elevation and windage to align your POA with your POI.
- 5 Fire another 3-5 rounds to verify the zero. Repeat adjustments until the POA and POI are the same.

Reticle Illumination (FDR Model Only)

The Illumination Turret is located opposite the Windage Turret. The Battery Cap sits on top of the Illumination Turret.

Note: Rotating the battery cap does **not** adjust illumination settings.

- Rotate the dial to select brightness levels (1-6).
- **Off position:** Set the dial between numbers when not in use to conserve battery life (CR2032 battery).
- **Avoid glare:** Using excessive brightness in dark environments may cause unintended visual effects.





Changing the Battery

- 1 Unscrew the battery cap using the battery cap tool.
- 2 Remove CR2032 battery.
- 3 Replace the battery with positive (side with markings) facing outwards.
- 4 Tighten the battery cap using the battery cap tool.





Zero Reset

- 1 Once your scope is zeroed, begin by loosening the cap located at the center of the elevation or windage turret. **Hold the turret firmly** while unscrewing the cap counterclockwise.
- 2 After the cap is fully loosened, lift it off. You can now lift the turret upwards.
- 3 Realign the "0" mark on the turret with the **reference mark (|)** on the scope body.
- 4 After alignment, securely tighten the cap by screwing it clockwise to complete the Zero Reset process.



Sunshade Included

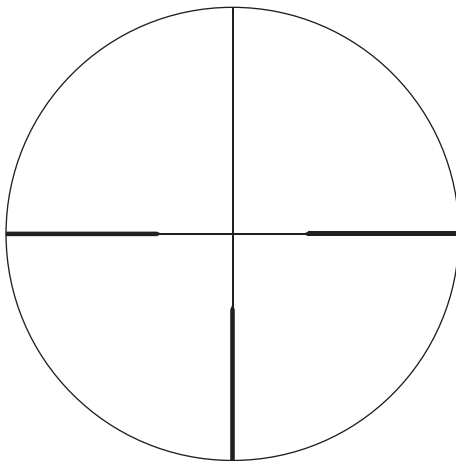
The OUTRIDER scope comes equipped with a sunshade, designed to reduce lens reflections for a clearer view. It also extends beyond the objective lens to help protect against impacts and scratches.





DLR (Duplex Reticle)

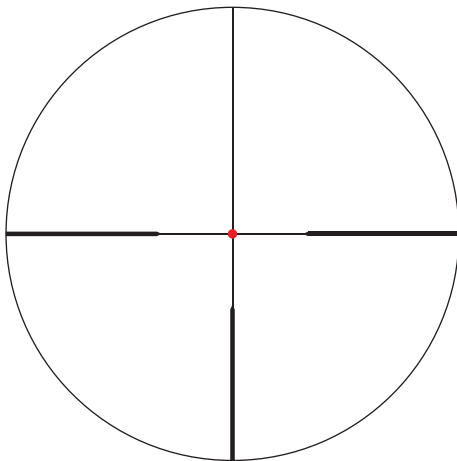
The OUTRIDER series features the DLR Reticle, with bold outer posts and a fine, precise center point. The prominent outer posts improve visibility in low light or dense environments, while the slim center point ensures accurate targeting. This design strikes a balance between fast center point acquisition and precise aiming.

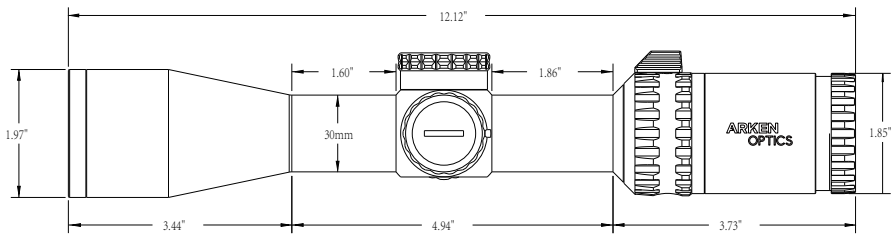




FDR (Fiber Duplex Reticle)

The OUTRIDER series features the DLR Reticle, with bold outer posts and a fine, precise center point. The prominent outer posts improve visibility in low light or dense environments, while the slim center point ensures accurate targeting. This design strikes a balance between fast center point acquisition and precise aiming.







BALLISTIC APP

For ballistic calculations, you may use the DNT App.

The app includes a database of over 8,900 industry-standard projectiles and supports manual input of personalized ballistic loads.

Once the correct ballistic data is entered, either from your custom load or the pre-loaded library, you can sync adjustments directly from the app.



Android

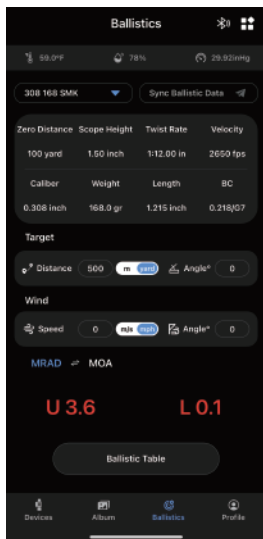


iOS

SAMPLE BALLISTICS DATA

This sample data is for reference purposes only, as your firearm/ammo will differ from the test rifle used.

Sample .308 Winchester Federal Gold Medal Match 168gr Ballistics.



The screenshot shows a mobile app interface for ballistics calculations, specifically a "Ballistic Table". The table has six columns: "Distance (Y)", "MRAD", "MOA", "MRAD", "MOA", and "Speed (m/s)". The data is as follows:

Distance (Y)	MRAD	MOA	MRAD	MOA	Speed (m/s)
0	0.0	0.00	0.0	0.00	807.7
50	0.0	0.15	0.0	0.04	776.0
100	0.0	0.00	0.0	0.07	745.0
150	0.3	0.88	0.0	0.10	714.6
200	0.6	2.07	0.0	0.13	685.0
250	1.0	3.44	0.0	0.17	656.2
300	1.4	4.96	0.1	0.20	628.0
350	1.9	6.60	0.1	0.24	600.6
400	2.4	8.36	0.1	0.28	573.8
450	3.0	10.25	0.1	0.32	547.6
500	3.6	12.28	0.1	0.37	521.9
550	4.2	14.45	0.1	0.41	496.7
600	4.9	16.78	0.1	0.47	472.1
650	5.6	19.29	0.2	0.52	448.0
700	6.4	21.99	0.2	0.58	424.5
750	7.2	24.90	0.2	0.65	401.6
800	8.2	28.04	0.2	0.72	379.5



Sample 6.5 Creedmoor Hornady 140gr ELD-Match Ballistics.

Ballistics

55.0°F 78% 29.92inHg

6.5 CM 140 EL... Sync Ballistic Data

Zero Distance	Scope Height	Twist Rate	Velocity
100 yard	1.50 inch	1-8.00 in	2710 fps

Caliber	Weight	Length	BC
0.264 inch	140.0 gr	1.374 inch	0.326(G7)

Target

Distance: 500 m (1500) Angle: 0

Wind

Speed: 0 mph Angle: 0

MRAD MOA

U 3.0 **L 0.1**

Ballistic Table

Devices Album Ballistics Profile

< Ballistic Table

Distance (Y)	MRAD	MOA	MRAD	MOA	Speed (m/s)
100	0.0	0.00	0.0	0.06	783.2
150	0.2	0.76	0.0	0.09	762.2
200	0.5	1.50	0.0	0.12	741.6
250	0.9	2.99	0.0	0.15	721.3
300	1.2	4.27	0.1	0.18	701.3
350	1.6	5.64	0.1	0.21	681.7
400	2.1	7.08	0.1	0.24	662.4
450	2.5	8.58	0.1	0.27	643.5
500	3.0	10.16	0.1	0.30	624.8
550	3.4	11.81	0.1	0.34	606.4
600	3.9	13.54	0.1	0.37	588.3
650	4.5	15.34	0.1	0.41	570.5
700	5.0	17.23	0.1	0.45	553.0
750	5.6	19.19	0.1	0.49	535.7
800	6.2	21.25	0.2	0.53	518.6
850	6.8	23.41	0.2	0.57	501.8
900	7.5	25.66	0.2	0.62	485.2
950	8.2	28.02	0.2	0.67	468.8
1000	8.9	30.50	0.2	0.72	452.7
1050	9.6	33.09	0.2	0.77	436.9

www.arkenoptics.com