



**GRIFFIN OPTICS DIVISION**  
**1-8x MIL LPVO**  
**OWNERS MANUAL**



# GRIFFIN OPTICS DIVISION

# 1-8x MIL LPVO

## INSTALLATION & MAINTENANCE GUIDE



**FAILURE TO READ AND UNDERSTAND THIS MANUAL PRIOR TO USE MAY RESULT IN INJURY OR DAMAGE**

### WELCOME

Griffin Armament® has been satisfying customers for nearly two decades with innovative and cutting edge sound suppressor technology.

Founded by two brothers and former Army snipers, Griffin Armament knows what precision shooters want; accuracy, durability, and consistency above all else. Our optics are designed, developed, and tested in Wisconsin. Our commitment to quality, performance, and value are pillars of our company and why our products are sought after by discerning consumers.

### DISCLAIMER

Neither the manufacturer nor reseller from whom you received the product(s) are responsible for any improper use or resulting damage. Firearms and their accessories can be dangerous if not handled correctly, and it is the user's own responsibility to understand this manual and product for safe operation. If there are any unanswered questions, Griffin's experienced customer service team will gladly assist at (262)-200-0003.



Still have questions? Check out our [video channel](#) for an in-depth briefing on all products and accessories.

### PRODUCT SYNOPSIS

The Griffin 1-8x Ideal Carbine Optic™ (ICO™) LPVO provides users with a highly functional advanced target engagement optic for use in all light conditions and at a variety of ranges, at an affordable price.

This optic features a glass-etched MIL/BDC reticle that allows ranging of 19" targets out to 700m. Windage and bullet drop compensation marks allow accurate shot placement for a variety of common centerfire cartridges.

The Griffin 1-8x ICO™ LPVO is a first focal plane optic that utilizes 1/10th MIL adjustment increments for precise optical adjustments and has 11 brightness settings for use in low light conditions.



### SPECIFICATIONS

Model	1-8ICO-COR
Magnification	1-8x
Objective Diameter	24mm
Eye Relief	100mm (3.94 in)
Field of View (Degrees)	23° - 2.9° (1X - 8X)
Field of View (m/100m)	41m - 5m
Field of View (feet/100yds)	122ft - 15ft
Tube Size	30mm
Adjustment Graduation	1/10th MIL
Max Elevation Adjustment	≥29MIL
Max Windage Adjustment	≥29MIL
Dioptric Fast Adjust	≥ ±2 Diopters
Parallax Setting	Fixed @ 150yds
Turret Style	Low-Capped
Focal Plane	First Focal Plane (FFP)
Reticle	Glass-Etched ICO™ - MIL
Illumination	11 Levels (Red or Green available)
Length	280mm (11.0 in)
Weight	550g (19.4oz)

## INSTALLATION TIPS



The Griffin 1-8x ICO™ LPVO is ready to use right out of the box with the included CR2032 battery. The sight is sold as a standalone unit or as a bundle with a standard 30mm Griffin Precision Mount™ (GPM™) cantilever scope mount (QD and standard mounts available).

To install the battery, unscrew the battery cap located at the end of the brightness power adjustment knob. Insert the included CR2032 battery with the positive (+) terminal facing out. Screw the battery cap back on and finger tighten until snug. **Do NOT overtighten the battery cap.**

To mount the LPVO to your scope mount, follow manufacturer instructions ensuring that the reticle is leveled and the scope has proper eye relief in the final mounted position. For the Griffin GPM mount, remove the 3 screws on each side holding the two top clamps onto the mount and remove the top clamps. Rest the LPVO in to the cradle of the optic mount and replace the top clamps. Reinstall the clamp screws, confirm level, and tighten to 20 in/lbs.

**Ensure your optic is perfectly level prior to fully tightening the clamps.**

To mount your GPM™ scope mount using the Griffin “QD” GPM mount, loosen the QD knobs until you can fit the mount over picatinny rail. Seat the mount forward against the rail while tightening the thumb knobs until snug and no further clicking of the knobs occurs.



**CLEAR THE FIREARM PER MANUFACTURER'S MANUAL BEFORE PERFORMING MODIFICATIONS**

## ZEROING

We recommend zeroing this optic at 100m and consulting our ballistic charts for recommended zeros, as well as using a chronograph to confirm the velocity of your ammunition to match that velocity to our recommendations. Velocity of market ammunition can vary dramatically from advertised specifications.

- 1) Fire a 3-shot group and find the center of the group.
- 2) Use the mil scale to determine the required adjustment value. Remove the protective W/E caps, and adjust POI. (The direction noted by the arrow denotes the movement of the point of impact).
- 3) Each click/hash mark is a 1/10th MIL adjustment. Once adjustments are made, fire another 3-shot group to confirm zero of the optic.
- 4) Repeat these steps as necessary until you are precisely zeroed to recommended elevation @100m.

Elevation Knob

Windage Knob





**FAILURE TO PROPERLY MOUNT YOUR OPTIC MAY CAUSE DAMAGE TO YOURSELF OR YOUR FIREARM**

### INSTALL OR REPLACE BATTERY

- 1) Using a high-quality CR2032 battery can extend battery life significantly over a cheaper option. **Do NOT use a rechargeable battery.**
- 2) Unscrew the battery cap at the end of the brightness power/adjustment knob.
- 3) Remove the old battery from the battery housing.
- 4) Install the new battery by pressing it into the battery housing of the LPVO with the positive (+) side facing out.
- 5) Re-install the battery cap by screwing it onto the optic and snugging fingertight. **Do NOT overtighten battery cap.**



### CLEANING AND MAINTENANCE

- 1) Begin by blowing off debris from lenses using air pressure. This is ideally done with a camera lens blower tool.
- 2) Follow up with camera lens brush, brushing and blowing back and forth as needed until all debris is clear.
- 3) Finish with spraying and wiping off lenses with brand new microfiber towel and lens cleaner of your choosing. Finish with suede polishing tip, if desired.
- 4) Close lens covers, and brush down body to remove any dirt or debris and wipe external body clean.

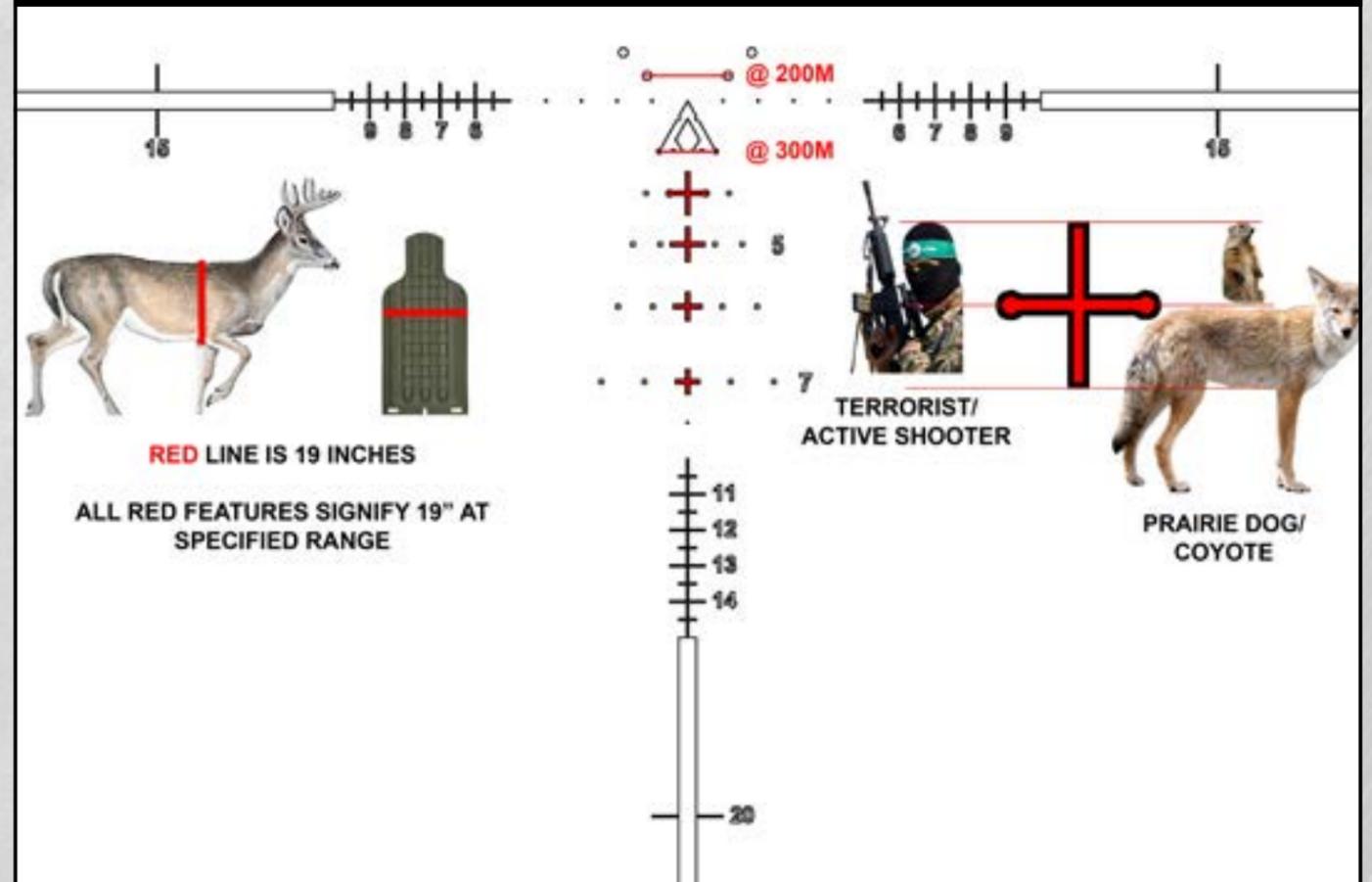


**DO NOT LOOK THROUGH THE OPTIC AT BRIGHT SOURCES OF LIGHT (E.G. DIRECT SUNLIGHT)**

### ADDITIONAL FEATURES

- 1) 11 Reticle Brightness Settings
- 2) MIL/BDC Ranging Reticle (see image below)
- 3) Red or Green Illumination Available
- 4) Parallax Fixed @ 150yds
- 5) Fully-Enclosed Aluminum Body
- 6) First Focal Plane (FFP), affording BDC/Ranging at any magnification
- 7) Included Flip-Up Scope Caps
- 8) 1/10th MIL Adjustment Increments
- 9) 24mm Objective Diameter
- 10) Lifetime Mechanical Warranty (2 Year Electronics Warranty)

### MIL/BDC RETICLE AND RANGING INFORMATION



# GRIFFIN ICO RETICLE BALLISTICS CHART

## M855 62 GRAIN SS109 5.56mm @ 1000ft ELEVATION

BBL Length/Muzzle Velocity	Recommended Zero at 100m	Within 1MOA to Specified Range (Meters)	Full Value Wind Holds (mph)	90° Offset Approx. Range (meters)
16" 2960 FPS	-1.5"	700	4/8	200/300
14.5" 2900 FPS	-0.2"	700	3.5/7	100/200
13.9" 2785 FPS	1.0"	600	4/8	100/200
12.5" 2675 FPS	2.0"	500	3/6	100/200

## MK262 77 GRAIN SIERRA OTM 5.56mm @ 1000ft ELEVATION (CHRONOGRAPH RECOMMENDED)

BBL Length/Muzzle Velocity	Recommended Zero at 100m	Within 1MOA to Specified Range (Meters)	Full Value Wind Holds (mph)	90° Offset Approx. Range (meters)
18" 2740 FPS	-0.7"	700	4.5/9	150/300
16" 2683 FPS	0.0"	700	4/8	150/300
14.5" 2589 FPS	1.5"	600	4/8	100/200

## M193 55 GRAIN NATO BALL 5.56mm @ 1000ft ELEVATION

BBL Length/Muzzle Velocity	Recommended Zero at 100m	Within 1MOA to Specified Range (Meters)	Full Value Wind Holds (mph)	90° Offset Approx. Range (meters)
16" 3089 FPS	-0.1"	600	3/6	125/250
14.5" 2988 FPS	0.8"	500	2.8/5.6	125/250
13.9" 2867 FPS	1.5"	500	2.8/5.6	100/200

## M80 147 GRAIN BALL 7.62x51mm @ 1000ft ELEVATION

BBL Length/Muzzle Velocity	Recommended Zero at 100m	Within 1MOA to Specified Range (Meters)	Full Value Wind Holds (mph)	90° Offset Approx. Range (meters)
20" 2710 FPS	-1.3"	600	5/10	150/300
16" 2620 FPS	0.0"	700	5/10	150/300
14.5" 2553 FPS	1.0"	700	4.5/9	125/250

## M118LR 175 GRAIN SIERRA MATCHKING 7.62x51mm @ 1000ft ELEVATION

BBL Length/Muzzle Velocity	Recommended Zero at 100m	Within 1MOA to Specified Range (Meters)	Full Value Wind Holds (mph)	90° Offset Approx. Range (meters)
20" 2556 FPS	-0.6"	600	6/12	150/300
16" 2480 FPS	0.5"	700	6/12	150/300
14.5" 2423 FPS	1.2"	700	5.5/11	150/300

## 6.5 CREEDMOOR 140 GRAIN HORNADY AMAX @ 1000ft ELEVATION

BBL Length/Muzzle Velocity	Recommended Zero at 100m	Within 1MOA to Specified Range (Meters)	Full Value Wind Holds (mph)	90° Offset Approx. Range (meters)
14.5" 2450 FPS	0.0"	600	6.5/13	150/300

## 6.5 CREEDMOOR 147 HORNADY ELD® MATCH AMAX @ 1000ft ELEVATION

BBL Length/Muzzle Velocity	Recommended Zero at 100m	Within 1MOA to Specified Range (Meters)	Full Value Wind Holds (mph)	90° Offset Approx. Range (meters)
14.5" 2432 FPS	-0.8"	600	8.5/17	150/300

## WARRANTY STATEMENT

### OPTIC PRODUCT LIFETIME LIMITED WARRANTY

Subject to the limitations outlined below, Griffin Armament will repair or replace free of charge any optical product we manufacture for 2 years (electronics) and lifetime for mechanical. This warranty is unlimited in duration and covers at Griffin Armament's sole discretion, service, repair, and/or replacement of damaged products caused by normal use. Any repair not covered by the warranty will be billed at a maximum of 30% of current MSRP for a comparable optical product

### LIMITATIONS

Griffin Armament's warranty does not cover loss, normal wear, damage to our product or the host weapon system resulting in whole or in part from abusive or negligent use, unauthorized modifications, or neglect. Finish wear is cosmetic and is not covered by this warranty. Any repairs to the unit made necessary by the above mentioned factors may be invoiced to the owner at a maximum of 30% of current MSRP for the most comparable product. In all cases refer to the product manual for product limitations prior to using a Griffin Armament product. Warranty is subject to change without notice.

To learn more about Griffin Armament® and the kit we provide, please visit us on the web at [www.GriffinArmament.com](http://www.GriffinArmament.com) or keep track of our social media pages:

Instagram



Facebook



YouTube



Rumble





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