

# **BARRAGE RIFLESCOPES**

**USER MANUAL** 

FF13061 FF13063 FF13065 FF13062 FF13064 FF13066



Engineered for high intensity, fast-paced situations, from paintball games to tactical training simulations to home defense, Firefield products are designed for the next generation shooter and serious gun enthusiast. Our goal is to provide optimal solutions for demanding tactical, hunting and competitive training situations.

Firefield products are tested for durability in extreme terrain and extreme climates. Consisting of shooting accessories compatible with extreme shooting guns, AR-15s, tactical carbines, air guns, shotguns and pistols, the Firefield product line includes: riflescopes, red dot sights, reflex sights, laser sights, magnifiers, bore sights, night vision, digital night vision, flashlights, spotting scopes, rails and mounts.

Delivering high quality and exceptional durability to every intense moment, Firefield is the key to victory. Transform fear to power, panic to excitement and chaos to glory with Firefield units—Victory Justifies Everything®

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# **BARRAGE RIFLESCOPES**

Designed for precision placement at various distances, Firefield Barrage Riflescopes bridge the gap between rugged reliability and consistent performance. Available in 1.5-5x32 and 2.5-10x40 magnifications as well as red laser, green laser or no laser variations, the Barrage family boasts IPX4 waterproof, fogproof and shockproof performance. An effective mil-dot illuminated reticle ensures your Barrage stays on target in low-light situations, while fully multi-coated optics increase overall light transmission. Constructed from 6061-T6 aircraft-grade aluminum and offering a 100-hr. battery life, Firefield Barrage Riflescopes are ideal for anything from close quarter missions to engaging mid-range targets.

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#### **FEATURES:**

- Red or green illuminated Mil-Dot reticle
- Precision windage and elevation adjustments
- IPX4 Waterproof/fogproof/shockproof

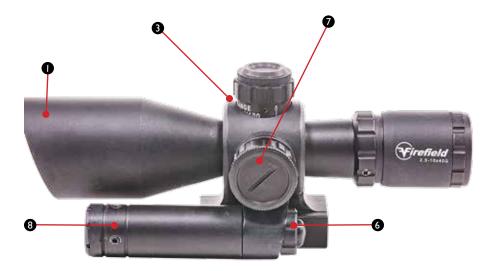
#### **INCLUDED:**

- Batteries
- Cleaning cloth

### DIAGRAM

- I) Objective lens
- 2) Windage/Elevation Adjustments
- 3) .223 Bullet-Drop Compensator
- 4) Magnification Ring
- 5) Diopter Adjustment

- 6) Red Laser on/off Switch
- 7) Reticle Illumination Adjustment
- 8) Red Laser Windage/Elevation Adjustments
- 9) Weaver Mount
- 10) Mil-Dot Reticle



#### **TECHNICAL SPECIFICATIONS**

TECHNICAL SPECIFICATIONS	FF13061	FF13062	FF13063	
Reticle type	Mil-Dot Mil-Dot		Mil-Dot	
Reticle color	red, green, and black red, green, and blac		red, green, and black	
Illuminated (yes/no)	yes	yes yes		
Reticle brightness settings	0-5	0-5 0-5		
Magnification	1.5-5	1.5-5	1.5-5	
Objective lens diameter (mm)	32	32 32		
Eye relief (in/mm)	5.1-1.97 / 130-50	5.1-1.97 / 130-50	5.1-1.97 / 130-50	
Field of view (m @100m)	14.0~4.9	14.0~4.9	14.0~4.9	
Field of view (ft @100yd)	42.0~14.7	42.0~14.7	42.0~14.7	
Diopter adjustment (+/-)	+2 to -2	+2 to -2	+2 to -2	
Parallax setting (yds)	100	100	100	
MOA adjustment (one click)	1/2	1/2	1/2	
Battery type	CR2032	CR2032	CR2032	
Battery life (hours)	100	100	100	
Focal plane	Second	Second	Second	
IP Standard (water rating)	IPX4 (weatherproof)	IPX4 (weatherproof)	IPX4 (weatherproof)	
Lens coatings	Fully multicoated, AR Green	Fully multicoated, AR Green	Fully multicoated, AR Green	
Mount type	weaver	weaver	weaver	
Operating temperature (°F/C)	0 to 120 / -17 to 48	0 to 120 / -17 to 48	0 to 120 / -17 to 48	
Dimensions (in/mm)	8.26 /3 / 3.14 210 / 77 /80	8.26 /3 /3.14 210 / 77 /80	8.26 /3 /3.14 210 / 77 / 80	
Weight (oz)	17.2	18.3	20.6	

### **TECHNICAL SPECIFICATIONS**

TECHNICAL SPECIFICATIONS	FF13064	FF13065	FF13066	
Reticle type	Mil-Dot	Mil-Dot	Mil-Dot	
Reticle color	red, green, and black	red, green, and black	red, green, and black	
Illuminated (yes/no)	yes	yes	yes	
Reticle brightness settings	0-5 0-5		0-5	
Magnification	2.5-10 2.5-10		2.5-10	
Objective lens diameter (mm)	40 40		40	
Eye relief (in/mm)	2.36-2.17 / 60-55	2.36-2.17 / 60-55	2.36-2.17 / 60-55	
Field of view (m @100m)	11.6 - 3.8 11.6 - 3.8		11.6 - 3.8	
Field of view (ft @100yd)	42.0~14.7	42.0~14.7	42.0~14.7	
Diopter adjustment (+/-)	+2 to -2	+2 to -2	+2 to -2	
Parallax setting (yds)	100	100	100	
MOA adjustment (one click)	1/4	1/4	1/4	
Battery type	CR2032	CR2032	CR2032	
Battery life (hours)	100	100	100	
Focal plane	Second	Second	Second	
IP Standard (water rating)	IPX4 (weatherproof)	IPX4 (weatherproof)	IPX4 (weatherproof)	
Lens coatings	Fully multicoated, AR Green	Fully multicoated, AR Green	Fully multicoated,AR Green	
Mount type	weaver	weaver	weaver	
Operating temperature (°F/C)	0 to 120 / -17 to 48	0 to 120 / -17 to 48	0 to 120 / -17 to 48	
Dimensions (in/mm)	8.07 / 3.15 / 3.14 205 / 80 / 85	8.07 / 3.15 / 3.14 205 / 80 / 85	8.07 / 3.15 / 3.14 205 / 80 / 85	
Weight (oz)	17.7	18.8	21.4	

## LASER SPECIFICATIONS

Laser Specs	FF13062	FF13063	FF13065	FF13066
Laser wavelength (nm)	632-650	532	632-650	532
Laser type	red, Class IIIA	green, Class IIIA	red, Class IIIA	green, Class IIIA
Laser output power (mW)	< 5	< 5	< 5	< 5
Dot size (in @ 100yds)	I	I	I	I
Battery type	2x AG13	CR2	2x AG13	CR2
Battery life (hours)	16	16	16	16

### **INSTALLATION**

It is recommended to have the riflescope mounted by a professional gunsmith; however, if attempting to mount the riflescope without professional assistance, please read and strictly adhere to the following directions:

I. Unload the weapon. Remove the bolt/firing pin to ensure the weapon is incapable of firing.

2. Establish the correct eye relief by moving the weapon into the shooting position. While in the shooting position, move the riflescope forward or backwards until the image is clearly visible.

3. Tighten the screws to between 45 - 65 inch pounds of torque.

4. Check alignment and position, then boresight the riflescope.

#### **REPLACING THE BATTERY**

#### ILLUMINATED RETICLE

If the reticle appears dim or fails to illuminate, the battery needs to be replaced. Firefield Barrage Riflescopes use a CR2032 to illuminate the reticle. 3 volt CR2032 batteries can be purchased at stores where batteries are sold or online. In order to replace the battery:

I) Remove the battery cap located on the reticle illumination adjustment (7) with a flat head screw driver. Rotate the cap counterclockwise until it is removed. It may be necessary to hold the illumination adjustment in place to prevent it from rotating.

2) Remove the old battery and insert a new battery, positive (+) side up.

4) Replace the battery cap. Use a flat head screw driver, rotate the cap clockwise until it is attached. It might be necessary to hold the illumination adjustment in place to prevent it from rotating.

5) Check that the reticle illumination is now functioning properly.

5mW GREEN / RED LASER (Models FF13062, FF13063, FF13065, FF13066)

If the laser appears dim or fails to operate, the battery needs to be replaced. The Riflescope with Red Laser uses two AG13 (LR44) batteries. The Riflescopes with Green Laser Use one CR2 battery. In order to replace the battery:

I) Grip the laser on/off switch (6) and rotate the on/off switch counterclockwise until it is removed.

2) Remove the old batteries and insert the new batteries.

3) Replace the on/ off switch and rotate clockwise until it is attached. Check to make sure laser is functioning.

#### OPERATING THE SIDE-MOUNTED LASER (MODELS FF13062, FF13063, FF13065, FF13066)

The built-in 5mW red/green laser is used for target acquisition in close range, rapidly changing environments. The laser has built-in windage and elevation adjustments (8) that allow the laser to be accurately sighted in with your rifle. To operate the laser: 1) Locate the laser on/off switch (6).



2) Push the button located on the back of the switch to turn the laser on.

3) Push the button again to turn the laser off.

Warning: Never point the laser designator directly at, or into someone's eye. This may cause damage to the eye, or blindness. Avoid looking directly into the laser. Avoid shining the laser into mirrors or other reflective surfaces.

CAUTION - USE OF CONTROLS OR ADJUSTMENT OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIEID HEREIN MAY RESULTS IN HAZARDOUS RADIATION EXPOSURE.

Note: Due to visual restrictions of 5mW red laser at greater distances in daylight, the most effective application is for close range/CQB scenarios. Shooters should evaluate the recurrent firing range in their scenarios and sight the laser to their firearm's point of impact at the range.

#### **BULLET DROP COMPENSATOR**

All Firefield Barrage 2.5-10x40 Riflescopes are equipped with a bullet drop compensator dial. The bullet drop compensation dial (3) allows for quick adjustments of the reticle for shooting targets at specific distances. This compensator was designed for a .223 caliber 55 grain bullet. The bullet drop compensation dial has distances of 1 (100yds), 2 (200yds), 3 (300yds), 4 (400yds) and 5 (500yds) marked directly on the dial. By using the mil-dot reticle to determine the distance, the bullet drop compensation dial is adjusted to that distance to acquire an accurate shot. Note: To work effectively, the dial must be set to 1 when sighting in the riflescope at 100 yards.

### **BORESIGHTING THE RIFLESCOPE**

Boresighting and test firing should be performed safely on a firing range. Laser boresights are a quick and accurate method to sighting in riflescopes. The traditional method of boresighting is as follows:

I. When mounting the riflescope on a bolt action rifle, remove the bolt; or when mounting to a semi automatic rifle, disassemble the rifle until there is a straight line of sight through the bore.

2. Use a target at least twenty yards to fifty yards away when sighting in the riflescope. Look through the bore of the weapon and locate the bull's-eye of the target.

3. Sight in the target through the bore and then make windage and elevation adjustments (see "Operating Windage and Elevation Adjustments" for instructions) to the riflescope until the reticle is centered on the bullseye.

To verify the riflescope is accurately sighted in, always fire a three-shot test group at 100 yards.

4. If you are still off center, make the necessary adjustments to move the reticle to the center of the target.

5. Again fire a three-shot test group, and use the center of the group to determine final adjustments.

## OPERATING WINDAGE AND ELEVATION ADJUSTMENTS

To make windage and elevation adjustments:

1. Remove the windage and elevation caps. Make the necessary windage and elevation adjustments by rotating the appropriately marked turrets. The windage and elevation adjustments are  $\frac{1}{2}$ -MOA for the 1.5-5X32 and  $\frac{1}{4}$ -MOA for the 2.5-10x40, meaning a single click moves the point of impact  $\frac{1}{2}$ - or  $\frac{1}{4}$ -inch at 100 yards. Adjustments can be felt and heard allowing the shooter to make adjustments without looking at the turrets.



### **DIOPTER ADJUSTMENT**

The diopter is the measurement of the eye's curvature. Every eye is curved differently. Firefield Barrage Riflescopes have a diopter adjustment to help the shooter attain a clear, crisp sight picture.

If the image does not appear clear and crisp, rotate the diopter adjustment clockwise or counterclockwise until a sharp sight picture and reticle are achieved, then tighten the eyepiece lock ring. This adjustment should stay the same unless the riflescope's operator changes.

### **OPERATING THE ILLUMINATED**

Firefield Barrage Riflescopes feature an illuminated reticle. Illuminating the reticle improves visual distinction between the target and the reticle, especially in low light conditions. The reticle can be used in the following states: black (off), red or green (illuminated). Reticle illumination includes five brightness settings for each color red/green. To illuminate the reticle:

I) Rotate the reticle illumination adjustment (7) turret located on the left side of the riflescope.

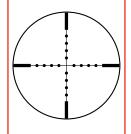


2) Turn the adjustment dial to the desired brightness level, until the reticle stands out against the target.

Note: Settings 1-3 are intended for use in low light conditions. Settings 4 and 5 are intended for use in bright conditions.

# **MIL-DOT RETICLE**

Firefield Barrage Riflescopes feature a U.S.Army Mil-Dot reticle. Mil stands for milliradian (also known as MRAD). A milliradian is 1/6283.2th of a circle or 3.438 MOA. The milliradian represents one unit at 1000 yards. Put simply, a 1-yard-tall target at 1000 yards is equal to 1 milliradian.





## **MAGNIFICATION ADJUSTMENT**

Firefield Barrage Riflescopes come equipped with variable magnification options. By rotating the magnification ring (4) to the desired setting, shooters can adjust to the most suitable magnification their shooting scenario. Note: Do not loosen the screw located on the magnification ring, doing so will cause problems with the variable magnification function.



# MAINTENANCE

Proper maintenance of the scope is recommended to ensure longevity. It is recommended that when the scope becomes dirty it is wiped down with a dry or slightly damp cloth. Blow dirt and debris off all optics and then clean the lenses with a lens cleaning cloth. No further maintenance is required.

#### WARNING

All Firefield Barrage Riflescopes are nitrogen purged and O-ring sealed unless otherwise noted. Do NOT disassemble the riflescope for any reason. Doing so will void the warranty and may be hazardous. Internal work should only be done by the manufacturer. Any tampering with the purge screw will void the warranty.

### TROUBLESHOOTING

Proper authorization is required before shipping any product back to Firefield. Failure to obtain authorization could result in your product being returned to the wrong address, lost or damaged. Firefield is not liable for products returned without authorization.

#### If the riflescope does not hold zero:

I.Verify the riflescope is mounted securely to the rifle. If the riflescope can be shifted in any direction, retighten the mount according to mounting instructions but do not overtighten. The riflescope will need to be re-zeroed afterwards.

2. Check that all screws on the mount are securely tightened.

3. When sighting in, be sure to use factory-loaded ammunition of the same bullet type, weight and, preferably, lot number.

#### The reticle does not illuminate:

I. Check that the battery is in working order and that the polarity of the battery is correct.

2. Check that there is no residue, film or corrosion on the battery contacts that may prevent the reticle from illuminating.

#### The reticle is blurry and not in focus:

I. Rotate the eyepiece to adjust the diopter adjustment until the reticle becomes clear and sharp.

#### The reticle has a halo or is fuzzy:

I. A halo or fuzzy appearance is caused by greater illumination than is required for the current environment. Decrease the brightness level of the reticle until clear.

#### The reticle illumination turns off while firing:

I. Tighten the battery cap with a coin or flathead screw driver until the cap is fully seated.






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