



**PRODUCT MANUAL**

**DEFENDER-XL™**

**MICRO RED DOT**

SPECS	DFXL-MRD5	DFXL-MRD8
DOT SIZE	5 MOA	8 MOA
DOT COLOR	Bright Red	Bright Red
BATTERY TYPE	CR2032	CR2032
BATTERY RUN TIME (@ SETTING 6)	25,000 hrs.	25,000 hrs.
ILLUMINATION SETTINGS	12 Settings (10 Daylight, 2 NV)	12 Settings (10 Daylight, 2 NV)
EYE RELIEF	Unlimited	Unlimited
MAGNIFICATION	1x	1x
ADJUSTMENT GRADUATION	1 MOA	1 MOA
TRAVEL PER ROTATION	25 MOA	25 MOA
MAX ELEVATION ADJUSTMENT	120 MOA	120 MOA
MAX WINDAGE ADJUSTMENT	115 MOA	115 MOA
PARALLAX SETTING	Parallax Free	Parallax Free



SPECS	
WIDTH	1.4"
HEIGHT	1.4"
LENGTH	2.0"
WEIGHT (W/ BATTERY)	1.9 oz.
MOUNTING FOOTPRINT	DeltaPoint® Pro

## DEFENDER-XL™ MICRO RED DOT

The rush of competitive shooting may bring us all together. But when you want an optic that sets you apart, depend on the Defender-XL™. Target to target. Stage to stage. It's built tough as nails around a massive sight window that delivers greater peripheral vision and increasing speed for follow-up shots so you always come out on top.



Images are for representation only. Product may vary slightly from what is shown.



## BASIC OPERATION

### Battery Installation and Replacement

**Install:** Using a small flathead remove the set screw on the side of the red dot. Depress the silver battery door latch on the top of the optics, latch will pop open. Install CR2032 Battery Plus (+) side up.

**Re-install:** Depress the cover and push the black button once lid is sealed. Re-insert the set screw.

### Power Up

To turn the Defender-XL™ micro red dot on, press either the “Up” or “Down” button. To turn off the Defender-XL™ manually, press and hold the “Down” button for approximately five seconds.

### Auto-Shutoff

The red dot will automatically shut off after 10 minutes. Powering down the red dot manually will disable the auto-shutoff feature. To engage or disengage the auto-shutoff press and hold the up and down buttons for three seconds. When the auto-shutoff is disengaged the dot starts at the highest brightness setting then decreases brightness to the lowest brightness setting over three seconds. When the auto-shutoff is engaged, the dot starts at the lowest brightness setting then increases brightness to brightest setting over three seconds. Button presses are not allowed during that three second period.

### Motion Activation

The Defender-XL™ is equipped with motion activation. This feature is only available when the auto-shutoff feature is turned on. By allowing the unit to shut off automatically after 10 minutes, the dot will turn on automatically the next time you pick up your gun. Powering down the red dot manually will disable the motion activation.

## Button Lockout

The Defender-XL™ includes a button lockout mode to prevent unintentional setting changes. To turn on the button lockout feature, press and hold the “Up” button for three seconds. The dot will blink off for a half of a second and then remain on. To turn the button lockout feature off, press and hold the “Up” button for three seconds. The dot will blink off twice in one second to confirm the lockout mode has been disabled and then will remain on.

## Brightness Selection

The Defender-XL™ sight offers 12 brightness settings (10 daylight settings and two night-vision settings). Adjust the dot brightness by pressing the appropriate “Up” or “Down” button.

## Battery Run Time and Battery Life:

The Defender-XL™ uses a CR2032 battery. The battery run time is the actual power draw of the unit compared to the capacity of the battery. Not all batteries have the same output however on average with the Defender-XL™ in constant on mode with the auto-shutoff disabled. The battery run time at setting six is 25,000 hours.

Battery life is the time measured in-between putting a battery into the unit and having to replace it. This number is a variable based on many different factors including, time used, brightness setting changes, auto-on mode engaged etc. While this number is dependent on the user here are some scenarios:

<b>With the Defender-XL™ on setting 6 for 24 hours a day</b>	25,000 Hours	1,041 Days
<b>With the Defender-XL™ on setting 6 for 12 hours a day</b>	50,000 Hours	2,083 Days
<b>With the Defender-XL™ on setting 6 for 8 hours a day</b>	75,000 Hours	3,125 Days
<b>With the Defender-XL™ on setting 6 for 6 hours a day</b>	100,000 Hours	4,166 Days

## Turret Adjustments

Turrets are used to adjust the bullet's point of impact and are marked in Minute of Angle (MOA). There are two turrets on your red dot. The turret on the top of the red dot is the Elevation Turret and is used to adjust the point of impact up and down. The turret on the right-hand side is the Windage Turret and is used to adjust the point of impact left and right.

Your Defender-XL™ features adjustable Elevation and Windage Turrets with audible and tactile clicks. Each click moves the bullet's point of impact 1 minute of angle. 1 MOA closely corresponds to 0.15 inches at 15 yards, 0.25 inch at 25 yards, 0.5 inch at 50 yards, 1 inch at 100 yards, and 2 inches at 200 yards.

**Example:** At a 25-yard sight-in distance, it will take 12 clicks of the turret to move the bullet's point-of-impact three inches.

### To make turret adjustments:

1. Use the included multi-tool.
2. Turn the turret in the appropriate direction: up/down or left/right as indicated by the arrows.

**Note:** The red dot will move in the opposite direction of the turrets when dialed.



## Mounting the Defender-XL™ Micro Red Dot

To get the best results from your Defender-XL™ micro red dot, proper mounting is essential. Although not difficult, the correct steps must be followed.

The Defender-XL™ utilizes the same screw spacing as the DeltaPoint® Pro footprint and will work on any pistol that is cut for a DeltaPoint® Pro Red Dot. You may have to reference the pistol's manual to see if any additional plates are required to mount the red dot. If a plate is required, mount the plate using the pistol or plate manufacturer's recommendations.

To install the red dot, place the sight on top of your pistol's slide or plate, being careful to match up the screw holes and recoil lugs. Ensure that the red dot sits flush on the mount. Select the appropriate screw size from the screws included in the box with the Defender-XL™. Tighten down the screws to 15 in-lbs.

If the screw needed is not included, please contact our Technical Dept at 1-800-4VORTEX.



## SIGHTING IN

After the red dot has been mounted, an initial sight-in at 25 yards is recommended. This should allow for the unit to have enough travel to overcome most alignment issues.

1. Following all safe shooting practices, fire a three-shot group as precisely as possible.
2. Next, adjust the illuminated dot to match the approximate center of the shot group. Be sure to read Page 9 prior to making adjustments.
3. Carefully, fire another three-shot group and see if the bullet group is centered on the bullseye. This procedure can be repeated as many times as necessary to achieve a perfect zero.

**Note:** When you dial the turrets up, the dot will move down, if you dial down, the dot will move up, if you dial left, the dot will move right, if you dial right, the dot will move left.

## MAINTENANCE AND STORAGE

### Cleaning

Your Defender-XL™ micro red dot requires very little routine maintenance other than periodically cleaning the exterior lenses. The optic's exterior may be cleaned by wiping with a soft cloth. When cleaning the lenses, be sure to use products that are specifically designed for use on coated optical lenses.

- Be sure to blow away any dust or grit on the lenses prior to wiping the surfaces.
- Using your breath, or a very small amount of water or pure alcohol, can help remove stubborn dried water spots.

### Lubrication

All components of the Defender-XL™ micro red dot are permanently lubricated, so no additional lubricant should be applied.

**Note:** Other than removing the Battery Cap and Protective Cover, do not attempt to disassemble any components of the Defender-XL™ micro red dot. Disassembly may void warranty.

### Storage

If possible, avoid storing your red dot in direct sunlight or any very hot location for long periods of time.



## TROUBLESHOOTING

### Red Dot Does Not Illuminate

If the red dot does not illuminate, please check the following before returning the red dot for service:

- Is the battery dead? Replace the battery.
- Is the battery installed correctly? Be sure the battery is oriented with the “+” facing away from the unit.
- Is the battery cap loose? Be sure cover is snug and contact points are clean.

### Dot Moves Within the Window

This is a normal function of any red dot that is parallax free. The placement of the dot within the window does not affect your point of impact. As long as the dot is on the target and zeroed, you will hit your target.

### Dot is Blooming

An astigmatism may cause the dot to look clustered, linear, or starbursted. Lowering the red dot intensity to an appropriate brightness setting, focusing on the target and not the dot, and keeping both eyes open helps reduce blooming.

### Red Dot Does Not Line Up with My Iron Sights

Iron sights are independent of the dot. You can have the iron sights sighted in and the red dot sighted in and they may not line up with one another.

### Mounting Screws Coming Loose

Check to make sure that the mounting screws were torqued to proper specifications. Add a thread locking compound to the screw. Torque to 10-12 in-lbs with thread locking compound or 15 in-lbs without.

## Bullets Are Not Grouping

Be sure all mount screws are tight. You should not be able to twist or move the red dot in any direction. Many times, problems thought to be with the red dot are actually mount problems.

## NOTICE

### Virtual Patent Marking Notice By Vortex Optics

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