



# SPARC<sup>®</sup> SOLAR

RED DOT



PRODUCT MANUAL

**SPECIFICATIONS**

<b>Waterproof</b>	Yes	<b>Dot Size</b>	2 MOA
<b>Fogproof</b>	Nitrogen gas purging	<b>Adjustment Graduation</b>	1 MOA
<b>Length</b>	2.6" (66mm)	<b>Elevation Adjustment</b>	100 MOA
<b>Weight</b>	5.9 oz. (167.3g)	<b>Windage Adjustment</b>	100 MOA
<b>Eye Relief</b>	Unlimited	<b>Travel Per Rotation</b>	42 MOA
<b>Battery</b>	CR2032		



Dual Use: Shooting Tactical / Hunting  
 Patent Pending  
 Images in this manual may vary from actual product.

**The SPARC® Solar Red Dot Sight**

The SPARC® Solar harnesses the power of the sun to bring incredible battery life. Speed, brains, longevity and durability in one powerful compact package.

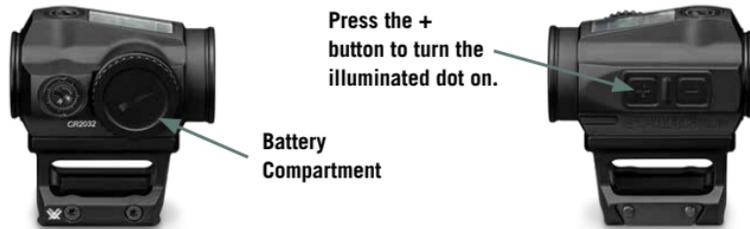


## Battery Installation

Remove the battery compartment cover. Install one CR2032 battery so the “+” lettering faces out and replace the cover. When replacing the battery cap, be sure it is fully tightened.

## Powering On/Off

To turn the SPARC® Solar on, press the “+” button. The red dot will automatically shut down after 14 hours. The SPARC® Solar is equipped with motion activation. By allowing the unit to automatically shut down, the red dot will automatically turn on the next time you pick up your gun. You can also turn the SPARC® Solar off manually by pressing and holding the “-” button for approximately 5 seconds. This will disable the motion activation, and the red dot will not automatically turn on the next time you use your gun.



## Brightness Adjustments

The SPARC® Solar red dot sight offers twelve illumination settings—the lowest two settings designed for use with night vision equipment. Adjust the dot brightness by pressing the appropriate “+” or “-” Brightness Level control button.

## Typical Battery Life

The SPARC® Solar uses a CR2032 battery. The typical battery life depends on the brightness intensity setting of the dot.

DOT COLOR	APPROXIMATE BATTERY LIFE AT BRIGHTNESS SETTING 6
Bright Red Dot	150,000 Hrs. + (using solar and battery power)

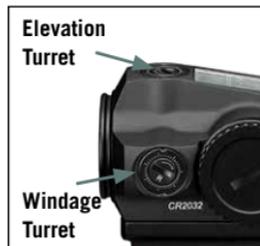
## Solar Panel Power Supply

The SPARC® Solar red dot operates by solar power (monocrystalline solar cell) and/or battery power, and is equipped with Auto D-TEC technology. In lower light conditions, the SPARC® Solar will automatically draw power from the battery to power the LED. Under most outdoor, daytime conditions, the SPARC® Solar will operate exclusively on solar power. Indoor lighting is not sufficient to power the SPARC® Solar using solar power alone and will need to draw power from the battery to operate.



## 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 of the red dot is the Windage Turret and is used to adjust the point-of-impact left and right.



Your SPARC® Solar red dot features adjustable Elevation and Windage Turret dials with audible and tactile clicks. Each click moves the bullet's point-of-impact 1 minute of angle. 1 MOA closely corresponds to 1/4 inch at 25 yards, 1/2 inch at 50 yards, 1 inch at 100 yards, and 2 inches at 200 yards.

**EXAMPLE:** At a 50 yard sight-in distance, it will take twelve clicks of the turret to move the bullet's point-of-impact six inches.

### To make turret adjustments:

1. Use a coin, screwdriver or bullet casing to make the adjustments.
2. Turn the turret in the appropriate direction: up/down or left/right as indicated by the arrows.

## Mounting the SPARC® Solar

To get the best results from your SPARC® Solar red dot, proper mounting is essential. Although not difficult, the correct steps must be followed. The SPARC® Solar can be mounted to Picatinny rails/bases. If needed, these may be purchased at most firearms dealers. Please follow the instructions below for the proper scope mounting procedure, or go to [VortexOptics.com](http://VortexOptics.com) for a video tutorial.

If you are unsure of your abilities, it would be best to use the services of a qualified gunsmith.

## Riflescope Mounting Checklist

- Gun vise or a solid platform/rest for your rifle
- Turret Tool

## Mount Height Options

The SPARC® Solar Red Dot can be mounted at two heights, lower 1/3 co-witness and a low-mount. To mount it at lower 1/3, mount the sight as received. The optic center will be 40mm above the base surface. The optic center at the low-mount will be 22mm above the base surface.



## To attach to rail:

1. Attach the unit to the rail/base with solar panel slanting towards the muzzle.
2. Make sure the mount is solidly seated in the base groove. To prevent recoil injury, position the red dot so you have at least four inches of eye relief.
3. Be sure the base clamp is hooked around the outside of the rail/base.
4. Press the red dot downward and forward toward the muzzle. Then, firmly tighten the base clamp bolt using the torx wrench. Using a torque wrench, torque the base screws to 20 in/lbs.

**Note:** It is a good practice to regularly re-check all mounting screws (including spacer attachment screws) to be sure they haven't loosened under field conditions.



## Bore Sighting

Initial bore sighting of the red dot at short range (25–50 yards) will save time and money at the range. This can be done by using a mechanical or laser bore sight according to the manufacturer's instructions or by removing the bolt and sighting through the barrel on some rifles.

## To visually bore sight a rifle:

1. Place the rifle solidly on a rest and remove the bolt.
2. Sight through the bore and center the target inside the barrel.
3. With the target centered in the bore, make windage and elevation adjustments until the illuminated dot is also centered over the target.

## Final Range Sight-In

After the red dot has been bore-sighted, final sight-in should be done at the range using the exact ammunition expected to be used while shooting. Sight in and zero the red dot at the preferred distance.

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 7 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.

## Shooting with the SPARC® Solar

The key thing to remember when shooting with the SPARC® Solar Red Dot is to keep both of your eyes open! Shooting with both eyes open allows you to take full advantage of your peripheral vision to get on target very quickly. Eye placement is not critical. As long as you can see the dot, you'll hit your target!



## Cleaning

The SPARC® Solar red dot requires very little routine maintenance other than periodically cleaning the exterior lenses and solar panel. The exterior of the scope may be cleaned by wiping with a soft, dry 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 things like dried water spots.

## Lubrication

All components are permanently lubricated, so no additional lubricant should be applied. If possible, avoid exposing your Vortex red dot to direct sunlight or any very hot location for long periods of time.

**Note:** Do not attempt to disassemble any components of the red dot.

## Replacing the Battery:

1. Unscrew the outer cap with the included turret tool.
2. Remove the CR2032 battery.
3. Replace with a new CR2032 battery.

## Storage

Keep lens covers closed to protect the lenses when not in use.

- Remove the battery when putting in storage for extended periods.
- Avoid storage in direct sunlight or in any very hot location.
- Storage and use in extreme cold will shorten battery life.

## Troubleshooting

Please check the following before returning the red dot for service.

### If the red dot does not illuminate:

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

### If 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 scope are actually mount problems.

**Note:** Our Troubleshooting Guide is available online at [VortexOptics.com](http://VortexOptics.com).



## VIP WARRANTY

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*Note: The VIP Warranty does not cover loss, theft, deliberate damage, or cosmetic damage not affecting product performance.*



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