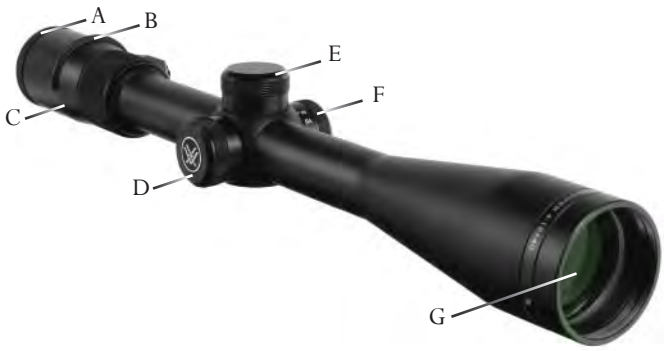
Congratulations on your Viper Riflescope!

At Vortex, your love for the outdoors is the driving force behind all we do. Our commitment to you, our customers and dealers, is unmatched in the industry—and is the strength of our success. From impressive images to durable construction, our carefully designed and field-tested optics are the culmination of an unwavering dedication to deliver quality, reliability and superior performance to you, our valued customer.

Vortex Viper Series Riflescopes

Contents

Please read this entire manual before mounting your riflescope.



A. Fast Focus Ring
B. MAG-View Adjustment Lever
C. Eyepiece
D. Windage Dial
E. Elevation Dial
F. Side Parallax Adjustment Dial (only on PA models)
G. Objective Lens

Riflescope Adjustments

1. Reticle Focusing

Vortex Viper series riflescopes use the exclusive Fast Focus mechanism to get a clear and sharp reticle image.

To focus the reticle, begin by allowing your eyes to focus on a distant object for several moments—*not* looking through the scope. Then, hold the scope up to the sky and quickly look through it. *Never* look directly into the sun! Pay attention to the sharpness of the reticle, and adjust the eyepiece focus until it is as sharp as possible. The reticle image should be crisp and sharp immediately when you look. Since your eyesight may change over time, it's a good idea to periodically re-check this adjustment.

2. Windage and Elevation Adjustment

Your Viper riflescope incorporates adjustable elevation and windage dials with audible clicks. Each audible click moves the bullet's point-of-impact a fraction of a minute of angle (MOA).

- 1/4 MOA closely corresponds to 1/4 inch at 100 yards, 1/2 inch at 200 yards, 3/4 inch at 300 yards...taking four (4) clicks to move the bullet's point-of-impact one inch at 100 yards.

How to Adjust Windage and Elevation Settings

Begin adjusting the windage and elevation settings by first removing the covers. Then, move the dials in the direction you wish the bullet's point-of-impact to change. To make the adjustments, turn the adjustment dial in the appropriate direction (up/down or left/right) as indicated by the arrows.

After sight-in, you can re-align the zero marks on the dials with the reference dots if you wish. Replace covers when done.

Caution!

Riflescopes are not intended for looking at the sun or any other intense light source. Such use could damage the retina and cornea of your eyes—even to the point of causing blindness.

3. MAG-View Adjustment Lever

To change magnifications, turn the MAG-View adjustment lever to the desired level. Use lower powers (offering a wider field of view) when making a quick shot at closer distances.

4. Parallax Adjustment

Parallax is a phenomenon that results when the target image does not quite fall on the same optical plane as the reticle within the scope. When the shooter's eye is not precisely centered in the eyepiece, there can be an apparent movement of the target in relation to the reticle which can cause a small shift in the point of aim. Parallax causes the greatest problem on small targets at high magnification, as with varmint and target shooting.

Some Viper riflescopes have a side parallax adjustment (PA) dial. All other models are set at the factory to be parallax-free at 100 yards; this is a setting that will work well for the majority of shooting situations encountered in the field.

When shooting at distances other than 100 yards, simply pay attention to good shooting form, keeping your eye centered in the scope, and you will minimize any problems with parallax.

Parallax Adjustment on PA Models

Setting the side focus parallax adjustment dial on the Viper PA scopes is very easy.

A. Be sure that the reticle is properly focused.
B. Match the range number (distance you are shooting) on the objective lens barrel as closely as possible to the indicator arrow on the riflescope body.
C. Check the setting by moving your head up/down and left/right while looking through the scope. The setting is correct if there is no apparent movement between the reticle and target. If there is movement, continue adjusting the lens slightly until the movement is eliminated.

Side Focus Parallax Adjustment Dial

Riflescope Installation

To get the best results from your Viper riflescope, proper mounting is essential. Although not extremely difficult, the correct steps must be followed. If you are unsure of your abilities, it would be best to use the services of a qualified gunsmith.

1. Centering the Reticle

Your Viper riflescope is pre-set at the factory with the reticle centered in both adjustment ranges. This is the ideal position to begin sight-in. If you have changed the settings and wish to re-center the reticle, follow this procedure:

A. Turn either dial (windage or elevation) as far as you can in one direction until it stops.
B. Turn the dial in the other direction until it stops, carefully counting the audible clicks as you turn the dial.
C. Turn the dial back again to half the number of clicks counted in Step B—the reticle will be centered for that adjustment only.
D. Repeat for the other adjustment so that the reticle is centered in both the windage and elevation settings.

2. Mount As Low as Possible

Using high quality, appropriately sized rings* and bases matched to your rifle, mount the scope as low as possible on the rifle. A low mounting will help assure proper cheek weld and aid in a solid shooting position and fast target acquisition. We recommend using the lowest rings that will give complete clearance of scope and rifle. Avoid contact with barrel, receiver, bolt handle, or any other part of the rifle. Work the riflescope's zoom ring and rifle's action to assure no contact. Be sure to follow the manufacturer instructions supplied with the rings and mounting base.

**Standard Vipers use 1-inch rings; select PA models use 30mm.*

3. Adjust for Maximum Eye Relief

Before final the tightening of the riflescope rings, adjust for maximum eye relief to avoid injury from recoil.

A. With the riflescope set at the lowest magnification, slide the scope as far forward as possible in the rings.
B. While viewing through the scope in the normal shooting position, slowly slide the scope back towards you. When you feel you *just* hit the full field of view, stop. Without disturbing the front-back setting, slowly rotate the scope until the elevation dial is at the top of the scope and the vertical crosshair of the reticle matches the vertical axis of the rifle. Using a visual vertical reference such as the edge of a building or telephone pole can help with this.
B. Tighten the rings per the manufacturer's instructions.

4. Bore Sighting

Initial bore sighting of the scope at short range of 50 yards will save time and money at the shooting range. This can be done using a bore sighter, following the manufacturer's instructions, or by removing the bolt and sighting through the barrel on a bolt action rifle. With the rifle placed solidly on a bench and the bolt removed, sight through the bore and center the target inside the the barrel. With the bulls-eye centered in the bore, make windage and elevation adjustments until the reticle crosshair is also centered over the bulls-eye. If possible, make initial windage adjustments using the mounting base rather than the riflescope's windage dial.

5. Base Adjustments and Shimming

Vortex riflescopes come centered from the factory, but you will need to make some adjustments when initially sighting in your scope. Many ring and base setups allow you to adjust windage at the base mount. If possible, use these adjustments for initial windage change. Though not usually necessary, you can correct the elevation adjustments using shims under the base mount.

Assuming typical ring spacing of 3.25", a shim of .001" will yield 1" at 100 yards, 2" at 200 yards, and so on.

Shim under the front base for more *down* adjustability and under the rear base (nearest shooter) for more *up* adjustability. Please consult a qualified gunsmith if you are unsure of this procedure.

Note:

If large windage/elevation corrections have been made using bases or shims, it will be necessary to have the rings lapped. Consult a qualified gunsmith if you're unsure of this procedure.

Riflescope Installation Continued

6. The Final Range Sight-In

Final sight-in should be done at the range using the exact ammunition you expect to hunt or shoot with. For Viper PA riflescopes, set the parallax adjustment to match the distance used for sight-in.

A. After the scope has been bore-sighted, fire a shot or two to check that you're roughly on target. If necessary, adjust the reticle to put you near the center of the target (see page 7).
B. Next, fire a three-shot group as precisely as possible. Use the center of this group as a reference when making any necessary correction adjustments for windage and elevation. Adjust the dials in the direction you wish the group to move.
C. Fire a final three-shot group to confirm your adjustment and repeat as necessary.

7. Resetting Adjustment Dials with Zero Reset

Viper riflescopes feature windage/elevation dials that will allow you to re-index the zero indicator after sight-in without disturbing your settings. This allows you to quickly return to your original zero if temporary corrections are used in the field. Reset the windage and elevation dials in this way:

A. Remove the outer cap and pull the adjustment dial outward against the spring tension until it stops.
B. With the dial pulled fully outwards, rotate the dial to reposition the zero mark on the index line.
C. Release the dial, allowing it to return to the normal inward position.

Riflescope Maintenance

Your Viper riflescope will require very little routine maintenance other than periodically cleaning the exterior lenses. All components of Vortex riflescopes are permanently lubricated so no additional lubricant should be applied.

Lens Care

When cleaning the lenses, be sure to use products such as the Vortex Lens Pen or the Fog Free lens cleaning kits that are 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, a very small amount of water, or pure alcohol can help remove oil and dried water spots.

Do not attempt to disassemble any components of your riflescope. Avoid storage in direct sunlight or hot locations since high temperatures can adversely affect internal lubricants.

Riflescope Body Care

Clean the exterior of the riflescope by wiping with the soft, dry cleaning cloth provided with the Viper riflescope.

Riflescope Troubleshooting

Please check the following before returning a riflescope for service. *Many times, problems thought to be with the riflescope are actually with the riflescope's mount.*

1. Be sure the mounts are tight to the rifle and that the scope is secure in the rings; you should not be able to twist or move the scope in the rings.
2. Insufficient windage or elevation adjustment range can indicate alignment problems with base mount holes drilled in the rifle's receiver or riflescope base; this may also indicate alignment problems with barrel and receiver. Re-center the reticle (see page 10) and then check the bore sight. If the reticle is way off while centered, base adjustment or shimming may be needed. Consult a qualified gunsmith if unsure of correct procedure.
3. If a rifle fails to group well, be sure the rifle's action is bedded correctly and that all mounting screws are properly tightened. The rifle's barrel and action must be clean and free of excessive oil or copper fouling. Be sure the ammunition works well with the rifle—try a type known to have grouped well in the rifle.

The VIP Warranty

This Vortex riflescope is built with our commitment to your absolute satisfaction; it is engineered to last and is unconditionally guaranteed. Vortex pledges this Very Important Promise to you, a Very Important Person—and that's why we call it the VIP warranty.

In the event that your Viper riflescope requires service, no matter the cause*, Vortex Optics will repair or replace (at our discretion) the riflescope at no charge to you. What's more, there is no time limit on our promise.

*The VIP warranty does not include loss, theft, deliberate damage, or damage because of unauthorized repair, modification, or disassembly. Vortex Optics reserves the right to replace warranted product with a product of similar value and/or with similar specifications in the event that the original product is no longer manufactured or has been discontinued. With no warranty card to fill out, the VIP warranty is completely transferable.

Vortex Optics Technical Service

For technical service questions, call the Vortex Optics Technical Service telephone number at (800) 426-0048 or send an e-mail to *service@vortexoptics.com*.

If your scope requires warranty service, please follow these practical instructions before shipping:

1. Remove the rings and any other accessories from the scope.
2. Include a note with your name, shipping address, daytime phone, e-mail, and a description of the problem.
3. Add padding around the riflescope, then pack inside a shipping carton to avoid damage during the shipping process.

Send all service repairs to:

Vortex Optics
2120 West Greenview Drive
Middleton, WI 53562

Vortex makes optics, not just riflescopes!

See our complete line of binoculars, spotting scopes, tripods, and accessories at your nearest Vortex dealer.

To receive your free Vortex product literature, simply call, e-mail, or write Vortex Optics:

Vortex Optics
2120 West Greenview Drive
Middleton, WI 53562

(800) 426-0048
info@vortexoptics.com
www.vortexoptics.com