



## RIFLESCOPE OWNER'S GUIDE

Model#: SIM3940C / SIM41240C

04-17

### YOUR NEW RIFLESCOPE

Congratulations on your purchase of a Simmons® riflescope! You are now the owner of one of the most technologically advanced riflescopes in the industry. Simmons maintains absolute product integrity and quality control throughout the entire design, production, and delivery cycle of these riflescopes.

### FEATURES AND BENEFITS

Your new riflescope also features our exclusive QTA Quick Target Acquisition, fast focus eyepiece. In a normal eyepiece, eye relief typically shrinks as magnification is increased. Simmons' new design delivers constant eye relief. In fact, once the shooter finds the proper cheek weld, position can be maintained throughout the entire power range.

Another design feature of the new Simmons QTA eyepiece is a larger eyebox, which provides the shooter with increased vertical and horizontal, as well as forward and backward movement behind the scope. This amazing new feature provides:

- + / - 2 diopter of adjustment range utilizing a fast focus system
- A constant minimum 3.75" eye relief through all power ranges for safety and comfort
- A faster target acquisition
- An extended eyebox that provides maximized field of view

Newly designed TrueZero windage and elevation dials on your scope employ a ball bearing and spring system that significantly reduces wear while maintaining dial reliability and accuracy over time. Their firm and precise clicks give you the confidence to know that any adjustments you make, at the range or in the field, are accurate and repeatable. This new dial design allows for:

- Fingertip adjustable dial screws that provide a low profile design for minimal obstruction
- Improved, long-term dial life combined with precise, audible and tactile adjustments
- 100% adjustment range with no loss of motion

**WARNING:** A SCOPE SHOULD NEVER BE USED AS A SUBSTITUTE FOR EITHER A BINOCULAR OR SPOTTING SCOPE. IT MAY RESULT IN YOU INADVERTENTLY POINTING THE GUN AT ANOTHER PERSON.

### CARING FOR YOUR RIFLESCOPE

Your scope needs very little maintenance. Exterior metal surfaces should be kept clean. A light dusting with a slightly dampened soft cloth is enough in most cases.

Your new scope features windage and elevation turrets that are completely sealed against water intrusion. However, we recommend that you keep the windage and elevation caps on the turrets, except when making adjustments, to prevent dust and dirt from collecting in the turret area.

We also recommend that lens covers be kept in place when the scope is not being used. Lenses should be inspected regularly and kept clean at all times. Dust, dirt, and fingerprints that collect on the lens surfaces will severely degrade image quality, and if left unclear for long periods, the anti-reflection coating could be damaged. Although lens cleaning is not difficult, it does require care and some patience.

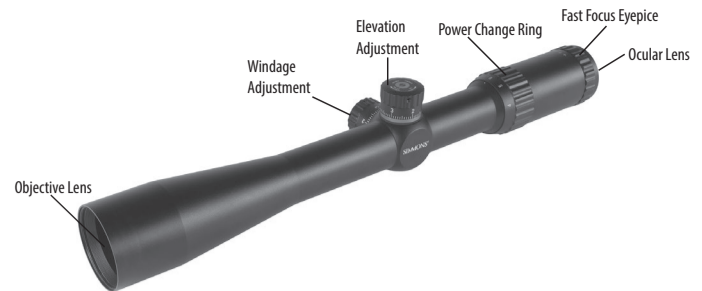
- Start with a lens brush or a small, soft bristle paintbrush. Gently whisk away loose dirt particles.
- Next, use an ear syringe or bulb aspirator (available in most drug stores) to blow remaining dirt or dust from lens surfaces.
- If further cleaning is needed, use a dry, soft lint-free cloth. Very gently wipe the lens, starting at the center using a circular motion, then working outward to the edge.
- If this has not corrected the problem repeat the process using condensation from your breath.

### KEY ELEMENTS OF A SCOPE

There are four major elements of a scope:

1. **Objective Lens:** This lens has three functions. First, it permits light to pass into the scope. Second, it determines resolution. Generally, larger lenses allow more light to enter the scope and resolve details better than smaller ones. Finally, it forms an image for the other lenses to magnify to a usable size. The image formed by this lens is upside down.
2. **Erector System:** The erector system serves three functions. Its primary function is to erect the image (that is, flips the image right-side up) and align it to the reticle. During this process, primary magnification of the image takes place. These two functions are the result of lens action.

The third function is a mechanical one. The erector lenses are housed in a tube that is fixed at one end, while the other end of the tube is free to move and respond to dial adjustments. By moving the erector system, the point-of-aim of the scope is adjusted to match the point-of-impact of the bullet.



3. **Reticle:** In simple terms, the aiming device around which the scope is built. This element replaces the iron sight system of non-scoped rifles.
4. **Ocular or Eye Lens:** This element provides the secondary and final magnification of the image.

### MOUNTING YOUR SCOPE

Your new scope, even with its technologically advanced design and features, will not perform at its best if not properly mounted. One of the most important contributing factors to the accuracy of your scope and rifle is the selection of the mount and the care with which mounting is done. Dependable mounts that attach your scope solidly to the rifle will reward you with dependability and consistent accuracy. You should take as much care in selecting a mounting system as you did in selecting your scope.

Remember, not all scopes are compatible with all mounts on all rifles. If there is any doubt in your mind, you should seek the advice of your local retailer or gunsmith.

### PRELIMINARY SCOPE ADJUSTMENTS

Before installing the scope, we recommend you set the focus of the eyepiece to fit your individual visual requirement. Refocusing the ocular distance will result in a sharper reticle focus, an improved optical image, and will help to avoid eye fatigue when using the scope over prolonged periods of time. To refocus, hold the scope about 3 to 4 inches from your eye and point at the open sky or other flatly lit area such as a monotone painted wall.

**WARNING:** NEVER LOOK AT THE SUN THROUGH THE RIFLESCOPE (OR ANY OTHER OPTICAL INSTRUMENT). IT MAY PERMANENTLY DAMAGE YOUR EYES.

Quickly glance into the scope. If the reticle appears blurred when you first glance at it, it is out of focus. Turn the eyepiece clockwise or counter clockwise several turns. Glance into the scope again to check the sharpness of the reticle. Remember to take quick glances, as the eye will compensate for slightly out of focus conditions with prolonged looks. If the reticle still appears blurred, turn the eyepiece another two or three turns. Repeat this procedure until the reticle is sharp and clearly defined.

Unless your eyes undergo a significant change over the years, you will not have to make this adjustment again.

### ATTACHING A MOUNT, RINGS AND SCOPE TO YOUR RIFLE

**WARNING:** BEFORE BEGINNING THE MOUNTING PROCEDURE, BE SURE THE ACTION IS OPEN, THE CLIP OR MAGAZINE IS REMOVED AND THE CHAMBER IS CLEAR. DO NOT ATTEMPT ANY WORK UNTIL YOUR FIREARM HAS BEEN CLEARED AND DETERMINED TO BE SAFE.

**WARNING:** IF THE SCOPE IS NOT MOUNTED FAR ENOUGH FORWARD, ITS REARWARD MOTION MAY INJURE THE SHOOTER WHEN THE RIFLE RECOILS.

In mounting your scope, we recommend that you DO NOT take short cuts as it may lead to damage to either the mounting system or to the scope. Each mounting system will have its own instructions to follow, and it is best to read the instructions first to be sure you understand them and have the necessary tools on hand.

We further recommend that you plan to go through the mounting procedure twice. The first time, to be sure everything fits together and functions properly. On the first run through, please keep the following in mind:

- Before attaching the base, clean the mounting holes in the receiver and the threads of the attaching screws with acetone or any good solvent to free them of oil or grease.
- If the mount manufacturer has recommended the use of a thread adhesive, do not use it on the first mounting trial. Once adhesive has set, it is difficult to demount if anything needs correction.
- Be sure the mounting screws do not protrude into the receiver or the barrel.
- When using dovetail mounts, do not use the scope as a lever when installing the scope. The initial resistance to turning may cause damage to the scope, and is not covered by the warranty. We recommend using a 1" wooden dowel or metal cylinder to seat the rings.
- Be sure the position of the scope does not interfere with the operation of the action.
- Be sure there is at least 1/8" of clearance between the edges of the rings and any protruding surfaces such as the turret housing (saddle), power selecting ring, and the flare of the objective bell. Also be sure there is at least 1/8" of clearance between the objective bell and the barrel.
- You should test position the scope for the proper eye relief. The scope rings should be left loose enough so that the scope will slide easily. Variable power scopes should be set at the highest magnification when performing this procedure. Mount the rifle and look through the scope in your normal shooting position.
- Test position the rifle for the proper cheek weld a number of times to ensure that your scope is positioned properly.
- When you are satisfied that everything is okay, demount and start again. This time, seat all screws firmly.

### PARALLAX

Parallax occurs when the target image is not focused on the same optical plane as the reticle. It appears as target movement against the reticle when the eye moves away from exit pupil center. The amount of movement depends upon the difference between the distance at which the objective lens is focused and the actual target distance.

In most cases, parallax will not effect bullet point of impact enough to be of significant concern in large game hunting situations. Scopes without an adjustable objective lens or side focus system are set to be parallax-free at 100 yards.

### PRELIMINARY SIGHTING-IN

You can save a significant amount of expense and frustration by pre-sighting the scope to the rifle before you take it to the range for zeroing.

There are two basic methods that can be used for pre-sighting your scope. Method one is to use a Bushnell® Bore Sighter (laser, magnetic or standard). The use of a Bore Sighter saves time and ammunition and is the system most often used by gunsmiths. The second method is traditional bore sighting:

### BORE SIGHTING METHOD

1. Place a target at 25 to 50 yards.
2. Remove the bolt from the rifle.
3. Place the rifle on sandbags or a shooting rest.
4. Set the scope to its lowest magnification.
5. Peer through the bore from the receiver and adjust the position of the rifle to center the target bull's eye in the bore (Fig. A, below).
6. Without moving the rifle, look into the scope and note the position of the reticle on the target. Adjust the windage and elevation adjustments to center the reticle on the bull's eye (Fig. B).

### FINAL SIGHTING-IN

**WARNING:** SINCE THIS PROCEDURE INVOLVES LIVE FIRE, IT SHOULD BE DONE AT AN APPROVED RANGE OR OTHER SAFE AREA. CHECK BORE FOR OBSTRUCTIONS. AN OBSTRUCTED BORE MAY CAUSE INJURY TO YOU AND OTHERS NEARBY. EYE AND EAR PROTECTION IS RECOMMENDED.

1. From a steady rest position, fire two or three rounds at a 100-yard target. Note the impact of the bullet on the target and adjust the windage and elevation dials as needed.
2. To move the bullet impact, turn the windage and/or elevation adjustments in the direction on the dials that corresponds to where the impact point falls on the target (for example, if test shots are hitting low, adjust elevation "down"). The adjustments on your riflescope model are marked in Mils, and the point of impact at 100 yards will change by .1 Mil (about .34") for each click of the windage or elevation adjustment. 10 clicks=1 Mil of adjustment.
3. When the impact on the 100-yard target is satisfactory, switch to a target set at the desired distance for final zeroing. Set the magnification to the desired power on variable power models.

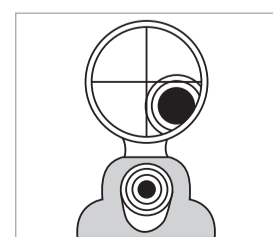


Fig. A  
Reticle not in alignment

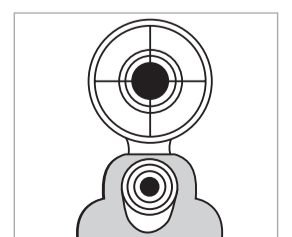


Fig. B  
Reticle in alignment

## USING THE MIL DOT RETICLE

Your Simmons riflescope contains a mil-dot reticle (in the 2nd focal plane), the most accurate means of range estimation using a manual optical device. These mil dots also allow precise leads for moving targets and exact compensation for shooting in a crosswind.

The middle of this reticle contains four evenly spaced mil-dots arrayed outward vertically and horizontally from the center. Actually, because the very center dot was left out to allow clear aiming, the reticle represents five mils in any direction -- ten vertical mils -- as shown in the illustration. Note that the most outward dot is replaced by the edge of the heavier reticle line.

One mil is the space from center-dot to center-dot. One-half and one-quarter mils are easy to estimate mentally; with practice, you can measure tenths of mils for the most exact ranging.

The mil is an angular measurement -- 1/6400th of a circle -- which equals almost precisely one yard at 1000 yards, or one meter at 1000 meters. This proportional relationship makes possible a simple formula to compute distances:

$$\frac{\text{Object's Width or Height in Yards} \times 1000}{\text{Object's Width or Height in Mil}} = \text{Range in Yards}$$

Object's Width or Height in Mil

This formula works equally well with meters, but don't mix meters and yards: Measure the object in yards to find the distance in yards, use meters to yield distances in meters.

Looking through your scope (be sure to set it on the synchronized magnification setting--marked in red or white), select an object at the distance you want to range -- an object whose width or height you know or can estimate accurately. Man-made objects of uniform size, such as fenceposts, are best, but any object of known dimensions will do. Measure the object's height or width carefully in mils, compute it according to the formula and you will find its range. Support your rifle and be precise when measuring objects; any measuring error causes an error in the computed range. Equally, a mistake in estimating the object size results in a proportional range error.

Here's an example: A coyote is sunning himself in a snowfield beside a fencepost; having crossed the fence earlier, you know that the post is four feet high, or 1.33 yards. The fencepost measures 2.5 mils in your reticle.

$$\frac{1.33 \text{ yards} \times 1000}{2.5 \text{ mils}} = \frac{1330}{2.5} = 532 \text{ Yards}$$

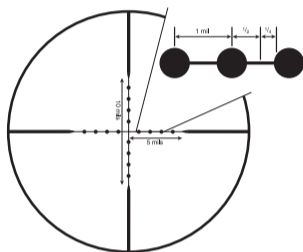
As you have a variable power scope with a 2nd focal plane reticle (the reticle stays the same size regardless of magnification), it must be set at the calibrated power mark to synchronize the mil-dot size for ranging, which is maximum power for both models (9x for the 3-9x40, and 12x for the 4-12x40 scope). But you also can range at half that power if you divide the range estimate in half, or at double the calibrated power, by doubling the range estimate, as shown in the next section (using as an example a 2nd focal plane reticle with a calibrated (synchronized) setting of 12x power):

### CALCULATING HOLDS FOR WIND AND MOVING TARGETS

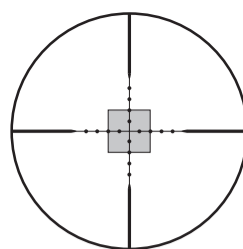
Your horizontal mil dots provide a precise way of holding for crosswinds and target movement. Just look in your cartridge's wind drift and moving target tables to determine the exact holds for different distances. The accompanying table lists one-mil widths from 100 to 600 yards, so you can calculate how many mils to hold right or left when firing in a crosswind, or engaging a moving target.

### MIL WIDTH FOR WIND AND MOVING TARGET LEADS

Distance	One Mil At This Distance (Inches)
100 Yards	3.6" (0.1 Yard)
200 Yards	7.2" (0.2 Yard)
300 Yards	10.8" (0.3 Yard)
400 Yards	14.4" (0.4 Yard)
500 Yards	18.0" (0.5 Yard)
600 Yards	21.6" (0.6 Yard)

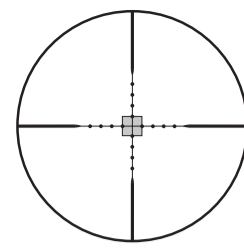


One mil is the distance between centers of dots



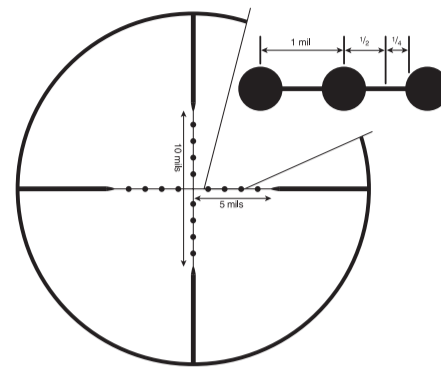
12x

Synchronized setting for this mil-dot reticle. Calculate as normal.



6x

Object measures half as large as 12x, so calculate the distance, then divide by half.



It's easy to measure in half-mils or even quarter-mils and with practice you can measure tenths of a mil.

## ALTITUDE AND TEMPERATURE

Ballistic charts published by ammunition manufacturers are based upon standard sea level conditions. When sighting in, it is well to keep in mind that altitude and temperature affect trajectory. It is best to sight-in under the same conditions in which you will be hunting.

## DO YOU NEED TO SEND YOUR SCOPE TO US?

Before returning your scope for service, you should check the following points to make sure the problem is with the scope:

- Check the mounting system and rings for looseness or misalignment.
- Check to be sure the barrel and action are properly bedded and all receiver screws are tight.
- Check to be sure the mounting system allows sufficient clearance between the objective bell and the barrel.
- Check to be sure you are using the same type and weight ammunition that you used for sighting-in.

## LIFETIME LIMITED WARRANTY

Your Simmons® product is warranted to be free of defects in materials and workmanship for the lifetime of the original owner. In the event of a defect under this warranty, we will, at our option, repair or replace the product, provided that you return the product postage prepaid. This warranty does not cover damages caused by misuse, improper handling, installation, or maintenance provided by someone other than a Simmons Authorized Service Department.

Any return in the U.S. or Canada made under this warranty must be accompanied by the items listed below:

1. A check/money order in the amount of \$10.00 to cover the cost of postage and handling.
2. Name, address and daytime phone # for product return.
3. An explanation of the defect.
4. Copy of your dated proof of purchase.

Do not send in accessories (batteries, SD cards, lens caps), only the product for repair.

Product should be well packed in a sturdy outside shipping carton to prevent damage in transit, and shipped to the address listed below:

<b>IN U.S.A. Send To:</b>	<b>IN CANADA Send To:</b>
Simmons Optics	Simmons Optics
Attn.: Repairs	Attn.: Repairs
9200 Cody	140 Great Gulf Drive, Unit B
Overland Park, Kansas 66214	Vaughan, Ontario L4K 5W1

For products purchased outside the United States or Canada please contact your local dealer for applicable warranty information. In Europe you may also contact Simmons at:

B.O.P. Germany GmbH  
European Service Center  
Mathias-Brüggen-Str. 80  
D-50827 Köln  
GERMANY  
Tel: +49 221 995568-0  
Fax: +49 221 995568-20

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You may have other rights which vary from country to country.  
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