



LEUPOLD®

**RIFLESCOPE
OWNER'S
HANDBOOK**

**Complete Installation and
Operating Instructions**

You're Part of the Tradition

In a sport rich in tradition, Leupold® has earned its place as one of the classic names in hunting and shooting. To be sure, the Golden Ring® scope you now own is the finest example of Leupold heritage.

Frederick Leupold came to Portland, Oregon, from Germany in 1907, and quickly established a firm to manufacture and repair surveying transits. Fred's son, Marcus, broadened the company's focus in the late 1930s after the avid outdoorsman missed a buck on the soggy western slopes of Oregon's Cascade Range. (His scope had fogged, as was common for scopes of that era.) Frustrated by the experience, Marcus set out to build a better scope. The rest, as they say, is history.

Marcus Leupold's quest for quality has continued on to the present. In the words of the firm's founder, Frederick Leupold, "We solemnly promise never to let down on quality; the customer is entitled to a square deal." This is why we build every Leupold Golden Ring product to be worthy of the Leupold Full Lifetime Guarantee. It's the best customer protection in the business, and it's the best way we know to thank you for buying Leupold.

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Know Your Scope

Riflescopes have become far more sophisticated over the years, but the four most basic parts have remained the same. Working from front to back they are:

1. The objective lens (or front lens) is critical to a superior sight picture.
2. The internal erector lenses which right the image.
3. The reticle, often referred to as the crosshair, provides the aiming point.
4. The ocular lens (or eyepiece lens) works with the other lenses to magnify the image, provide correct eye relief, and make diopter corrections.

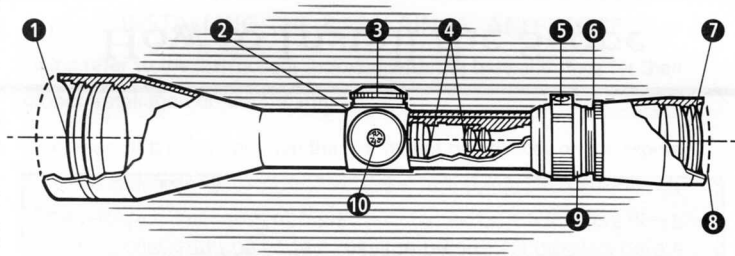
HOW SCOPES WORK

As light passes through and beyond the objective lens, the resulting upside down image is sent to the internal lenses. Known as erector lenses, these internal lenses return the image to a right-side-up position. Finally, the ocular lens makes a final enlargement of that image and sends it on to your eye.

Your Leupold scope was designed, manufactured, and tested to ensure that, when properly mounted and sighted-in on your firearm, you will enjoy

exceptional performance. A solid mount is critical to satisfactory performance of your scope. If you have problems or questions, please contact Leupold Technical Service (see page 36).

PARTS OF THE SCOPE



- | | |
|--|-----------------------------|
| 1 Objective Lens | 6 Eyepiece Lock Ring |
| 2 Windage Adjustment
(opposite side of scope) | 7 Ocular Lens |
| 3 Elevation Adjustment | 8 Eyepiece Assembly |
| 4 Erector Lenses | 9 Reticle Housing |
| 5 Power Selector Ring | 10 Side Parallax Adjustment |

PLEASE READ THIS ENTIRE HANDBOOK
BEFORE MOUNTING YOUR SCOPE.

CAUTION

Always check and be certain that the firearm is unloaded before undertaking any work upon it.

How to Install the Scope

THE LOWER THE SCOPE, THE BETTER

A scope mounted close to the rifle ensures proper cheek weld on the stock for a stable firing position and allows for rapid target acquisition. We recommend using the lowest possible ring height. No specific clearance is required, but the

scope must clear the bolt handle, hammer (on lever actions and handguns), sights, and barrel.

When installed, be sure that your scope does not interfere with firearm operation and does not contact anything except the mount rings.

INSTALLING THE BASE, RINGS, AND SCOPE

Please refer to the instructions included with the base and rings for their proper installation on the firearm.

If necessary, it is safe to position the rear mount ring directly on the exposed threaded area near the eyepiece, but only after focusing the eyepiece. This allows a more forward placement of the scope. See page 8 for more details.

NOTE: The windage and elevation adjustments on new Leupold scopes are centered as part of the assembly process. If you are mounting a scope that was previously mounted on another rifle, you should center the adjustments (please see "Centering Windage and Elevation Adjustments" on page 17 for more details).

NOTE: Use care in mounting the 2.5x28mm Scout riflescope. It is necessary to place the back edge of the rearmost ring at least 3/4" forward of the ocular bell/tube juncture to avoid possible reticle damage. Because of the longer eye relief of this product, mounting the scope back slightly will not in any way impair its function or effectiveness.

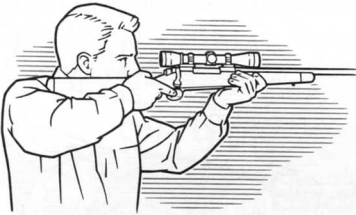
ESTABLISHING EYE RELIEF ON RIFLES AND SHOTGUNS

Because of the safety considerations associated with proper eye relief, Leupold strongly recommends that you mount your scope as far forward as possible.

Beyond that, follow these steps:

1. With the scope as far forward in the mounts as possible, hold the rifle in your normal shooting position. (Variable power scopes should be set at the highest magnification for this process.)
2. Slowly move the scope to the rear just until you can see a full field-of-view.
3. Position your scope here for maximum eye relief.
4. Proceed to **COMPLETING THE INSTALLATION**.

NOTE: To confirm that your scope is mounted in the best possible position, try assuming various positions: kneeling, seated, prone, and aiming both uphill and downhill. Remember that aiming uphill typically reduces eye relief.



Leupold riflescopes are engineered to provide a generous 3" to 5" eye relief, depending on the model and the magnification level.

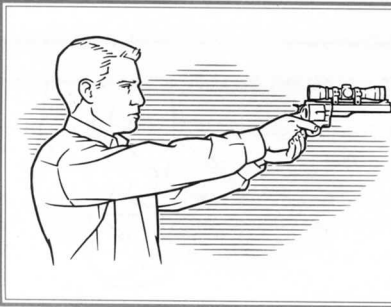
— W A R N I N G —

If a scope is mounted too far to the rear, the eyepiece can injure the shooter's brow. Shooting at an uphill angle also increases this hazard because it shortens the distance between the brow and the rear of the scope. For this reason, Leupold scopes are engineered to provide generous eye relief. Therefore, when mounting your scope, we recommend positioning it as far forward in the mounts as possible to take full advantage of this generous eye relief.

ESTABLISHING EYE RELIEF ON HANDGUN SCOPES

Since handguns are typically fired from an arms-extended position, eye relief is less of a safety issue than with riflescopes. However, it's still important to get the eye relief right for you.

1. Holding the handgun in your normal shooting stance, position the scope in the rings to achieve a full field-of-view.
2. Proceed to COMPLETING THE INSTALLATION.



The eye relief of handgun scopes is more forgiving than that of riflescopes. Nevertheless, it is important that the eye relief is compatible with your shooting style.

Unlike riflescopes, adjustments to the eyepiece in handgun scopes affect the eye relief as well as the reticle focus. Turning the eyepiece clockwise increases eye relief and turning it counterclockwise decreases it.

COMPLETING THE INSTALLATION

1. Without disturbing the optimal eye relief position, rotate the scope until the elevation adjustment dial is at the top of the scope.
2. From a firing position, check to be sure that the vertical hair of the reticle aligns with the vertical axis of the firearm. Misalignment will not affect accuracy at moderate distances but it can diminish long range accuracy.
3. When you are satisfied, tighten the ring screws evenly and securely.

FOCUSING THE RETICLE

Secure the scope and firearm in a firm rest. Point the scope at a light colored background object. With the scope approximately four inches from your eye the reticle should appear sharp and crisp; if it does not, it is necessary to adjust the focus by means of the eyepiece.

If your Leupold scope is one of our models with an eyepiece that has a lock ring, follow these simple steps:

1. Grasp the eyepiece with your hand and back it away from the lock ring. Once the lock ring is free from the eyepiece, turn it clockwise away from the eyepiece to keep it out of the way during the adjustment.
2. If you tend to hold things away from yourself to see them clearly (you are farsighted) turn the eyepiece counterclockwise by a couple of turns. If you hold things close to yourself to see them clearly (you are nearsighted) turn the eyepiece clockwise by a couple of turns.
3. Looking through the scope when pointed at the sky, take a few quick glances at the reticle. The focus of the reticle should be noticeably different from when you started. Continue this process until the reticle appears clear and sharp.
4. When you are satisfied with the image of the reticle, turn the lock ring so that it rests firmly against the eyepiece.

If your Leupold scope is one of our models without an eyepiece lock ring, follow these simple steps:

1. All adjustment is made with the eyepiece.
2. Look through the scope with quick glances while focusing the reticle image. If you tend to hold things away from yourself to see them clearly (farsighted) turn the eyepiece ring counterclockwise until the reticle is clear and sharp. If you hold them close to yourself to see them clearly (nearsighted) turn the eyepiece ring clockwise until the reticle is sharp and clear.

If your eyesight changes, readjust the eyepiece. As we age, eyesight normally changes. You may want to check the sharpness of the reticle on your scope every few years to ensure it is still adjusted correctly for your eye.

NOTE: To protect the integrity of the waterproof seal of every Leupold Golden Ring scope, an internal mechanism prevents the eyepiece from coming off the scope.

The primary function of a scope is to aim the firearm. Never use the scope as a substitute for binoculars. Never watch another person through the scope. As always, the Golden Rule applies.

How to Sight-In

USING A BORE-SIGHTING COLLIMATOR

To save time and ammunition, start out in your shop or gun room with a bore-sighting collimator. Follow the directions included with the collimator for specific instructions on its proper use. Remember, when possible, it is better to make the initial windage adjustments to the mount base before using the scope's windage adjustment.

NOTE: Bore-sighting alone is not sufficient to sight-in a scope. You must make final adjustments by shooting the firearm using the same ammunition you use in the field.

USING THE LEUPOLD ZERO POINT ILLUMINATED MAGNETIC BORESIGHTER

This tool fits any rifle, shotgun, or pistol, and helps you get "on the paper" fast, without barrel spuds or batteries. It works with any optical sight, and can even be used to recheck your zero, without firing a shot. See your Leupold Golden Ring Dealer or visit www.leupold.com for more information.

TRADITIONAL BORE-SIGHTING (BOLT ACTIONS)

Preliminary sighting-in can also be accomplished by bore-sighting at the firing range using a target from 20 to 50 yards away.

1. Position the firearm on the bench, using sandbags to steady the firearm.
2. Remove the bolt from the firearm.
3. Looking through the bore itself, move the firearm to center the bull's-eye of the target inside the barrel, as shown in Figure A.
4. Hold the rifle steady. With the bull's-eye centered when viewed through the bore, make windage and elevation adjustments to the scope until the very center of the reticle is aligned with the bull's-eye of the target, as shown in Figure B.

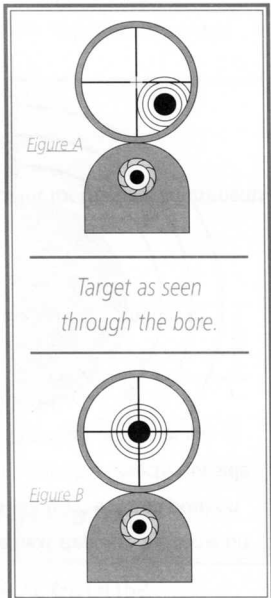


Figure A

*Target as seen
through the bore.*

Figure B

