

## CAM-ASSIST 3-AXIS LEVELING BLOCK with Hex-Shaped Armored Rod Holder



The cam-assist 3-axis leveling block (US Patent #7,331,112) has the same convenient removal and precise reattachment split-block design feature of our leveling block assembly and goes far beyond conventional two-axis leveling. Two-axis leveling only addresses the adjustment made between the sighting aperture level and sight frame, which, when set accurately square with each other, will only ensure consistent right and left arrow impact while shooting on level ground. By adjusting the 3rd axis you can eliminate the right and left impacts on up and downhill shots.

Adjustments are easy and accurate with “Cam-Assist Control.” A lever extends from the pocketed cam that controls the movement for both 2-axis and 3rd axis adjustments.

The cam-assist 3-axis leveling block adds the following:

1. Incorporates the use of our armored scope rod holder design enclosing the entire threaded rod under tension between the scope and the jam nut. This, by design, will minimize the flexing of the scope rod and its chance to break. Also, with the scribed marks on the armored hex rod, you have a very convenient reference for large windage moves without scope rotation.  
Note for Black Eagle scope owners:  
Only use the non-threaded tube supplied with our scope!
2. Permits an additional adjustment which, properly adjusted, ensures consistent right and left arrow impact when shooting a bow through a complete arc from the most severe up and downhill shots, as well as shots on level ground. This additional adjustment allows movement of the leveled aperture toward or away from the bow. Only when a leveled aperture is adjusted both square with the path of an arrow (from a top view) and square with a vertical sight frame, can this be accomplished.

Additional leveled apertures could be set up with cam-assist 3-axis leveling block assemblies for backup or for different shooting conditions and changed as needed, to keep from re-leveling your scope(s).

### Attaching holder to the sight

Loosen the leveling block assembly knob (LBA knob) on the attachment so the “V-shaped” split-block can be matched to the “V” on the sight’s windage block. Tighten the LBA knob clockwise until finger-tight. Note: Tightening the LBA knob with an allen head wrench (7/64”) may be necessary to ensure that the attachment will remain secure while shooting. Use light pressure for no more than 1/8 of a turn.

# INSTALLATION & ADJUSTMENT INSTRUCTIONS

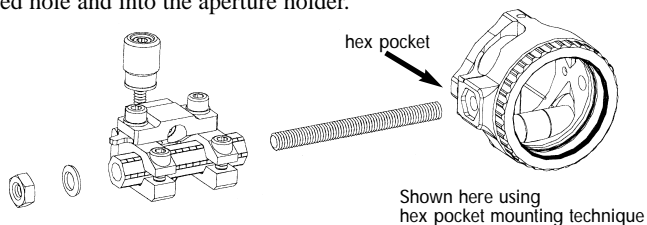
## FOR SURE-LOC® SIGHTS AND ACCESSORIES

### Assembly detail

The cam-assist 3-axis leveling block comes assembled right-handed.

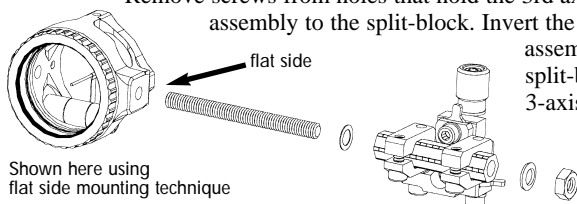
To convert a right-handed cam-assist 3-axis leveling block for left-handed use, see left-handed use instructions below.

The 3rd axis support bracket is attached to a split-block using socket head screws. The oval-shaped hole on the bottom allows the 3rd axis holder to be rotated within a limited range. A second socket head screw with flat washer locks the 3rd axis holder. The 3rd axis pivot hole is positioned toward the scope side of the sight while the 3rd axis oval-shaped hole is away from the scope. The armored aperture holders are attached to the 3rd axis support bracket by a locking screw with lock washer through pivot hole and a locking screw with flat washer through the oval-shaped hole and into the aperture holder.



### Left-handed use:

Remove screws from holes that hold the 3rd axis support bracket and assembly to the split-block. Invert the support bracket and assembly and reattach to the split-block, attaching scope to 3-axis leveling block.



### Attaching scope

Note: To install the SURE-LOC® Black Eagle scope, see its instructions.

1. Set the windage adjustment on your sight to the middle of its adjustment range.
2. Attach the cam-assist 3-axis leveling block assembly to your sight.
3. Loosen the armored hex tube adjustment screws and remove the hex tube.
4. Thread the hex tube onto the scope rod (with the hex tube threads toward the scope). Make sure the point of the hex is facing toward the front of the scope or you may want to tip your scope slightly to align your fiber (if used) at longer yardage and tighten against the scope. Note: If the point of the hex is not rotated to the front of the scope, and has a flat facing the front of the scope, install the flat washer provided.

# INSTALLATION & ADJUSTMENT INSTRUCTIONS

## FOR SURE-LOC® SIGHTS AND ACCESSORIES

5. Reinstall hex tube with scope into aperture holders. Secure with washer and a jam nut.
6. Slide the scope/tube assembly in or out to attain center shot and re-tighten screws.
7. You are now ready to level your scope to the sight.  
See manual 3rd axis leveling instructions or check out our new leveling device to simplify your set-up.

### Using holder with scopes not manufactured by SURE-LOC®

Due to the wide variety of materials used for manufacturing scope housings, we recommend you contact the manufacturer of your scope for suggested mounting instructions.

### Windage adjustment

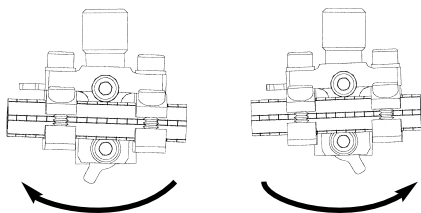
**Small adjustments:** Simply use the windage adjustment knob on your SURE-LOC® sight. Each click will move .002".

**Large adjustments:** Loosen the 2 allen screws in the clamp above the hex tube with a 7/64" allen wrench. Slide the hex tube left or right, depending on the impact of your arrow.

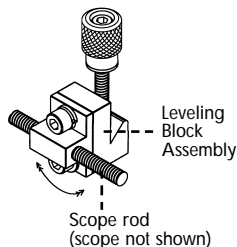
**Set-up tips:** Each scribe on the hex tube is equal to 1 full turn of the windage knob. Try to keep a tube scribe mark flush but visible with an edge of the armored aperture support bracket. If you are running out of micro adjustment in either direction, move the hex tube one scribe mark or more in that direction and re-tighten. Then move the windage knob 1 full turn for every mark moved back toward the center of the adjustment to regain the same center position before the move. Finish by micro adjusting to your final windage position.

### 2-Axis leveling techniques

Hold the sight frame in a true vertical position using a good carpenter's level. A vertical object known to be square, such as a door edge or frame, can work well also. Loosen the locking screws and rotate the aperture level to the square position and re-tighten screws. The SURE-LOC® leveling device can also be used for two-axis leveling and is portable, too.



Cam-Assist 3-Axis Leveling Block  
-US Patent #7,331,112-



Standard Leveling Block Assembly

# INSTALLATION & ADJUSTMENT INSTRUCTIONS

## FOR SURE-LOC® SIGHTS AND ACCESSORIES

### 3-Axis leveling – manual technique

1. Two-axis leveling must be established first, see “Two-Axis Leveling Technique.”
2. 3rd axis leveling should be set by visually setting the scope approximately square with the arrow (looking down from directly above the sight), and securing the locking screws.
3. Shoot test arrows for centerline arrow impact on severe up or downhill shots.  
(Do not adjust the windage in case of a centerline miss on these shots!)
4. Note that centerline miss adjustments are opposite for right- and left-handed use. Loosen the 3rd axis screws and adjust in the following manner:

#### Right-handed:

- A consistent downhill miss to the right or an uphill miss to the left indicates the scope should be moved toward the bow.
- A consistent downhill miss to the left or an uphill miss to the right indicates the scope should be moved away from the bow.

#### Left-handed:

- A consistent downhill miss to the right or an uphill miss to the left indicates the scope should be moved away from the bow.
  - A consistent downhill miss to the left or an uphill miss to the right indicates the scope should be moved toward the bow.
5. Re-tighten the locking screws. Adjusting in this manner will not affect your impact on level ground.
  6. Repeat steps 3 through 5 until correct center shot impact is attained.

