



### Lifetime Warranty

This AXCEL® Sight is guaranteed to the original owner with a valid sales receipt against defects in materials and workmanship not caused by normal wear for the lifetime of the product. T.R.U., Inc., the manufacturer of AXCEL® Sights, reserves the right to repair or replace defective parts at its earliest convenience if the sight has been used according to the enclosed instructions. T.R.U., Inc. alone will judge whether a defect has been caused by normal wear and which parts will be repaired or replaced. Defects caused by normal wear may be repaired for an additional charge.

### LIMITATIONS TO GUARANTEE

Parts that are modified, abused, or not used according to the instructions are not covered by this guarantee. T.R.U., Inc. shall not be liable for injuries or property damage of any kind. This guarantee is only valid to the original owner and is void if the original owner does not have the sales receipt. IT IS CRITICAL THAT YOU KEEP YOUR SALES RECEIPT IN A SAFE PLACE, AS REPAIRS WILL NOT BE PERFORMED WITHOUT THE ORIGINAL SALES RECEIPT! All packages sent to T.R.U., Inc. must have a return authorization (RA) number.

If you believe that a return to our factory is needed, call 434-929-2800 for a return authorization (RA) number, then UPS ship INSURED to T.R.U., Inc., 131 Crennel Drive, Madison Heights, VA 24572. T.R.U., Inc. is not liable for products that are lost in shipping, so it is very important to INSURE all shipments and make sure that your package has a tracking number. All returns must have a return authorization number, a short explanation of the problem, and be accompanied by a copy of the original sales receipt. The RA# must be written on the outside of the package or the package will not be accepted.

ITEMS IN THIS MANUAL MAY BE PATENT PENDING OR COVERED BY US PATENTS & REGISTERED TRADEMARKS.  
VISIT  
[WWW.AXCELSIGHTS.COM/LEGAL.HTML](http://WWW.AXCELSIGHTS.COM/LEGAL.HTML)  
FOR A FULL LIST OF PATENTS & TRADEMARKS.

Tomorrow's Resources Unlimited, Inc.  
**AXCEL® ARCHERY**  
131 Crennel Dr., PO Box 1180  
Madison Heights, VA 24572  
434-929-2800  
[WWW.AXCELARCHERY.COM](http://WWW.AXCELARCHERY.COM)

# TECHNICAL MANUAL

# ACHIEVE<sup>VR</sup>

## 1.5 AND 2.0

### COMPOUND AND RECURVE

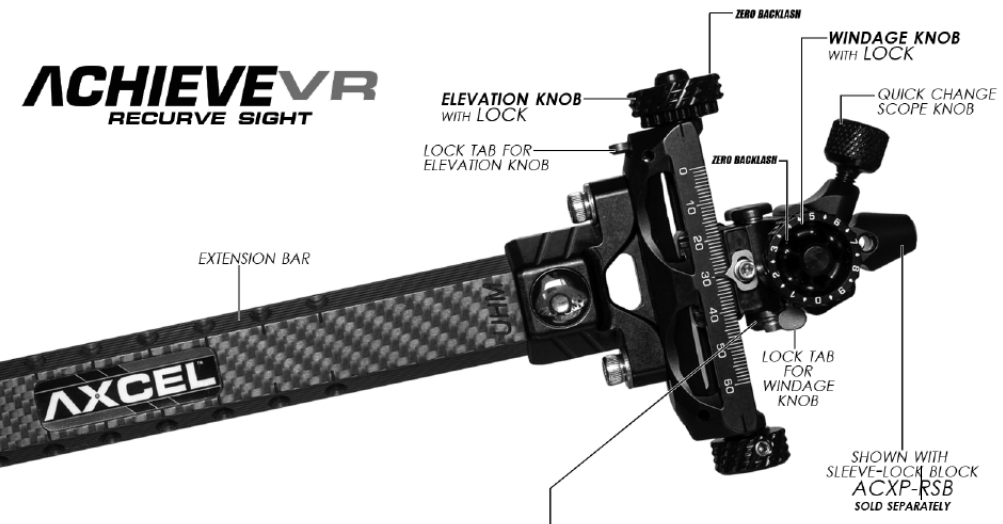


[WWW.AXCELSIGHTS.COM](http://WWW.AXCELSIGHTS.COM)

**▲ WARNING:** This product can expose you to chemicals including Nickel Acetate, which is known to the State of California to cause cancer or birth defects or other reproductive harm. For more information, visit [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

ACHIEVE VR SIGHTS PARTS BREAKDOWN:

**ACHIEVE VR**  
RECURVE SIGHT



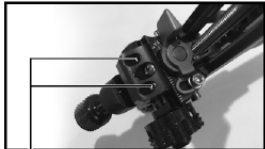
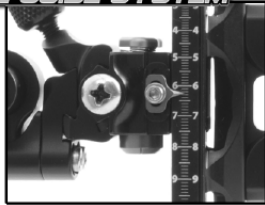
**ACHIEVE VR**  
COMPOUND SIGHT



"VTS" (VARIABLE TENSION SYSTEM), PROVIDES A NEW ADJUSTMENT WHERE THE ARCHER PERSONALLY CHOOSES A DESIRED ELEVATION TRAVEL TENSION SETTING.

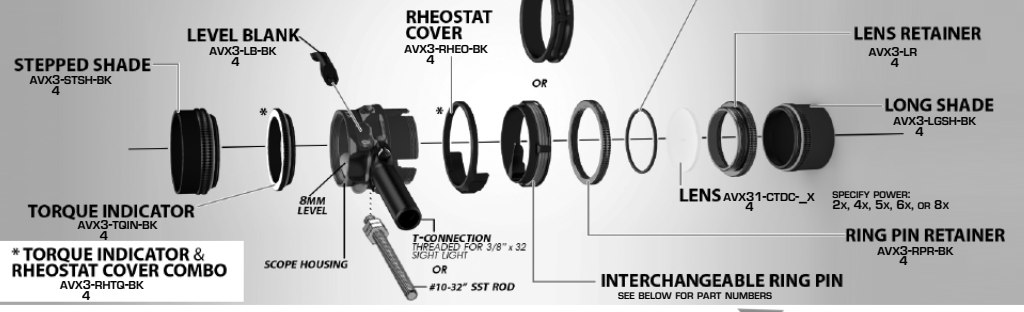
**WINDAGE DOVETAIL GUIDE SYSTEM**

SUPERIOR "WINDAGE DOVETAIL GUIDE SYSTEM", REPLACES INFERIOR TWIN-DOWEL GUIDE SYSTEMS.



IF THERE IS MOVEMENT OR PLAY IN THE WINDAGE SYSTEM, TIGHTEN THE TWO 4-40 SET SCREWS IN 1/16 TURN INCREMENTS UNTIL DESIRED PRESSURE IS REACHED AND MOVEMENT/PLAY IS GONE. IF TIGHTENED TOO MUCH, THE WINDAGE WILL LOCK UP.

**AVX-31 AND AVX-41 BREAKDOWN**



**RING PINS**

INTERCHANGEABLE PATENTED RING PIN MOUNTED ON EXTERIOR OF SCOPE HOUSING FOR MAXIMUM PIN FIBER BRIGHTNESS - RING PIN COMBO KIT AVAILABLE IN .010" OR .019" FIBER SIZE IN GREEN, RED, YELLOW, OR BLUE

- AVX3-RP10** AVX-31 SCOPE FIBER OPTIC RING PIN - .010" SIGHT PIN [SPECIFY PIN COLOR]
- AVX3-RP19** AVX-31 SCOPE FIBER OPTIC RING PIN - .019" SIGHT PIN [SPECIFY PIN COLOR]
- AVX4-RP10** AVX-41 SCOPE FIBER OPTIC RING PIN - .010" SIGHT PIN [SPECIFY PIN COLOR]
- AVX4-RP19** AVX-41 SCOPE FIBER OPTIC RING PIN - .019" SIGHT PIN [SPECIFY PIN COLOR]

**RING PINS WITH RHEOSTAT COVER**

RHEOSTAT COVER TO DIAL IN YOUR BRIGHTNESS INTERCHANGEABLE PATENTED RING PIN MOUNTED ON EXTERIOR OF SCOPE HOUSING FOR MAXIMUM PIN FIBER BRIGHTNESS - RING PIN COMBO KIT AVAILABLE IN .010" OR .019" FIBER SIZE IN GREEN, RED, YELLOW, OR BLUE

- AVX3-RPRH10** AVX-31 SCOPE FIBER OPTIC RING PIN & RHEOSTAT COVER - .010" SIGHT PIN [SPECIFY PIN COLOR]
- AVX3-RPRH19** AVX-31 SCOPE FIBER OPTIC RING PIN & RHEOSTAT COVER - .019" SIGHT PIN [SPECIFY PIN COLOR]
- AVX4-RPRH10** AVX-41 SCOPE FIBER OPTIC RING PIN & RHEOSTAT COVER - .010" SIGHT PIN [SPECIFY PIN COLOR]
- AVX4-RPRH19** AVX-41 SCOPE FIBER OPTIC RING PIN & RHEOSTAT COVER - .019" SIGHT PIN [SPECIFY PIN COLOR]



<p><b>BLACK ONLY</b></p> <p><b>FIRE RING PIN</b> AC14-FRP FIBER SIZE - FIBER COLOR</p> <p>INCLUDED ON PRO MODEL OR SOLD SEPARATELY</p>  <p>FIBER SIZE .019", .019" OR .029"</p> <p>FIBER COLOR YELLOW, GREEN, RED, BLUE</p>	<p><b>X-ZONE LENS</b> ZERO POWERED (0x)</p> <p>.019" DRILLED LENS WITH ROLLOFF STICK FIBERS &amp; DECALS AC14-CTXZ19-OXFD</p> <p>.019" DRILLED LENS AC14-CTXZ19-OX</p> <p>.029" DRILLED LENS WITH ROLLOFF STICK FIBERS &amp; DECALS AC14-CTXZ29-OXFD</p> <p>.029" DRILLED LENS AC14-CTXZ29-OX</p> <p><b>WARNING:</b> DO NOT USE A LENS WITH MAGNIFICATION IN A RECURVE SCOPE!</p>	<p><b>REPLACEMENT APERTURE DISC SET (ALSO SOLD INDIVIDUALLY)</b></p> <p>INCLUDES: A. CURVE BK CO-RING AC14-RXORING B. APERTURE DISC #1 ROUND (1/2") AC14-RXAD1 C. APERTURE DISC #2 ROUND (7/16") AC14-RXAD2 D. APERTURE DISC #3 ROUND (3/8") AC14-RXAD3 E. APERTURE DISC #4 SQUARE AC14-RXAD4</p>  <p><b>WHITE RING PIN RETAINER</b> AC14-RPR-WH</p> <p><b>BLACK RING PIN RETAINER</b> AC14-RPR-BK</p> <p><b>WARNING:</b> FIRE RING PIN MAY NOT BE USED AT THE SAME TIME AS A DRILLED LENS OR DOT DECAL LENS, THIS WILL RESULT IN A VIOLATION OF FITA RULE 11.5.1 BY PROVIDING TWO AIMING POINTS</p>

SQUARE RECURVE SCOPE ALIGNS WITH SQUARE TARGET FACE FOR BETTER VERTICAL BOW ALIGNMENT, SHOT-AFTER-SHOT. THE .019" OR .029" DIAMETER FIBERS IN GREEN, RED, OR YELLOW ARE WRAPPED AROUND THE SCOPE FOR A BRIGHTER PIN.

- SQUARE EDGES LINE UP WITH THE TARGET EDGES
- FIBER WRAPS AROUND THE SCOPE TO PROVIDE A BRIGHTER PIN THAN OTHER SQUARE SCOPES
- .019" OR .029" FIBER SIZE
- 8MM INSIDE SCOPE DIAMETER



# AVX31

31MM INSIDE SCOPE DIA.

AVX31 - AVX3- -BK

CHOOSE:  
**IC** = "I" CONNECTOR & STAINLESS #10-32 ROD  
**SC** = STAINLESS #10-32 ROD

INCLUDED WITH AVX MODELS:  
 LENS SPACER EXTERNAL SPACER LENS RETAINER  
 LEVEL BLANK RING PIN RETAINER

# AVX41

41MM INSIDE SCOPE DIA.

AVX41 - AVX4- -BK

CHOOSE:  
**IC** = "I" CONNECTOR & STAINLESS #10-32 ROD  
**SC** = STAINLESS #10-32 ROD

INCLUDED WITH AVX MODELS:  
 LENS SPACER EXTERNAL SPACER LENS RETAINER  
 LEVEL BLANK RING PIN RETAINER

## SCOPE & LENS COMBOS

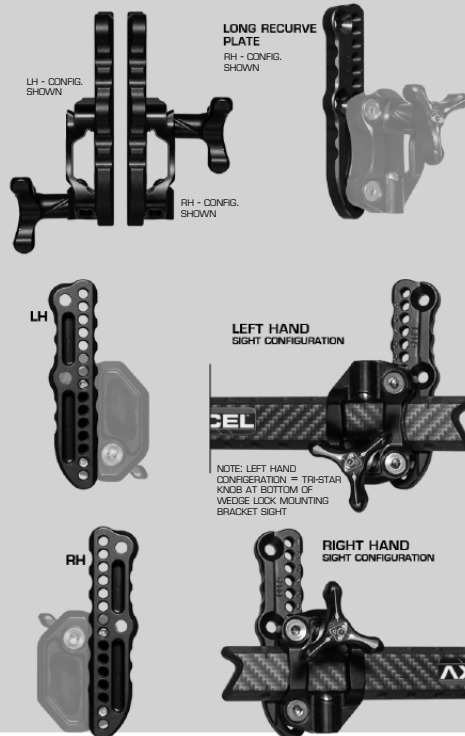
FEATURES: **DOCS CHOICE CLEAR LENSES**  
 SPECIFY POWER - 2X, 4X, 5X, 6X OR 8X  
 SCOPE INCLUDES: LENS SPACER, EXTERNAL SPACER, LENS RETAINER, LEVEL BLANK & RING PIN RETAINER

AVX3-TC-10 AVX-31 SCOPE WITH DOCS CHOICE 1-3/8" DIA. LENS COMBO - "I" CONNECTION & SST #10-32  
 AVX4-TC-10 AVX-41 SCOPE WITH DOCS CHOICE 1-3/4" DIA. LENS COMBO - "I" CONNECTION & SST #10-32



## ACHIEVE XP Accessories:

### LONG RECURVE PLATE



### SHORT COMPOUND PLATE



## CURVE RX RECURVE SCOPE

- AC14-RX** SCOPE ONLY WITH #8-32 ROD (NO FIBERS OR LENS)
- AC14-RX19** WITH CT X-ZONE .019" DRILLED OX LENS
- AC14-RX29** WITH CT X-ZONE .029" DRILLED OX LENS
- AC14-RXP19-** WITH .019" FIRE RING PIN - RHEOSTAT FIBER COLOR - CT X-ZONE .019" DRILLED OX LENS
- AC14-RXP29-** WITH .029" FIRE RING PIN - RHEOSTAT FIBER COLOR - CT X-ZONE .029" DRILLED OX LENS
- AC14-RXP10-** WITH .010" FIRE RING PIN - RHEOSTAT FIBER COLOR - CT X-ZONE .019" DRILLED OX LENS

**PRO MODEL AC14-RXP19-GRBK**  
 SHOWN WITH GREEN .019" FIBER FIREPIN

INCLUDED WITH BOTH MODELS  
 SQUARE APERTURE DISC  
 O-RING (FOR USE WITH APERTURES WITHOUT LENS)  
 SPACER SLEEVE (FOR USE WITHOUT FIRE RING PIN)

INCLUDED IN PACKAGE X-ZONE ZERO POWERED (OX) WITH A DRILLED NON-GLARE COATED LENS WITH DOT STICKER KIT

REMOVABLE FIRE RING PIN INCLUDED ONLY IN PRO MODEL OR SOLD SEPARATELY  
 LONGER WRAP OF FIBERS IN THE FRP DESIGN SIGNIFICANTLY INCREASES BRIGHTNESS IN ALL FIBER SIZES  
 FIBER AVAILABLE IN .010", .019", & .029" DIA., IN GREEN OR RED  
 EASILY ADJUSTABLE FROM RH TO LH

ELIMINATES STARBURST!

ADJUSTABLE FIRE PIN BRIGHTNESS

ALSO AVAILABLE: CURVE CX COMPOUND TOURNAMENT SCOPE ITEM

## CURVE RXF RECURVE SCOPE

- AC14-RXF19-RH- B** .019" FIBER SIZE - RIGHT HAND
  - AC14-RXF19-LH- B** .019" FIBER SIZE - LEFT HAND
  - AC14-RXF29-RH- B** .029" FIBER SIZE - RIGHT HAND
  - AC14-RXF29-LH- B** .029" FIBER SIZE - LEFT HAND
- SPECIFY FIBER COLOR GREEN - G OR RED - R

**CURVE RXF AC14-RXF19-RH-GB**

14MM SCOPE I.D.

WRAPPED FIBER IN COLORS OF RED OR GREEN

CHOOSE: RIGHT HAND (RH) OR LEFT HAND (LH)

CHOOSE FIBER SIZE: .019" OR .029" DIA.

DESIGNED SHORT TO REDUCE INSIDE SCOPE WALL VISIBILITY THAT OCCURS WHEN MOVING THE SCOPE 5 METERS TO 60 METERS IN FIELD ARCHERY COMPETITION

ADJUSTABLE RHEOSTAT COVER TO ADJUST PIN BRIGHTNESS & ELIMINATE STARBURST

## CURVE CUBE

- ACC8-RX19-RH- B** .019" FIBER SIZE - RIGHT HAND
  - ACC8-RX19-LH- B** .019" FIBER SIZE - LEFT HAND
  - ACC8-RX29-RH- B** .029" FIBER SIZE - RIGHT HAND
  - ACC8-RX29-LH- B** .029" FIBER SIZE - LEFT HAND
- SPECIFY FIBER COLOR GREEN - G, RED - R, OR YELLOW - Y



### RECURVE ACCESSORIES

**RECURVE SLEEVE-LOCK BLOCK**  
**ACXP-RSB**  
 INCLUDED

**RECURVE ALIGNMENT BLOCK**  
**ACXP-RAB**  
 ALIGN SCOPE TO YOUR EYE  
 (NO SHIMS NEEDED BETWEEN BOW AND SIGHT)  
 SOLD SEPARATELY

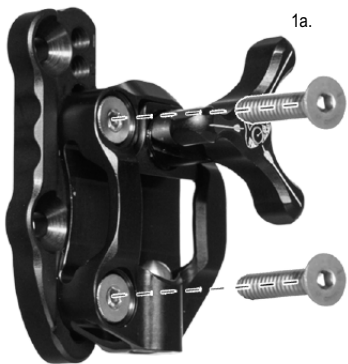
### COMPOUND ACCESSORIES

**METAL SIGHT TAPES**

GET PRECISE DISTANCES WITH YARDAGE MARKS THAT WON'T WEAR OFF OR GET DAMAGED DURING NORMAL USE.

## Installation & Adjustment Instructions

### MOUNTING SIGHT



Mount Compound or Recurve Plate to bow riser with screws provided (1a.). Tighten mounting screws securely.

Add Bow Mount Bracket to Plate. Then sight in bow to your desired setting. Many compound archers will use their sight at a fixed distance of 18m or 50m, while many recurve archers will shoot at 18m or 70m. For fixed distance use, we recommend sliding the Bow Mount Bracket up or down the Plate until the aiming point in the aperture or scope is in the middle of the sight. Each seven lines on the scale on your sight's elevation bar correspond to one hole up or down on the plate. For example, if your aiming point is 14 scale lines low, you would move the Bow Mount Bracket 2 holes on the Plate.

For situations like 3D or field tournaments, we recommend sighting in at 20 yards and moving the Bow Mount Bracket to the highest setting on the Plate so that you can have a complete range of elevation adjustment for your bow!

Then slide the sight extension into the bow mounting bracket and choose your desired sight length setting. Many archers attempt to set their pin or aperture approximately 30 inches from their eye. Note the location of this length setting so that you can remove the sight and re-attach it to the same setting every time that you shoot for repeatable accuracy.



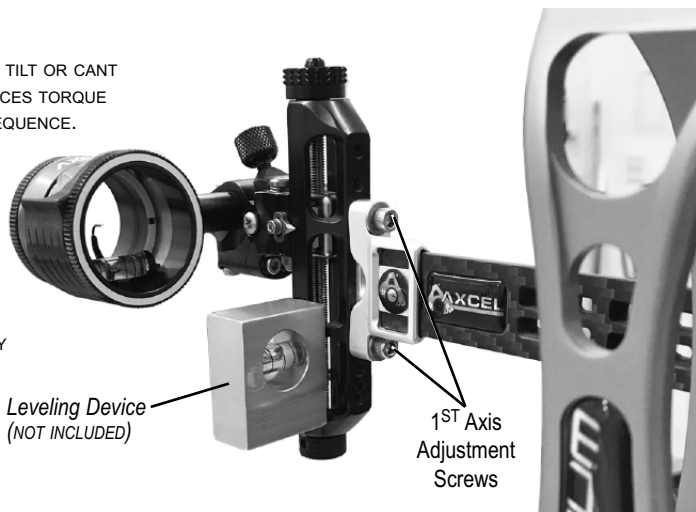
(MANY ARCHERS ATTEMPT TO SET THEIR SIGHT PIN OR APERTURE APPROXIMATELY 30 INCHES FROM THEIR EYE)

NOTE THE LOCATION OF THIS SETTING SO THAT YOU CAN REMOVE THE SIGHT AND RE-ATTACH IT TO THE SAME SETTING EVERY TIME THAT YOU SHOOT FOR REPEATABLE ACCURACY.

### SETTING 1<sup>ST</sup> AXIS

Level the elevation bar (frame) with bow string (or) level at full draw with natural bow tilt or cant based on the archer's preference.

NOTE: ARCHER'S NORMAL BOW TILT OR CANT MAY BE PREFERABLE AS IT REDUCES TORQUE THROUGHOUT THE BOW SHOT SEQUENCE.



NOTE: NEVER DRY FIRE YOUR BOW AS IT MAY RESULT IN INJURY

## AXCEL ARCHERY **ACHIEVE XP 1.5 & 2.0 USER CHART**

### FIXED DISTANCE TOURNAMENTS

TOURNAMENT TYPE/NAME	SIGHT MODEL		CHOOSE VR MOUNT HOLE FOR OPTIMAL SCOPE BLOCK POSITION
	ACHIEVE XP 1.5	ACHIEVE XP 2.0	
Olympic Recurve 70-meter (Fixed Distance)	✓	✓	CHOOSE RECURVE CENTERED
FITA Compound 50-Meter (Fixed Distance)	✓	✓	COMPOUND CENTERED
Indoor Recurve/Compound 18m/20yds (Fixed Distance)	✓	✓	RECURVE COMPOUND

### VARIABLE MULTI-DISTANCE TOURNAMENTS

TOURNAMENT TYPE/NAME	SIGHT MODEL		CHOOSE VR MOUNT HOLE FOR OPTIMAL SCOPE BLOCK POSITION
	ACHIEVE XP 1.5	ACHIEVE XP 2.0	
3D Compound (50yd max) All Axcel Sight Tapes (No. 0-40)	✓	✓	CHOOSE COMPOUND 20YDS
Compound (75yd max) All Axcel Sight Tapes (No. 0-40)	✓	✓	COMPOUND 20YDS
Field Compound (80yd max) All Axcel Sight Tapes (No. 0-40)		✓	COMPOUND 20YDS
Field Compound (80yd max) Axcel Sight Tapes (No. 0-33)	✓	✓	COMPOUND 20YDS
Field Recurve (80yd max) Axcel Achieve XP 1.5 & 2.0 not usable			
Compound (92yd max) All Axcel Sight Tapes (No. 0-40)		✓	COMPOUND 20YDS
Compound (100yd max) Axcel Sight Tapes (No. 0-10)	✓	✓	COMPOUND 20YDS
Compound (100yd max) Axcel Sight Tapes (No. 0-31)		✓	COMPOUND 20YDS

⊗ VR PLATE HOLE SPACING EQUALS 7 FULL REVOLUTIONS OF ELEVATION KNOB OR 7 ENGRAVED GRADIENT LINES ON ELEVATION RAIL.

⊗ RECOMMENDED TO LOCATE 20 YARD MARK NEAR TOP OF ELEVATION RAIL LEAVING 3 FULL ELEVATION KNOB REVOLUTIONS FOR **FREE SPACE** TO MEET CLICK ADJUSTMENT NEEDS MID-TOURNAMENT DUE TO WEATHER, TEMPERATURE CHANGES, BOW STRING STRETCH, ETC.

**ALIGNING SCOPE TO EYE**

Align the scope square with your eye to ensure scope lens clarity.



Threaded Barrel  
Hex/Square End  
(OPTIONAL)

Non-Threaded Barrel  
Hex/Square End  
(STANDARD)

**NON-THREADED BARREL**

Always insure square or hex alignment aids on end of barrel mate with scope to eliminate scope rotation, when securing scope to barrel. Rotate your scope by spinning barrel in C-clamp to align scope to be square with your eye and tighten C-clamp securely. To make minute rotation adjustments, loosen the C-Clamp locking screw and rotate the barrel

using alignment marks for visual movement. When your scope is square with your eye, tighten the C-Clamp Lockscrew securely. Always ensure that the C-Clamp Lockscrew and the scope rod and nut are securely tightened.

**THREADED BARREL**

Always insure square or hex alignment aids on end of barrel mate with scope to eliminate scope rotation. Tighten scope to barrel and ensure that it is tightened securely. Align scope to eye by rotating the scope barrel in the C-Clamp. For fine rotation adjustments, use alignment marks. After you are sure that the scope is aligned with your eye, tighten the C-Clamp Lockscrew securely. Always ensure that the C-Clamp Lockscrew and the scope attachment bolt are securely tightened.

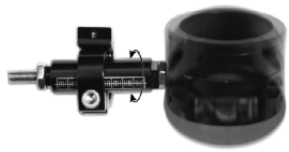
(STANDARD)

● **Non-Threaded Barrel-**  
Hex/Square end fits Classic, Extreme, Sure-Loc, Bullseye, Specialty, Viper, Beiter, CR Apex, G&B Specialties, True-Spot, Cartel and Impact Scopes

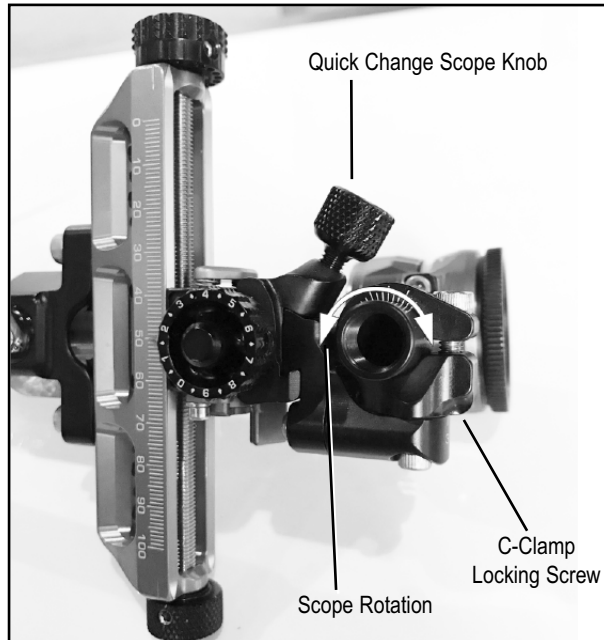
(OPTIONAL)

● **Threaded Barrel-**  
Hex/Square end fits many scopes

*The above Scope Brands may be covered by Trademarks & are the property of their respective owners.*

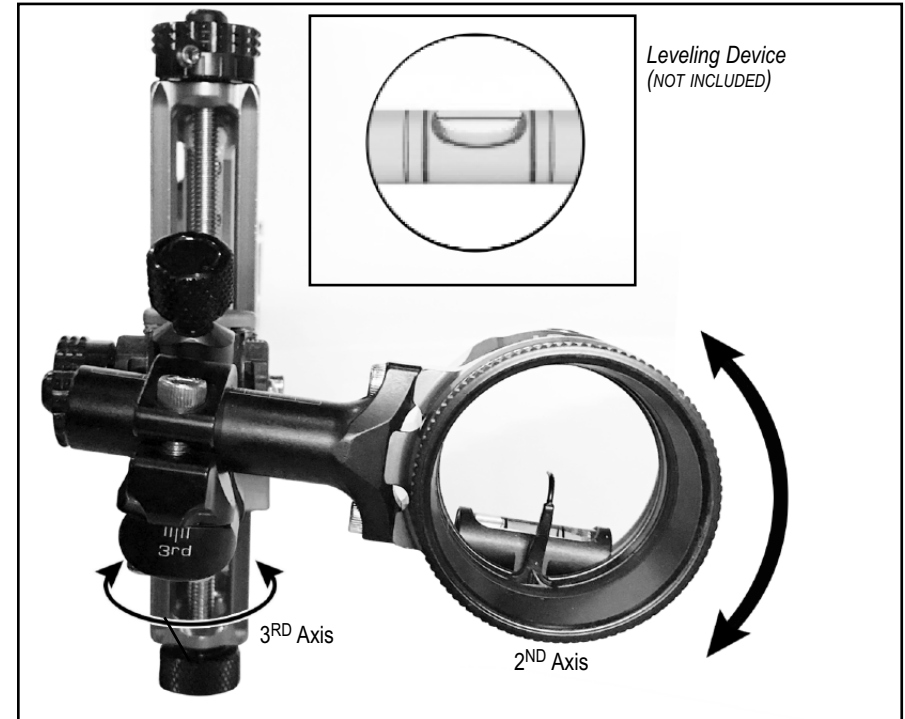


Rotate Scope by spinning barrel in c-clamp to align scope square to your eye.



**SETTING THE 2<sup>ND</sup> AXIS**

Make 2nd Axis adjustments by attaching a level device to the side of the elevation bar (frame) and adjusting the 2nd Axis to bring the scope level. Make sure that both the leveling device and the scope level are level at the same time. Insure that the 2nd Axis screw is securely tightened.



Leveling Device  
(NOT INCLUDED)

**SETTING THE 3<sup>RD</sup> AXIS**

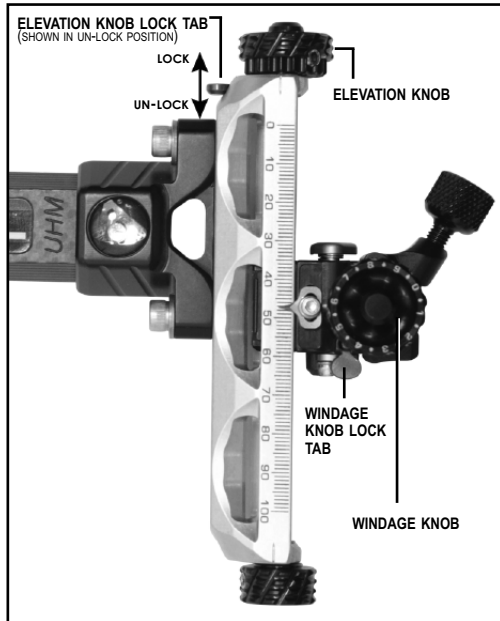
With level device still attached to the side of the elevation bar (frame), bring bow to full draw and point your bow down at a 45 degree angle. Adjust the 3rd Axis to insure that the scope level and elevation bar (frame) level are level at the same time.

Insure that the 3rd Axis screw is securely tightened.

(NOTE: NEVER DRY-FIRE BOW AS INJURY MAY RESULT.)

**ELEVATION KNOB**

Elevation knob is engraved with 20 divisions numbering 1-10 with dot indicators between numbers. There are 20 clicks on the elevation knob for one full revolution or turn on a 32 pitch lead screw. There are engraved yardage marks on the side of the elevation bar (frame). One engraved mark equals 1 turn (or 20 clicks from “0” to “0”). When turning the elevation knob one full turn, the sight will move in elevation the distance of one engraved yardage mark. This allows for the finest movement per click (.00156) in the tournament sight market place. To lock, lift Elevation Knob Lock Tab. Push down to unlock.



Note: When using software to make your own sight tape, always use (32 pitch x 20 clicks)

**WINDAGE KNOB**

Windage knob is engraved with 20 divisions numbering 1-10 with dot indicators between numbers. There are 20 clicks on the windage knob for one full revolution or turn on a 32 pitch lead screw. There are engraved marks on the side of the windage block. One engraved mark equals 1 turn (20 clicks from “0” to “0”). When turning the windage knob one full turn, the sight will move in windage the distance of one engraved mark. This allows for the finest movement per click

(.00156) in the tournament sight market place. To lock, lift Windage Knob Lock Tab. Push down to unlock.

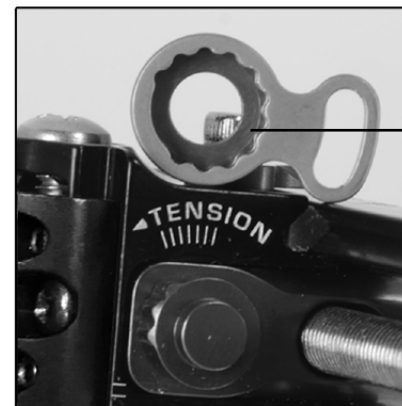
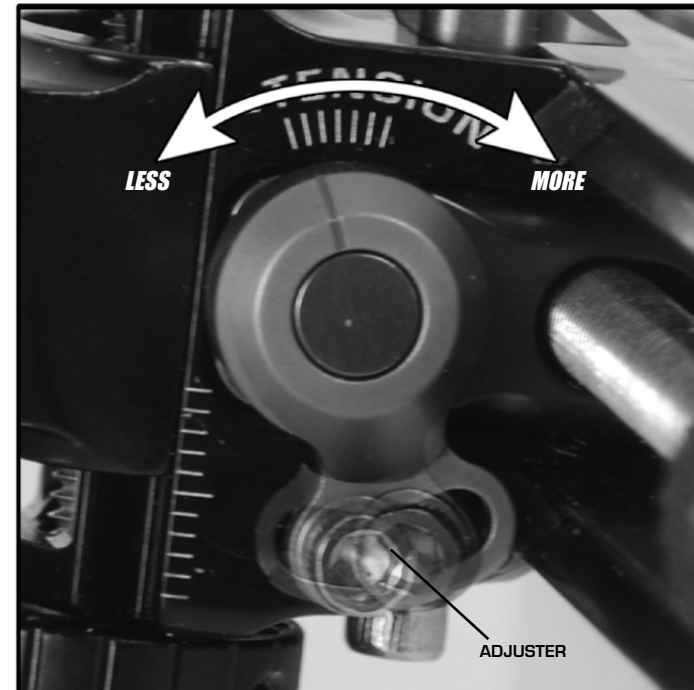
Note: One click of windage adjustment equals approximately 1/32 inch of target point of impact at 20 yards. 8-clicks of windage adjustment will change the point of impact approximately 1/4 inch at 20 yards.

**Maintenance**

Your AXCEL® Sight has been designed to operate in any weather condition. All parts are aluminum or stainless steel and are free from rust. Simply blow away debris to keep sight clean. Threads and way gibs should be kept clean of debris. Do not lube sight threads or ways as this will attract dirt and debris. Lube only the underside (click-side) of the elevation and windage knobs as needed. Use only a synthetic, non-water soluble grease such as SuperLube®.



TO ADJUST TENSION: USE 5/64" ALLEN WRENCH TO TURN SCREW COUNTER-CLOCKWISE, THEN ROTATE ADJUSTER TO DESIRED TENSION. TIGHTEN SCREW CLOCKWISE. DO NOT OVERTIGHTEN!



**TENSION RANGE ADJUSTMENT:**  
FOR ARCHERS WHO DESIRE SIGNIFICANTLY MORE OR LESS TENSION: USE 5/64" ALLEN WRENCH TO REMOVE SCREW . LIFT OFF ADJUSTER, THEN REPOSITION ON GEAR TEETH TO A NEW POSITION. REINSTALL SCREW (TIGHTEN CLOCKWISE) DO NOT OVERTIGHTEN!

GEAR TEETH ON UNDERSIDE OF ADJUSTER SHOWN FOR REFERENCE.