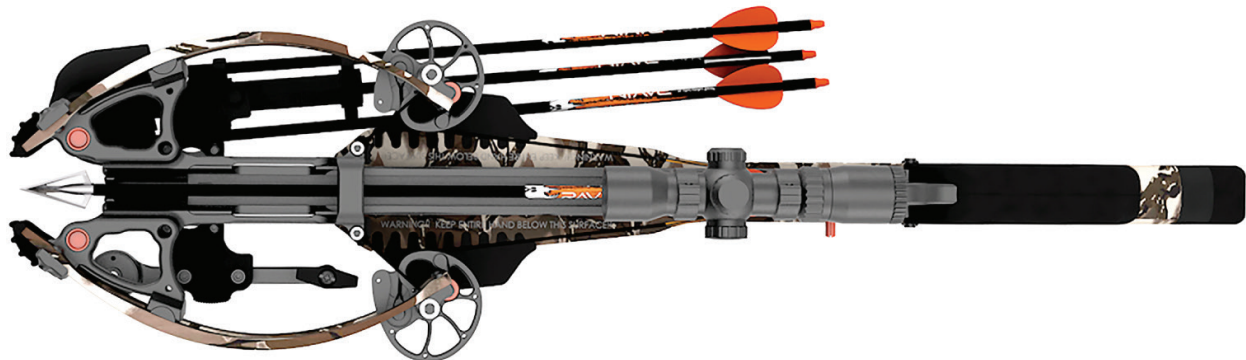




**RAVIN**<sup>TM</sup>  
CROSSBOWS

**R9**  
INSTRUCTION  
MANUAL



[www.ravincrossbows.com](http://www.ravincrossbows.com)



R9

Speed (400 gr.)	390 fps
Power-stroke	13"
Kinetic Energy	135 ft. lbs.
Draw Weight	195 lbs.
Width Axle-Axle	6" Cocked
Width Axle-Axle	10.5" Un-Cocked
Length	34.5"
Physical Weight	6.9 lbs.

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Ravin Crossbows  
69 North 28th Street, Suite 500  
Superior, WI 54880

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



## SECTION 1 - WHY RAVIN?

The world has never seen a crossbow like the Ravin™ R9. The Ravin™ R9 crossbow was designed from the ground up to provide unparalleled downrange accuracy, all in the most compact design available. The Ravin™ R9 crossbow holds groups comparable to a rifle at 100 yards. The entire Ravin™ Crossbow benefits from Ravin's patent pending Helicoil™ technology, which spirals the cables away from the cams, balances the load on the limbs, reduces vibration and maintains perfectly level cam rotation to guide the free floating arrow. Ravin™ patents: [www.ravincrossbows.com](http://www.ravincrossbows.com)

Your new Ravin™ Crossbow is a dangerous and deadly weapon that is designed for hunting and target shooting only. Use for any other purposes can cause serious injury or death.

Whether you are an experienced crossbow shooter or have never handled one before, **CAREFULLY READ THE ENTIRE MANUAL** and its warnings before using your Ravin™ Crossbow. It explains your Ravin™ Crossbow's operation, handling, and warns of the potential danger, including property damage, serious personal injury, or death that can result from using it unsafely. We want you to shoot your Ravin™ Crossbow safely.

Your safety and the safety of others requires that you always remain aware of the danger inherent in handling your Ravin™ Crossbow. You are responsible for safely operating your Ravin™ Crossbow.

Product warranty registration is for your safety and convenience. Unless you register your product we will be unable to send you important updates about your Ravin™ Crossbow. Please register your Ravin™ Crossbow by mailing the enclosed registration card or online at [www.ravincrossbows.com/support/register](http://www.ravincrossbows.com/support/register).

## **⚠ DANGER**

Serious injury will result from discharging your Ravin™ Crossbow with any part of your body in the release path of the bowstring. To avoid possible finger amputation keep fingers out of the bowstring path and below the finger guard at all times.

## **⚠ WARNING**

To minimize risk of property damage, death, or serious injury:

- Do not remove, modify or deactivate the safety features on your Ravin™ Crossbow or any of its parts or accessories.
- Do not use your Ravin™ Crossbow for any purpose other than hunting or target shooting.
- Follow the safety advice and instructions in this manual.
- Wear safety glasses when handling or using your Ravin™ Crossbow.
- Keep your fingers below the finger guard at all times.
- Unload and uncock before transporting or performing maintenance on your Ravin™ Crossbow.
- Store your Ravin™ Crossbow in a locked cabinet or safe, well beyond the reach of children.
- Do not rely totally on your Ravin™ Crossbow's safety mechanism, which can be inadvertently moved into an unsafe condition.
- Handle your Ravin™ Crossbow carefully, especially when cocked and loaded.

## **⚠ CAUTION**

To insure that all users of this Ravin™ Crossbow follow the safety advice and instructions in this manual, keep this manual with your Ravin™ Crossbow.

## **NOTICE**

The warranty for your Ravin™ Crossbow is void if any of the following occur:

- The instructions in the manual are not followed.
- The Ravin™ Crossbow or any of its parts or accessories are modified from their original condition.
- Damage is caused by abuse or neglect.
- Damage is caused by dry-firing or by using underweight arrows.
- The Ravin™ Crossbow is disassembled.
- Use of replacement parts not approved by the manufacturer.
- Damage to the scope from overtightening the mounting rings.
- Use of fixed-blade broadheads with a maximum diameter greater than 1 5/8".

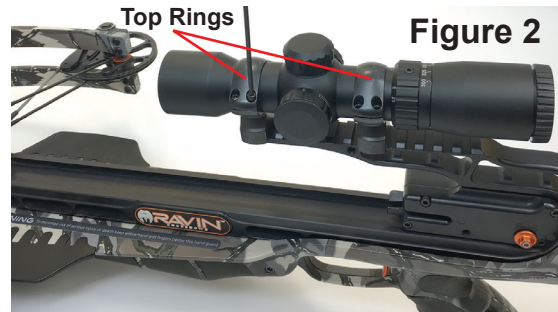
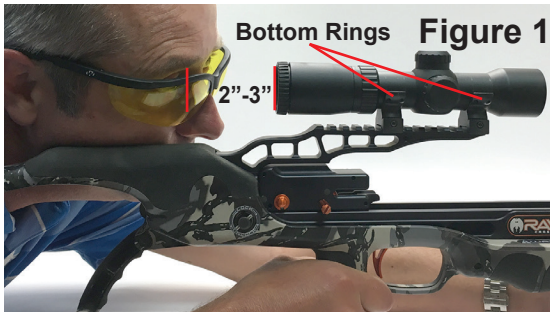
## **SECTION 3 – MOUNTING THE SCOPE, QUIVER, AND COCKING HANDLE**

### **A. Mounting the Scope.**

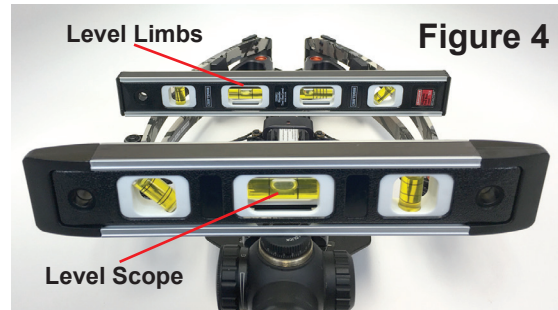
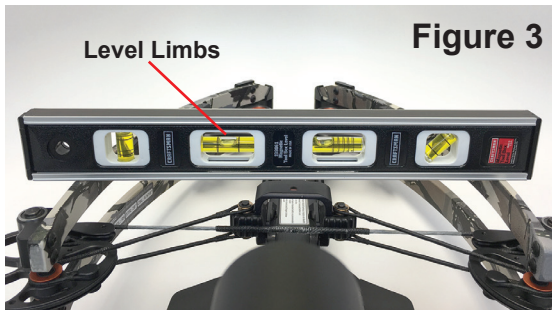
The scope is specifically designed for your Ravin™ Crossbow. While the dovetail scope mount rail will accept a variety of crossbow scopes, accuracy may be degraded by using a crossbow scope not matched to your Ravin™ Crossbow.

**We highly recommended that you have your scope mounted at your local pro shop.** If you elect to mount the scope yourself, please use the following procedure.

1. Attach the bottom rings on the rail approximately in the positions shown, taking into account proper eye relief of approximately 2" - 3" from your eye to the eyepiece when holding the Ravin™ Crossbow in a shooting position (Figure 1). Lightly snug up the screws on the bottom rings so you can still adjust them on the rail.



2. Lay the scope into the bottom rings. Place the top rings on the bottom rings so the scope is surrounded (Figure 2). Lightly snug up the screws on the top rings so you can still freely move the scope in the rings.
3. Before tightening the rings, look through the scope in your normal shooting position. Adjust the scope (forward or backward) until you find the furthest point forward to ensure maximum eye relief (at least 2 inches from your eye) that allows you to see a full field of view.
4. Position your Ravin™ Crossbow as level as possible. Place a level on the limb mounts to confirm the Ravin™ Crossbow limbs are level (Figure 3).



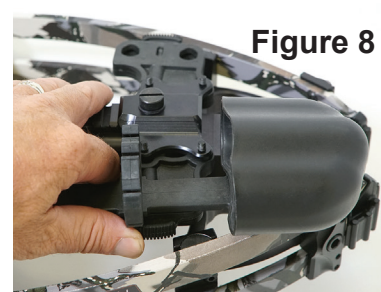
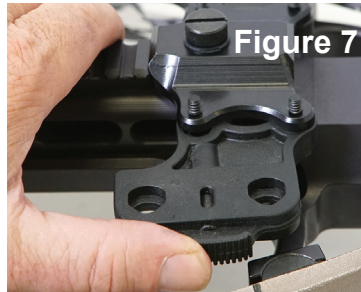
5. Remove the elevation turret cap and place a level on the elevation turret. Rotate the scope in the rings until it is level with the Ravin™ Crossbow limbs (Figure 4). The horizontal reticle markings should be parallel with the Ravin™ Crossbow limbs.
6. Tighten the upper rings, alternating between front and back screws, while still keeping an eye on your scope levels. Keep slightly tightening and alternating from front to back until secure. **Overtightening the mounting rings will damage the scope and void the warranty!**
7. Rotate the FPS selection dial to match the manufacturers advertised speed of your Ravin™ Crossbow (Figure 5).





## B. Attaching and Removing the Quiver.

1. Attach the mounting bracket to the bottom of your Ravin™ Crossbow. Screw the mounting bracket into the hole on the bottom of the Picatinny rail with the sloped surfaces on the mounting bracket pointing rearward (Figure 6).

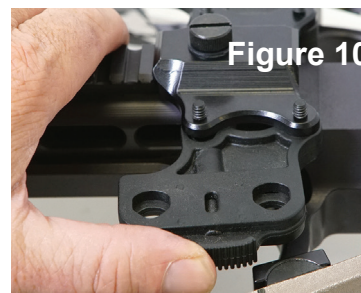


2. To attach the Quiver to the mounting bracket, depress and hold the thumb release on the mounting bracket (Figure 7). Position the posts on the Quiver in the holes in the mounting bracket with the hood facing forward (Figure 8). Release the thumb release to lock the Quiver in place. Reverse the process to remove the Quiver from your Crossbow.

3. The quiver can be mounted on either side of the mounting bracket. Most right handed shooters prefer to locate the quiver on the right side of the Ravin™ Crossbow (when viewed from the top of the Ravin™ Crossbow).

## C. Attaching and Removing the Cocking Handle.

1. Attach the mounting bracket to the bottom of your Ravin™ Crossbow. Screw the mounting bracket into the hole on the bottom of the Picatinny rail with the sloped surfaces on the mounting bracket pointing rearward (Figure 9).



2. To attach the Cocking Handle to the mounting bracket, depress and hold the thumb release on the mounting bracket (Figure 10). Position the posts on the Handle in the holes in the mounting bracket with the Cocking Handle head facing forward (Figure 11). Release the thumb release to lock the Cocking Handle in place. Reverse the process to remove the Cocking Handle to the Ravin™ Crossbow.

3. The cocking handle can be mounted on either side of the mounting bracket. Most right handed shooters prefer to locate the cocking handle on the left side of the Ravin™ Crossbow (when viewed from the top of the Ravin™ Crossbow).

## SECTION 4 – ARROW & NOCK SELECTION AND INSPECTION

### ⚠ WARNING

To minimize risk of serious injury from improper use or selection of arrows for your Ravin™ Crossbow:

- Use only Ravin™-branded arrows with Ravin™ clip-on nocks recommended for this Ravin™ Crossbow.
- Do not use Ravin™-branded arrows on any other crossbow.
- Do not use arrows with flat, half-moon, slotted moon, or universal nocks.
- Do not use arrows lighter than 400 grains (including tip). Lighter arrows can cause a dry-fire effect and result in limbs breakage.
- Do not use fixed-blade broadheads with a maximum diameter greater than 1 5/8".
- Use only mechanical broadheads rated for crossbows. Premature blade opening can deflect the arrow in an unintended direction and damage the Ravin crossbow.
- Inspect carbon arrow shafts for hairline fractures or cracks. Firing a damaged carbon shaft can cause it to shatter, scattering fragments.
- Inspect arrows for damage. Damaged arrows can fly in unintended directions.

### NOTICE

Damage to your Ravin™ Crossbow caused by firing a damaged or unapproved arrow or broadhead is not covered by the warranty.

Ravin™-branded arrows are included with your Ravin™ Crossbow.

Use only 20" - 400 grain Ravin™-branded arrows with the Ravin™ clip-on nock recommended for this Ravin™ Crossbow. The Ravin™-branded arrows are correctly weighted and include the required Ravin™ clip-on nock. Lighter arrows are not designed to absorb the high energy generated by the Ravin™ Crossbow and will create a "dry fire" condition that will damage the Crossbow.

The anti-dry fire mechanism on your Ravin™ Crossbow is designed to only work with the Ravin™ clip-on nock, and WILL NOT work with flat, half-moon, slotted moon, or universal nocks. Ravin™-branded arrows are specifically designed for this model Ravin™ Crossbow and CANNOT be used on any other crossbow.

Visually inspect each arrow for damage before each use. Look for damage to the nock and vanes. Check for any splintering or cracking to the carbon shaft by flexing the arrow back and forth in your hand. Rotate and repeat this inspection process four to five times around the entire circumference of the shaft. If you find an arrow to be damaged in any way discard it immediately. Firing a damaged arrow can cause serious personal injury and damage to your Ravin™ Crossbow.

Make sure the nock and white fletching are properly oriented (see below). The nock opening should be perpendicular to the white (cock) fletching. If the nock is not in the proper orientation, rotate the nock to the required position. Inspect the nock to insure there are no chips or cracks. If the nock is damaged, replace with a Ravin™ clip-on nock only.



Do NOT use fixed-blade broadheads with a maximum diameter greater than 1 5/8". Use only mechanical broadheads rated for crossbows. Premature blade opening can deflect the arrow in an unintended direction and damage the Ravin crossbow.

## SECTION 5 – OVERVIEW OF THE TRIGGER, SAFETY & ANTI-DRY FIRE

### ⚠ WARNING

To minimize risk of death or serious injury when shooting your Ravin™ Crossbow:

- Do not remove, modify, or deactivate the safety features on your Ravin™ Crossbow.
- Never move the safety to the FIRE position until you are ready to fire.
- Do not put your finger on the trigger until you are ready to fire your Ravin™ Crossbow.
- Do not rely totally on your Ravin™ Crossbow's safety mechanism, which can be inadvertently moved into an unsafe condition.

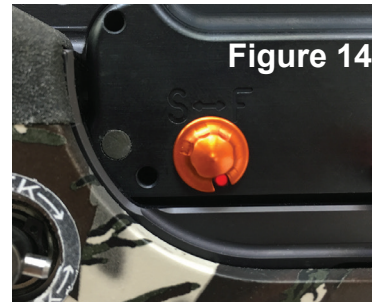
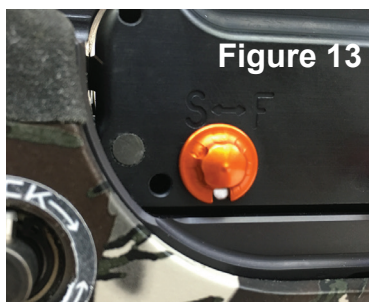
The **Trac Trigger Firing System™** (TTFS) that slides along the rail contains the safety and anti-dry fire mechanisms (Figure 12). Engaging the TTFS with the bowstring automatically activates the safety and the anti-dry fire mechanism. The safety is in the SAFE position (white dot visible) when the TTFS is engaged with the bowstring. If the safety is not engaged, push the safety to the Safe position.

The trigger mechanism works in conjunction with the Trac Trigger Firing System™. When the TTFS housing is in the rearmost position the trigger mechanism is automatically engaged.

The trigger pull on your Ravin™ Crossbow is about 2.0 pounds, which is one of the most precise of any crossbow on the market. Consequently, the safety must always be in the SAFE position (white dot visible) until you are ready to fire (Figure 13).

The anti-dry fire mechanism will only disengage when a Ravin™-branded arrow is fully inserted into the trigger mechanism and the Ravin™ clip-on nock is clipped onto the bowstring. Flat, half-moon, slotted moon, or universal nocks will not release the anti-dry fire mechanism. Nocking a Ravin™-branded arrow on the string disengages the anti-dry fire mechanism.

Sliding the safety to the FIRE position (red dot visible) will allow the Ravin™ Crossbow to fire when trigger is pulled (Figure 14).



## SECTION 6 - COCKING & UNCOCKING

### ⚠ WARNING

To minimize risk of serious injury from accidental discharge during cocking or uncocking of your Ravin™ Crossbow:

- Wear safety glasses.
- Verify the safety in the SAFE position.
- Do not place any part of your body into the bowstring path.
- Do not attempt to cock or uncock your Ravin™ Crossbow by hand.
- Do not leave your Ravin™ Crossbow cocked when it is not in use or unsupervised.
- Do not let go of cocking handle while the spool thumb release is pressed or the cocking handle will free spin.

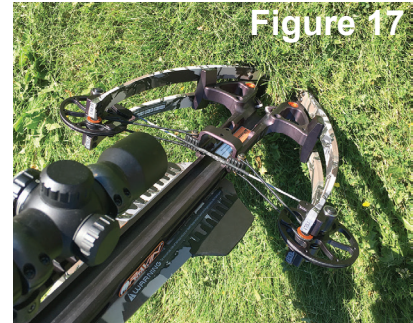
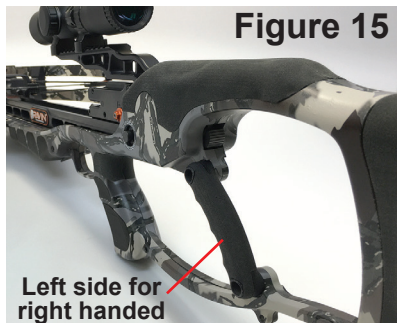


## NOTICE

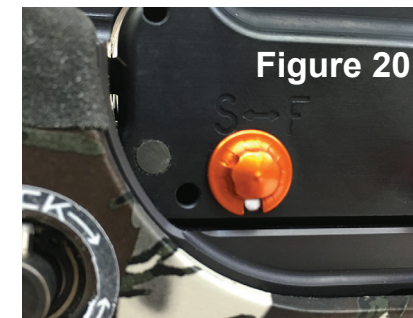
Do not leave your Ravin™ Crossbow cocked for more than 8 hours.

### A. Cocking.

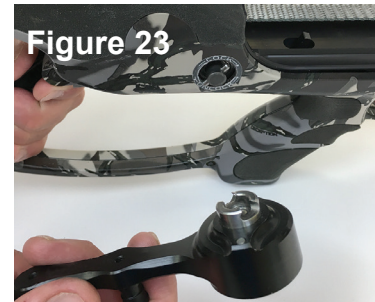
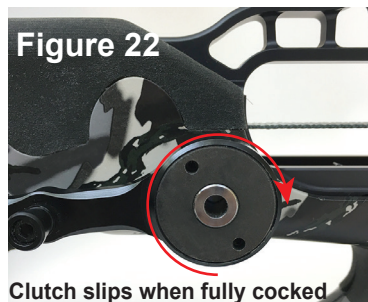
1. If you are right handed, make sure the rear grip is mounted on the left side of the stock (Figure 15). This grip can be switched to the other side for left handed shooters by removing the two screws.
2. Remove the cocking handle from the mounting bracket by depressing the thumb release. Place the cocking handle head in the recessed hole on either side of the stock. Engage the slots on the cocking handle head to the pins with the drive shaft for a positive connection (Figure 16). There is a magnet in the cocking handle that will assist in holding the handle in place.
3. Place the limb tip bumpers of the Ravin™ Crossbow on the ground with the top of the crossbow facing away from you (Figure 17).



4. To release any tension in the cocking system, rotate the cocking handle slightly forward toward the top of the Ravin™ Crossbow. Depress the spool thumb release (Figure 18) then rotate backward to release the tension.
5. Remove the cocking handle from the Ravin™ Crossbow.
6. While still holding the spool thumb release down with one hand, slide the Trac Trigger Firing System™ forward along the rail with the other hand pressing firmly until it is fully engaged with the bowstring. The cocking strap will unwind from the spool as the Trac Trigger Firing System™ is moved forward (Figure 19). The bowstring clasp will automatically close around the bowstring and the safety and anti-dry fire system will automatically activate. If the safety is not engaged, push the safety to the Safe position.
7. Visually confirm the safety is in the SAFE position (white dot visible) (Figure 20). If the safety is not engaged, push the safety to the Safe position.



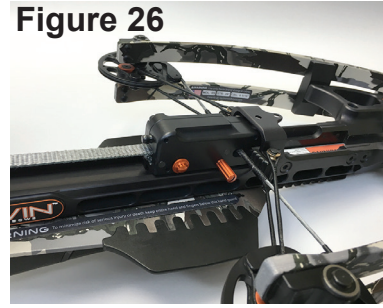
8. While firmly holding the Ravin™ Crossbow grip with one hand, rotate the cocking handle forward toward the top of the Ravin™ Crossbow with the other hand to retract the Trac Trigger Firing System™ toward the trigger (Figure 21). The spool ratchet will make a clicking sound as the cocking handle is rotated. **DO NOT DEPRESS THE SPOOL THUMB RELEASE DURING THIS PROCEDURE.** Your Ravin™ Crossbow is fully cocked when the clutch in the cocking handle slips and clicking sound from the spool ratchet stops (Figure 22).
9. Disengage the cocking handle from the drive shaft and store on the mounting bracket (Figure 23). **Do not place any part of your body into the bowstring path.**
10. Your Ravin™ Crossbow is now fully cocked and ready to load with a Ravin™-branded arrow recommended for your Ravin™ Crossbow.



## B. Uncocking.

1. Point your Ravin™ Crossbow in a safe direction.
2. Visually confirm the safety is in the SAFE position (white dot visible). If the safety is not engaged, push the safety to the Safe position.
3. Unload the Ravin™ Crossbow as explained in SECTION 7 – LOADING & UNLOADING before uncocking your Ravin™ Crossbow.
4. Remove the cocking handle from the mounting bracket by depressing the thumb release. Place the cocking handle head in the recessed hole on either side of the stock. Engage the slots on the cocking handle head to the pins on the drive shaft for a positive connection. There is a magnet in the cocking handle that will assist in holding the handle in place.
5. Place the limb tip bumpers of the Ravin™ Crossbow on the ground with the top of the crossbow facing away from you (Figure 24).
6. Firmly grasp the Ravin™ Crossbow grip and the cocking handle during the uncocking cycle. Failure to do so can result in serious injury and malfunction.
7. To release any tension in the cocking system, rotate the cocking handle slightly rearward toward the bottom of the Ravin™ Crossbow. While applying pressure to the cocking handle with one hand, depress the spool thumb release down with the other hand (Figure 25). The force of the drawstring will be immediately transferred to the cocking handle. You can stop the uncocking cycle at any time by releasing the spool thumb release.
8. While continuing to depress the spool thumb release slowly rotate the cocking handle backwards toward the bottom of the Ravin™ Crossbow to move the Trac Trigger Firing System™ forward until the bowstring contacts the string stops (Figure 26). The cocking strap will have some slack when the Ravin™ Crossbow is fully uncocked.

9. Disengage the cocking handle from the drive shaft and store on the mounting bracket.



## **SECTION 7 - LOADING & UNLOADING**

### **⚠WARNING**

To minimize risk of serious injury from accidental discharge during loading and unloading of your Ravin™ Crossbow:

- Wear safety glasses.
- Verify the safety is in the SAFE position.
- Do not place any part of your body into the bowstring path.
- Do not load an arrow in your Ravin™ Crossbow until you're at your shooting location.
- Index your arrow with the odd color fletching facing down (six-o'clock).
- Unload your Ravin™ Crossbow before moving to a different shooting location.
- Carefully hold the arrow with your index and middle fingers and your thumb just behind the broadhead or point.
- Fully engage the Ravin™ clip-on nock with the bowstring.

### **A. Loading.**

1. Inspect your Ravin™-branded arrow as discussed in SECTION 4 – ARROW & NOCK SELECTION AND INSPECTION. Do NOT use fixed-blade broadheads with a maximum diameter greater than 1 5/8". Use only mechanical broadheads rated for crossbows. Premature blade opening can deflect the arrow in an unintended direction and damage the Ravin crossbow.
2. Cock the Ravin™ Crossbow as discussed in SECTION 6 - COCKING AND UNCOCKING. Visually confirm that the safety is in the SAFE position (white dot visible). If the safety is not engaged, push the safety to the Safe position.
3. Point your Ravin™ Crossbow in a safe direction when loading or unloading. NEVER place your hand in the bowstring path (Figure 27). Always keep your hand forward of the string stops.
4. Grasp your Ravin™-branded arrow directly behind the tip (Figure 28). The odd color (white) fletching must be positioned downward in the rail – the 6 o'clock position.
5. Insert the nock end of the Ravin™-branded arrow under the riser archway and into the center of the TTFS (Figure 29) until the Ravin™ clip-on nock clips on to the bowstring. You should hear an audible click. Confirm that the odd color (white) fletching is in the down position. If the Ravin™ clip-on nock is not fully clipped to the string the Ravin™ Crossbow will not fire.

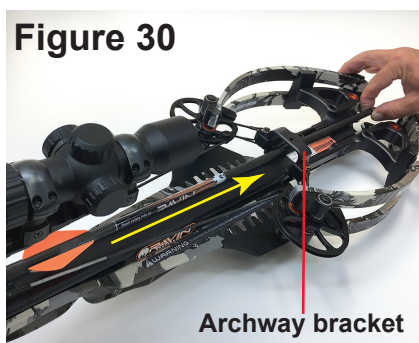
**Figures 27-29 on next page**



6. The Ravin™-branded arrow will now be centered on the rest at the front of the Ravin™ Crossbow. Your Ravin™ Crossbow is now fully loaded and ready to fire. Sliding the safety to the FIRE position (red dot visible) will allow the Ravin™ Crossbow to fire!

## B. Unloading your Cocked Crossbow.

1. Point your Ravin™ Crossbow in a safe direction.
2. Visually confirm that the safety is in the SAFE position (white dot visible). If the safety is not engaged, push the safety to the Safe position.
3. Grasp your Ravin™-branded arrow directly behind the tip and pull the arrow forward until it clears the archway bracket (Figure 30). NEVER place your hand in the bowstring path (Figure 31). Always keep your hand in front of the string stops.
4. Secure the arrow in the quiver.
5. Your Ravin™ Crossbow is now un-loaded and can be uncocked as explained in Section 6(B).



## SECTION 8 - SHOOTING YOUR CROSSBOW

### **⚠ DANGER**

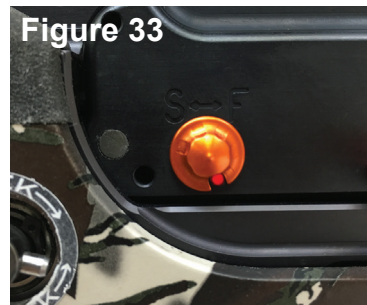
Serious injury will result from discharging your Ravin™ Crossbow with any part of your body in the release path of the bowstring. To avoid possible finger amputation keep fingers out of the bowstring path and below the finger guard at all times.

## **⚠️WARNING**

To minimize risk of death or serious injury when shooting your Ravin™ Crossbow:

- Follow the safety advice and instructions in this manual.
  - Do not remove, modify, or deactivate the safety features on your Ravin™ Crossbow.
  - Do not use your Ravin™ Crossbow for any purpose other than hunting or target shooting.
  - Do not discharge your Ravin™ Crossbow with any part of your body in the release path of the bowstring.
  - Wear safety glasses.
  - Never move the safety to the FIRE position until you are ready to take fire.
  - When shooting from a bench rest do not permit your fore-grip hand to rotate into the bowstring path.
  - Do not tilt the Ravin™ Crossbow from side to side.
  - Do not put your finger on the trigger until you are ready to fire your Ravin™ Crossbow.
  - Know your intended target and what is beyond it before pulling your trigger. An arrow can cause death or serious injury even beyond its effective hunting range.
  - Be certain your backstop is adequate when target shooting.
  - Always keep your loaded Ravin™ Crossbow pointed toward the target. Accidentally pointing it in the direction of others can cause death or serious injury in the event of accidental discharge.
  - Do not fire your Ravin™ Crossbow if it is not in proper working condition. If you have any questions Contact Customer Service at 715-718-3574.
  - Unload your Ravin™ Crossbow before handing it to another person.
  - Keep bystanders well behind you when shooting your Ravin™ Crossbow. A malfunction of your Ravin™ Crossbow can cause death or serious injury to bystanders.
  - Require bystanders should wear safety glasses.
  - Never allow your Ravin™ Crossbow to be used by anyone who has not read and understood this manual.
  - Do not rely totally on your Ravin™ Crossbow's safety mechanism, which can be inadvertently moved into an unsafe condition.
  - Seek a doctor's advice if you are taking medication to be sure that you are able to shoot and handle a Ravin™ Crossbow safely.
  - Do not consume drugs or alcohol before or while using the Ravin™ Crossbow. Your vision and judgment can be seriously impaired, making your handling of the Ravin™ Crossbow unsafe.
1. Determine the yardage to the target. The scope has yardage compensation markers on the reticle that approximates the elevation adjustment based upon distance. If you are shooting the Ravin™ Crossbow for the first time the shooting distance should be 20 yards or less.
  2. Point your COCKED (see Section 6) and LOADED (see Section 7) Ravin™ Crossbow toward the intended target with one hand on the fore-grip and the other hand on the stock.
  3. Confirm that your fingers and hands are not in the bowstring path. Lightly press the stock against your shoulder (Figure 32).
  4. When you are ready to fire slide the safety forward to the FIRE position (red dot visible) (Figure 33).
  5. With the Ravin™ Crossbow sighted on the intended target, pull the trigger slowly and smoothly.

**Figures 32-33 on next page**



6. If the Ravin™ Crossbow fails to fire, return the safety to the SAFE position (white dot visible). The most common cause of the Ravin™ Crossbow not firing is the Ravin™ clip-on nock is not properly seated on the bowstring. Double check that the safety is in the SAFE (white dot visible) position, then grasp the arrow directly behind the tip and push the arrow rearward until the nock snaps onto the bowstring. Attempt to fire the Ravin™ Crossbow again. If the Ravin™ Crossbow still does not fire, unload and uncock the Ravin™ Crossbow immediately. To obtain service contact our Service Department at 715-718-3574.

## SECTION 9 – ADJUSTING THE SCOPE

### **⚠ DANGER**

Serious injury will result from discharging your Ravin™ Crossbow with any part of your body in the release path of the bowstring. To avoid possible finger amputation keep fingers out of the bowstring path and below the finger guard at all times.

### **⚠ WARNING**

To minimize risk of death or serious injury when shooting your Ravin™ Crossbow:

- Follow the safety advice and instructions in this manual.
- Wear safety glasses.
- Never look at the sun through the scope – permanent eye damage can occur.
- Never move the safety to the FIRE position until you are ready to take fire.
- Do not put your finger on the trigger until you are ready to fire your Ravin™ Crossbow.
- Know your intended target and what is beyond it before pulling your trigger. An arrow can cause death or serious injury even beyond its effective hunting range.
- Be certain your backstop is adequate when target shooting.
- Always keep your loaded Ravin™ Crossbow pointed toward the target. Accidentally pointing it in the direction of others can cause death or serious injury in the event of accidental discharge.

You should have already mounted your scope as explained in Section 3. Confirm the FPS selection dial setting matches the manufacturers advertised speed of your Ravin™ Crossbow.

### **A. Ocular Lens Adjustment.**

You need to adjust the ocular lens on the scope to match your eye characteristics.

1. Hold the scope about two or three inches from your eye and look through the eye piece at an object at a normal shooting distance of perhaps 30 yards away.
2. If the reticle and the object are not sharply defined, look through the scope and turn the eyepiece at the rear of the scope (either direction) If the focus became worse, turn it the opposite direction.
3. If the focus has improved, but is still not perfect, continue adjusting the lens until the reticle is clear and sharp.

## **B. Sighting in the Scope.**

Sighting in your scope involves adjusting the point of aim (POA) to match with the point of impact (POI).

1. Choose a place to shoot your Ravin™ Crossbow that is safe. Place a target on the backstop and set up for first shot at 10 yards.
2. Before taking the first shot, rotate the FPS selection dial to match the manufacturers advertised speed of your Ravin™ Crossbow (see Section 3, A-7). The speed of your Ravin™ Crossbow can be found in the owner's manual.
3. Take a shot at the center of the target using the 20 yard aiming point on the reticle.
4. Remove the protective cap from the windage adjustment and elevation adjustment dials to make suitable adjustments to bring the point of impact (POI) closer to the point of aim (POA). For example, if the point of impact is lower than the point of aim rotate the elevation adjustment dial counter clockwise. If the point of impact is higher than the point of aim rotate the elevation adjustment dial clockwise. At 10 yards each click moves the point of impact 1/20th of an inch.
5. Once the point of impact is the same as the point of aim at 10 yards, repeat this process at 20 yards. At 20 yards each click moves the point of impact 1/10th of an inch.
6. Once the point of impact is the same as the point of aim at 20 yards, repeat this process at 50 yards using the 50 yard aiming point on the reticle. At 50 yards each click moves the point of impact 1/4 of an inch. When you are happy with the 50 yard POI, replace the protective caps. You have now sighted in the scope to the Ravin™ Crossbow.

## **C. Calibrating the Scope to the Crossbow Speed.**

In order for the crossbow speed calibration to function properly a Ravin™-branded arrow is recommended for this Ravin™ Crossbow and equipped with a 100gr field point or broadhead must be used. If a heavier or lighter (Minimum 100gr) broadhead or field point is used at any time you must repeat the zeroing your scope process.

1. Now that you sighted in your Ravin™ Crossbow at 50 yards, as discussed above, choose a place to shoot your Ravin™ Crossbow that is safe. Place a target on the backstop and set up for first shot at 20 yards.
2. Take a shot at its center using the 20 yard aiming point on the reticle. If the point of impact is higher than the point of aim, turn the FPS speed selector dial to a slightly lower number. If the point of impact is lower than the point of aim, turn the FPS speed selector dial to a slightly higher number.
3. Once the point of impact is the same as the point of aim at 20 yards the scope is calibrated for your Ravin™ Crossbow speed. It is not necessary to adjust the FPS selection dial for other distances. If the FPS selection dial is changed you will need to recalibrate your Ravin™ Crossbow using this process.

## **D. Illuminated Reticle.**

Your scope is equipped with a selectable red or green illuminated reticle. The illumination rheostat is located on the left side of the scope (Figure X). High brightness settings are recommended for daytime use when ambient light is bright. At times of low light such as dawn or dusk, a lower brightness setting is recommended. The lower settings may not be visible during bright daylight. Reticles are black in the "R" or "G" position or if the battery is defective.

Ravin illuminated scope models use a CR2032 coin style lithium battery. To insert a battery unscrew the battery compartment cap on the top of the rheostat adjustment turret and insert a new battery "+" side up. Warning: Always hold onto the lower half of the rheostat when loosening or tightening the battery compartment cap to ensure no damage is done.

## E. Care and Maintenance of your Scope.

Your scope is a precision instrument that deserves a high level of care. Do not attempt to disassemble or clean the scope internally. Store the scope in a dry environment. Never store the scope in places on hot days, such as vehicles. High temperatures can adversely affect the lubricants and sealants.

Keep the protective lens covers in place when the scope is not in use. The external lens coatings should occasionally be wiped clean with the lens cloth provided or an optical quality lens paper. Remove any external dirt with a soft brush to avoid scratching the lens.

Unnecessary rubbing or use of a coarse cloth may cause permanent damage to lens coatings. To clean the external surface of the scope it is recommended that a cleaning cloth is used to protect the scope against corrosion.

## SECTION 10 – MAINTENANCE

### **⚠ WARNING**

Firing a Ravin™ Crossbow that is not in proper working condition is extremely dangerous. To minimize risk of death or serious injury while servicing your Ravin™ Crossbow:

- Wear safety glasses.
- Unload and uncock before servicing.
- Seek a qualified professional to change cables, strings, arrow rest, cocking strap, or limbs.
- Return your Ravin™ Crossbow to our Service Department to replace a damages or worn cocking strap.
- Only use manufacturer-approved replacement parts.
- Do not lubricate the internal components of your trigger assembly.
- Contact Customer Service at 715-718-3574 if you have any questions.

### **NOTICE**

The warranty for your Ravin™ Crossbow is void if any of the following occur:

- The instructions in the manual are not followed.
- The Ravin™ Crossbow or any of its parts or accessories are modified from their original condition.
- Damage is caused by abuse or neglect.
- Damage is caused by dry-firing or by using underweight arrows.
- The Ravin™ Crossbow is disassembled.
- Use of replacement parts not approved by the manufacturer.
- Use of fixed-blade broadheads with a maximum diameter greater than 1 5/8".

Regular inspection and maintenance will extend the life of your Ravin™ Crossbow.

#### **1. General.**

Check for worn or loose parts.

#### **2. Strings & Cables.**

Immediately replace worn strings and cables. Use only Ravin™ approved components. We recommend changing the strings and cables about every two years or 200 shots, whichever occurs first.



### 3. Waxing Strings.



To extend the life of your strings, wax them every 75-100 shots or at the beginning of each shooting session if you don't shoot very often, this will help keep your strings from drying out. Wax the strings with the crossbow in the uncocked position only. Apply a liberal amount of wax and rub the wax into the strings. Do not wax the center serving or cam areas (Figure 34). Doing so can cause a buildup of wax in the trigger mechanism or cams, leading to a possible malfunction.

### 4. Cocking Strap.

Return your Ravin™ Crossbow to our Service Department to replace a damaged or worn cocking strap.

### 5. Arrow Rest.

If the rollers on the arrow rest become damaged or worn, the entire arrow rest must be replaced.

### 6. Storage.

Store your Ravin™ Crossbow in a locked cabinet or safe located in a cool and dry location. Do not expose your Ravin™ Crossbow to extreme heat or cold.

### 7. Service.

To obtain service please contact our Service Department at:

Ravin Crossbows, LLC  
69 N 28th Street, Suite 500  
Superior, WI 54880  
Phone: 715-718-3574  
service@ravincrossbows.com

## SECTION 11 - STRING REPLACEMENT

### ⚠ WARNING

Improper use of the Ravin™ press is extremely dangerous. To minimize risk of death or serious injury while servicing your Ravin™ Crossbow:

- Carefully read the instructions provided with the Ravin™ press before use.
- Always unload and fully uncock your Ravin™ Crossbow before servicing.
- Use only the Ravin™ press on your Ravin™ Crossbow.
- Do NOT use the Ravin™ press on any other crossbows.
- Only use manufacturer-approved replacement parts.
- Contact Customer Service at 715-718-3574 if you have any questions.

### NOTICE

The warranty for your Ravin™ Crossbow is void if any of the following occur:

- The instructions for the Ravin™ press are not followed.
- Use of a crossbow press other than the Ravin™ Press on your Ravin™ Crossbow.
- Use of replacement parts not approved by the manufacturer.

**We highly recommend that you have your strings and cables replaced at your local pro shop or the Ravin Service Department.**

Use only manufacturer-approved replacement parts. Use of replacement parts not approved by Ravin will void your warranty.

If you elect to replace the strings and cables yourself, **use only the Ravin™ press** specifically designed to compress the limbs on your Ravin™ Crossbow. Do not use the Ravin™ press on any other crossbow. The Ravin™ press is sold separately. Carefully read the instructions and its warnings supplied with the Ravin™ press before use.

## **SECTION 12 – HUNTING SAFELY WITH YOUR CROSSBOW**

### **⚠ WARNING**

To minimize risk of death or serious injury when hunting with your Ravin™ Crossbow:

- Take a hunter's education and safety course prior to use. In fact, most states require that you complete such a course prior to obtaining your hunting license.
- Do not fire your Ravin™ Crossbow if branches or other obstructions block its limbs release path. Doing so could cause the limbs, bowstring or cables to break.
- Never shoot unless you have a clear view of your target. Movement can be a camouflaged hunter.
- Do not fire unless the arrow has an unobstructed path to the target. Arrows can be deflected by obstacles and can strike an unintended target.
- Hunting with your Ravin™ Crossbow from elevated surfaces such as tree stands is dangerous and can result in death or serious injury.
- Do not put your finger on the trigger until you are ready to fire your Ravin™ Crossbow.
- Inserting a gloved finger into the trigger guard can cause accidental discharge of your Ravin™ Crossbow.
- Know your intended target and what is beyond it before pulling your trigger. An arrow can cause death or serious injury even beyond its effective hunting range.
- Always keep your loaded Ravin™ Crossbow pointed toward the target. Accidentally pointing it in the direction of others can cause death or serious injury in the event of accidental discharge.
- Keep bystanders well behind you when shooting your Ravin™ Crossbow. A malfunction of your Ravin™ Crossbow can cause death or serious injury to bystanders.
- Require bystanders should wear safety glasses.
- Do not rely totally on your Ravin™ Crossbow's safety mechanism, which can be inadvertently moved into an unsafe condition.

### **NOTICE**

Check your local, state, or provincial regulations before transporting your Ravin™ Crossbow. Some jurisdictions require that a crossbow be cased during transport.

## **SECTION 13 – FREQUENTLY ASKED QUESTIONS**

### **HOW LONG SHOULD STRINGS LAST?**

We recommend changing the strings and cables about every two years or 200 shots, whichever occurs first. The string life can vary depending on the care and maintenance, the amount of shooting and weather extremes the string system is exposed to.

## **HOW LONG CAN I KEEP MY CROSSBOW COCKED?**

It is safe to keep your Ravin™ Crossbow cocked while you are hunting in a stationary position. For personal safety reasons do not stalk or walk to or from your hunting location with your Ravin™ Crossbow cocked. Do not keep your Ravin™ Crossbow cocked for more than about 8 hours.

## **WHY DOES MY CROSSBOW SHOOT HIGH OR LOW?**

If you are using field points, you can simply adjust the sights to correct the problem. If you are using broadheads the blades of the broadhead may be catching air as they fly. This problem is only correctable by using a different type or brand of broadhead.

## **WHY ARE SOME BROADHEADS INACCURATE?**

The design of some broadheads is not conducive to accurate shooting with a Ravin™ Crossbow. Some broadheads have an extremely large surface area, blade shape, or other design characteristics that do not fly well. If the broadheads have too much surface area or a very large cutting diameter, they will catch air in flight and may move off target. Do NOT use fixed-blade broadheads with a maximum diameter greater than 1 5/8". Use only mechanical broadheads rated for crossbows. Premature blade opening can deflect the arrow in an unintended direction and damage the Ravin crossbow.

## **WHAT TYPE OF ARROWS SHOULD I USE WITH MY CROSSBOW?**

Use only Ravin™-branded arrows with Ravin™ clip-on nocks recommended for your Ravin™ Crossbow.

## **WHAT SIZE DOVETAIL IS ON THE SCOPE MOUNT?**

The size of the dovetail on the Ravin™ Crossbows is standard 7/8" Picatinny style rail.

## **HOW DO I OBTAIN SERVICE FOR MY CROSSBOW?**

To obtain service you must call our Customer Service number (715-718-3574) for a Return Authorization Number (RA#) prior to sending the unit. Write the RA# on the outside of the package, along with the words "Service Return." Attach a note to the product containing your name, address, telephone number and description of the problem. Carefully package and return the product, transportation charges pre-paid, to the factory (Collect shipments will not be accepted).

## **SECTION 14 – LIMITED WARRANTY**

Congratulations on the purchase of your new crossbow ("the Ravin™ Crossbow") from Ravin Crossbows, LLC ("Ravin"). By using the Ravin™ Crossbow you are agreeing to be bound by the terms of this Limited Warranty.

With proper usage and care you will enjoy many years of use. It is important to follow proper safety, assembly and equipment usage procedures. This information is located in your manual. Serious injuries to yourself or others, damage to your Ravin™ Crossbow, or poor performance from your Ravin™ Crossbow could result from failure to thoroughly read, understand, and follow these instructions. If any part of this manual is unclear to you, further information is available at [www.ravincrossbows.com/support](http://www.ravincrossbows.com/support) or you can contact the Service Department at 715-718-3574.

## Five-Year Non-Transferable Limited Warranty

New Ravin™ Crossbows are covered under a five year limited warranty from date of purchase against defects in materials and workmanship to the stock, trigger and cocking mechanism, and limb assembly, when used normally in accordance with our published instructions and guide-lines. Our liability extends to parts, labor and return transportation to the customer and is non-transferable. This limited warranty does not cover strings, cables, arrow rest, scopes, arrows, transportation of the Ravin™ Crossbow to our Service Center; damage caused by abuse, dry firing, using arrows other than Ravin™-branded arrows recommended for your Ravin™ Crossbow, failure to follow safety advice and usage instructions in the manual, modification or failure to perform normal maintenance; or any other expenses or damage to property or person. This warranty gives you specific legal rights and you may also have other rights that vary from state to state.

Product Registration is for your safety and convenience. Unless you register your product we will be unable to send you important updates about your Ravin™ Crossbow. Please register your Ravin™ Crossbow by using the enclosed registration card or online at [www.ravincrossbows.com/support/register](http://www.ravincrossbows.com/support/register)

To obtain service: Please call for a return authorization number (RA#) prior to sending the unit and write the RA# on the outside of the package. The Serial No. on your Ravin™ Crossbow is required to receive an RA#. Attach to the product your name, address, telephone number and a letter describing the problem. Carefully package and return product prepaid, clearly writing the RA# below the address. Return the unit to an authorized Service Center or directly to the factory. For a listing of authorized service centers please call the factory at the number listed below. Ravin™ Crossbows deemed to be covered under the five year warranty will be repaired and shipped to you at no charge. You will be responsible for the shipping charges into the service center, and possibly labor charges for repairs completed at a non-factory authorized service center. Ravin™ Crossbows not covered under this warranty will be subject to normal charges. We will obtain your permission before we repair your Ravin™ Crossbow if it is not covered by warranty. For further inquiries contact the Service Department:

Ravin Crossbows, LLC  
69 N 28th Street, Suite 500  
Superior, WI 54880  
Phone: 715-718-3574  
[service@ravincrossbows.com](mailto:service@ravincrossbows.com)

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LIMITATIONS OF LIABILITY. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY, AND THE SOLE LIABILITY OF RAVIN FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES, ARISING OUT OF OR RELATING TO ANY BREACH OF THE TERMS OF THIS LIMITED WARRANTY, SHALL NOT EXCEED THE PRICE PAID FOR THE PRODUCT.

Any cause of action you may have with respect to the terms of this Limited Warranty must be brought within one (1) year of when the cause of action arose. If any portion of this Limited Warranty is held to be invalid, such holding shall not invalidate the other provisions. This Limited Warranty constitutes the entire agreement between you and Ravin, and all promises, representations, understandings, warranties and agreements with reference to the subject matter hereof and inducements for purchasing the Ravin™ Crossbow relied upon by you are expressed herein. The validity, performance, and construction of this Limited Warranty shall be governed and interpreted in accordance with the laws of Wisconsin. The Parties hereby consent and submit to the exclusive jurisdiction of any of the federal or state courts located in the State of Wisconsin with respect to the enforcement of any rights or remedies hereunder.