

# RAM Rubberball / Paintball Rifles

Ages  
18+

## OWNER'S OPERATION MANUAL



- .43 Caliber
- CO2 Powered
- Shoots Paintballs or Rubberballs with casings
- Ejects casing with every shot
- Velocity up to 300 fps

**⚠ CAUTION:** May be dangerous up to 275 yards or the distance of over two football fields. Think about what you might hit if you miss your target.

**This manual covers these RAM Rifles:**

**R-Series: 1R, 2R, 7R**

**S-Series: 11S, 13S**

**A-Series: 47, 74**



Read this owner's manual completely.

This airgun marker is not a toy. Treat it with the same respect you would a firearm. Always carefully follow the safety instructions found in this owner's manual and keep this manual in a safe place for future use.

**⚠ WARNING:** THIS AIRGUN MARKER IS NOT A TOY. MISUSE MAY CAUSE SERIOUS INJURY OR DEATH. EYE AND EAR PROTECTION DESIGNED SPECIFICALLY FOR PAINTBALL MUST BE WORN BY THE USER AND PERSONS WITHIN RANGE. PURCHASER MUST BE 18 YEARS OR OLDER. PERSONS UNDER 18 MUST HAVE ADULT SUPERVISION. READ OWNER'S MANUAL BEFORE USING.

**⚠ WARNING:** THIS AIRGUN MARKER CAN CAUSE SERIOUS INJURY OR DEATH. READ AND FOLLOW THE INSTRUCTIONS CAREFULLY. DO NOT LOAD A PROJECTILE INTO THE AIRGUN MARKER UNTIL YOU ARE READY TO SHOOT. IF YOU DO LOAD A PROJECTILE AND THEN DECIDE NOT TO SHOOT, REMOVE IT BY SHOOTING THE AIRGUN MARKER AT A SAFE TARGET. AN UNLOADED AIRGUN MARKER WHICH IS "ON SAFE" IS SAFEST. ACCIDENTS HAPPEN FAST, FATALLY WOUNDING SOMEONE IS A TERRIBLE THING. PLEASE SHOOT SAFELY.

Markers differ in their operation and you are never ready to fire any gun until you are thoroughly familiar with it. Read the following operating instructions thoroughly prior to operating.

These symbols, ⚠, ⚠, mark warnings and cautions in this operation manual. Carefully follow them for your own safety and the safety of others.

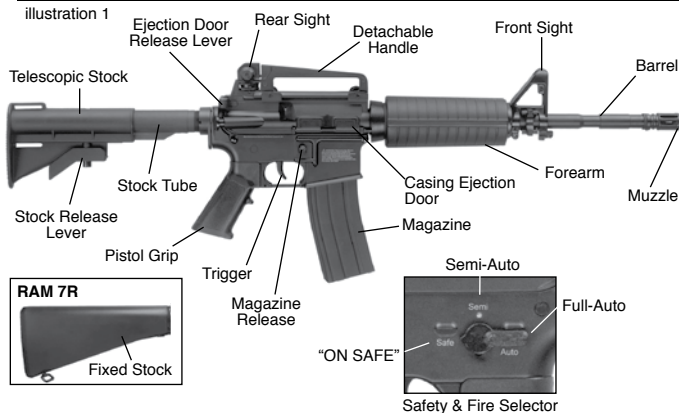
**⚠ CAUTION:** Eye protection designed specifically for paintball must be worn by the user and persons within range. Read all instructions before using.

### Operating Procedures

1. Learning the Parts of Your Marker
2. Operating the Safety
3. Installing CO<sub>2</sub> Capsules
4. Removing CO<sub>2</sub> Capsules
5. Loading and Unloading Projectiles
6. Firing Safely
7. Aiming and Adjusting the Sights
8. Use and Handling of CO<sub>2</sub> Capsules
9. Maintenance, Cleaning, and Storage
10. Adjusting Velocities
11. Troubleshooting
12. Reviewing Safety
13. Repair / Service / Warranty

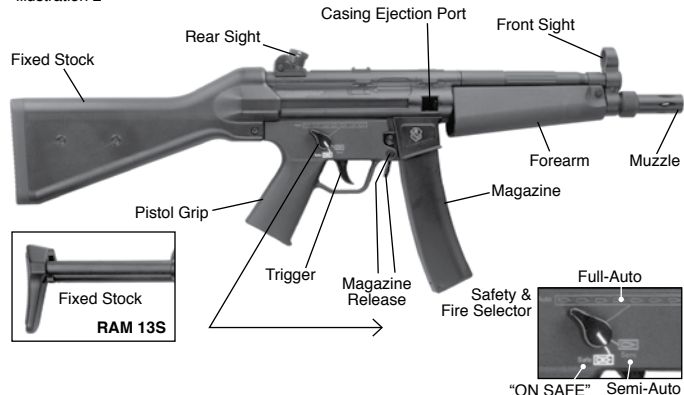
## 1. Learning the Parts of Your Marker

RAM 1R, 2R, 7R



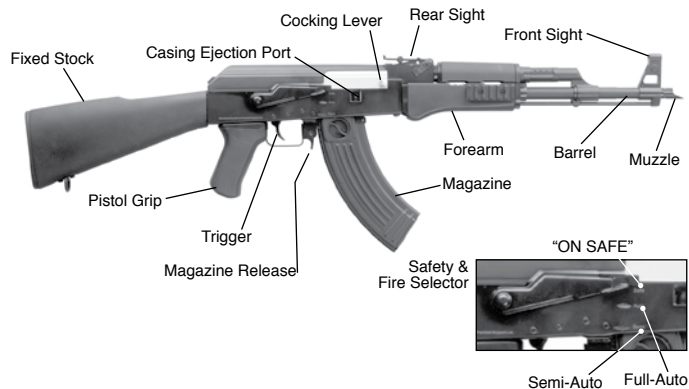
RAM 11S, 13S

illustration 2



RAM 47, 74

illustration 3



**⚠ CAUTION:** Failure to follow the rules for safe paintball play, and the instructions and recommendations in this owner's manual may result in bodily injury including face, eye, and ear injury, blindness, or deafness.

**ATTENTION:** Before using, first clean the barrel to remove the protective lubricant. Refer to page 14 in this manual for barrel cleaning instructions.

## 2. Operating the Safety

**⚠ WARNING:** BE SURE THE AIRGUN MARKER IS ALWAYS POINTED IN A SAFE DIRECTION. NEVER POINT THE MARKER AT ANYTHING YOU DON'T INTEND TO SHOOT. ALWAYS ASSUME AND HANDLE THE MARKER AS IF IT WERE LOADED AND READY TO FIRE.

### RAM 1R, 2R, 7R

#### To Put the Airgun Marker "ON SAFE":

- Locate the safety on the left side of the marker.
- Rotate the switch counterclockwise until you feel the switch land in a notch and the point of the switch is lined up with the word "SAFE" (illustration 4).

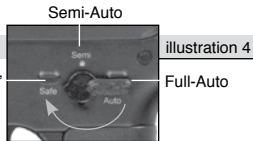


illustration 4

### RAM 11S, 13S

#### To Put the Airgun Marker "ON SAFE":

- Locate the safety on the right side of the marker.
- Rotate the switch clockwise until you feel the switch land in a notch and the white line is lined up with the "ON SAFE" symbol (illustration 5).

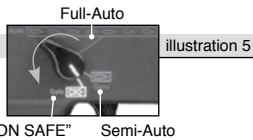


illustration 5

### RAM 47, 74

#### To Put the Airgun Marker "ON SAFE":

- Locate the safety on the right side of the marker.
- Rotate the switch up until you feel the switch land in a notch and the point of the switch is lined up with the word "SAFE" (illustration 6).

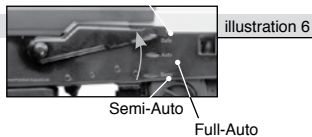


illustration 6

**⚠ CAUTION:** Like all mechanical devices, an airgun marker safety can fail. Even when the safety is "ON SAFE", you should continue to handle the marker safely. NEVER point the marker at anything you do not intend to shoot.

## 3. Installing CO<sub>2</sub> Capsules

**⚠ WARNING:** USE ONLY CO<sub>2</sub> GAS. ANY ATTEMPT TO USE OTHER TYPES OF GAS COULD BE EXTREMELY DANGEROUS AND COULD RESULT IN SERIOUS INJURY OR DEATH. GASES OTHER THAN CO<sub>2</sub> COULD RESULT IN AN EXPLOSION OR RUPTURE OF THE MARKER.

**⚠ CAUTION:** Keep hands and face away from escaping CO<sub>2</sub> gas. Escaping CO<sub>2</sub> gas is very cold and can cause serious injury to you or others. Always wear eye and hand protection when inserting or removing CO<sub>2</sub> capsules.

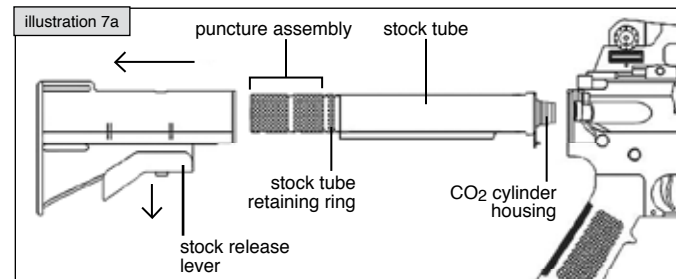
**NOTE:** Never try to force any CO<sub>2</sub> capsule into or out of place. Do not store your airgun marker with a CO<sub>2</sub> capsule in it. If you know you will not be using your airgun marker for an extended period of time, empty the CO<sub>2</sub> cylinder housing and remove it from the marker. (see step 4. Removing CO<sub>2</sub> capsules). This is very important to remember, as it will prolong the longevity of your marker seals.

**R-Series RAM Rifles are powered by two 12 gram CO<sub>2</sub> capsules. We recommend the use of Walther CO<sub>2</sub> capsules for a proper seal.**

- Put the airgun marker "ON SAFE" (see Step 2. Operating the Safety).
- Remove the magazine and make sure a projectile is not loaded (see Step 5. Unloading Projectiles).
- Make sure the airgun marker is not already charged with CO<sub>2</sub>. Point the marker in a SAFE DIRECTION, put it on "Fire", and pull the trigger. If it contains CO<sub>2</sub> (see step 4. Removing CO<sub>2</sub> Capsules).

### 3.—1R and 2R

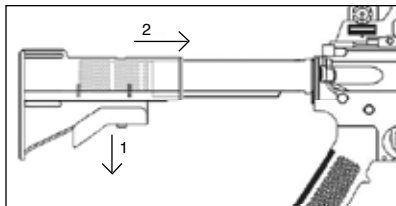
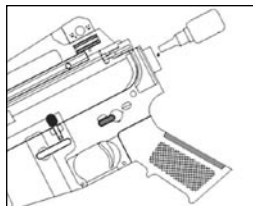
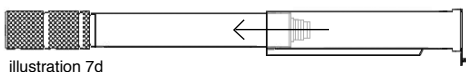
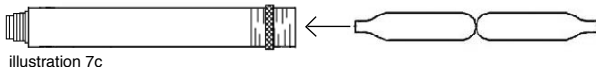
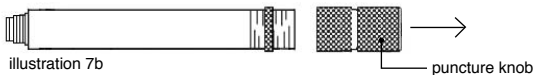
- Remove the stock and CO<sub>2</sub> cylinder housing. Pull down the stock release lever and slide the telescoping stock off of the stock tube (illustration 7a).
- Turn the stock tube retaining ring counterclockwise until it meets the puncture assembly (illustration 7a).



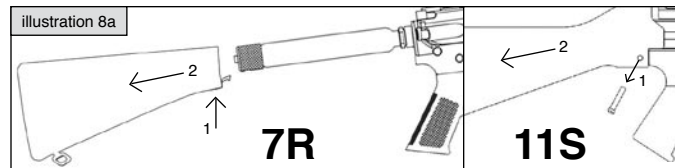
**3.—1R and 2R continued**

- Remove the CO<sub>2</sub> cylinder housing and stock tube from the rear of the marker by rotating both the stock tube retaining ring and puncture assembly counterclockwise.
- Unscrew the puncture assembly from the CO<sub>2</sub> cylinder housing (illustration 7b).
- Before installing a 12g CO<sub>2</sub> capsule, place one drop of RAM Oil on the top of the small end of each 12g CO<sub>2</sub> capsule.
- Insert two 12g CO<sub>2</sub> capsules end to end (illustration 7c).
- Put the puncture assembly back onto the CO<sub>2</sub> cylinder housing and tighten.
- Turn the puncture knob clockwise to puncture the two 12g CO<sub>2</sub> capsules.
- Slide stock tube back onto CO<sub>2</sub> cylinder housing (illustration 7d).
- Apply two drops of RAM Oil into the rear of the marker (illustration 7e).
- Put CO<sub>2</sub> cylinder housing into rear of marker and tighten.
- Tighten stock tube retaining ring to secure stock tube against rear of marker.
- Put telescoping stock on by pulling stock release lever down and sliding over stock tube (illustration 7f).
- Make sure CO<sub>2</sub> gas is being released into the marker. With the marker pointed in a SAFE DIRECTION, put on "Fire" (see step 6. Aiming and Firing Safely) and pull the trigger. If the marker does not fire, tighten the puncture knob some more and repeat this step.

**CAUTION:** NEVER INSERT THE MAGAZINE UNTIL YOU HAVE VERIFIED THE MARKER WILL DISCHARGE CO<sub>2</sub> PROPERLY.

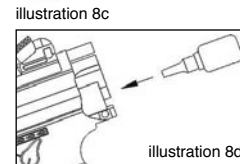
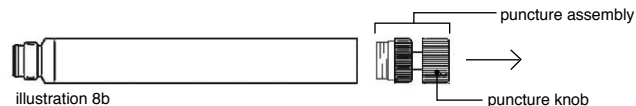
**3.—7R and 11S**

- Remove the stock and CO<sub>2</sub> cylinder housing. Push the button on the bottom of the stock and pull the stock off of the marker, 11S has a stock retaining pin instead of a button, remove the pin to remove the stock (see illustration 8a).



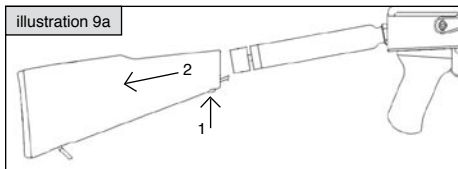
- Remove the CO<sub>2</sub> cylinder housing from the rear of the marker by rotating the puncture assembly and CO<sub>2</sub> cylinder housing together counterclockwise.
- Unscrew the puncture assembly from the CO<sub>2</sub> cylinder housing (illustration 8b).
- Before installing a 12g CO<sub>2</sub> capsule, place one drop of RAM Oil on the top of the small end of each 12g CO<sub>2</sub> capsule.
- Insert two 12g CO<sub>2</sub> capsules end to end (illustration 8c).
- Put the puncture assembly back onto the CO<sub>2</sub> cylinder housing and tighten.
- Turn the puncture knob clockwise to puncture the two 12g CO<sub>2</sub> capsules.
- Apply two drops of RAM Oil into the rear of the marker (illustration 8d).
- Put CO<sub>2</sub> cylinder housing into rear of marker and tighten.
- Slide stock over CO<sub>2</sub> cylinder housing until button clicks in place on 7R. Insert stock retaining pin on 11S.
- Make sure CO<sub>2</sub> gas is being released into the marker. With the marker pointed in a SAFE DIRECTION, and the magazine out, put on "Fire" (see step 6. Firing Safely) and pull the trigger. If the marker does not fire, tighten the puncture knob some more and repeat this step.

**CAUTION:** NEVER INSERT THE MAGAZINE UNTIL YOU HAVE VERIFIED THE MARKER WILL DISCHARGE CO<sub>2</sub> PROPERLY.



### 3.—RAM 47 and 74

- Remove the stock and CO<sub>2</sub> cylinder housing. Push the button on the bottom of the stock and pull the stock off of the marker (see illustration 9a).
- Remove the CO<sub>2</sub> cylinder housing from the rear of the marker by rotating the puncture assembly and CO<sub>2</sub> cylinder housing together counterclockwise.



- Unscrew the puncture assembly from the CO<sub>2</sub> cylinder housing (illustration 9b).
- Before installing a 12g CO<sub>2</sub> capsule, place one drop of RAM Oil on the top of the small end of each 12g CO<sub>2</sub> capsule.
- Insert two 12g CO<sub>2</sub> capsules end to end (illustration 9c).
- Put the puncture assembly back onto the CO<sub>2</sub> cylinder housing and tighten.
- Turn the puncture knob clockwise to puncture the two 12g CO<sub>2</sub> capsules.
- Apply two drops of RAM Oil into the rear of the marker (illustration 9d).
- Put CO<sub>2</sub> cylinder housing into rear of marker and tighten.
- Slide stock over CO<sub>2</sub> cylinder housing until button clicks in place on 47 and 74.
- Make sure CO<sub>2</sub> gas is being released into the marker. With the marker pointed in a SAFE DIRECTION, and the magazine out, put on "Fire" (see step 6. Firing Safely) and pull the trigger. If the marker does not fire, tighten the puncture knob some more and repeat this step.

**CAUTION:** NEVER INSERT THE MAGAZINE UNTIL YOU HAVE VERIFIED THE MARKER WILL DISCHARGE CO<sub>2</sub> PROPERLY.

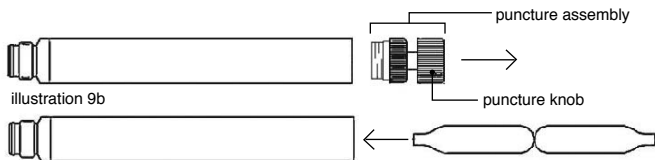


illustration 9b



illustration 9c

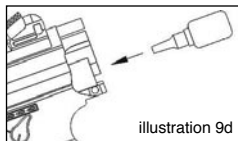


illustration 9d

### 3.—13S

- Remove the stock and CO<sub>2</sub> cylinder housing. Remove the stock retaining pin and remove the stock unit (see illustration 10a).

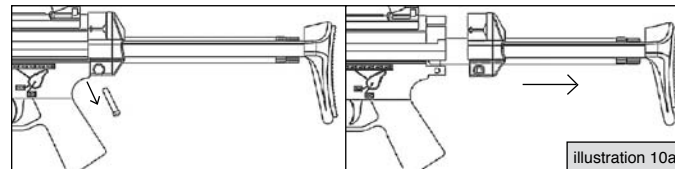


illustration 10a

- Turn the puncture knob counterclockwise until it stops.
- Remove the CO<sub>2</sub> cylinder housing from the rear of the marker by turning the puncture assembly and CO<sub>2</sub> cylinder housing together counterclockwise.
- Unscrew the puncture assembly from the CO<sub>2</sub> cylinder housing (illustration 10b).
- Before installing a 12g CO<sub>2</sub> capsule, place one drop of RAM Oil on the top of the small end of each 12g CO<sub>2</sub> capsule.
- Insert two 12g CO<sub>2</sub> capsules end to end (illustration 10c).
- Put the puncture assembly back onto the CO<sub>2</sub> cylinder housing and tighten.
- DO NOT TIGHTEN THE PUNCTURE KNOB UNTIL THE CO<sub>2</sub> CYLINDER IS SECURED IN THE REAR OF THE MARKER.**
- Apply two drops of RAM Oil into the rear of the marker (illustration 10d).
- Put CO<sub>2</sub> cylinder housing into rear of marker and tighten.
- Turn the puncture knob clockwise to puncture the two 12g CO<sub>2</sub> capsules.
- Do not put stock back on yet. First, make sure gas is being released into the marker. With the marker pointed in a SAFE DIRECTION, and the magazine out, put on "Fire" (see step 6. Firing Safely) and pull the trigger. If the marker does not fire, tighten the puncture knob some more and repeat this step.
- Slide stock over CO<sub>2</sub> cylinder housing and insert stock retaining pin.

**CAUTION:** NEVER INSERT THE MAGAZINE UNTIL YOU HAVE VERIFIED THE MARKER WILL DISCHARGE CO<sub>2</sub> PROPERLY.



illustration 10b

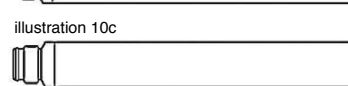


illustration 10c

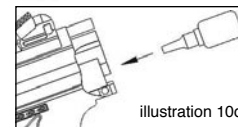


illustration 10d

#### 4. Removing CO<sub>2</sub> Capsules

- Put the airgun marker "ON SAFE" (see step 2. Operating the Safety).
- Make sure the airgun is unloaded (see step 5. Unloading Projectiles).
- Point the airgun marker in a SAFE DIRECTION.
- Put the airgun marker on "Fire".
- Fire the marker until it will not fire, indicating the CO<sub>2</sub> cylinder housing is empty.
- Put the marker "ON SAFE".
- See step 3. Installing CO<sub>2</sub> Capsules, for instruction on how to remove the stock and CO<sub>2</sub> cylinder housing assembly.
- Remove the empty CO<sub>2</sub> capsules and discard.
- It is recommended to make sure the core is empty of all CO<sub>2</sub> when storing your marker. With the magazine out, the marker unloaded, and CO<sub>2</sub> removed, point in a safe direction and pull the trigger until all of the CO<sub>2</sub> has escaped. Put the marker "ON SAFE".

#### 5. Loading and Unloading Projectiles

**RAM Rifles will fire either .43 caliber paintballs or .43 caliber rubberballs and must be used with .43 caliber casings.**

RAM magazines for RAM 1R, 2R, 7R, 11S, and 13S will hold 20 rounds.

RAM magazines for the RAM 47 and 74 will hold 23 rounds.

##### 5A. Loading Paintballs or Rubberballs

- Load casings with either rubberballs or paintballs.
- Turn the knob clockwise on the side of the marker magazine until it stops.  
NOTE: If you want to fill the magazine half way, turn the knob only a couple of times before loading projectiles.
- Hold the loading latch back and load the projectiles with RAM Cases into the magazine with the open side of the case facing forward (illustration 11a).
- Make sure the marker is "ON SAFE".
- Insert the magazine into the marker. Make sure locks into place.

NOTE: Do not over tighten the knob on the magazine.

##### 5B. Unloading Projectiles

- Make sure the marker is "ON SAFE".
- Press the magazine release button and remove the magazine.

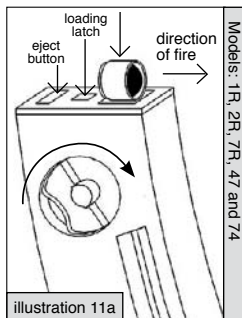


illustration 11a

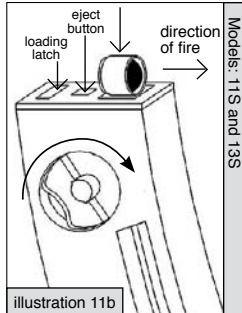


illustration 11b

- Make sure a projectile does not remain in the chamber. If there is, turn the marker on its side and allow the projectile to fall out of the ejection port.
- Aim in a SAFE DIRECTION and put the marker on "Fire".
- Pull the trigger a couple of times to make sure no projectiles are left in the barrel.
- Put the marker back "ON SAFE".
- To eject projectiles from the magazine, turn the magazine upside down and push down on the ejection button until every projectile is ejected. (see illustration 11a)

**⚠ CAUTION:** Be sure to keep the opening pointed away from eyes.

**⚠ CAUTION:** Always point the muzzle in a safe direction. Never place your hand in front of the muzzle. Should a paintball burst inside the marker all residues **MUST** be removed before the marker is fired (See section 9. Maintenance, Cleaning, and Storage).

**⚠ CAUTION:** Use only flawless .43 caliber paintballs or rubberballs. Do not attempt to use deformed, used, or soiled projectiles. Projectiles other than .43 caliber paintballs or rubberballs can cause injury to you or someone else or may damage and/or jam the marker. Use of anything other than .43 caliber paintballs or rubberballs will void the warranty.

#### 6. Firing Safety

- You and others with you should always wear shooting glasses and ear protection made specifically for paintball to protect your eyes and ears.
- Always aim your airgun marker in a SAFE DIRECTION. Be sure of your target and backstop, and make certain the area around your target is clear.
- Open the casing ejection port by pulling ejection door release lever (1R, 2R, 7R) or the cocking lever (RAM 47, 74). 11S & 13S do not have ejection port levers or functioning cocking levers.
- Put the fire selector in the desired fire mode (see Step 2. Operating the Safety).
- Squeeze the trigger with steady pressure until the airgun marker fires.
- Note: Casings will eject from the marker as it fires.  
DO NOT FIRE THE RAM 47 OR RAM 74 WITHOUT OPENING THE EJECTION PORT. THIS IS ACCOMPLISHED BY PULLING THE COCKING LEVER.
- Do not shoot paintballs or rubberballs at hard surfaces or the surface of water. Rubberballs may bounce off or ricochet and hit someone or something you had not intended to hit.
- Always choose your target carefully. Only targets which cannot be penetrated or which will not cause ricochets should be used.
- Your backstop should be checked for wear before and after each use. Replace your backstop if the surface is worn or damaged, or if a ricochet occurs.

**⚠ CAUTION:** Your backstop should be inspected for wear before and after each use. Discontinue use if the backstop surface shows signs of failure. Always place the backstop in a location that will be safe should the backstop fail. Discontinue the use of a backstop if the projectile rebounds or ricochets. Never aim at pets or water. Never aim at people when they're not involved in a gaming or training situation.

## 7. Aiming and Adjusting the Sights

- Always aim at a safe target. Know what the projectile might hit if you miss your intended target or if it ricochets.
- If your marker has open sights, line-up the front sight in the middle of the rear sight notch and rest the center of your target on top of the front sight post (see illustration 12a).
- If your marker has an aperture-style sight, center the front post in the middle of the rear aperture opening. Rest the target on top of the front post (see illustration 12b).



illustration 12a

### RAM 1R, 2R, and 7R Sights (illustration 13a)

- An aperture-style rear sight with two aperture diameters. The rear sight is adjustable for both windage and elevation. The rear sight is attached to a removable handle.



illustration 12b

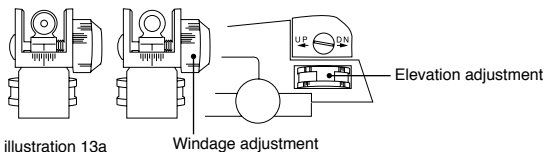


illustration 13a

Windage adjustment

### RAM 47 and 74 Sights (illustration 13b)

- An open, notched, rear sight that is adjustable for elevation.

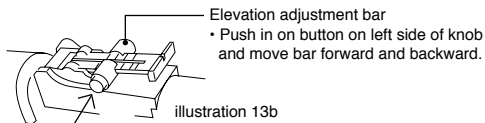


illustration 13b

### RAM 11S and 13S Sights (illustration 13c)

- Fixed, hooded post front sight.
- An aperture-style rear sight with four aperture diameters. The rear sight is adjustable for both windage and elevation.

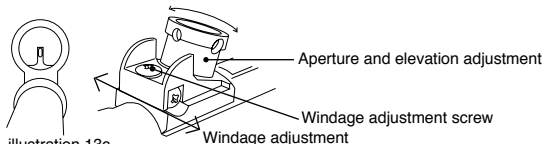


illustration 13c

## 8. Use and Handling of CO<sub>2</sub> Capsules

**⚠ WARNING:** A CO<sub>2</sub> CAPSULE CONTAINS GAS UNDER PRESSURE, WHETHER OR NOT IT HAS BEEN INSERTED INTO A GUN. IF EXPOSED TO HIGH TEMPERATURES (SUCH AS INSIDE A CLOSED CAR AND/OR IN DIRECT SUNLIGHT, IT COULD EXPLODE. STORE ALL CAPSULES IN A COOL PLACE.

Always follow warnings listed on propellant source for handling and storage.

It is possible that certain conditions may affect a CO<sub>2</sub> capsule, which can impact its proper performance. These conditions include the usage, maintenance and storage at temperatures that are higher or lower than normal outdoors temperatures (59°F/15°C to 69.8°F/21°C). Another condition may be when the airgun marker is fired rapidly.

1. High temperatures can increase pressure in the CO<sub>2</sub> capsule and also within the airgun, leading to higher than standard operating pressure. This excess pressure could cause the airgun to malfunction or be permanently damaged. Maximum storage or operation temperature should never exceed 122°F (50°C). This temperature can be reached if you leave the airgun under direct sunlight on a bright day. Thus, to ensure proper airgun operation, do not expose it to high temperatures or direct sunlight for long periods of time. Otherwise, the CO<sub>2</sub> capsule could overheat and explode, which could damage the airgun and cause injuries or death to people around it.
2. Fast consecutive shooting may produce a decrease of temperature in the airgun, as well as the CO<sub>2</sub> capsule. This could result in lower projectile velocities and may even lower gas pressure enough so that the pistol will not fire. This condition can be especially apparent when shooting in cold weather and can be avoided by allowing more time between shots. This permits the gas to increase in temperature and pressure and produce normal velocities.
3. During rapid fire, the muzzle velocity of each shot will diminish. This can affect shooting accuracy and you will get fewer shots per CO<sub>2</sub> capsule.
4. Care should be exercised to ensure that the airgun is not shot with a CO<sub>2</sub> capsule that is low in pressure. Here are some indicators of insufficient pressure:
  - A) The sound of the shot is not as loud as when the capsule is full.
  - B) The projectile hits the target, but in a lower position than it would with a full CO<sub>2</sub> capsule (that is, the shooting speed has dropped).

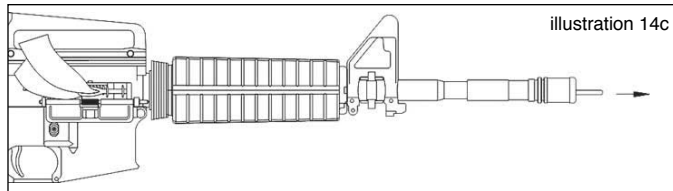
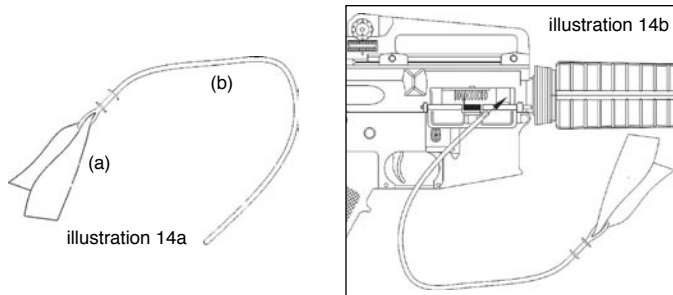
**⚠ CAUTION:** Never attempt to reuse a CO<sub>2</sub> capsule for any purpose.

## 9. Maintenance, Cleaning, and Storage

**CAUTION:** Before any care, cleaning, or maintenance, always be sure your airgun marker is "ON SAFE" and unloaded. It is important to maintain your airgun properly.

### Barrel Cleaning

- Always keep your RAM marker pointed in a SAFE DIRECTION and keep your hands away from the front of the muzzle.
- Put the airgun marker "ON SAFE".
- Remove the magazine.
- Make certain there are no projectiles left anywhere in the marker.
- Open the casing ejection port.
- Attach the cleaning cloth(a) to the end of the barrel cleaner(b) that was included with your RAM marker (see illustration 14a).
- Push the barrel cleaner through the opening of the breech towards the muzzle (see illustration 14b).
- Slowly pull the barrel cleaner with the cloth attached through the barrel. (see illustration 14c).
- Repeat this action until the barrel is clean and free of oil.



**CAUTION:** Should a paintball burst inside the airgun marker all residues MUST be removed before the airgun marker is fired.

### Maintenance and Cleaning

- Before you attempt to perform maintenance on your airgun marker, make sure the marker is "ON SAFE" and unloaded, and the CO<sub>2</sub> cylinder housing has been removed.
- Apply 1 to 2 drops of RAM Oil onto all moving parts such as the projectile follower, trigger hinge, and threads of the CO<sub>2</sub> cylinder housing.
- Clean the surface of your marker with a soft cloth. Wipe the metal parts with a lightly oiled rag, RAM Oil is excellent for this.
- If you drop your airgun marker, check to see that it works properly before you use it again. If anything seems changed, like a shorter or weaker trigger pull, this may mean worn out or broken parts. Call Customer Service at Umarex USA for assistance before using your RAM marker again.
- Tampering with the marker or attempts to change the air marker in any way not explained in this manual may make it unsafe to use and will void the warranty.
- Regularly check screws for tightness.
- Regularly check for broken or worn parts.

**If you find any worn or broken parts or experience problems with your RAM Marker, contact Umarex USA by phone or internet:**

**Umarex USA**  
**Service Department**  
**Phone: 479-646-4210**  
**Internet: [www.UmarexUSA.com](http://www.UmarexUSA.com)**

### Storage

- Only keep and store your marker in its unloaded condition. Make sure there are no projectiles left in the barrel. Remove the CO<sub>2</sub> cylinder housing. Remove any remaining projectiles from the magazine.
- It is recommended to make sure the core is empty of all CO<sub>2</sub> when storing your marker. With the magazine out, the marker unloaded, and CO<sub>2</sub> removed, point in a safe direction and pull the trigger until all of the CO<sub>2</sub> has escaped. Put the marker "ON SAFE".
- Keep the barrel blocking device in the marker muzzle when not shooting.
- Store your airgun marker in a secure location, out of reach of children and others not educated in gun safety.
- It is recommended that you clean the barrel and remove the CO<sub>2</sub> capsules before you store your marker.
- It is recommended that you have the RAM Marker Core serviced after 30,000 rounds.
- Store projectiles separate from marker and in a climate controlled area between the temperatures of 59 and 80 degrees Fahrenheit.

**WARNING:** A MARKER THAT IS NOT OPERATING PROPERLY MAY BE DANGEROUS. IT SHOULD BE KEPT SAFELY FROM USE BY ANYONE UNTIL REPAIRED OR DESTROYED. DO NOT TRY TO TAKE THE MARKER APART. IT IS DIFFICULT TO REASSEMBLE AND IMPROPER DISASSEMBLY OR REASSEMBLY CAN CAUSE SERIOUS INJURY OR DEATH.



## 10. Adjusting Velocities

**CAUTION:** Although you may adjust velocity, be advised that any velocity adjustment will void your warranty on matters related to the RAM's core seals.

**REMEMBER:** Always keep the muzzle pointed in a safe direction. Wear safety glasses when handling any gun. Remove the CO2 cylinder housing from the RAM marker and make sure to put the RAM marker ON SAFE.

### Adjusting Velocity of RAM R-Series Rifles

- Push the pin out of the top-rear of the core from the left side using a punch (see illustration 15a).
- Pivot the barrel downward and lift the rear of the receiver cover up (see illustration 15b).
- To adjust velocity, turn the larger hex screw—clockwise to increase velocity, counterclockwise to decrease velocity (see illustration 15c). **Note:** Increasing or decreasing the velocity too high or low will cause the marker to malfunction.
- After the adjustment is made, hold down the spring-loaded casing ejector while pivoting the receiver back toward the grip frame. Snap it in place (see illustration 15d).
- Reinsert the pin so that the rounded head is on the right side of the marker's core.

illustration 15a



illustration 15b



illustration 15c



illustration 15d



### Adjusting Velocity of RAM S-Series Rifles

- Remove the rear sight using a Phillips screwdriver to remove the top screw (see illustration 16a).
- To adjust velocity, turn the larger hex screw—clockwise to increase velocity, counterclockwise to decrease velocity (see illustration 16b). **Note:** Increasing or decreasing the velocity too high or low will cause the marker to malfunction.
- Replace the rear sight.

illustration 16a



illustration 16b



### Adjusting Velocity of RAM A-Series Rifles

- Push in the upper receiver release button located on the back of the A-Series rifle and lift up the receiver cover (see illustration 17a & 17b).
- To adjust velocity, turn the larger hex screw—clockwise to increase velocity, counterclockwise to decrease velocity (see illustration 17c). **Note:** Increasing or decreasing the velocity too high or low will cause the marker to malfunction.
- When replacing the receiver cover, slide the cover into the slot located underneath the rear sight (see illustration 17d).
- Make sure the right side of the cover clears the spring and ejection port lever (see illustration 17e).

- Keeping pressure at the front of the cover so that it stays in the slot, push the rear of the cover down over the receiver release button. You may have to give it a good tap to get it in place. Notice that the cover must be inside of the raised edges (see illustration 17g).

illustration 17a



illustration 17b



illustration 17c



illustration 17d

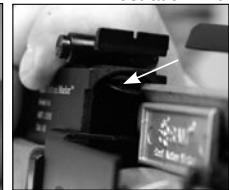


illustration 17e



illustration 17f



## 11. Trouble Shooting

<b>Problem</b> <b>Solution</b>	Poor firing performance	Marker does not function	Low velocity
Safety is on		●	
CO2 capsule is empty	●	●	●
Barrel is dirty	●		●
CO2 capsule is defective		●	
Extreme temperature	●		●
Incorrect projectiles	●	●	●
Projectiles loaded in magazine incorrectly		●	
Incorrect sight or barrel installation	●		●
CO2 leaking	Dry fire 3-4 times to seal the o-rings.		
If full auto does not work	Put 2-3 drops of lubricant onto the back of the marker where the CO2 cylinder screws in, prior to installing the CO2 cylinder housing. Fire the rifle in a safe direction until the CO2 has been depleted. Install new CO2 capsules. If it still does not work, repeat this process.		

## 12. Reviewing Safety

- Every person within range must wear eye, face, and ear protection designed specifically to stop paintballs and meeting specification F 1776.
- Always measure your marker's velocity before playing paintball and never shoot at velocities in excess of 300 feet per second.
- Never point the airgun marker at anything you do not intend to shoot.
- Always treat the airgun as though it is loaded and with the same respect you would a firearm.
- Always aim in a SAFE DIRECTION. Always keep the muzzle of the airgun marker pointed in a SAFE DIRECTION.
- Never look down the barrel of a paintball marker.
- Always keep the airgun marker "ON SAFE" until you are ready to shoot.
- Always check to see if the airgun marker is "ON SAFE" and unloaded when getting it from another person or from storage.
- Always keep your finger off the trigger and out of the trigger guard until ready to shoot.
- Use the proper size projectile for your airgun marker.
- Never reuse ammunition.
- Do not shoot solid projectiles at hard surfaces or at the surface of water. The projectile may bounce off or ricochet and hit someone or something you had not intended to hit.

- Do not shoot at fragile objects such as windows.
- Place the backstop in a location that will be safe should the backstop fail.
- Your backstop should be checked for wear before and after each use. All backstops are subject to wear and will eventually fail. Replace your backstop if the surface is worn or damaged or if a ricochet occurs.
- Do not attempt to disassemble or tamper with your airgun marker. Unauthorized repairs or modifying the function of your airgun in any way may be unsafe and will void your warranty.
- Before you store your airgun marker, make sure it is unloaded, the CO2 capsule is removed, and is "ON SAFE."

**⚠ CAUTION:** The components of this airgun marker were engineered and manufactured to deliver optimum performance. Any modification or tampering with an airgun marker may cause a malfunction, void your warranty, and may make it unsafe to use. Any change in performance (such as a lowered trigger pull force and shortened trigger travel) indicates possible modification, tampering and/or wear. Such marker should be inspected, replaced, or properly repaired by only qualified Umarex USA personnel. Any airgun marker that has been dropped should be checked by qualified personnel to ensure that its function has not been affected.

## 13. Repair / Service / Warranty

Do not return defective or damaged product to the dealer. If your airgun marker needs repair or service, call Umarex USA (479) 646-4210 and ask for the Service Department or visit [www.umarexusa.com](http://www.umarexusa.com). **DO NOT ATTEMPT TO DISASSEMBLE IT!** Your airgun marker requires special tools and fixtures to repair it. Any disassembly or modification not performed by Umarex USA will void the warranty.

### 1 YEAR LIMITED WARRANTY

RAM Rifles are warranted to the retail consumer for one (1) year from date of purchase against defects in material and workmanship and is not transferable. **WHAT IS COVERED:** Replacement parts and labor.

**WHAT IS NOT COVERED:** Shipping charges to Umarex USA for defective product and damages caused by abuse or failure to perform normal maintenance as well as any other expense. Consequential damages, or incidental expenses, including damage to property. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

**WARRANTY CLAIMS:** Warranty Claims and Repair for U.S. and Canadian customers only. Call Umarex USA (479) 646-4210 and ask for the Service Department. If it is determined a return is necessary, you will be issued a Return Authorization Number. Write this number boldly on the box and return the product prepaid to Umarex USA. Your name, address, phone number, and a note explaining the defect found must be included in the package. A copy of the original purchase receipt must accompany the return. Include a check made to Umarex USA in the amount of \$19.95 to cover shipping and handling.

**IMPLIED WARRANTIES**

Any implied warranties, including the implied warranties of merchantability and fitness for a particular purpose, are limited in duration to 1 (one) year from date of retail purchase. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU. TO THE EXTENT ANY PROVISION OF THIS WARRANTY IS PROHIBITED BY FEDERAL, STATE, OR MUNICIPAL LAW WHICH CANNOT BE PREEMPTED, IT SHALL NOT BE APPLICABLE. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE AND COUNTRY TO COUNTRY.



**CAUTION:** Unauthorized modifications of your airgun marker may result in a different classification and are therefore not permitted. The manufacturer's warranty will become null and void in such cases.

**RAM 1R Specifications**

System:	CO <sub>2</sub>	Action:	Semi- or Full-Auto
Caliber:	.43	Velocity:	Up to 280 feet per second
Projectiles:	Paintballs or Rubberballs	Safety:	Manual
Length:	33.5 in.	Magazine Capacity:	20 shots
Barrel Lgth:	14.5 in.	Danger Distance:	250 yards
Weight:	6.9 lbs.	Max. Effective Range:	70-100 ft.

**Accessories for 1R:**

- 2292007 – 20-round magazine, black
- 2292008 – 20-round magazine, blue
- 2292013 – 88g CO<sub>2</sub> adapter

**RAM 2R Specifications**

System:	CO <sub>2</sub>	Action:	Semi- or Full-Auto
Caliber:	.43	Velocity:	Up to 280 feet per second
Projectiles:	Paintballs or Rubberballs	Safety:	Manual
Length:	29.5 in.	Magazine Capacity:	20 shots
Barrel Lgth:	10.5 in.	Danger Distance:	250 yards
Weight:	6.9 lbs.	Max. Effective Range:	70-100 ft.

**Accessories for 2R:**

- 2292007 – 20-round magazine, black
- 2292008 – 20-round magazine, blue
- 2292013 – 88g CO<sub>2</sub> adapter

**RAM 7R Specifications**

System:	CO <sub>2</sub>	Action:	Semi- or Full-Auto
Caliber:	.43	Velocity:	Up to 280 feet per second
Projectiles:	Paintballs or Rubberballs	Safety:	Manual
Length:	32.68 in.	Magazine Capacity:	20 shots
Barrel Lgth:	14.75 in.	Danger Distance:	250 yards
Weight:	8.75 lbs.	Max. Effective Range:	70-100 ft.

**Accessories for 7R:**

- 2292007 – 20-round magazine, black
- 2292008 – 20-round magazine, blue
- 2292013 – 88g CO<sub>2</sub> adapter

**RAM 47 and 74 Specifications**

System:	CO <sub>2</sub>	Action:	Semi- or Full-Auto
Caliber:	.43	Velocity:	Up to 280 feet per second
Projectiles:	Paintballs or Rubberballs	Safety:	Manual
Length:	34.75 in.	Magazine Capacity:	23 shots
Barrel Lgth:	16 in.	Danger Distance:	250 yards
Weight:	6.3 lbs.	Max. Effective Range:	75-100 ft.

**Accessories for 47 and 74:**

- 2292009 – 23-round magazine, black

**RAM 11S Specifications**

System:	CO <sub>2</sub>	Action:	Semi- or Full-Auto
Caliber:	.43	Velocity:	Up to 280 feet per second
Projectiles:	Paintballs or Rubberballs	Safety:	Manual
Length:	28.75 in.	Magazine Capacity:	20 shots
Barrel Lgth:	8.25 in.	Danger Distance:	250 yards
Weight:	6.2 lbs.	Max. Effective Range:	75-100 ft.

**Accessories for 11S:**

- 2292010 – 20-round magazine, black
- 2292011 – 20-round magazine, blue

## RAM 13S Specifications

System:	CO <sub>2</sub>	Action:	Semi- or Full-Auto
Caliber:	.43	Velocity:	Up to 280 feet per second
Projectiles:	Paintballs or Rubberballs	Safety:	Manual
Length:	27 in.	Magazine Capacity:	20 shots
Barrel Lgth:	8.25 in.	Danger Distance:	250 yards
Weight:	6.4 lbs.	Max. Effective Range:	75-100 ft.

### Accessories for 13S:

- 2292010 – 20-round magazine, black
- 2292011 – 20-round magazine, blue

### Other available accessories:

- 2292005 – .43 caliber Black rubberballs, 500 count bag
- 2252533 – Walther 12g CO2 capsules, 12-pack box
- 2252534 – Walther 88g CO2 capsules, 2-pack box
- 2292019 – RAM Oil, 1/2 oz.
- 2292018 – RAM O-Rings, 10 pack



Manufactured by Q.W. Paintball Support Limited.

Distributed in North America by:

**UMAREXUSA®**

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