



# Conventional In-Line Rifle

Model No. \_\_\_\_\_ Serial No. \_\_\_\_\_

Caliber \_\_\_\_\_ Date Purchased \_\_\_\_\_

Type of Gun \_\_\_\_\_

# Warranty Information

## WARNING

**IF HANDLED IMPROPERLY FIREARMS ARE DANGEROUS. READ AND FOLLOW ALL "CAUTIONS", "CAUTION" AND WARNINGS OF "DANGER" TO AVOID SERIOUS INJURY AND/OR DEATH AND/OR PROPERTY DAMAGE.**

Call CVA Customer Service at 770-449-4687 if you have any questions or visit us on the Internet at: [www.cva.com](http://www.cva.com) or E-mail us at: [info@cva.com](mailto:info@cva.com)



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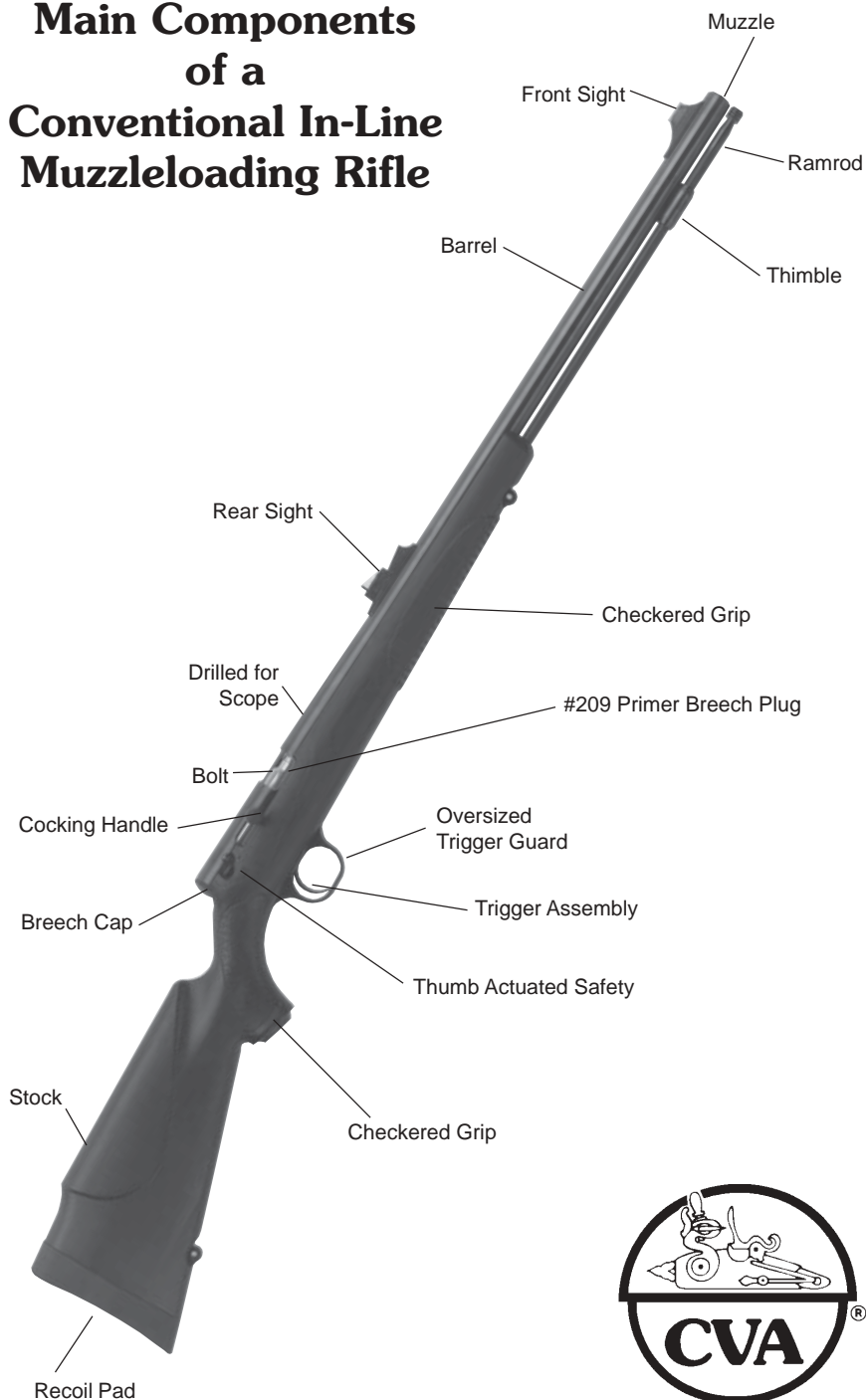
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# Main Components of a Conventional In-Line Muzzleloading Rifle





**WARNING:** THE INFORMATION CONTAINED IN THIS MANUAL IS CRITICAL FOR THE PROPER USE AND CARE OF YOUR FIREARM. **DO NOT ATTEMPT TO LOAD OR FIRE YOUR MUZZLELOADER UNTIL YOU HAVE READ AND UNDERSTAND THE INFORMATION DESCRIBED IN THIS MANUAL.**

All muzzleloading firearms, including In-Lines, are faithful to the original basic designs. For this reason, blackpowder guns cannot be made with many of the refinements and features that are standard on modern cartridge firearms. Shooters must remember that even now, despite the modern appearance of In-Line design rifles, there is no way to build a muzzleloader that absolves the user from the need to use the special safety precautions and good judgment unique to all muzzleloading firearms. When handled properly, a muzzleloader is a safe and enjoyable firearm for shooting and hunting. But, if abused, harmful consequences can result. Treat this muzzleloading firearm with the full respect due any firearm.

**NOTE:** If after reading the instructions, cautions, and dangers contained in this manual, you are not willing to accept the responsibilities involved in the safe handling and shooting of a muzzleloader, return the firearm in its entirety to the place of purchase. If you have any questions about safe use of your CVA firearm, write, call, or e-mail our Customer Service Department at 5988 Peachtree Corners East, Norcross, Georgia 30071; (770) 449-4687; info@cva.com.

If you sell, trade, or give this firearm to any other person, this owner's manual must accompany the firearm. Replacement books are available from CVA.

## **A. INTRODUCTION TO IN-LINE MUZZLELOADERS**

In-Line design muzzleloaders are so described due to the fact that the ignition source (#11 percussion cap, musket cap or modern primer) is located directly behind (or, in line with) the propellant charge. By contrast, with Sidelock design muzzleloaders the ignition source is positioned to the side of the propellant charge.

The BuckHorn™ 209 Magnum is considered a CONVENTIONAL In-Line due to the fact that cocking mechanism is a straight pull device. Other types of In-Line designs would include BOLT ACTION, BREAK ACTION, and FALLING BLOCK designs.

## **B. GETTING STARTED**

1. Safety First - Verify gun is unloaded.
2. Assemble gun.
3. Check all functions.
4. Remove and clean breech plug (refer to section M for Disassembly/Assembly).
5. Clean entire gun including barrel.
6. **Apply breech plug grease or anti-seize compound to threads of breech plug.** Reinstall breech plug until snug but do not overtighten.



7. Read and study instruction manual.
8. Understand terminology & procedures.
9. Get all questions answered.

**For Safety:** CVA encourages that you take a certified hunter's safety course before using this muzzleloader or any other firearm. Consult your local Game & Fish authorities, The National Muzzleloading Rifle Association or your local sporting goods dealer for information on the courses available.

## C. TEN COMMANDMENTS OF FIREARM SAFETY

1. Always keep the gun muzzle pointed in a safe direction and never pull it towards you by the muzzle.
2. Be sure of your target and beyond.
3. Never rely on a gun's mechanical "safety".
4. Gun should be unloaded until ready to use.
5. Always wear eye and ear protection.
6. The barrel should be clear of obstruction before shooting.
7. Handle every gun as if it is loaded.
8. Keep guns and ammo separate and in locked storage.
9. Avoid alcoholic beverages and drugs before and during use of a firearm.
10. Do not alter or modify your firearm. Have your firearm checked regularly by a competent gunsmith. Make sure all parts work properly.

**Health Warning:** Discharging of firearms in a poorly ventilated area and/or handling of ammunitions may cause exposure to lead or lead compounds. According to the state of California, exposure may cause cancer, birth defects, or other reproductive harm. Make sure that you have proper ventilation at all times. Be sure to wash hands thoroughly after shooting, handling ammunition, or cleaning your firearm. Do not eat or smoke during these activities.

## D. SAFETY CONSIDERATIONS UNIQUE TO MUZZLELOADERS

1. Never smoke when shooting or handling a muzzleloader or related equipment. Ashes and/or loose sparks may cause powder or caps to ignite, resulting in personal injury or death.
2. Always wear eye protection. Flying debris from the breech area and muzzle are always a possibility with any muzzleloader.
3. Never pour powder into a muzzleloader directly from a flask, horn or any large volume, enclosed container. Hot embers in the barrel could cause the container to explode.
4. All powder storage containers and percussion caps should be kept well away from the area where shooting is to be conducted. Sparks from shooting can cause accidental ignition of these devices. Follow all manufacturers instructions for long-term storage of powder, percussion caps and primers.
5. Use only Blackpowder or an approved blackpowder substitute in your muzzleloading firearms. The only approved blackpowder substitutes are Pyrodex and Pyrodex Pellets, Triple 7 Powder & Triple 7 Pellets,



Pioneer Powder & Pioneer Powder Stix, Clean Shot Powder & Clean Shot Pellets, and Clear Shot powder. **NEVER USE MODERN SMOKELESS POWDER IN ANY MUZZLELOADER. The use of any amount of smokeless powder in a muzzleloader will create dangerously high pressures upon ignition, may result in severe injury or death to the shooter and/or bystanders, and will void the warranty.**

6. Always check to ensure that your muzzleloader is in good working condition before use. Test the bolt and safety mechanisms carefully prior to loading. Check the barrel for any obstruction as any blockage may cause the gun to explode.
7. **Use only recommended loading data for the particular model of rifle in use. Different models have different powder charge and projectile capabilities. Improper loading or overloading of a muzzleloading firearm may result in severe injury or death.**
8. Never prime or cap a firearm until you are ready to fire. Primer/cap should always be removed when walking, climbing trees or fences, transferring the gun from one person to another, leaving the gun unattended, etc.
9. Never lean or rest a loaded muzzleloader against a tree, wall, vehicle or other surface. Any fall of the loaded gun may cause accidental discharge resulting in severe injury or death to bystanders.
10. Never transport a loaded muzzleloader in any type of vehicle. A muzzleloader is considered loaded until powder, bullet and percussion cap are removed.
11. Never exchange a loaded muzzleloader with any other person. Only the party who personally loaded or witnessed the loading of the muzzleloader should fire it. This practice will help prevent overloading or doubleloading, which may cause severe injury or death.
12. Never store a loaded muzzleloader. Muzzleloaders should be unloaded and cleaned (including Bolt Assembly) prior to any storage.
13. Never load a muzzleloader without first making sure that it is unloaded.
14. Exercise extreme caution when hunting from treestands with muzzleloaders. The dropping of a loaded muzzleloader may cause accidental discharge leading to severe injury or death. Be sure the primer/cap is removed whenever raising or lowering the firearm.
15. Never allow the hammer or bolt of a muzzleloader to rest against the cap. Any impact to the hammer or bolt could cause accidental discharge.
16. Never rely upon a mechanical safety. Muzzleloaders should always be handled as if ready to fire, regardless of the safety systems employed.
17. Always use proper cleaning procedures. Firing of an improperly maintained muzzleloader may lead to unsafe pressure conditions, resulting in severe injury or death.
18. Make sure that the projectile is firmly seated against the powder charge. "Short starting" of the projectile may cause the gun to explode.
19. Always keep the muzzle of the gun pointed in a safe direction while loading. Never lean over the muzzle while loading.



## E. SPECIFIC CAUTIONS/RECOMMENDATIONS FOR THE USE OF CVA IN-LINE MUZZLELOADING FIREARMS

**YOU ARE RESPONSIBLE FOR FIREARM SAFETY!** As a gun owner, you accept a set of demanding responsibilities. At all times handle your muzzleloader with intense respect for its firepower and potential danger. Read and understand the functions and terminology explained in this book before attempting to use your CVA muzzleloader.

1. When selecting powder loads be sure to use the correct loading data (Section I) for your particular model of CVA In-Line.
2. "Magnum" loads for CVA in-lines are safe only when using pelletized powder. "Magnum" loads of loose blackpowder or Pyrodex are inefficient and are not recommended.
3. Always follow recommended loading data when selecting bullet type and weight. When using sabot bullets and pelletized powder, maximum bullet weight should not exceed 300 grains. With loose powder loads, conical lead bullets should never exceed 400 grains. Heavier bullets may produce dangerously high pressure levels, possibly resulting in explosion of the gun and severe injury to the shooter and bystanders.
4. Always use the #209 Primer Ignition when firing pelletized powder or "magnum" loads. The extra fire to the charge ensures efficient burn of the entire charge.
5. PowerBelt™ Bullets or sabot bullets are recommended when using pelletized powder. Both provide the tight gas seal necessary for efficient burn of the entire pellet charge.
6. For maximum accuracy when shooting sabot bullets, the barrel must be cleaned of powder fouling and plastic residue after each shot. PowerBelt Bullets do not require cleaning after every shot.
7. Round ball and patch loads are not recommended for CVA In-Line rifles. The fast rate of rifling twist (1:28") associated with CVA In-Lines will not provide optimum accuracy when using patched round ball loads.
8. Never use modern smokeless powder, or any mix of smokeless powder, in any muzzleloader. Such improper loading of the rifle may result in an explosion of the gun, causing severe injury or death to the shooter and by-standers.
9. Never use a "Poly Patch" in any CVA rifle.

## F. BASIC ACCESSORIES FOR A MUZZLELOADER

### 1. LOADING ACCESSORIES

Propellant - Blackpowder or approved synthetic substitute such as Pyrodex, Triple 7, Clean Shot or Clear Shot. **NEVER USE MODERN SMOKELESS POWDER.**

Projectile - round ball, conical bullet, sabot bullet, or belted bullet.

Ignition Source - Percussion Cap, Musket Cap, or Modern 209 Primer.

Powder Flask - To transport and dispense powder (not required with the use of pelletized powder)



Powder Measure - To measure correct powder charge (not required with the use of pelletized powder)

Bullet Starter - To "start" bullet down the barrel

Capper - To carry and dispense percussion caps or 209 primers

2. **CLEANING ACCESSORIES**

Solvent - Cleaning solution

Patches - For cleaning inside of barrel

Breech Plug Wrench - For removing breech plug and/or nipples (included with BuckHorn rifle)

Jag - Retains cleaning patch on end of ramrod

3. **OTHER NEEDED ACCESSORIES**

Preloaders - To hold premeasured powder charge and bullet for quick reloading.

## **G. PROPELLANTS**

**WARNING: NEVER USE MODERN SMOKELESS POWDER IN ANY MUZZLELOADER. The use of any amount of smokeless powder in a muzzleloader will create dangerously high pressures upon ignition, and will result in severe injury or death to the shooter and/or bystanders, and will void the warranty.**

Only six types of propellant are acceptable for use in CVA muzzleloading firearms.

The first type is **BLACKPOWDER**. (IMPORTANT: The term "blackpowder" refers to the formulation of the propellant, not the color. Many of the smokeless propellants manufactured for modern cartridges or shotgun shells are also black in color, but will create extremely dangerous pressures in the muzzleloading barrels.)

**FFG** (Commonly called Double "F") is the only granulation of authentic blackpowder that can be used in CVA In-Line rifles. It is also commonly used for 12, 16 and 20 gauge muzzleloading shotguns.

The second type of propellant acceptable for use in CVA muzzleloading firearms is **PYRODEX**. Pyrodex is a synthetic propellant designed for use in percussion rifles and shotguns found to be in good shooting condition by a competent gunsmith. Pyrodex is currently offered in two granulations of loose powder in addition to a pelletized form. These types and their uses are listed below:

**PYRODEX RS (rifle & shotgun)** Designed for use in all calibers of percussion muzzleloading rifles and shotguns.





## **PYRODEX SELECT (rifle & shotgun)**

Pyrodex Select is a premium propellant in an FFG equivalent. The granulations of this powder are more consistent in their size and shape and will therefore provide more uniform ballistics.

## **PYRODEX PELLETS**

Pyrodex Pellets are a premeasured and preformed version of loose Pyrodex powder. Pyrodex Pellets are available for a variety of calibers and may be combined into multiple pellet loads to create several different grain-equivalent loads.

When using any form of pelletized powder, the #209 primer ignition is recommended. This system provides the hottest flash available to ensure efficient ignition of the entire pellet charge.

The other four brands of approved blackpowder substitutes include **CLEAN SHOT POWDER & CLEAN SHOT PELLETS, CLEAR SHOT POWDER, PIONEER POWDER & PIONEER POWDER STIX, and TRIPLE 7 POWDER & TRIPLE 7 PELLETS.**

Note: Pelletized Powder is the only form of propellant that can be used to create "magnum" loads for CVA "magnum" capable in-line rifles. Please refer to powder manufacturers written instructions for the specific propellant you are using, or contact the customer service/technical department listed on the product label.

## **H. PROJECTILES**

PowerBelt™ Bullets are the recommended projectile for use in all CVA in-line rifles. CVA bore diameters have been carefully matched with PowerBelt Bullet diameters to provide a safe optimum result when used with our recommended powder charges and projectiles in the appropriate caliber.

**NOTE: MUZZLELOADING PROJECTILES MUST BE MADE FROM PURE LEAD. LINOT WEIGHTLEADS CONTAIN ANTIMON WHICH CREES AN EXTREMELY HARD, OVERSIZED PROJECTILE AND IS VERY DIFFICULT TO LOAD.**

CVA does not recommend the use of non-CVA approved projectiles for CVA rifles. This is due to the fact that CVA has no control over projectile bullet molds or sabot bullets sold and marketed by other manufacturers. Some projectiles produced by other manufacturers, especially sabot bullets, can produce high barrel pressures creating unsafe conditions. If you have questions concerning approved projectiles, contact the CVA customer service department at 5988 Peachtree Corners East, Norcross, Georgia 30071; 770-449-4687 or fax 770-242-8546, or visit us on the web at CVA.com or E-mail us at info@CVA.com.



1. **POWERBELT™ BULLETS** - PowerBelt Bullets are conical projectiles with a plastic base. The base or "belt" provides a perfect gas seal, eliminating accuracy robbing blow-by. Like sabots, the PowerBelt Bullet's patented snap-on base creates a perfect gas seal, providing consistent pressures and unsurpassed accuracy. But unlike sabots, PowerBelt Bullets are easy to load and do not require cleaning after every shot. And they are full caliber sized, so you get the most knock down power possible out of a muzzleloader. PowerBelt Bullets are available in .45, .50, and .54 calibers, copper coated or pure lead, with hollow points or AeroTips, and in a variety of grain weights. They are the #1 selling muzzleloading bullet on the market and the only bullet recommend for CVA in-line rifles. (Figure 1-A)
2. **CONICAL BULLETS** such as the CVA Buckslayer Bullet and others of this type provide acceptable accuracy in all CVA firearms as well as increased knock down power desired by hunters. These projectiles are best suited for use in medium to fast twist rifling barrels which stabilize the bullet more rapidly. (Figure 1-B)
3. **SABOTED BULLETS** - Modern sabots from various manufacturers have been tested and provide acceptable accuracy in CVA firearms when complying with the sabot manufacturer's recommendations for usage. Caution: Do not use a sabot bullet weighing more than 300 grains. (Figure 1-C)

Note: Patched round balls are not recommended for use in CVA in-lines. This is because the twist rate is too fast to stabilize a round ball and will result in very poor accuracy.

Loads for conical bullets and sabots should not exceed the maximum load recommended in Table 1.

## I. RECOMMENDED LOADING DATA

The proper charge for any muzzleloading firearm is an efficient load that provides consistent ignition and velocity while keeping breech pressures below the maximum safe levels. **NOTE:** Rarely do two rifles settle on the same exact load.

The shooter should load using the minimum and maximum charge limitations shown in the table below. It is recommended to begin shooting using a charge in the middle of the recommended range, gradually increasing or decreasing the load to obtain the desired results. Tests have shown that heavier loads increase breech pressures while providing only a minor increase in velocity. These tests also indicate that heavier loads may be less accurate.

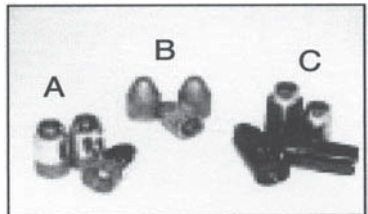


Figure 1



TABLE 1

| CALIBER FIREARM | PROJECTILE TYPE       | CHARGE TYPE     | CHARGES IN GRAINS |         |
|-----------------|-----------------------|-----------------|-------------------|---------|
|                 |                       |                 | MINIMUM           | MAXIMUM |
| .45             | .45 Conical           | Powder FFG      | 50                | 100     |
| .50             | .50 Conical           | Powder FFG      | 50                | 100     |
| .45             | .45 PowerBelt/Saboted | Powder FFG      | 50                | 100     |
| .50             | .50 PowerBelt/Saboted | Powder FFG      | 50                | 100     |
| .45             | .45 PowerBelt/Saboted | Pellet          | 50                | 100     |
| .50             | .50 PowerBelt/Saboted | Pellet          | 50                | 100     |
| .45             | .45 PowerBelt/Saboted | "Magnum Pellet" | 100               | 150*    |
| .50             | .50 PowerBelt/Saboted | "Magnum Pellet" | 100               | 150*    |

**\*WARNING:** This is a "magnum" charge and can only be safely loaded in In-Line rifles that are expressly designated as "magnum capable".

## J. LOADING AND SHOOTING CVA IN-LINE MUZZLELOADERS

1. Wear shatterproof shooting glasses and ear plugs or muffs to protect yourself from sparks, bits of fragmented caps, and hearing loss.
2. Verify the rifle is not loaded.
  - a. Place ramrod down the barrel to breech plug.
  - b. The top of the attached cleaning jag should be approximately flush with the crown of the muzzle. If ramrod is not flush, assume that the rifle is loaded and follow instructions for Removing a Charge (section O).
3. Check to make sure that breech plug and nipple (if applicable) are snugly screwed into place. Do not overtighten. Note: Make sure anti-seize grease has been applied to all threads.
4. Clean all oil and grease from barrel interior using a patch and cleaning solvent.
  - a. With the rifle pointed in a safe direction, cock the bolt by pulling back on the bolt handle. Next, place the thumb-actuated safety in the safe (green) position.
  - b. Using the 209 capping tool (provided), place a 209 primer into the breech plug.
5. Release the safety and fire primer to insure that the bore and nipple are dry of moisture. Repeat process if necessary. **NEVER DRY FIRE ANY CVA RIFLE. DOING SO WILL DAMAGE BOLT ASSEMBLY AND/OR NIPPLE AND WILL NOT BE COVERED UNDER WARRANTY.**
6. If using powder, pour powder from flask into a powder measure that is set for correct powder charge. (See Figure 2). Skip to step 6a if using pelletized powder.
  - a. With the muzzle pointed "up" and no part of your body extended over



the gun, pour a measured charge or drop the correct number of pellets down the barrel. (See suitable charges - Table 1) (See Figure 3).

7. For Conical Bullet, PowerBelt Bullet or Saboted Bullet:
  - a. Make sure bullet is lubricated. PowerBelt Bullets and sabot bullets do not require additional lubrication.
  - b. Start the projectile into the bore with your fingers, making sure it is centered.
  - c. Use short end of a bullet starter to press bullet just into muzzle. (See Figure 4).
8. Use longer end of ball starter to move projectile about six inches down the bore. (See Figure 5).
9. With ramrod, push projectile down on top of powder, firmly, but without crushing the powder or pellets. (See Figure 6).  
**IMPORTANT:** Be sure projectile is seated firmly against powder. No air space should exist between projectile and powder.



Figure 2



Figure 3

10. **WITH GUN POINTED IN SAFE DIRECTION**, the bolt cocked and the safety in the "safe" (green) position, place a primer into the breech plug. **THE GUN IS NOW LOADED.** (See Figure 7).

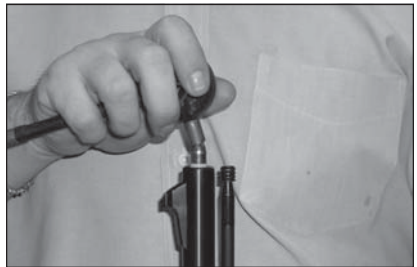


Figure 4

11. Aim at target and release the safety. **YOU ARE NOW READY TO FIRE.**
12. Squeeze trigger to fire.
13. After firing, wait one minute to reload. This allows all remaining sparks in barrel to burn out prior to reloading.
14. If a misfire or failure to fire occurs, wait at least one minute with the gun pointed at the target.
  - a. Install a new primer into the breech plug. Be certain of the target and fire.
  - b. Never attempt to shoot out a projectile which is not firmly seated against powder charge. The projectile and powder charge should be removed using a ball puller. See Section O, Removing a Charge.

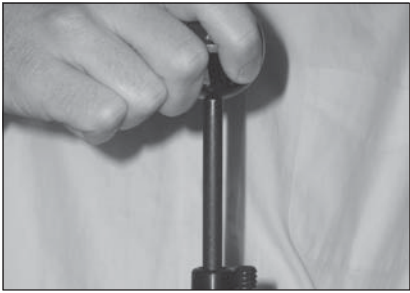


Figure 5

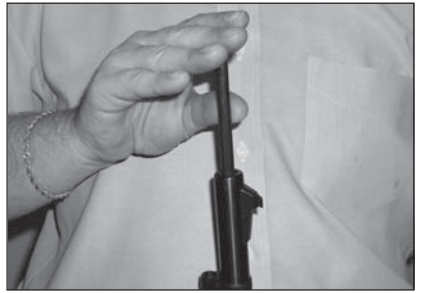


Figure 6

- c. Go back to Step 1 and repeat, being sure bore and breech plug are clean and free of obstructions and moisture.

## K. IGNITION SYSTEM OPTIONS

The 209 Shotgun primer ignition system is the standard ignition system on all CVA In-Lines. The 209 primer provides the hottest ignition available and is recommended for usage with both loose powder and pelletized powder.

Musket cap and #11 ignition systems conversion kits are available for most CVA In-Lines. These ignition systems are recommended for areas where the local regulations do not allow the use of the 209 primer system. Complete conversion information is available on-line at [www.cva.com](http://www.cva.com) or by calling CVA Customer Service at 770-449-4687.

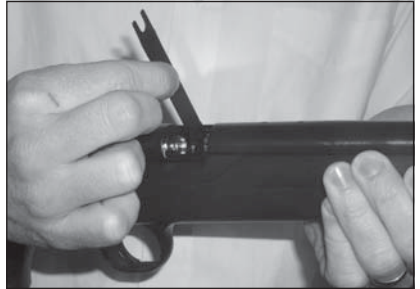


Figure 7

## L. SAFETY SYSTEMS

All BuckHorn Series rifles are equipped with a thumb-actuated safety, which is located behind the bolt (cocking) handle. The safety should manually be engaged to the lower (green) position for safe until ready to fire (Fig. 8).



Figure 8



## M. CONVENTIONAL IN-LINE DISASSEMBLY/ASSEMBLY FOR CLEANING AND MAINTENANCE.

**NOTE:** Before beginning this procedure make sure gun is unloaded. (See Step 2 of Section J).

1. Remove ramrod from gun.
2. Loosen and remove the hex screw from the fore-end of the stock followed by the hex screw located behind the trigger guard.
3. Remove the barrel/receiver assembly from the stock.
4. Unscrew and remove the cap at the rear of the receiver. The bolt should be in the uncocked position prior to unscrewing cap.
5. Remove the bolt spring from the rear of the receiver.
6. Remove the bolt handle by pulling straight out to the side of the receiver.
7. While depressing the trigger, remove the bolt by sliding out through the rear of the receiver.
8. Remove the breech plug with the Breech Plug tool supplied. The flat blade end of the tool removes the breech plug. The steel rod slides through the Breech Plug/Nipple Wrench tool body acting as a handle. **NOTE:** Check breech plug for snug fit with wrench before firing. Do not overtighten.
9. Remove trigger assembly by loosening the trigger mounting screws from the under side of the receiver. Do not attempt to disassemble the trigger assembly. Clean as a one-piece unit.
10. To reassemble the rifle, follow the above outlined procedure in reverse order. Be sure to recheck the rifle for proper function of the bolt and safety prior to using. **DO NOT ATTEMPT TO USE THIS RIFLE IF ANY OF THE SAFETY OR BOLT MECHANISMS DO NOT OPERATE PROPERLY. CHECK WITH A COMPETENT GUNSMITH OR CVA CUSTOMER SERVICE TO CORRECT THE PROBLEM, AS ACCIDENTAL FIRING MAY RESULT.**

## N. GENERAL CLEANING AND MAINTENANCE

Blackpowder and blackpowder substitutes are very corrosive. Therefore, careful cleaning of your muzzleloading firearm is extremely important. If left uncleaned for any length of time the fouling will cause rust, pits, and degradation of the metal, particularly around threaded areas. The barrel attaching system on the BuckHorn allows for the barrel to be removed for easier cleaning without disassembly. The recommended cleaning procedure is as follows.

1. Verify that gun is unloaded. (Section J, Step 2)
2. Remove cocking mechanism and breech plug from gun as described in section M.
3. Using a cleaning brush and solvent, thoroughly clean breech plug of all rust preventative oils and/or powder fouling. Important - Lubricate breech plug threads with CVA Breech Plug Grease (ACI670) before reinstalling. **NOTE:** Do not overtighten plug.
4. With the allen wrench provided, loosen and remove the retention hex



screw located on the fore-end of the stock followed by the rear trigger guard screw.

5. You will now be able to separate the stock from the barrel.
  6. Remove the trigger mounting screws and lift the one-piece trigger from the receiver. Note: For a light field cleaning this process is not necessary.
  7. Swab the barrel with patches and cleaning solvent until all residue has been removed. For best results, use a range or cleaning rod that allows greater clearance from the muzzle.
  8. Clean the breech area, including receiver threads, with a CVA breech brush and Barrel Blaster cleaning solvent (AC1660).
  9. Dry all parts thoroughly, including the inside and outside of the barrel, and spray with a light coating of non-petroleum based gun oil.
  10. Reassemble the gun components in reverse order.
- Note: Always store your muzzleloader unloaded and in a cool dry place.

## O. REMOVING A CHARGE

Under normal conditions a muzzleloading firearm is unloaded simply by firing it into a suitable and safe backstop. There are, however, some conditions under which the firearm cannot be fired and the charge must be removed.

THE TWO MOST COMMON CONDITIONS ARE AS FOLLOWS:

1. If the projectile is not seated firmly against the powder charge, stop immediately! Do not attempt to fire the rifle. You must remove the charge and clean the barrel.
2. If the rifle is loaded in a proper manner yet fails to fire after repeated attempts (as explained in the "Loading and Shooting" Section).

**NEVER ATTEMPT TO PULL A CHARGE UNTIL THE POWDER HAS BEEN RENDERED INERT (DEACTIVATED) BY THOROUGHLY SOAKING IN WATER.**

Removing a projectile is dangerous when there is a powder charge behind the projectile. With the muzzle in a safe direction, and the primer removed from the breech plug, remove the bolt assembly and breech plug (see sections M, N). Empty the powder into a safe container. Using the ramrod and cleaning jag with a solvent soaked cleaning patch, push the projectile from the breech forward and out the muzzle of the barrel.

After the projectile has been removed from the bore, clean the bore, barrel and parts as explained in the "Cleaning" section and reassemble the firearm.

If for any reason you are unable to remove the charge in the manner recommended, soak the barrel in very hot water for one-half hour. Once the powder has been rendered inert, take the barrel to a qualified gunsmith.



## **P. SIGHT ADJUSTMENTS**

Most CVA rifles are equipped with adjustable style rifle sights for windage and elevation.

1. Adjust the rear sight for elevation by loosening the elevation retaining screw located on the side of the rear sight. **REMEMBER:** Slide the sight up the ramp to raise the point of impact and down the ramp to lower the point of impact.
2. Adjust the rear sight for windage by loosening the windage retaining screw on the top of the rear sight. **REMEMBER:** To move the point of impact to the right, move rear sight to the right. To move the point of impact to the left, move rear sight to the left.

## **Q. SCOPE MOUNTING**

CVA In-Line rifles are drilled and tapped for easy scope installation. Do not drill additional holes in the barrel as this could weaken its structure, causing injury and/or death and will void the CVA warranty. Scopes should be mounted according to manufacturer's instructions. CVA's Universal In-Line Scope Mounts (AC1666-AC1669) allows the shooter the option of a quick detachable scope mounting system, that returns to the zero point when reinstalled.

## **R. STATEMENT OF LIABILITY**

This gun is classified as a firearm or dangerous weapon and is sold by us with the express understanding that we assume no liability for its resale and unsafe handling under local laws and regulations. Blackpowder Products, Inc. assumes no responsibility for physical injury or property damage resulting from intentional or accidental discharge, or the function of any gun subject to influences beyond our control. We will honor no claim which was the result of careless or improper handling, unauthorized adjustment, unauthorized modification of firearm, improper loading, use of improper powder or components, corrosion or neglect.

For your protection, examine this firearm carefully at the time of purchase. If any unsafe condition exists contact your dealer or CVA immediately.

Blackpowder Products, Inc. does not recommend or approve of any custom alteration or conversion. Firearms subjected to alteration are not covered by factory warranty. Responsibility for these alterations rests totally with the individual performing such work. Any such work done improperly or without proper judgement may cause malfunction or damage resulting in injury or death to the shooter and/or bystanders.

## **S. VOLUNTARY RECALL**

In August 1997, CVA implemented a Voluntary Recall of all In-Line rifle models with serial numbers ending in -95 or -96. If you have a CVA In-Line model with such a serial number do not use or allow anyone else to use the gun. If you have one of these rifles, call CVA immediately at 770-449-4687 for complete details and instructions on how to receive a replacement gun.





In May 1999, Blackpowder Products, Inc. purchased the assets of Connecticut Valley Arms, inc. and now operates under the trade name of Connecticut Valley Arms and/or CVA. Any claims relating to the above described Voluntary Recall should be addressed to Connecticut Valley Arms, Inc., not Blackpowder Products, Inc. Blackpowder Products, Inc. assumes no liability for any products manufactured or sold prior to January 1, 1998.

## **T. SERVICE & REPAIR (770) 449-4687 MON-FRI 8:30 - 4:00 PM EST**

Should your CVA firearm require repair, we recommend that it be returned to our Warranty Repair Center. This will insure all work is performed by a competent staff of trained technicians.

Any firearm returned to the repair center should be marked to the attention of Repair Department. A letter with instructions should be enclosed to facilitate handling. Please be sure to include name, address and daytime phone number. All firearms must be unloaded and shipped via United Parcel Service (UPS).

Our Service Department will inspect and evaluate the problem. Should any work required not be covered by warranty, you will be advised of the cost. No work will be done without your approval.

## **U. ORDERING INSTRUCTIONS FOR REPLACEMENT PARTS**

1. All correspondence and orders must be addressed to:  
CVA  
5988 Peachtree Corners East  
Norcross, GA 30071  
Attention: Customer Service
2. Include in the order:  
Model of Gun  
Part Number  
Part Description  
Caliber and Type (Percussion, Flintlock)
3. If the proper part identification is not possible from the parts list, send the specific part in question to aid identification.
4. Discontinued items are subject to availability. CVA will reserve the right to make compatible substitutions when necessary.
5. Enclose the total retail price of the item plus postage and handling. Refer to the chart to determine this.
6. Please allow four to six weeks from receipt of order for delivery.



## POSTAGE & HANDLING CHART

Orders Totaling: Add

|                           |         |
|---------------------------|---------|
| UP TO \$20.00 .....       | \$3.50  |
| \$20.01 - \$30.00 .....   | \$5.00  |
| \$30.01 - \$50.00 .....   | \$7.00  |
| \$50.01 - \$80.00 .....   | \$10.00 |
| \$80.01 - \$110.00 .....  | \$15.00 |
| \$110.01 - \$200.00 ..... | \$20.00 |
| \$200.01 - \$500.00 ..... | \$25.00 |
| OVER \$500.00 .....       | \$30.00 |

Georgia residents must add 6% sales tax.

## LIMITED LIFETIME WARRANTY

Connecticut Valley Arms (CVA), warrants all factory finished firearms to be free of defects in material or workmanship, for the lifetime of the firearm, to the original consumer owner. This warranty is established by return of the authorized warranty card within fifteen (15) days of purchase, and is not transferable.

Any CVA firearm or part thereof returned postage paid to the address below will be repaired or replaced to our commercial standard, free of charge, and returned to the purchaser postage prepaid.

This warranty does not cover any damage resulting from careless handling, improper loading, corrosion, neglect, or customer alteration. Nor does it cover normal wear of any part, metal or wood finish, cost of inconvenience due to product failure, or transportation damage.

Connecticut Valley Arms reserves the right to refuse to repair or replace firearms or parts thereof damaged by the above.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

This warranty is void if:

- Any propellant other than the correct type blackpowder or Blackpowder Substitute has been used.
- CVA recommended powder charge has been exceeded.
- Any form of plastic patch has been used. (modern day sabots or PowerBelts not included)



**Address all inquiries and correspondence to:**

Connecticut Valley Arms  
5988 Peachtree Corners East  
Norcross, GA 30071  
Attn: Customer Service Department