

## ***Owner's Manual - In-Line Rifles***

Austin & Halleck  
In-Line Rifle Shooters Manual  
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You've probably heard the expression: "When all else fails, read the instructions". It's humorous only when there's no risk of harm. But a firearm is an inherently deadly instrument. If used ignorantly or carelessly it can kill or maim. The information in this booklet might save your eyes, face, hands, or possibly even your life (or someone else's). It's worth reading. Read it.

If you don't understand any of it, or if you have questions, don't blunder ahead in the hope that the answer will be miraculously revealed by trial-and-error. Instead call Austin & Halleck at (801) 371-0412, 9 am to 5 pm, MST, Monday through Friday. Do this before attempting to load and fire your rifle. Good advice is always less useful when it is sought too late.

**USE ONLY FFg BLACK POWDER OR A BLACK POWDER SUBSTITUTE IN THIS RIFLE. NEVER USE SMOKELESS POWDER, NO MATTER WHAT COLOR IT IS. BLACK POWDER DESIGNATES A TYPE OF POWDER, NOT ITS COLOR. PYRODEX IS AN EXAMPLE OF A SPECIALLY FORMULATED SUBSTITUTE FOR BLACK POWDER.**

**SMOKELESS POWDER CAN GENERATE DANGEROUSLY HIGH PRESSURE THAT CAN WRECK THE RIFLE AND KILL OR MAIM YOU AND/OR BYSTANDERS. IF YOU ARE NOT ABSOLUTELY POSITIVE THAT YOUR POWDER IS FFg BLACK POWDER OR A BLACK POWDER SUBSTITUTE, DON'T LOAD IT.**

**THE MAXIMUM SAFE LOAD IS 150 GRAINS OF FFg OR RS POWDER, MEASURED BY VOLUME, NOT WEIGHT. DO NOT EXCEED IT!**

## THE RIFLE AND ITS ACCESSORIES



### NOMENCLATURE

1. BARREL	15. REAR SIGHT
2. MUZZLE (of barrel)	16. FRONT SIGHT
3. TRIGGER	17. RAMROD
4. TRIGGER GUARD	18. WEATHER SHROUD
5. RECEIVER	19. BRASS CLEANING JAG (Not Shown)
6. SAFETY BUTTON	20. DISASSEMBLY TOOLS
7. BOLT	21. PLASTIC CLEANING TUBE
8. BOLT HANDLE	
9. HAMMER	
10. HAMMER SEAR (Not Shown)	
11. HAMMER FACE (Not Shown)	
12. BOLT SHROUD	
13. BREECH PLUG (Not Shown)	
14. NIPPLE (Not Shown)	

### NOTE:

As used in this manual, the terms LEFT, RIGHT, FRONT AND REAR refer to the rifle as seen by a shooter holding it in the firing position.

## SPECIFICATIONS:

Caliber:	.50
Action:	In-line bolt-action percussion, muzzle loading with removable weather shroud.
Barrel:	26" overall--1" half-octagon to 3/4" tapered round, eight grooves .007" deep, 1-in-28" twist.
O.A. length:	47-1/2"
Weight:	Approx. 7-1/8 pounds
Hammer throw:	.199"
Sights:	Leaf rear adjustable for windage and elevation; ramp front, receiver drilled and tapped for scope.

## **WARNING!**

DO NOT MAKE ALTERATIONS TO THIS RIFLE. It has been designed to function properly IN ITS ORIGINAL CONDITION ONLY. Do not jeopardize your safety or that of others by making modifications. Austin & Halleck will not be responsible for the consequences of any alteration to this rifle after it leaves our control. The alteration, substitution or addition of parts or accessories not manufactured by us is potentially dangerous and contrary to our instructions. Only genuine Austin & Halleck parts should be used for repair, and any repair work should be performed by Austin & Halleck or by a service facility authorized by us.

## **SOME BASIC RULES OF GUN SAFETY**

1. ALWAYS assume every gun is loaded until you personally prove otherwise. Don't take anybody else's word for it.
2. NEVER point any gun --loaded or unloaded-- at anything you are not willing to see destroyed.
3. ALWAYS pay attention where the muzzle is pointing while handling any gun, especially while operating any part of its mechanism. Keep the muzzle pointed in a safe direction!
4. ALWAYS leave the safety "ON" and keep your finger out of the trigger guard until you intend to fire.
5. ALWAYS be sure, before commencing to load, that the barrel is empty. A double-charge can wreck your plans permanently.
5. ALWAYS use powder, bullets and caps of the correct type, caliber and size for your gun.
7. ALWAYS carry your gun so that you can control the direction of the muzzle if you fall or stumble.
8. NEVER leave an unattended gun loaded. Guns and ammunition should be stored separately, locked if possible, beyond the reach of children and careless adults.
9. ALWAYS be sure of your backstop, what lies beyond, and the safety of bystanders before you shoot. It's far better than making excuses afterward.
10. NEVER mix alcohol or drugs with gunpowder. Guns are dangerous enough without the added hazard of fuzzy judgment.
11. ALWAYS wear shooting glasses and hearing protection. Your eyes and ears are not replaceable organs.
12. NEVER pull a gun toward you by grasping its muzzle. If it snags on something and fires, the bullet probably won't miss.
13. NEVER transport a loaded gun inside a vehicle, or attempt to load or unload a gun inside a vehicle or building (except a properly constructed indoor range); there usually is no safe direction in which to point the muzzle.

14. NEVER climb a tree or fence, jump over a stream or ditch, or ride a horse while carrying a percussion gun with a cap installed. A severe fall or impact may produce an accidental firing. When engaged in such activities always open the bolt and remove the percussion cap.

15. NEVER shoot at a hard object or at water except under carefully controlled conditions. Bullets can glance off hard materials like rock, glass, steel, etc. or skip off the surface of water and travel in unpredictable directions with dangerous velocity.

16. NEVER allow anyone to use any gun without supervision unless he or she has first read its instruction manual.

## **PROTECT YOUR EYES AND EARS**

Always wear impact-resistant shooting glasses and earplugs or " earmuff " type protectors when shooting. Always make certain that others around you are similarly protected.

Without shooting glasses you invite serious eye injury from the powder gas, flash, carbon particles, lubricant, metallic spatter (particularly fragments of percussion caps) and similar debris that can emanate occasionally from any muzzle-loading firearm in normal use. In the unlikely event that something disastrous happens, shatter-proof glasses can mean the difference between future sight and blindness.

If you ignore ear protection, you are either already deaf or soon to become so. Hearing loss from gunfire is cumulative and permanent. Many experienced shooters who value their hearing wear both earplugs and muffs.

## **THE TRIGGER**

Your Austin & Halleck rifle is fitted with a high- precision target trigger. It is factory-adjusted to combine superior trigger pull with a secure engagement between the sear and the hammer to prevent release from shock in normal handling. The trigger adjustments have been sealed at the factory. Do not adjust!

The trigger incorporates a manual safety that, when placed in the "Safe" position, mechanically blocks the sear from disengaging the hammer if the trigger is pulled inadvertently.

Proper operation of the trigger and the safety are dependent upon preserving the factory-set adjustments and keeping tight the hex screw (see photo), which holds the trigger assembly to the receiver. This screw has been

locked with a special thread sealant to prevent loosening from vibration. Do not adjust!

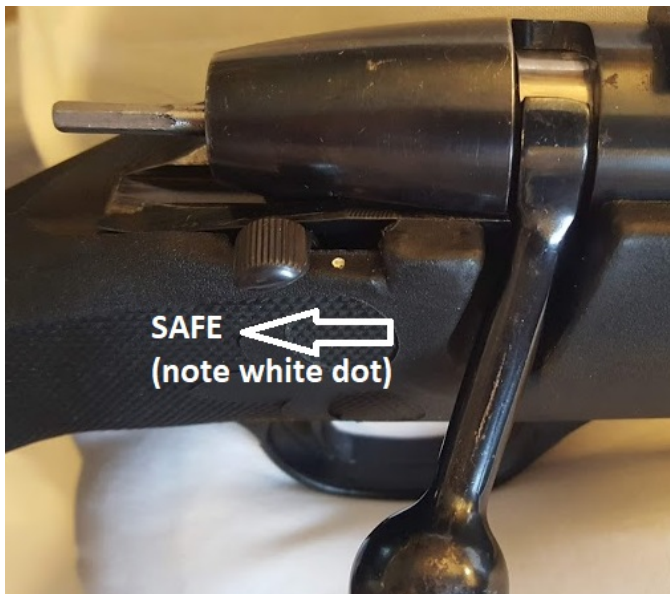
## WARNING!

Do not attempt to readjust the trigger or remove the trigger assembly from the receiver. Tampering with the trigger adjustments or unlocking the trigger assembly mounting screw can create a dangerous condition in which the rifle may fire without the trigger being pulled, or fire even if the safety is in the "Safe" position. If you believe the trigger needs adjustment or repair, do NOT take the rifle to a gunsmith; return it to Austin & Halleck for warranty service.

## USE OF THE SAFETY

The safety is a sliding button on the right side of the receiver next to the bolt handle. Two colored indicator dots in the stock, white for "SAFE" and red for "FIRE", correspond to the safety's two positions.

When the button is pulled back to its fully rearward position, exposing the white dot, the safety is "ON", i.e., in the "SAFE" mode. When the button is pushed fully forward, covering the white dot and exposing the red dot, the safety is "OFF", i.e., in the "FIRE" mode.



SAFE



FIRE

Safety Button Shown above. Note: Red and White dots

## WARNING!

The manual safety is designed primarily to prevent firing from an inadvertent pull on the trigger. It provides **ONLY PARTIAL PROTECTION** against firing from other causes, particularly from a severe blow or shock that might result from dropping or impact on a hard surface. Like any other precision instrument, the trigger/safety assembly can be damaged, broken or defeated by abuse, and may allow the trigger sear to release the hammer and permit the rifle to fire.

You can eliminate this risk by taking the simple precaution of **OPENING THE BOLT AND REMOVING THE PERCUSSION CAP FROM THE NIPPLE**. In this mode the loaded rifle is virtually impervious to firing from dropping or external impact.

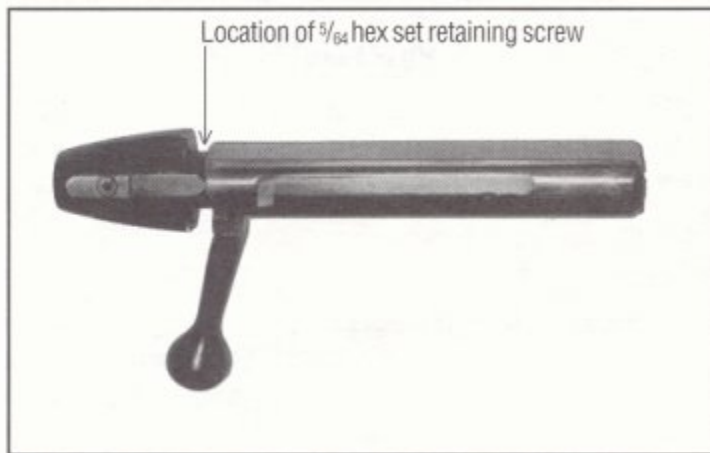


Fig. 1: Hammer cocked; hammer sear resting in detent notch



Fig. 2: Bolt position where ramp-out aligns with bolt stop pin.

## INSTALLING AND REMOVING THE BOLT

The bolt houses most of the rifle's firing mechanism: the hammer and its spring, the bolt shroud, the hammer sear, and (if desired) a weather shroud. In order to insert the bolt in the rifle, the hammer must be cocked. The hammer face must be flush with the front of the bolt and the hammer sear tip must rest in the detent notch in line with the bolt stop slot on the underside of the bolt body (see Fig.1). (If the hammer is protruding beyond the front of the bolt, it is not cocked; to cock it, pull rearward on the bolt shroud against spring pressure while twisting the shroud counterclockwise until the sear tip engages its detent.)

To install the bolt: Put the safety "ON". Slide the bolt (with the handle raised in the open position) into the receiver and rotate the handle up or down slightly until the bolt stop pin snaps into its slot on the underside of the bolt body, then close the bolt.

To remove the bolt (Fig. 2): Put the safety "ON". Open the bolt and draw it slowly to the rear about 3" while maintaining a slight downward (clockwise) pressure on the handle until you feel the bolt stop pin engage a ramp-out in the bolt slot. Press the bolt handle down about 1/4 inch (clockwise) to free the bolt stop pin from the slot and slide the bolt rearward out of the receiver.



Use FFg granulation black powder or a black powder substitute ONLY. For example, RS Pyrodex is a black powder substitute used in the same manner as black powder. BOTH ARE MEASURED BY VOLUME (NOT BY WEIGHT) using a standard black powder measure (not supplied).

Your rifle is designed to fire charges from a minimum of 50 grains to a MAXIMUM OF 150 GRAINS of FFg black powder or black powder substitute measured by volume. It is vital to measure accurately (See Warning below)

Use ONLY No.11 percussion caps. No. 10 caps for pistols will be too small and musket caps will be too large. Caps will detonate from impact so handle them carefully and keep them in a container until you use them.

### **WARNING!**

NEVER EXCEED THE MAXIMUM OF 150 GRAINS OF FFg BLACK POWDER OR A BLACK POWDER SUBSTITUTE. Excessive pressure can wreck the rifle and kill or maim you. ALWAYS MEASURE POWDER BY VOLUME, NOT WEIGHT! NEVER POUR POWDER INTO THE BARREL DIRECTLY FROM A CONTAINER! Always pour from a powder measure set for the appropriate charge.

### **WARNING!**

Discharging firearms in poorly ventilated areas, cleaning firearms, or handling ammunition may result in exposure to lead, a substance known to the State of California to cause birth defects, reproductive harm, and other serious physical injury. Have adequate ventilation at all times. Wash hands thoroughly after exposure.

Best accuracy will be obtained with longer .50 caliber conical bullets. Some examples of bullets showing



excellent accuracy in our inline rifles are the Barnes 250-grain and 300-grain solid copper hollow point sabots, or with Buffalo 375-grain SSB. The Barnes bullets are .910" long in 250-grain and 1.053" long in 300-grain weight, providing the necessary length for stabilization in the Austin & Halleck's fast-twist 1-in-28" barrel, but are much lighter than lead for their size. This combination of length and lighter weight provides a muzzle velocity up to 1800 fps with only 3" of drop at 150 yards when sighted in at 100 yards. The Buffalo sabots, though heavier and somewhat slower, are also very stable and accurate.

Shorter .50 caliber lead bullets and smaller patched balls may safely be used in this rifle, but probably will not stabilize as efficiently, and therefore will not be as accurate.

## **WARNING!**

USE ONLY .50 CALIBER BULLETS. If in doubt, measure the diameter of the bullet with a micrometer.

Proper bullets will measure between .450 and .505. Do not attempt to force oversize bullets into the bore. Even if you succeed in loading them, the increased friction can raise pressures to dangerously high levels with the same effect as an overcharge of powder. Damage to the rifle and serious or fatal injury can result.

## **BASIC PRECAUTIONS WHEN LOADING**

1. Put the safety "ON" before you begin loading, and leave it on until you are ready to fire.
2. Don't even THINK about putting a percussion cap on the nipple before you load the powder and the bullet, and NEVER load the rifle with the bolt closed.
3. Before you go near the muzzle, open the bolt, make certain there is no cap on the nipple, and live longer. Once powder is in the barrel, DO NOT look down the muzzle. Ignition of the powder, even with out a bullet, can blind you.
4. Before each shooting session, make sure the barrel and the nipple are clean and clear of any obstruction. Unscrew the breech plug and look.
5. Before loading, make sure the rifle is empty. Loading one charge on top of another that's already there can, upon firing, wreck the gun and kill or maim you. Check for a loaded barrel by inserting the ramrod. The ramrod is marked with a red indicator ring near its rear end, showing where it will stop when there is a conical bullet and 100 grains of powder already loaded. If the ramrod stops with the red ring approximately aligned with the muzzle (or earlier), unscrew the breech plug and investigate. Only about 3/4" of the ramrod will be sticking out of the muzzle if the barrel is empty.

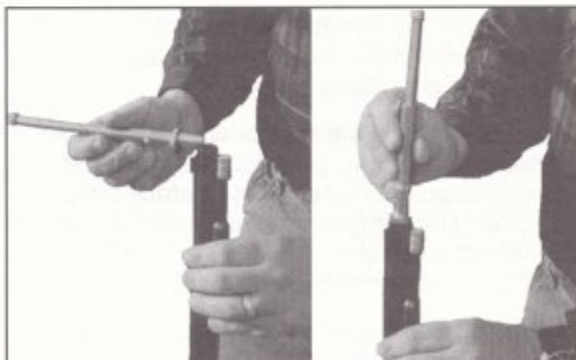
6. When using the ramrod, hold it with your fingers around its shaft. Do not cup your palm over the end of it, and keep your face (and other parts of your body) out of direct line with the muzzle. This will minimize the risk of injury if anything happens.
7. Seat the bullet fully down against the powder. Do not leave any airspace between the bullet and the powder, as this may result in accelerated burning and dangerously high pressure.
8. However, DO NOT pound the bullet forcibly into the powder charge with the ramrod. Black powder is impact sensitive. It can ignite from shock.
9. Be sure to remove the ramrod before firing. If the gun is fired with a ramrod inside the barrel, the pressure will be astronomic, and you may blow up the rifle and yourself.
10. Before first loading the rifle, and after cleaning the bore in the field, fire a few percussion caps without powder or bullets to burn out any moisture that may be present in the barrel breech. This aids reliable ignition, and helps avoid a potentially hazardous hang fire (delayed ignition of powder). Wait one minute for any glowing ember to die before loading powder.
11. Between shots check the hammer face for fragments of spent percussion caps, and clean them out if necessary.



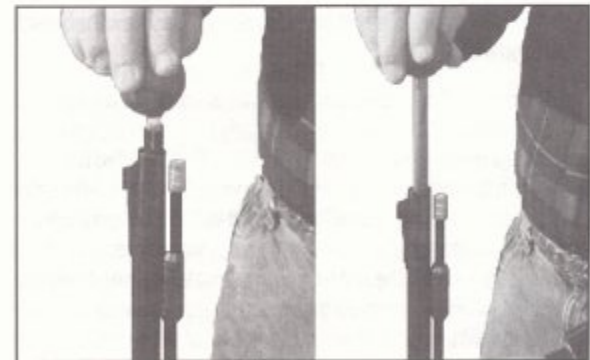
1. BEGIN: Safety "ON", bolt OPEN, nipple CLEAR.



2. Measure powder, MAXIMUM 150 grains.



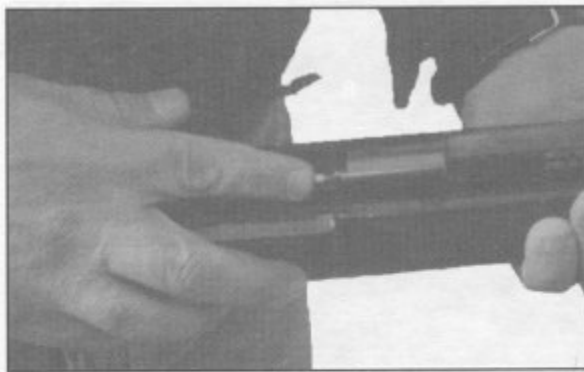
3. Pour powder down muzzle, MAXIMUM 150 grains.



4. Start the bullet into the muzzle, base first.



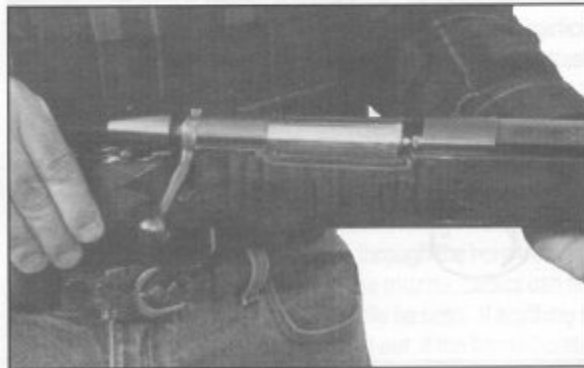
5. Push bullet down firmly with ramrod as far as it will go without pounding on it. Keep your face and hands to the side.



6. Place percussion cap on the nipple.



7. Close the bolt. Keep your finger away from the trigger.



8. DONE. Note cap is visible on nipple with hammer cocked. Safety still "ON". Ready to fire when safety disengaged.

## BOLT OPERATION

When loading is completed as shown, the hammer is cocked and the rifle is ready to fire when the safety is pushed to the "OFF" position.

The bolt operates as follows: the hammer is cocked automatically when the bolt handle is lifted, placing spring tension on the hammer. You can see when it is cocked (Fig. 1) by noting that the hammer face is retracted and flush with the front of the bolt (A); also, there is a small gap between the bolt shroud (attached to the hammer) and the rear of the bolt body (B). If a percussion cap is on the nipple, it will be visible in front of the bolt. When the trigger is pulled, the hammer is released, snapping forward .199" to strike and detonate the percussion cap, firing the rifle.



Fig. 1: Hammer cocked for firing.

(Note space comparisons between figures 1 and 2)

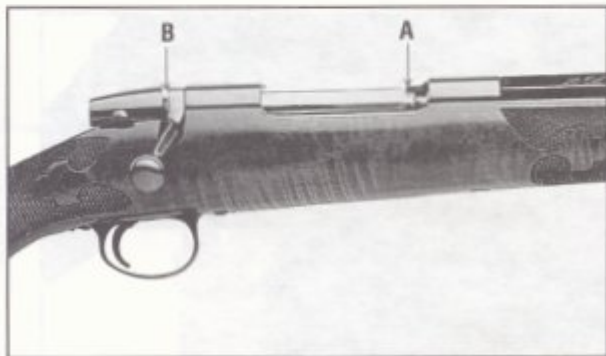


Fig. 2: Hammer de-cocked after firing.

Thus de-cocked (Fig. 2), the hammer face now protrudes from the front of the bolt and completely encloses the fired percussion cap (A), which is no longer visible. Note also that the bolt shroud now rests directly against the bolt body with very little gap (B).

On occasion (for example, when putting the rifle away), you may wish to manually de-cock the hammer to relax the pressure on the main- spring to avoid "dry-firing", i.e., snapping the hammer down forcibly on the nipple. This can be done by retracting the bolt, holding back the trigger with the safety "OFF" and closing the bolt.

**DO NOT DO THIS WITH THE RIFLE LOADED OR WITH A PERCUSSION CAP ON THE NIPPLE.** (See Warning below).

### **WARNING!**

1. **DO NOT** push the safety to the "OFF" position until you have placed the rifle to your shoulder, have checked your target and the area beyond the target, and have determined that it is safe to fire. Then --and only then--should you push the safety forward to the "OFF" position, take aim and pull the trigger.
2. **DO NOT** place a percussion cap on the nipple until you must be ready to shoot. Except when hunting, there is seldom any reason to attach the cap until you prepare to actually fire, and leaving the cap off until then provides a wide extra margin of safety against accidents.
3. **DO NOT** trust the manual safety to prevent an accidental firing in all circumstances. It isn't designed for that. When climbing tree stands or fences, crossing streams, horse riding, or in any kind of situation where there is risk that the rifle might be subjected to dropping, impact, shock, tangling in brush, or even just careless handling by other people, be wise and not sorry: **OPEN THE BOLT AND REMOVE THE CAP.**
4. If the rifle fails to fire when the trigger is pulled, **ALWAYS WAIT ONE FULL MINUTE WITH THE RIFLE POINTED AT THE TARGET.** It might be a hang fire: a delayed or retarded ignition of the cap or slow burning of the powder, with the rifle suddenly firing at anytime during this minute. Hang fires result from wet or deteriorated powder or caps, a partially clogged nipple, contamination from aerosol lubricants and other causes. If the rifle does not fire, try another cap. If it still misfires wait **ANOTHER** full minute, then remove the bolt and unload the charge.
5. **NEVER** manually de-cock the hammer with a percussion cap on the nipple. In this mode, the hammer would be resting directly on the cap, and any impact on the rear of the bolt shroud could cause the rifle to fire without the trigger being pulled, even if the manual safety is "ON".
6. Between shots, wait one minute before pouring another charge of powder in the barrel. There might be a

glowing particle in the barrel from the previous shot, waiting to ignite your fresh powder charge.

7. The barrel can be bulged or burst if earth, snow, water or vegetation is allowed to enter the muzzle and obstruct the bore. Whenever the muzzle of your rifle comes into contact with the ground, or you have reason to suspect that foreign matter may be in the barrel, unload the rifle and look through the bore from the rear. It's not enough to just look at the muzzle; debris can fall some distance inside where it can't easily be seen. If anything is lodged inside, never attempt to shoot it out; if the barrel bursts, YOU or a bystander could be killed or maimed

## **WEATHER SHROUD**

Your rifle comes with a plastic weather shroud accessory, which can be installed on the bolt when desired to protect the cap and nipple from rain and snow. To install the shroud, open the bolt and draw it to the rear. Insert the shroud into the annular groove in the bolt face; in this position the hammer can pass through it to strike the cap. Orient the gas relief hole in the shroud to point to 3 o'clock; this will direct any gas leakage from the percussion cap to the side, away from the action where it might be deflected into your face. Close the bolt. The shroud now surrounds the nipple and the rifle can be fired with the shroud in place.



**CAUTION:** Check with your local game warden. Some states prohibit the use of weather shields (shroud) for hunting during muzzle-loading season.

Firing black powder produces heavy carbon fouling in the barrel with only a few shots. In order to maintain accuracy it is necessary to clean the barrel frequently while shooting. "Field cleaning" is readily accomplished with commercial water-based solvents specially formulated to dissolve black powder residue.

Put the safety "ON", open the bolt, make sure the nipple is clear and the rifle is empty. Screw the brass cleaning jag into the bullet-starter on the end of the ramrod; place a solvent-saturated patch over the jag and swab out the barrel. Repeat with a second wet patch, followed by dry patches until the bore is clean.

Make sure the hole in the nipple is not clogged and remove any fragments of percussion cap lodged in the hammer face or in the action. When field cleaning is completed, fire a percussion cap or two without powder or bullets to dry out any moisture remaining from the 50ivent. Wait one minute to allow any smoldering spark to burn itself out before reloading.

## **WARNING!**

After removing the breech plug, clean away any powder grains that may be in the barrel threads before attempting to reinstall the plug. Black powder can be ignited from the friction of screwing in the plug, and can cause injury!

## **UNLOADING WITHOUT FIRING**

To unload the rifle without shooting it, point the muzzle in a safe direction, and proceed as follows: Put the safety "ON", open the bolt and be sure no percussion cap is on the nipple. Remove the bolt to allow removal of the breech plug.

The Austin & Halleck disassembly tool is designed with one end to remove only the nipple and the other to remove the entire breech plug/nipple assembly. (If this tool is not at hand, a standard 7/16" socket and long extension will work.) Insert the tool through the hole in the rear ring of the receiver and unscrew and remove the breech plug, holding the rifle muzzle-down to keep the powder charge from spilling into the action.

A plastic cleaning tube is supplied as an accessory with your rifle. Screw its threaded end into the breech plug opening. The tube will serve to channel the powder and bullet from the receiver. Raise the muzzle and insert the ramrod from the muzzle to push the powder and bullet out the breech and into the cleaning tube, dumping them outside the action. (If the cleaning tube is not at hand when unloading is necessary, stuff a clean rag into the rear receiver ring to protect the trigger sear from powder spill and invert the rifle to allow the powder and bullet to fall out the top of the receiver.)

Clean out any powder lodged in the barrel threads (see Warning above). Reinstall the breech plug, first coating its threads with an anti-seize compound to protect them from the corrosive effects of black powder and to ensure ease of removal. Cinch up the plug snugly but **DO NOT OVER-TIGHTEN**.

## COMPLETE CLEANING

After each shooting session, always thoroughly clean your rifle. Black powder residue is corrosive and will rust the action and bore if not completely cleaned away.

Use a commercial bore solvent specifically formulated for black powder firearms. Put the safety "ON", make sure the rifle is unloaded, and remove the bolt. Unscrew the breech plug and remove the nipple, and thoroughly clean both. Clean the barrel from either end, following the same procedure described in "Field Cleaning". Always use the plastic cleaning tube accessory to prevent solvent and dissolved muck from entering the action, especially the trigger mechanism as this is a precision instrument and must be kept very clean. Wipe up promptly any spilled solvent in the action. Reinstall the breech plug following the precautions described in the section titled "Unloading".

Wipe a thin film of oil in the bore to prevent rust. Check that no patch or bits of cleaning material are left in the bore. If the rifle will be stored unused for a long period, use a light rust-inhibiting grease, such as RIG (which should be wiped out before the rifle is next used). If you store the rifle upright, leave the bolt open and stuff a small clean rag into the rear receiver ring over the trigger sear opening to catch any drainage.

Clean the outside of the bolt, particularly the recess in the face of the hammer, paying special attention to remove all traces of powder residue and any metallic fragments of percussion cap that might be lodged there.

Inspect the nipple to make sure its orifice is not clogged. If the nipple is eroded, cracked, chipped or badly peened, replace it.

AVOID excessive use of aerosol-spray lubricants or preservatives, as these tend to migrate into places where they shouldn't be. A light film of oil in the bore and on the bolt and hammer, and wiping down the exterior metal surfaces with an oily rag are all that is necessary. DO NOT attempt to remove the barrel from the receiver.

### **To disassemble the bolt for cleaning:**

Step 1. After removing the cocked bolt from the rifle, use a 5/64 alien wrench to completely remove the hex set screw located near the hammer sear on the bolt shroud.

Step 2. Remove the weather shroud if installed. Note that in the cocked position, the head of hammer should be

aligned evenly with the bolt body.

Step 3. Using a coin placed in the slot found in the head of the hammer, unscrew the hammer in a counter clock wise direction. After the hammer is unscrewed approximately 1/2 inch move the bolt into the uncocked position to relieve the spring pressure, then continue unscrewing until disassembled. To reassemble, reverse the process (however after starting the reassembly, make sure that the hammer sear is in the cocked position in order to correctly align the head of the hammer with the bolt body).

## **WARNING!**

DO NOT put the rifle away with a charge in the barrel, even if you have removed the percussion cap. It is still potentially dangerous: the powder and bullet are waiting to be accidentally fired later by some careless person unaware or forgetful of their presence --or worse, double-charged. Avoid a tragedy: Take a minute and unload the rifle.

## **FINDING AN ACCURATE LOAD**

Accuracy-wise, every rifle is an individual with its own preferences.

To efficiently find the best load for your particular rifle, you need a good bench rest, spotting scope, sand bags or mechanical rest, adjustable powder measure, a selection of bullets you would like to try, and a note pad and pen. For best results, shoot on a calm day. Hang flags downrange and don't fire until the flags hang limp. If it's windy go home and save your powder.

Initially it may be necessary to make coarse sight adjustments in order to print holes reasonably close to the center of the target at 50 yards so that you will be on the paper at 100 yards. Don't waste time and powder with fine adjustments until you have determined the load with which your rifle shoots best.

Start loading with 90 grains of powder and your first choice of bullet. Shoot three shots, measure your group center-to-center and record the data on your pad. Clean the rifle bore, increase the load by 5 grains and shoot another three-shot group. Continue this process up to 120 grains or until you achieve a satisfactory group. Do the same using other bullets. Don't be concerned about where the group strikes the paper; your objective is to achieve the tightest group. Once you discover the combination that gives you the smallest three-shot group, it is an easy matter to adjust the sights to place this group in the bull's-eye.



"Working up your load" can provide hours of enjoyment, satisfaction, and that feeling of really getting to know your rifle and how it works. Don't rush the process. You'll discover your best load and have fun getting there. If you don't, trade in the rifle for golf clubs.

The rear sight is adjustable for windage and elevation. Turning the top screw clockwise lowers the elevation. Turning the side screw clockwise moves the sight to the right.

Re: Sight graduation. The rear sight is marked with small graduations for both windage and elevation. These marks DO NOT represent "minute of angle at 100 yds." due to the variables of powder change, bullet weight, etc. The sight markings are merely reference points for the convenience of the shooter when sighting in the rifle initially.

A helpful rule to remember: ALWAYS MOVE THE REAR SIGHT IN THE DIRECTION YOU WISH TO MOVE THE POINT OF IMPACT.

## **SERVICE AND REPAIR**

If you notice any mechanical malfunction of this rifle, DO NOT continue to use it. It is extremely dangerous to use any firearm that is not in proper working order.

Unload the rifle. IMMEDIATELY contact Austin & Halleck by phone at (801) 371-0412 or fax at (801) 374-9998 for advice, or return the rifle via UPS with a detailed letter describing the problem to:

Austin & Halleck, Inc.  
2150 South 950 East  
Provo, UT 84606

## **A REMINDER:**

If you sell or give this rifle to someone else, make sure that person receives this manual with it. If the manual is lost or destroyed, a new one can be obtained free of charge from Austin & Halleck.

## **IMPORTANT NOTICE**

This rifle is sold with the specific reservation that Austin & Halleck is not responsible in any manner for its improper or negligent handling or resale under federal, state or local laws and regulations.

Neither Austin & Halleck nor the sellers of this rifle shall be responsible in any manner whatsoever for malfunctioning of the firearm, or for physical injury or property damage, resulting in whole or in part from (1) criminal or negligent discharge, (2) improper or careless handling, (3) unauthorized modifications, (4) defective or improper propellant, projectiles or percussion caps, (5) corrosion, (6) neglect, or (7) other influences beyond our direct and immediate control. This limitation applies regardless whether liability is asserted on the basis of contract, negligence or strict liability (including any failure to warn). Under no circumstances shall Austin & Halleck or the sellers be liable for incidental or consequential damages, such as the loss of use of property, commercial loss, or loss of earnings or profits.

### **AUSTIN & HALLECK LIMITED WARRANTY**

Austin & Halleck Inc. will not be responsible for repairing, replacing or duplicating any modification that has been made to the product after it is sold by us. If the firearm must be replaced and if that model is discontinued we reserve the right to replace it with a similar firearm of equivalent value. This warranty shall be void with respect to any firearm used for commercial rental.

Austin & Halleck Inc. reserves the right without notice and at any time to make changes in the design or specification of firearms, and add or remove accessories, and to add or discontinue models without incurring obligation.

Austin & Halleck Inc. warrants to the ORIGINAL RETAIL PURCHASER for a period of ONE (1) YEAR FROM DATE OF PURCHASE that this firearm is free from defect in materials and workmanship. Our obligation under this warranty shall be limited to our repair or replacement (at our option) of the firearm or part thereof that is found to be defective in materials or workmanship. Austin & Halleck Inc. will provide this service through its Service Department only, free of charge for parts or labor for claims that meet the requirements including the notice requirement of this warranty.

To make a claim under this warranty the original retail purchaser must give Austin & Halleck notice of the defect in materials and/or workmanship within thirty (30) days after discovery of the defect and in any event within one (1) year from the date of original retail purchase. A copy of the purchaser's retail sale receipt showing the model and serial number of the firearm and date of purchase must accompany the notice. The purchaser must return the firearm or part thereof, with the shipping charge prepaid, to:

Austin & Halleck Inc.  
2150 South 950 East  
Provo, UT 84606-6285  
Phone: (801) 374-9990  
Fax: (801) 374-9998

This is the ONLY express warranty made by Austin & Halleck with respect to this product, whether in the instruction manual, advertising or elsewhere. No employee, agent, distributor or seller is authorized to make any modification, extension, or addition to this warranty.

## **LIMITATIONS AND EXCLUSIONS**

THE USE OF DEFECTIVE OR IMPROPER POWDER, PROJECTILES OR PERCUSSION CAPS VOIDS ALL WARRANTIES.

THE DURATION OF ANY IMPLIED WARRANTY ARISING FROM THE SALE OF THIS PRODUCT, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL BE LIMITED TO A PERIOD OF ONE (1) YEAR FROM THE DATE OF ORIGINAL RETAIL PURCHASE.

UNDER NO CIRCUMSTANCES SHALL AUSTIN & HALLECK INC. BE LIABLE WHETHER IN CONTRACT, NEGLIGENCE OR STRICT LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGE INCLUDING, BUT NOT LIMITED TO, LOSS OR USE OF PROPERTY, COMMERCIAL LOSS AND LOSS OF EARNINGS OR PROFITS.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the limitations and exclusions contained herein may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

## **AUSTIN & HALLECK LIFETIME REPAIR PROTECTION**

Without modifying or extending our normal one year Limited Warranty, Austin & Halleck provides lifetime repair protection on any Austin & Halleck rifle for as long as it is owned by the original retail purchaser, providing the following qualifications are met:

1. The original purchaser has completed and returned to Austin & Halleck the warranty repair card packed with the rifle within 30 days of the original retail purchase.
2. The original retail purchase receipt is returned with the rifle showing the model, serial number, place and date of purchase.
3. Lifetime repair protection is for defects in materials or workmanship only. Normal finish wear, damage caused by misuse, abuse, unauthorized modifications or repairs, corrosion, or neglect are not covered by lifetime repair protection. Austin & Halleck will be the sole judge of the cause of need of repairs.
4. To obtain repairs, the owner must first call Austin & Halleck at (801) 371-0412 and obtain information regarding your return to Austin & Halleck. Rifles shipped without a letter of explanation WILL NOT be accepted.
5. Rifles sent to Austin & Halleck must have the shipping cost prepaid.

THE LIMITATIONS AND EXCLUSIONS CONTAINED IN THE AUSTIN & HALLECK LIMITED WARRANTY ARE ALSO INCORPORATED HERE.

### **SHIPPING INSTRUCTIONS**

1. Federal law permits you to ship your muzzle-loading rifle to us by US Mail or by common carriers such as UPS. Because state and local laws vary greatly and may impose additional restrictions on your shipment or receipt of firearms, it is strongly recommended that any firearm returned to us be shipped through a federally licensed dealer.
2. Firearms must be sent to us with the shipping charge prepaid by you. WE WILL NOT ACCEPT COLLECT SHIPMENTS. Ship to:

Austin & Halleck Inc.  
c/o Customer Repairs  
2150 South 950 East  
Provo, UT 84606-6285  
Tel (801) 371-0412.

3. Please enclose a letter referencing the model and serial number of your firearm(s) and return authorization number. Describe the specific nature of the difficulty experienced or repair required. "Defective" or "Repair as needed" is insufficient information if it is a functioning problem. PLEASE IDENTIFY THE BRAND AND TYPE OF POWDER, BULLETS AND CAPS BEING USED. Enclose copies of any previous correspondence.

4. DO NOT SHIP FIREARMS LOADED! Before packing, please double-check to be sure the barrel is empty and that there is no percussion cap on the nipple.
5. DO NOT INCLUDE telescopic sights, slings, gun cases, or other accessories with your rifle when you send it to us. We cannot be responsible for possible loss or damage caused in transit.
6. When the work is completed, your rifle will be returned via UPS, with the return shipping paid by us.

**AUSTIN & HALLECK, INC. SHALL NOT BE RESPONSIBLE IN ANY MANNER WHATSOEVER FOR PHYSICAL INJURY OR FOR PROPERTY DAMAGE RESULTING IN WHOLE OR PART FROM:**

1. CRIMINAL OR NEGLIGENT DISCHARGE
2. UNSAFE, IMPROPER OR CARELESS HANDLING BY THE USER
3. UNAUTHORIZED MODIFICATIONS
4. DEFECTIVE OR IMPROPER POWER, PROJECTILES OR CAPS
5. CORROSION, ABUSE OR NEGLECT
6. OTHER INFLUENCES BEYOND OUR DIRECT CONTROL

THESE LIMITATIONS APPLY REGARDLESS WHETHER LIABILITY IS ASSERTED ON THE BASIS OF CONTRACT, NEGLIGENCE OR STRICT LIABILITY (INCLUDING ANY FAILURE TO WARN). AUSTIN & HALLECK INC SHALL NOT BE RESPONSIBLE IN ANY MANNER WHATSOEVER FOR RESALE OF THE FIREARM AFTER IT LEVES OUR HANDS OR FOR ANY FAILURE BY A SELLER, PURCHASER OR USER TO COMPLY WITH APPLICABLE FEDERAL, STATE OR LOCAL LAWS OR REGULATIONS