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Instruction Manual for Muzzleloading Rifles, Pistols and Shotguns



SAFETY TIPS

This manual contains:

- Important warnings which should be read and understood before using this firearm.
- Important information about black powder and Pyrodex.
- Important information regarding suggested load data for muzzleloading firearms.
- Directions and procedures for loading 'black powder' firearms.
- Instructions for care and cleaning.
- Section on troubleshooting .

This instruction manual should always accompany this firearm, and be transferred with it upon change of ownership.

Copies of this manual are available from Cabela's upon request.

NOTE: Disregarding safety precautions can result in serious injury or death.

- 1. **NEVER** place a percussion cap, musket cap or primer upon the nipple before loading your firearm. This will aid in the prevention of accidental discharge during loading, which can result in serious injury or death.
- Use the proper powder. All blackpowder shotguns, rifles and pistols are intended for use with black powder or Pyrodex ONLY. Never use ANY form of smokeless powder. Use only the recommended black powder or Pyrodex for your firearm. Do not substitute pistol powder for rifle and shotgun powder, or shotgun and rifle powder for pistol powder unless otherwise stated by the manufacturer of a particular firearm.
- 3. Do not overcharge. Follow the recommended load data charts in this instruction manual, and do not exceed the maximum charges. Use an adjustable powder measure constructed of brass for a safe and accurate charge measurement. Do not use old or contaminated powder.
- 4. Load only one ball into the barrel. Be certain that the ball is seated firmly against the powder charge. Any gap between the ball and powder charge will cause excessive pressure which will result in serious damage to the firearm and injury to the shooter. It is wise to make an indexing mark on the ramrod which will provide a reference point indicating proper seating of the ball.
- 5. Only use lubricated, non-burning patches of proper thickness when loading a round ball. **Do Not** use patches when loading any form of conical bullet or sabot.
- 6. Never charge a muzzleloader directly from the powder flask. A lingering spark can ignite the powder as it flows from the flask, causing the entire flask to explode while in hand. Use only a pre-measured charge from a separate container. After firing, leave the hammer down on the exploded cap as you reload. This restricts air circulation and helps smother any sparks left by the preceding shot.
- 7. Remain clear of the muzzle, particularly during loading.

- 8. Never smoke while handling black powder or Pyrodex. Keep black powder and Pyrodex away from sparks, flame and all sources of heat.
- 9. Make sure the hammer will not drop when the trigger is pulled while the hammer is in the half-cock position.
- 10. Always wear safety glasses while shooting black powder firearms. Shatterproof shooting glasses will protect the eyes from sparks, broken percussion caps, hot gasses and lead fragments.
- 11. Protect your hearing. Use ear plugs or muffs when firing any firearm.
- 12. While on the firing line, keep all black powder canisters closed.
- 13. Keep spectators to the rear of the shooter. Standing beside the shooter is not safe. Flames, hot gasses and percussion cap fragments could cause injury. Be especially wary of the hot gasses jetting out from the touch hole of a flintlock.
- 14. In case of misfires, keep the muzzle pointed downrange for at least two minutes before attempting to reprime it. There is always a chance a spark is smoldering in the powder charge and the gun could fire at any second.
- 15. Treat unprimed flintlocks as loaded weapons. Sparks from the flint can fire the gun.
- 16. Use a non-flammable material such as leather to hold the flint in place. Cloth, cardboard or canvas could hold a lingering spark which might set off the next priming charge unexpectedly.
- 17. Before each shooting session, inspect your black powder firearm carefully. Check barrel for obstructions, proper seating of the nipple, proper lock functions etc.
- 18. Black powder deposits heavy residues on all metal parts. Thorough cleaning is necessary after each shooting session.

- 19. Store black powder and percussion caps in separate locations in their original containers. Black powder and percussion caps are sensitive to static electricity, percussion, heat and flame. Check local fire regulations before storing black powder in the home.
- 20. Remember, safety is your responsibility. Be a safe shooter.
- 21. Treat every gun as though it were loaded.
- 22. Keep the gun's muzzle pointed in a safe direction at all times.
- 23. Always be certain of your target before firing.
- 24. Always be certain of your backstop before firing. Never aim at hard, flat surfaces or water, since ricochets could result.
- 25. Water, snow, mud or any other material can obstruct the barrel of your gun and cause injury of fatality. Always check the barrel of your firearm for obstructions before loading and firing.
- 26. Never climb a tree, fence or wall while carrying a loaded firearm. Never leave a loaded gun unattended or resting against a tree, fence or wall. Never drop a loaded gun, as it could discharge.
- 27. Unload all firearms when not in use. Never store a loaded firearm.
- 28. Never bring a loaded firearm into a house, motorized vehicle, or boat.
- 29. Horseplay has no place around firearms. Guns can't thinkyou can.
- 30. Firearms and alcohol don't mix. Abstain from drinking alcoholic beverages before or during use of any firearm.
- 31. Use only projectiles designed for use in black powder firearms.
- 32. Contact Cabela's to clarify any instructions you may not understand. 1-800-237-8888

BLACK POWDER LOADING DATA

Cabela's is not responsible for loading information printed in sources other than this manual. Since we have no control over the actual loading procedures or methods used, or condition, or choice of firearms, or components used and assembled, no responsibility for the use or safety in use of these data is assumed or implied.

- Use only black powder or Pyrodex.
- Do not exceed recommended maximum loads, or substitute powder.
- All load data listed are maximum recommended loads.

Caliber	Dia	Bullet	Grains of Powder G-0 FFg	Grains of Powder G-0 FFFG
32	.310	Rd. Ball		30
36	.350	Rd. Ball		40
45	.440	Rd. Ball	75	50
45	.440	285 gr. conical	60	50
45	.440	350 gr. conical	60	50
50	.490	Rd. Ball	90	70
50	.490	360 2r. conical	80	60
50	.490	385 gr. conical	80	60
54	.530	Rd. Ball	100	80
54	.530	425 gr. conical	90	70
54	.530	435 Sr. conical	90	70
58	.570	Rd. Ball	110	- 1
58	.570	525 gr. conical	100	an te B
58	.570	560 gr. conical	100	

Black Powder Rifle Data

Pyrodex Rifle Data

Caliber	Dia	Bullet	Grains of Powder RS (Rifle/Shotgun)	Grains of Powder P (Pistol)
.32	.310	Rd. Ball		24
.36	.350	Rd. Ball		32
.45	.440	Rd. Ball	60	50
.45	.440	285 gr. conical	48	
.45	.440	350 gr. conical	48	
.50	.490	Rd. Ball	72	
.50	.490	360 gr. conical	64	
	.490	385 gr. conical	64	
.54	.530	Rd. Ball	80	-
.54	.530	425 gr. conical	72	a
.54	.530	435 gr. conical	72	
.58	.570	Rd. Ball	88	
.58	.570	525 gr. conical	80	
.58	.570	560 gr. conical	80	

Black Powder Single Shot Pistol Data

Caliber	Dia	Bullet	Grains of Powder G-O FFg	Grains of Powder FFFG
.45	.440	Rd. Ball		30
.50	.490	Rd. Ball		40

Pyrodex Single Shot Pistol Data

Caliber	Dia	Bullet	Grains of Powder RS (Rifle/Shotgun)	Grains of Powder P (Pistols)
.45	.440	Rd. Ball		35
.50	.490	Rd. Ball		45

Black Powder Loading Data / Reproduction Black Powder Rifles & Muskets

Caliber	Dia	Bullet	Grains of Powder G-0 FFG
.54	.540	Patched .530 Rd. Ball	50 gr.
.58	.577	Patched .570 Rd. Ball	60 gr.
.75	.740	Patched .730 Rd. Ball	80 gr.

* THE ABOVE LOADS ARE FOR G-0 FFG BLACK POWDER, WHEN USING PYRODEX USE A 20% REDUCTION IN LOAD *

Black Powder Shotgun Data

Gage	Shot	Wad Column	Grains of Powder
20	7/8 lead	.135 card + 1/4" filler	75
20	1 lead	.135 card + 1/4" filler	75
20	3/4 steel	MEC steel shot cup "white"	75
12	1 1/8 lead	.135 card + 1/4" filler	92
12	1 1/4 lead	.135 card + 1/4" filler	92
12	1 1/8 steel	MEC steel shot cup "green"	92
10	1 1/4 lead	.135 card + 1/4" filler	110
10	1 1/2 lead	.135 card + 1/4'' filler	110
10	1 1/2 steel	MEC steel shot cup "brown"	110

Pyrodex Shotgun Data				
Gage	Shot	Wad Column	Grains of Powder RS (Rille/Shotgun)	
20	7/8 lead	.135 card + 1/4" filler	60	
20	1 lead	.135 card = 1/4" filler	60	
20	3/4 steel	MEC steel shot cup "white"	60	
12	1 1/8 lead	.135 card + 1/4" filler	72	
12	1 1/4 lead	.135 card + 1/4" filler	72	
12	1 1/8 steel	MEC steel shot cup "green"	72	
10	1 1/4 lead	.135 card + 1/4" filler	88	
10	1 1/2 lead	.135 card + 1/4" filler	88	
10	1 1/2 steel	MEC steel shot cup "brown"	88	

Cap and Ball Revolvers - Standard Cylinder Capacity Black Powder Data

Caliber	Dia	Bullet	Grains of Powder G-0 FFFG
31	.315	Round Ball & Conical	12
36	.375	Round Ball & Conical	22
44	.451	Round Ball & Conical	35

Cap and Ball Revolvers - Large Cylinder Capacity (1st, 2nd, and 3rd Model Dragoon and Walker Pistols) Black Powder Data

Caliber	Dia	Bullet	Grains of Powder G-0 FFFG
44	.451	Round Ball & Conical	50

Cap and Ball Revolvers - Standard Cylinder Capacity Pyrodex Data

Caliber	Dia	Bullet	Grains of Powder P (Pistol)
31	.315	Round Ball & Conical	9
36	.375	Round Ball & Conical	17
44	.451	Round Ball & Conical	28

Cap and Ball Revolvers - Standard Cylinder Capacity (1st, 2nd, and 3rd Model Dragoon and Walker Pistols) Pyrodex Data

And in the second s	Caliber	Dia	Bullet	Grains of Powder P (Pistol)
	44	.451	Round Ball & Conical	40

LOADING MUZZLELOADING FIREARMS

Loading muzzleloading firearms requires the same techniques for both caplock and flintlock. **The following precautions should be taken before loading:**

Since oil and other forms of moisture are the enemy of the successful black powder shooter, the bore and chamber area should receive a good cleaning just before the gun is loaded.

Any oil or solvent present in the chamber will soak into the powder charge and either reduce the power of the load or make it fail to fire altogether. Run fresh patches down the barrel until they come out clean and dry. Clean the flash channels of flintlocks and caplocks with pipe cleaners, pushing the flexible stem through the flash channel and into the barrel.

If your gun is caplock, snap several caps on the nipple before loading. This will insure ignition and clear away any oil in the nipple port. If your gun is a flintlock, open the frizzen and fill the pan with priming powder. Close the frizzen, cock the hammer and fire the priming charge. Do this several times to burn off any accumulated oil.

For a quick visual check, hold the muzzle near a blade of grass or bit of dust. Firing a cap or priming charge will cause a small but noticeable blast moving the blade of grass or dust.

If the blast is not noticeable, the shooter must clean the gun to clear away the obsruction.

Finally, after all is clear, run a last clean patch down the barrel to catch any freshly dislodged lubricant. Now the gun is ready to be loaded. Place the hammer in half-cock position and proceed as follows.

NEVER place a percussion cap, musket cap or primer upon the nipple before loading your firearm. This will aid in the prevention of accidental discharge during loading, which can result in serious injury or death.

Loading Patched Balls

1. Stand with the rifle on its butt with the barrel pointing away from your face and body. Measure and pour the powder down the barrel using an adjustable measure or pre-weighed charges. Strike the barrel several sharp raps with the heel of your hand; this will settle the powder into the barrel chamber.

2. Lay your strip of lubricated patching cloth (or pre-cut patch) over the muzzle. Center the ball and press it into the bore until it is flush with the muzzle. A tight-fitting ball can be seated by reversing your ball starter and rolling' it over the ball.

3. Cut the excess patch from around the ball. Specially designed patch knives are ideal for this task, although any sharp object will work. This is not necessary with pre-cut patches.

4. Push the ball into the bore (about four inches) using your ball starter.

5. Seat the ball firmly on the powder with the ramrod. The desired ramming stroke is smooth and uninterrupted. Jabbing or tamping the ball down the bore like they do in Hollywood may result in serious deformation or uneven seating. Make sure the ball is firmly seated, since an air space could cause a bulged barrel, or worse. Once the ball has been loaded, it is a wise practice to mark your ramrod on the muzzle. A reference mark on the ramrod will insure all future balls are seated to the same depth. Return the ramrod to the thimbles.

6. Place the hammer on full cock and prime the rifle. To prime the percussion rifle, you simply press a cap all the way down on the nipple. On a flintlock, open the frizzen and pour a small amount (enough to fill the depression to the level of the flash hole) of priming powder into the pan. Overfilling the frizzen pan results in a slow discharge at firing. Close the frizzen and the rifle is ready to fire. Carefully lower the hammer to half-cock, if the shot will not be made right away. **Note:** The same instructions may be used to load single shot pistols.

Loading Maxi or Minnie Balls

- 1. Stand with the rifle on its butt with the barrel pointing away from your face and body. Measure and pour the powder down the barrel using an adjustable measure or pre-weighed charge. Strike the barrel several sharp raps with the heel of your hand; this will settle the powder into the barrel chamber.
- 2. Do not use a cloth patch. Push the **lubricated** ball into the bore with your fingers. The ball will hang up when the bearing band on the nose reaches the muzzle. The diameter of the nose is larger than the rest of the ball and must be engraved to the muzzle to insure a precision fit.
- 3. Push the ball into the bore (about four inches) using your ball starter.
- 4. Seat the ball firmly on the powder with the ramrod. The desired ramming stroke is smooth and uninterrupted. Jabbing or tamping the ball down the bore like they do in Hollywood may result in serious deformation or uneven seating. Make sure the ball is firmly seated, since an air space could cause a bulged barrel, or worse. Once the ball has been loaded, it is a wise practice to mark your ramrod on the muzzle. A reference mark on the ramrod will insure all future balls are seated to the same depth. Return the ramrod to the thimbles.
- 5. Place the hammer on full cock and prime the rifle. To prime the percussion rifle, you simply press a cap all the way down on the nipple. On a flintlock, open the frizzen and pour a small amount (enough to fill the depression to the level of the flash hole) of priming powder into the pan.

Overfilling the frizzen pan results in a slow discharge at firing. Close the frizzen and the rifle is ready to fire. Carefully lower the hammer to half-cock, if the shot will not be made right away.

Loading Muzzleloading Shotguns

1. Stand with the rifle on its butt with the barrel poiting away from your face and body. Measure and pour the powder down the barrel using an adjustable measure or pre-weighed charges. Strike the barrel several sharp raps with the heel of your hand; this will settle the powder into the barrel chamber. When loading double barrel shotguns, it is wise to load one barrel at a time. Leaving the ramrod in the barrel not being loaded will help you avoid double charging or dry charging a barrel. After properly loading the gun, mark your ramrod at the top of the barrel so that in future loadings it can be used as a gauge to easily determine that you've used the proper load and it is seated correctly.

2. Lead Shot Loads:

- A. The over-the-powder card wad comes next and ranges from being a very tight fit to being an impossibly tight fit depending on the degree and type of choke in the barrel. Fortunately, there's no need to start the card wads perfectly straight, since the only reliable way to get them started is to push on edge into the bore, collapsing the rim a bit. There will be about half the card wad sticking out of the muzzle at an angle, but the next loading step will take care of that.
- B. Remove the ramrod from the thimbles and place the head over the tilted car wad. The ramrod head, you'll notice, will be very near the bore

diameter, to keep the various wads straight as they are started and seated. Carefully press the card wad past the muzzle and ram it smoothly down on top of the powder charge.

- C. The fiber cushion wad comes next, unless you are starting with plastic at this stage. The fiber wads are also a tight fit, but you can't slip these in sideways; they have to be pushed in straight and thumbed down flush with the muzzle. Use the ramrod to push the wad down snugly on top of the card wad. If using a plastic shot cup, insert it now and seat it on the fiber wad.
- D. Measure and pour the desired weight and size of shot down the barrel.
- E. The over-shot card wad is the last major operation and is a duplicate of the over-powder wad's treatment. Push one corner of the wad down past the muzzle and collapse the rim of the wad slightly.
- F. Place the head of the ramrod over the card wad and press it smoothly down the bore until it lodges solidly on top of the shot charge. Make sure the load column is firmly seated on the powder since an air space could cause a bulged barrel or worse. Once the shot has been added, it is a wise practice to mark ramrod on the muzzle. A reference mark on the ramrod will insure that all future shots are seated to the same depth. Return the ramrod to the thimbles.

3. Steel Shot Loads:

A. Place the appropriate Steel Shot wad in the barrel (most shooters prefer a thin over-powder wad between the powder and steel shot wad). Force the plastic wad down the barrel with a short starter. Depending on the choke, this could be hard. With a tightly choked bore, the forcing cone. (We do not reccomend using steel shot in a full choke barrel).

- B. Seat the wad down to the powder charge with the dowel end of your ramrod, being very careful not to fold any of the petals of the wad. Pour in the measured shot charge. It is important that the shot charge fill the cup, if using a lighter load, a buffering compound should be used to fill the cup. Never, at any time, overfill the steel shot wad. This could result in serious damage to the gun or worse. Determine how much shot and/or buffer it takes to fill the wad before placing it into the barrel.
- C. Place the overshot card in the barrel and force it down on the cup and shot charge. Seat the shot column firmly against the powder charge, making sure all components are firmly seated against each other.
- D. Hints for achieving the best pattern out of your steel shot loads:
- 1. Extending the slits to the bottom of the wad will allow the cup to open sooner after leaving the barrel. This gives the shooter a more open pattern.
- 2. Experiment with over-shot cards; sometimes a thicker or thinner wad will help you achieve the pattern that you desire.

4. Patterning Your Gun:

A. It is imperative that you know your gun before you go afield. Please take the time to visit your local range and pattern test your shotgun. The information provided in this text is only a general guideline. Patterns can be affected by the amount of powder used, type and thickness of wads, use of plastic wads, and size or type of shot. Note: The higher velocity maximum loads don't always provide the best pattern. With a little practice and experimentation, you can adapt your loads to take anything from doves to turkeys with the same gun.

Loading the Cap and Ball Revolver

Hold the revolver muzzle poiting up and away from face 1. and body with the hammer at half cock, so that the cylinder rotates. Measure powder charges either in a calibrated powder measure or flask with a nozzle. To get consistent powder charges, place your index finger over the nozzle opening. With your thumb holding the flask lever open, "throw" a charge of powder down into the nozzle. Release the lever while still holding nozzle down. Pour a powder charge into a small vial. Then pour the powder from the vial into each chamber. A funnel may be needed to do so.

(Note: Do not use a nozzle for a caliber larger than your gun. i.e. a nozzle for a .44 caliber will overfill the chamber of a .36 caliber).

1. Round Ball:

When all the chambers are charged with the proper amount of A. powder, place the correct round ball on top of the chamber on the left side of the loading ram. Rotate the cylinder under the loading ram and depress, or seat, the ball on top of the charge. In the seated position the ball should be flush with or below the edge of the cylinder.

Finish loading the remaining cylinders.

Place lubricant, such as Cabela's Muzzleloader Lube, Β. Hodgdon's Spit Ball, Natural Lube, or Crisco, over each chamber. This not only helps from a gas seal when the ball enters the barrel, but also prevents chain firing of all chambers at once, and aids in cleaning. (Note: Some commercial wads can be used with round balls eliminating the need to seal the cylinder with lubricant).

NEVER load the powder charge directly from the powder flask into the chamber. Leftover embers may ignite the charge and the powder in the flask causing serious injury or death.

2. **Conical Bullet:**

- When all the chambers are charged with the proper A. amount of powder, insert a wad followed by a conical bullet on top of the chamber on the left side of the loading ram. Rotate the cylinder under the loading ram and depress, or seat, the bullet on top of the powder charge. In the seated position the top of the bullet should be flush with or below the top of the cylinder. Finish loading all chambers.
- With all chambers loaded, hold the gun with muzzle Β. down and away from you or anyone around you. Press the proper size percussion cap on every nipple.

NEVER place a percussion cap on the nipples until you are ready to fire the revolver. NEVER carry a revolver with the chambers loaded and percussion caps upon the nipples. If the revolver is dropped, it can discharge causing serious injury or death.

CARE AND CLEANING INSTRUCTIONS

After Shooting: you must clean your muzzleloading firearm after each shooting session to prevent rust and corrosion from damaging the metal.

Two Cleaning Techniques:

Hot Soapy Water - The traditional way to clean a muzzleloader.

- 1. Scrub the bore with a strong solution of hot soapy water. Wipe all powder fouling from other metal parts.
- 2. Flush the barrel with the hottest clean water available. This not only removes the soap, but also heats the steel, which helps in the drying process.
- 3. Dry all parts.
- 4. Apply a good coat of oil-displacing lubricant to all metal parts and reassemble.
- 5. Inspect for the next few days just to be safe.

Modern Solvents - These are just as effective as soapy water, if properly used. Solvents designed specifically for black powder guns are now available.

- 1. Scrub the bore with a brass brush and several patches. Wipe down all metal parts.
- 2. Using clean patches, wipe the bore dry. Dry all metal parts.
- 3. Apply oil to all metal parts and reassemble.
- 4. Inspect for the next few days just to be safe.

During Shooting: To obtain the best accuracy and optimum consistency when loading, most shooters wipe the bore after each shot. This is accomplished by running a cleaning patch (saturated with powder solvent) up and down the bore several times. The saturated patch is then followed by several dry patches to absorb moisture. This same procedure is followed for general shooting. However, it is not necessary to wipe the bore after each shot.

Depending upon the specific load and weather conditions (fouling forms a harder cake in colder temperatures), a series of shots can be fired before it becomes necessary to clean the bore. The best method is to pay attention to loading. If the ball seems to drag or is somewhat difficult to seat, then clean the bore before you load the next shot.

TROUBLE SHOOTING GUIDE

Misfires: Should your gun fail to fire, keep the muzzle pointed in a safe direction for at least two minutes, until the chance of a hangfire has passed and you are satisfied the charge is truly 'dead." Inspect the nipple and/or vent, remove any obvious obstruction, reprime and try the shot again.

If the charge continues to balk, you may have to work some fine powder into the nipple or vent with your pick, reprime and shoot. At worst it may be necessary to pull the ball and patch and remove the powder charge.

Clean out the obstruction that prevented the gun from firing and fire 3-5 caps to make sure the nipple and flash channel are clear. In the case of a flintlock, charge and fire the pan to clear the touch hole.

Ball Seated Without Powder: This seems to happen to everyone at one time or another. It may be necessary to use a 'worm' or similar device to remove the ball. Before you go to those extremes, try this: work a small amount of fine powder into the flash channel, seat the ball, prime and shoot. If the ball does not clear, attempt it again, this time with a slightly stronger powder charge. Make sure the ball is re-seated against the powder charge.

Ball Not Seated Against The Powder Charge: Never try to fire a ball that is not properly seated against the powder charge. If a ball becomes lodged part way down the barrel and refuses to go any further, the breech plug may have to be removed. Consult a qualified gunsmith for such work. Removing the breech plug is not for amateurs. Many manufacturers' warranties are voided when the breech plug is removed.