

BURNING OF THE VALLEYS MILITARY ASSOCIATION

SAFETY STANDARDS AND GUIDELINES FOR BLACK POWDER USE

(Ratified 3/29/2003)

GENERAL GUIDELINES

These guidelines apply to the use of Black Powder firearms for historical demonstration purposes by Burning of the Valleys Military Association (BVMA) member units. "Member Units" mean an organization that is recognized by the BVMA and is officially enrolled as such or any unit that is a guest of the BVMA.

"Demonstration" means the loading and firing of a black powder weapon, for the purpose of public education, under the supervision of a Safety Officer.

Every Member Unit is required to have a Safety Officer. This individual will be thoroughly knowledgeable of the Safety Standard and Guidelines for Black Powder Use.

Only three types of weapons may be fired by Member Units: Muzzle-loading* black powder flintlocks, and muzzle loading cannons, *excluding toy and miniature cannons. Pistols may not be fired in demonstrations except by Mounted Troops with the approval of both the Event Coordinator and Field Commanders (subject to specific additional requirements that may be imposed by sites).

Edged weapons must always remain sheathed except when used as a camp tool, or in the case of sentries carrying arms. Swords, pole-arms and bayonets may be unsheathed in tactical demonstrations with prior approval of both the Event Coordinator and Field Commanders

The two types of Weapons Demonstrations permitted are: Individual Demonstrations and Tactical Demonstrations.

Individual Demonstrations are demonstrations during which a single or multiple muzzle-loading weapons are loaded and fired by a member or members in a non-opposed situation, or, in the case of a cannon, a crew of members. **Tactical Demonstrations** are those where two or more weapons are loaded and fired under simulated battle conditions. This includes but is not limited to reenactments in which opposing forces face each other.

An individual or individuals that operate a muzzle-loaded black powder weapon in an Individual Demonstration must be familiar with BVMA Black Powder Guidelines and have their weapons inspected prior to use by a Safety Officer. A unit participating in a Tactical Demonstration (including reenactments) must have present, during the demonstration, at least one member or members appointed as Safety Officers.

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INDIVIDUAL DEMONSTRATION

1. The only weapons authorized for Individual Demonstrations are muzzleloaded black powder shoulder arms. These include flintlock muskets, rifles, musketoons and carbines. Pistols may be demonstrated only by Mounted Troops and/or for the purpose of demonstrating a duel with the approval of the Event Coordinator.
2. A minimum of two members must be present for an Individual Demonstration. One to operate the weapon and another to provide crowd control and act as Safety Officer. Either member may address the public. Each must be at least 16 years of age to field under arms. All Individual Demonstrations must have approval of a Safety Officer.
3. The Individual Demonstration must be held in an area as detailed in the appended diagram, *Range Table for Small Arms Firing (Appendix A)*.
4. The weapon being demonstrated is subject to inspection by a Safety Officer using appended checklist.
5. Blank charges are not to exceed the Maximum load designated in the appended *Table of Maximum Loads (Appendix B)* for the particular weapon used.
6. Flintlocks are to be loaded from pre-wrapped paper cartridges prepared according to correct period procedures. Aluminum foil, coin wrappers and metal staples, etc. are not to be used.
7. Wadding is permitted for Individual Demonstrations but **NOT** in Tactical Demonstrations (Opposing Forces).
8. The demonstrator must carry cartridges in an authentic tin, or leather with a wood block cartridge box. Irregulars and Natives will carry leather bags with a flap suitable to accept a cartridge block or tubes for any cartridges.
9. When loading and firing, the demonstrator will follow the correct manual for the type of weapon being fired. Riflemen who do not have a prescribed manual will follow safe loading and firing procedures. Powder horns and measures may be used only with approval of both the Event Coordinator and Field Commanders in rifle demonstrations. Outside of the demonstration, the demonstrator should not carry a horn with powder.
10. **AT NO TIME IS THE DEMONSTRATOR TO SURRENDER CONTROL OF THE WEAPON TO A MEMBER OF THE PUBLIC.**
11. Tomahawk and knife throwing demonstrations will not be permitted.

AT NO TIME WILL ANY MEMBER OF THE PUBLIC BE ALLOWED TO FIRE A WEAPON AND AT NO TIME WILL A DEMONSTRATOR CARRY LIVE AMMUNITION IN EITHER PREPARED OR LOOSE FORM BLACKPOWDER AND LEAD BALL.

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ARTILLERY DEMONSTRATION

Cannons may be demonstrated by members only under the direct supervision of a Safety Officer. The Safety Officer and the Gun Commander will be one and the same.

1. Ideally the crew of the Field Piece will have six (6) or more members, but no gun will be operated with less than four (4), except swivel guns and mortars, which require only two (2).

The Gun Commander – This man has overall command of the gun and crew. He is responsible for giving commands and assuring that crewmembers execute their duties correctly and safely.

Gunner #1 (Firer) – This job is to maintain the linstock and to touch off the charge when ordered by the Gun Commander.

Gunner #2 (Vent Tender) – This man stops (tends) the vent to be sure NO air escapes during worming, sponging and loading. He picks open the charge with a priming wire and primes the piece. This man must have a leather thumbstall to protect his thumb from the heat of the gun while tending the vent. This position is critical to the safe operation of the piece, and should always be manned by an experienced Artillerist.

Gunner #3 (Ram & Sponge) – This man sponges the piece and rams home the cartridge. He must always be sure the sponge is in good condition and that there is water for the artillery bucket. This man is, at the discretion of the crew, to wear heavy-duty welders' gauntlet gloves for protection while performing his duties. Like #2, this position should always be served by an experienced crewmember.

Gunner #4 (Worm & Loader) – This man's job is to extract the spent cartridge casing (search the piece), and to place the new round in the muzzle for #3 to ram (charge the piece).

Gunner #5 (Powder Handler) – This man's job is to remove the powder box to a secure position before the piece is fired, and to bring each round forward to #4 for loading. He is also responsible for manning the tiller for aiming the gun and guarding the powder box at all times.

Any additional gunners perform duties as assigned (pulling the gun, relieving casualties during tactical demonstrations, etc.).

In case of a four-man crew, Gunner #4 will double as #5. Gunner #4 should never carry extra rounds in the pass-box, as he will be close to the piece when he fires. For guns without a removable ammunition box (gallopers), they must be empty of ammunition, closed, latched and ammunition stored the required distance from the piece.

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2. Cannons used in firing demonstrations must be reproductions and must conform to the specifications in the *Cannon Inspection Checklist (Appendix D)*. ALL IRON CANNON MUST BE SLEEVED!
3. All drill performed by the Artillery crew is subject to the approval of an Artillery Safety Officer using the *Artillery Demonstration Checklist (Appendix C)*.
4. Ammunition for artillery is to be prepared off-site prior to the event. Preparation of cartridges at the event is strictly forbidden. Cartridges are to be made of at least three thickness' of heavy gauge aluminum foil made around a former of a width corresponding to the bore of the Gun they are to be used with. Powder charges shall NOT exceed the specifications in the *Table of Maximum Loads (Appendix B)*.
5. Demonstrations will be held in an area that conforms to the appended *Range Diagram for Cannon Firing (Appendix F)*.
6. ALL FIRING SHALL BE WITH A LINSTOCK AND SLOW MATCH.
7. ALL ARTILLERY WILL BE PRIMED WITH QUILLS ONLY.

TACTICAL DEMONSTRATION

To assure maximum safety for demonstrators and visitors, the following standards will govern Tactical Demonstrations:

1. ALL Units will be required to have Representatives at Morning Officer/Safety meetings.
2. Participants in the Tactical Demonstration shall be limited to INSPECTED members of the BVMA and invited units.
3. Participants must be at least 16 years of age to field under arms
4. Each unit shall have at least one member who has been appointed as a Safety Officer by their Unit.
5. Weapons, ammunition, ammunition containers and weapon drill are subject to inspection by a Safety Officer who has the power to require correction of incidents of non-compliance with these guidelines.
6. Tactical Demonstrations will be held only under the direct supervision of a Safety Officer or Officers. The scenario for each demonstration is subject to the Safety Officers', Event Coordinator and Commanding Officers' prior approval.
7. Weapons and blank rounds of ammunition used in Tactical Demonstrations shall conform to the specifications laid down in these Guidelines. Powder loads shall not exceed the amounts specified in the appended *Table of Maximum Loads (Appendix B)*.
8. There shall be no simulation of Hand to Hand combat, except in rehearsed engagements approved by the Event Coordinator and Commanding Officers.

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9. Opposing forces shall not discharge weapons at each other unless there is an interval of at least 30 yards between them.
10. Weapons may not be fired in the General direction of the public.
11. RAMRODS ARE NOT TO BE USED AND CHARGES ARE NOT TO BE WADDED.
Ramrods are to remain in the thimbles during the tactical.
12. Bayonets, pole-arms and swords may be used in Tactical Demonstrations with prior approval of Event Coordinator and Commanding Officers. Knives and hatchets carried in Tacticals will remain sheathed and secured at all times.
13. Bayonets charges may be executed in a tactical with permission of Event Coordinator and Commanding Officers. BAYONET CHARGES MAY ADVANCE AT NO FASTER THAN A QUICK STEP AND MAY CLOSE NO CLOSER THAN 15 YARDS TO THE OPPOSING FORCE.
14. Artillery crews shall follow the manual for their pieces, observing all safety procedures specified above. Guns will be operated by a minimum of four crew members. Small Pieces (3 pounders and below) shall not be discharged at Opposing Forces at ranges of less than 50 yards. Larger pieces (6 pounders and above) shall not be discharged at Opposing Forces at ranges less than 100 yards.
15. Horses shall be tethered in designated areas when not in use. During Tactical Demonstrations, both mounted and dismounted troops will have a joint responsibility to maintain a safe buffer zone between mounted and dismounted troops and persons portraying casualties at all times.
16. All Safety Officers' power shall extend to stopping the demonstration if they feel that it is a necessary course of action. All Safety Officers have the power to order immediate correction of safety violations. Safety Officers will have complete authority to exclude or remove both individuals or units for non-compliance of Safety Regulations.
17. Under NO circumstances shall a weapon be discharged anywhere other than the Individual Demonstration or the Tactical Demonstration or other area designated by the Event Coordinator. Weapons shall not be discharged in camp or anywhere off the field of demonstration.
18. Demonstrators are not to surrender control of their weapon to members of the public or the public to fire a weapon.
19. At no time during the Tactical Demonstration will the Ramrod be used to clean barrels. THE RAMROD WILL NEVER BE REMOVED DURING TACTICAL DEMONSTRATIONS.
20. CROSSED RAMMERS WILL INDICATE A LOADED ARTILLERY PIECE. UNDER NO CIRCUMSTANCES ARE TROOPS TO CLOSE BEYOND THE ACCEPTED RANGES SPECIFIED IN THE APPENDIX (Appendix F).
21. All firing should be done at a standstill, under no circumstances should a Participant fire while moving (exception: Mounted Troops).
22. It is the responsibility of the individual unit for securing arms before leaving the field.
23. Powder horns may only be carried empty.

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HANDLING BLACK POWDER AMMUNITION

Members will observe the following rules for the transportation and storage of blank ammunition:

1. Blank ammunition will be prepared off-site before the demonstration is held.
2. Loads shall not exceed the loads specified in the appended *Table of Maximum Loads (Appendix B)* for the particular weapon to be fired.
3. Cartridges will be paper wrapped, rolled on a former of the proper caliber for the weapon being fired, and should be twisted, folded, or glued closed. METAL CLOSURES (STAPLES) ARE NOT PERMITTED.
4. Demonstrators must carry rolled cartridges in cartridge boxes that are in good repair, have secure leather flaps, and are kept clean of powder residue.
5. Member Units are required to store ammunition in a safe area away from fire and well out of the reach of the public. (Locked Surplus Military Ammunition Cans Are Strongly Suggested).
6. Each Unit will be required to participate in policing the field after the tactical.

CARTRIDGES ARE NEVER TO BE HANDLED BY OR GIVEN TO THE PUBLIC.

APPENDIX A

MUSKET & RIFLE INSPECTION CHECKLIST

Before the inspection, the weapon is to be confirmed to be unloaded by springing the rammer.

THE STOCK:

1. No cracks or splits.
2. Butt plate, trigger guard, etc. to fit tightly with no burrs that would snag clothing or hands.
3. If pin-fastened barrel, no missing pins & tight.
4. If band-fastened barrel, bands should be tight and hold barrel in place.
5. Two-piece stocks must have sections securely joined.

THE LOCK:

1. The lock works smoothly.
2. All hammer positions are firm and solid.
3. The half-cock (safety) position works properly.
4. The trigger pull is proper, not a hair trigger.
5. Rifles with set triggers must be adjusted properly.
6. Locks must fit properly into the stock and snugly against the barrel. No gap between lock bolster and barrel.
7. Ensure the leather or lead holds the flint securely in the lock jaws.
8. The pan is clean and in proper relation to the touchhole of the barrel.
9. All muskets must have a well fitting flashguard of sufficient gauge. BVMA STANDARD: The flash guard will be of sheet steel or brass not less than 20ga. (.0375 in.) in thickness, and will be secured to the lock in such a manner so as to maintain its position beside the pan. The height of the flash guard shall extend above the pan to a point at least 25 degrees above the level of the vent hole.
10. Leather frizzen covers are required, and must be secured to the firelock.

THE BARREL:

1. The flint is not striking the barrel.
2. The touchhole is clear with no signs of corrosion.
3. The ramrod is straight and fits properly.
4. The muzzle is not dented or worn.
5. Sights on rifles are not loose and are fitted so as not to catch on clothing or hands.
6. Musket bayonet lug is secure and the bayonet fits easily and latches with a positive twist lock.
7. Minimum Blunderbuss barrel length is 24 inches.
8. Minimum Barrel length for muskets will be 36 inches for use in second-rank firing.

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APPENDIX B

TABLE OF MAXIMUM LOADS

<u>WEAPON TYPE</u>	<u>CALIBER</u>	<u>MAXIMUM LOAD</u>
Brown Bess Musket/Carbine	.75	100 grains FFg or FFF
Charleville Musket/Carbine	.69	100 grains FFg or FFF
Rifles	varies	80 grains FFg or FFF
Pistols	varies	1 grain per caliber FFg or FFF
Blunderbuss	varies	Minimum 1 grain per caliber FFg or FFF
Grasshopper	3 pounder	8 oz. Fg or FF
Light 6	6 pounder	12 oz. Fg or FF
Howitzer	5.8 inch	10 oz. Fg or FF
Iron Gun	3 pounder	8 oz. Fg or FF
Iron Gun	4 pounder	10 oz. Fg or FF
Iron Gun	6 pounder	12 oz. Fg or FF

APPENDIX C

ARTILLERY DEMONSTRATION CHECKLIST

BEFORE:

1. The Gun has been inspected, and bore is clean of any foreign material.
2. The carriage is in good condition & all keys secure.
3. The accessory equipment is in good condition, i.e. sponge head in good repair, rammer and sponge heads secure on staff, etc.
4. Sponge head fits bore snugly but not too tight.
5. Ammunition boxes are clean and free of loose powder.
6. Necessary equipment on hand to handle misfire.
7. The required number of personnel on hand to fire the piece.
8. The Gun is situated safely in relation to the public.

DURING:

1. The crew is following the approved manual with each person where they are supposed to be at any given time.
2. The sponge is adequately damp but not soaking wet.
3. The sponge head does not contact the ground at any time so as to prevent grass or sand, etc. from sticking to it.
4. If there is a misfire, it is handled safely and properly.

AFTER:

1. All weapons, explosives & accessory pieces are accounted for.
2. The demonstration area is inspected carefully for smoldering cartridges.
3. All remaining cartridges are promptly returned to the proper storage areas.
4. The Gun is secured and equipment stored properly.

APPENDIX D

CANNON INSPECTION CHECKLIST

THE TUBE:

1. Tube is clean and free of rust or corrosion.
2. No sign of external damage or strain.
3. Inside of tube is clean and relatively smooth.
4. No internal signs of damage (bulges, pits, etc.)
5. No sign of corrosion damage at breach.
6. The vent is clear and of the acceptable size.
7. No signs of cracks or bending around the trunnions.
8. No signs of weakness at the chaplets on bronze tubes.
9. Iron cannon tubes must be steel sleeved.

THE CARRIAGE:

1. Wheels & body are tight and free of rot and infestation.
2. No pieces or parts are missing, cracked, bent or broken.
3. Wheels move freely.
4. None of the ironwork is loose.
5. Tube rotates freely on its trunnions.
6. Trunnion caps fit snugly and are properly keyed.
7. Lids of ammunition boxes and limber chests fit snugly, and are free of loose powder.
8. Wheel hub does not gouge the end of the axletree.
9. Linch pin is not digging into the wheel hub.

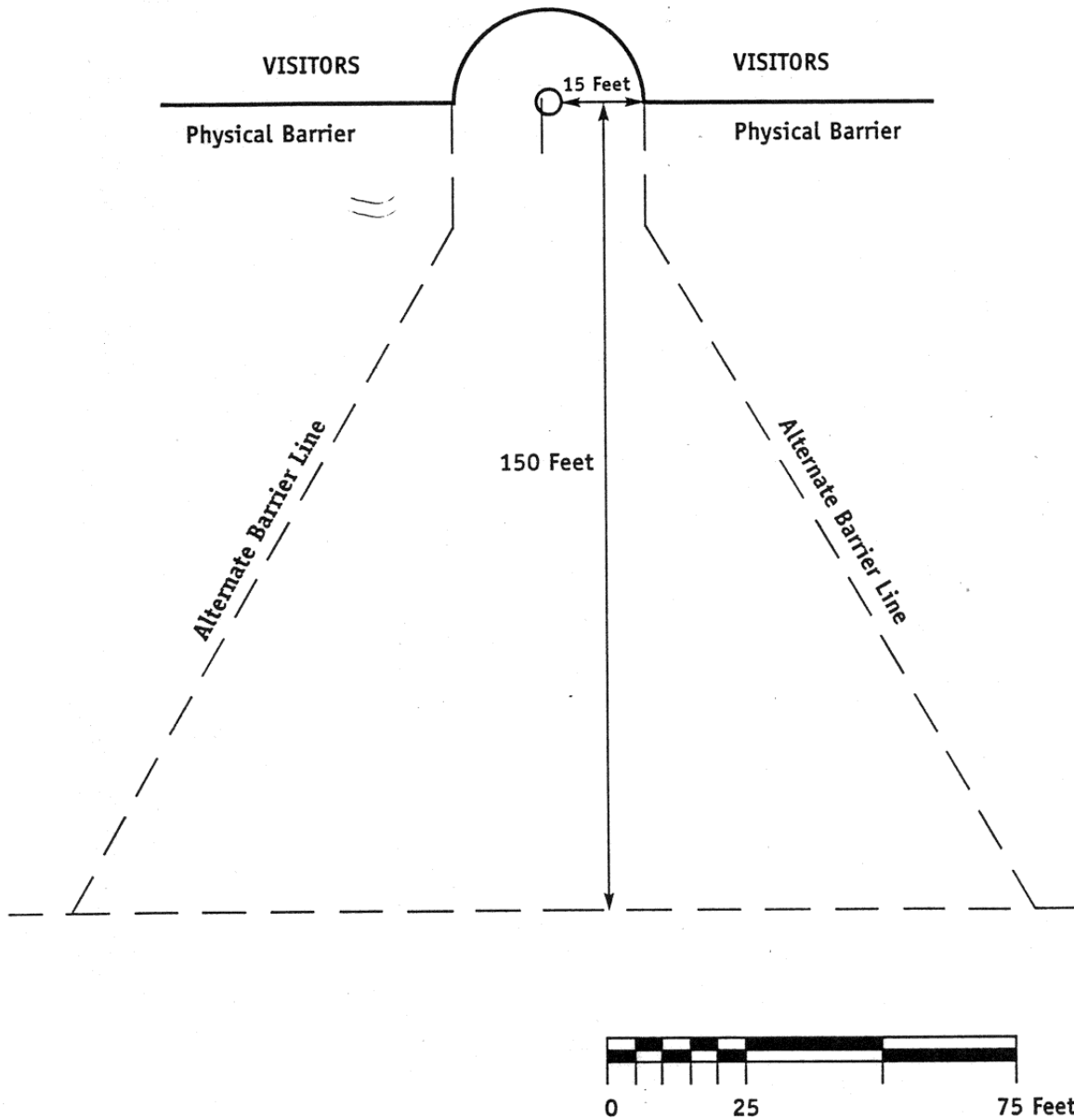
EQUIPMENT:

1. All necessary equipment is present.
2. Sponge is in good condition and is fitted to the bore.
3. Rammer head is secure and free of cracks.
4. Small items are in good condition (linstock, thumbstall, buckets, etc.)
5. Prongs of the worm are sharp and not bent.

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APPENDIX E

RANGE TABLE FOR SMALL ARMS FIRING



APPENDIX F

RANGE TABLE FOR ARTILLERY FIRING

