

Artillery Guidelines for 18th Century Market Fair at Locust Grove

BATTLE PREPARATION AND CONDUCT - ARTILLERY AND MORTAR:

A. Battle Orientation: All Gun Section leaders will attend the battle conference held each day. They will obtain the number of rounds to be fired, and the battle scenario showing the sequence of the rounds to be fired. The commanders of the Infantry Regiments participating should have the same information provided.

B. Firing: Gun crews will insure that no infantry units are forward of their positions previous to firing. Troops a sufficient distance forward of the weapon are not a consideration.

ARTILLERY DEMONSTRATIONS:

A. Units which have satisfactorily shown their competence and safety in the handling of their pieces shall be permitted to participate in matches, demonstrations and skirmishes.

B. Eligibility: Replicas of Revolutionary War Period Artillery pieces may be fired. Such replicas must be full scale, of correct documented shape, size, color, and must not be antedated past the year of 1783. Small scale or model cannons are not to be fired at any time during a scheduled event. The piece and its crew must pass the inspection specified in Paragraph 3. No person will be permitted to serve as a member of a gun crew unless he is a member of that crew, or a certified member of another crew.

C. Inspection:

1). All artillery pieces must be registered with the NWTa and approved in order to participate in any match or demonstration. Registration of an artillery piece shall consist of a complete inspection as here-in provided of the gun, necessary tools, projectiles, powder charges, and the gun crew and its drill. All equipment, ammunition, crews, and guns must be re-inspected yearly, or if alterations, modifications, update, or rebuilds are carried out before the one year limit is reached. Re-inspection will occur upon the changing of ownership of a piece. The NWTa shall maintain records of inspection dates, status of registered pieces, status of crew certifications, and shall present such information to the Board of Directors each year.

2). All tubes/barrels must show witnessed proof that a Test Fire of the tube was performed prior to its use.

3). Carriages that show excessive wear, rotting, weak or broken wheels, excessive rust or corrosion of tube or ironwork, neglect of ore, totally incorrect configuration of construction or historical accuracy, will not be certified.

D. Tools and Appendages: Each artillery piece will be furnished with the following required tools and appendages:

1). Sponge Bucket: This bucket may be of either leather or wooden construction. It must be large enough to contain a sufficient supply of water to allow for double sponging during the shots of the demonstrations, and have enough left to flood the bore. Leaks must not be so great as to inhibit this volume of water. Tin, Brass, or Copper may be used only if constructed in a historically correct fashion.

2). Sponge (Bore Mop): This sponge must be built around a wooden head that is firmly attached to the shaft. It may have a rammer or worm on its opposite end. Tacks holding on the cover must be of non-ferrous material. The cover may be of carpet, lambs wool, or other absorbent material that will cause a tight fit, match the shape of the chamber, and be absorbent enough to carry water to the full extent of the bore. A white canvas cover must be tied over the sponge when not in use. It must be clean (as clean as possible) before each demonstration.

3). Rammer: The rammer may be on its own shaft, or be part of a sponge-rammer appendage. It may also be included on the wad hook appendage. Its head must be at least 75% of the bore diameter and be firmly affixed to the shaft. No non-ferrous nails or metal parts may protrude from the surface of the wood. Cracks in the wood may not be open more than 1/32 inch.

4). Vent Pick (Priming Wire): The vent prick must be of non-ferrous metal and must pass the full length of the vent without resistance. It must be able to reach the bottom of the bore. Spare vent pricks must be on hand.

5). Swab Hook (Worm): The worm will measure at least 75% of the bore diameter. The tangs must be of sufficient strength that it may be bounced off the bottom of the bore without compressing the twist. (This test may be conducted by bouncing off a stone or concrete surface outside the bore to prevent wear to the chamber). The ends of the tang are to be sharpened to snag cartridge fragments. The hooks (tangs) must be secured to a metal ferrule which will firmly affix the head to the shaft. The wad hook may share a shaft with the rammer or the sponge.

6). Linstock: The linstock must be of sufficient length to allow the gunner to stand outside the wheels while firing.

7). Thumbstall: The thumbstall must be pliable to seal off all rushing air during ramming and be thick enough to protect the vent tender from heat.

8). Leather Gauntlets: These must be worn by the man who charges the piece (on the hand that holds the charge) and the man who rams the charge (both hands). These must be heavy-duty welders-type gauntlets with a cuff to extend past the wrist.

9). Gunner's Haversack or Pass Box: This haversack must be of leather and be large enough to enclose the entire cartridge inside it without exposing it in any way. It may be a musket cartridge box without the block, providing the flap secures the cartridge.

10). Matross Box (Ammunition box): This box may be separate, or part of the set built for the gun. It must be of sturdy construction. It must have a lid that closes down tightly with a hasp, and must have a canvas cover to protrude past the crack between the lid and the sides by at least two (2) inches. In the case of a box with a metallic cover, the seal must be very good between the lid and sides; no gaps of more than 1/32 inch. The lid must have a chain that allows the lid to open less than 90 degrees such that the lid will fall closed when the matross releases it. There must be no holes or cracks in the box that light can pass through. Any such gaps must be caulked. The box must have a padlock to secure the lid after battle or demonstration.

11). Other Tools: Any tools or appendages must be of documented 18th Century design. Other desirable tools and appendages not listed above may be used. These might include ladles, portfires, spikes, quadrants, forked levers, searchers, handspikes, bricoles and drag ropes, gimlets, sighting devices, fuse cutters, fuse hammers, etc.

E. Crews:

1). A full crew for artillery pieces shall include the following functions:

- a. The Sergeant: Directs the crew and oversees the drill.
- b. A Gunner: Tends the linstock and fires the piece.
- c. The Bombardier: Tends the vent and primes the piece.
- d. A Gunner: Sponges the piece and rams the piece. He may also search the piece at the Commander's discretion.
- e. A Gunner: Handles the cartridge or shot, and charges the piece. Also at the discretion of the Commander he may search the piece.
- f. A Matross (Powder Monkey): Carries the haversack to deliver the cartridge
- g. A Matross (Powder Monkey): Tends the ammunition chest.

h & higher. Other Matross: Stand at the drag ropes, point the piece, handle the water bucket, tend the extra linstock, and all the other full range of crew duties not listed.

Lieutenant: Stands to the rear of #1 and oversees the drill. He may shout the commands instead of the sergeant, or have the sergeant parrot his commands, or stand silent... as the crew wishes. His primary responsibility is as safety authority. He begins the drill by ordering "LOAD," and gives the command to fire.

Captain: Commands two or more batteries. His option is to shout the commands, with the Individual crew officers parroting his commands, or allow for independent fire, as he chooses. His primary function is to coordinate the fire with the program in a safe manner, allowing therefore the lieutenants the freedom to concentrate on their respective crew's safety. Honorary and Temporary rank of MAJOR and COLONEL may be issued for the event that needs supervision of large elements of artillery, such as "Wings" of five or more guns and "Battalions" of two or more wings. Such rank will be for the use of the artillerymen only, and only for the specific event that such large numbers of artillery occur. The Artillery Community may elect to recognize their Artillery Safety Officer as Major within their own program, but not as a rank over the infantry or cavalry or navy.

2). The minimum crew for Artillery pieces is as follows:

- a. Mortars (includes 4.5 inch, 12 pound siege and coehorn): shall be two men: one performs tasks #1, #2, and #3, the second man performing tasks #4, #5, and #6.
- b. Swivel Gun: shall be three men: one performing tasks #1 and #3, the second performing tasks #2, #5, and #6 and the third man performing task #4.
- c. Field Piece, Galloper, Grasshopper, Siege Gun, Naval Gun or Garrison Piece: shall be either four or five men. In a five-man crew, one man performs task #1, the second man performs tasks #2 and #3, the third man performs task #4, a fourth man performs task #5 and the fifth man performs tasks #6 and #7. In a four-man crew, one man may perform tasks #1, #2 and #3. All other positions are manned as in the five man crew.

d. Howitzer (3.6 inch, 12 pound): shall be either three or four men. In a four--man crew one man performs tasks #1, #2, and #3; the second man performs task #4; the third man performs task #5; and the fourth man performs tasks #6 and #7. In a three-man crew, tasks #5, #6 and #7 may be combined. All other positions are manned as in the four-man crew.

3). Gun crews may be expanded to divide combined tasks depending on manpower available and the discretion of the gun commander and the artillery safety officer at an event, but they may not be reduced below the minimum requirements.

F. Conditions: The conditions of artillery fire are as follows:

- 1). All crew members will carry out their duties in a slow deliberate pace. Any moving around will be done at a “walk,” especially #6.
- 2). The Sergeant or Lieutenant will regulate the rate and correctness of his own individual crew as it serves the piece. Any improper movements or unsafe conditions shall compel him to halt the drill and correct the problem. Should either notice a problem with another crew, they must inform the Captain or Artillery Safety Officer immediately.
- 3). The bore will be swabbed twice after each shot with a sponge wetted each time.
- 4). The vent will be pricked prior to sponging and tended prior to ramming. The vent will be thumbed tightly during the sponging and ramming operation. #4 and #5 are taking this opportunity to exchange wad hook and sponge.
- 5). #4 and #5 must be most careful not to allow their bodies ever to be placed in front of the bore during loading, and especially firing sequences. On small guns where room between the wheel and the carriage cheek is limited, the #4 and #5 man must stand outside the wheel when firing. Even with larger guns, these two must stand in line, if not behind the axeltree, to avoid excess noise damage to ears.
- 6). No crew member or other person may pass in front of the bore during loading or firing. The minimum “safe” distance for the enemy to approach the loaded muzzle is 50 feet.
- 7). The signal that a gun has been secured shall be that the sponge rammer be left in the barrel, and the sponge bucket be hung by the bail on the barrel.
- 8). A “secure” gun has been searched, double sponged, and flooded with the remaining water in the bucket, and the above visual signal displayed.
- 9). No crewman shall be permitted to leave the crew position before the gun is secure. Only if agreed to by the Safety Officers will gun crew members, not essential to the securing process, be permitted to “die” in battle.

G. Ammunition:

1). Only commercially produced BLACK POWDER can be considered for use in artillery pieces. Two types of Black Powder may be used. Artillery powder in the FFa granulation may be used in pieces with four (4) inches or smaller bores. Granulation Fa can be used in guns with a four (4) inch or greater bores. Fg may be used in guns of all calibers. FFg or FFFFg may be used in priming.

2). Cartridges are to be made double wrapped from broiler weight or extra heavy duty weight aluminum foil. Cartridges should have additional protection within the Matross Box. If such protection is not built into the box, then the cartridges must be placed either in paper tubes with lids, or paper cups, or some other enclosure.

3). Powder loads for cartridges will follow this formula:

a). Blanks: For bores smaller than three (3) inches diameter, two (2) ounces Fg per each inch of bore. For bores larger than three (3) inches diameter, three (3) ounces Fg per each inch of bore.

b). Cartridge Diameter: Cartridge diameter will be taken by measuring the bore diameter and dividing that figure into 15 parts. Shot or cartridge must not exceed 14 of those parts. Shot and cartridge must not be smaller than 12 of those parts.

c). Wadding: Wadding in any form is not permitted. Corn starch may be used in mortars, howitzers or field pieces to increase powder economy. Corn starch proportion must not exceed 50% of the total load.

d). Cartridge Supply: Only the cartridges needed for one battle may be taken onto the field in the ammunition chest intended for that battle. Additional cartridges must be left under guard in the artillery park in a suitable magazine.

e). Priming Quills: Priming quills must be made from paper drinking straws. Plastic straws are not to be used. Priming must be done either from quills, cartridges, or fuse. Under no condition is a powder horn used in priming.

H. Time Limits: Blank fire must not exceed one shot every minute. The time interval indicates the time that must elapse from the time the gun is fired until the time the next cartridge is inserted.

I. Additional Artillery Fire Regulations: Artillery pieces will be fired in the following manner:

1). The interval between guns must be at least 25 feet.

2). Ammunition chests must be at least 25 feet behind the gun, and must not be opened except for the removal of cartridges. The hasp must be closed down between box openings.

3). Muskets must not be fired within 25 feet of the gun position, including the position of the ammunition chest.

K. Disabled Guns:

1). Loaded pieces that cannot be unloaded by discharge will have the vent flooded with water or an attempt may be made to blow the cartridge out of the barrel with a Carbon Dioxide fire extinguisher through the vent.

2). Any misfire that occurs must be announced to the Gun Commander, and an interval of three minutes must pass before an attempt is made to re-prime the piece.

3). Cartridges must not be pulled from the tube by a wad hook unless the bore is flooded.