

ARTILLERY MATCHES (MORTARS)

IMPORTANT NOTICE

The use of the term “approved” by the ACWSA or its designated representative(s) shall mean that the mortar in question has been found to meet the dimension, configuration, mechanical function, and authenticity criteria of the ACWSA. It **does not** in any way imply, or infer, or guarantee the safety or the integrity of any particular mortar.

1. PARTICIPATION

Member and Probationary organizations may fire mortars in a shoot as prescribed by the event program.

2. ELIGIBILITY

Original or replica of Civil War mortars may be fired. The term “Civil War” applies to any mortar whose model antedates April 26, 1865. All mortars must maintain the same construction and ratio to the original in all components, including the bed, bore and exterior of the barrel. Replica mortars must utilize a bore and chamber conforming to the dimensions of the original mortar. No auxiliary chambers will be allowed. The bed must conform to the style of original Civil War mortars. **All reproduction barrels must be made of steel or bronze. Cast iron coehorn mortars must have a steel liner**

Scale mortars will be allowed with bores as small as 2.75 inches provided that all other parts of the mortar are scaled accordingly as described for full scale mortars above. Mortars with bores smaller than 2.75 inches, but 2.25 inches or larger that have been in use in the ACWSA prior to May 2010 will be allowed.

Mortars fitting the following descriptions will compete in their own class.

- A. Mortars with a bore diameter of less than 4.62 inches (12 pdr.).
- B. Mortars firing projectiles with streamers attached.
- C. Mortars using shotgun primer ignition systems.

At the discretion of the shoot director, and with the agreement of the mortar crew gunners mortars may shoot in combined classes.

3. REGISTRATION OF MORTARS

All mortars must be registered with the Artillery Officer using the mortar registration form, and approved in order to participate in any competition or demonstration at any shoot. A mortar registration form in duplicate shall be kept on file, one by the Artillery Officer, and one to be kept by the owner of the mortar.

4. INSPECTIONS

Registration of mortars shall consist of a complete inspection by the Artillery Officer of the mortar, necessary tools, projectiles, powder charges and gun crew. Each mortar, with its equipment, and ammunition, must be re-inspected when the piece is modified, altered, rebuilt, or sold. It is the responsibility of the unit owning the mortar to make arrangements to have the mortar inspected.

5. PROJECTILES

A. Only round balls may be used. Maximum weight shall be the weight of projectile designed for the bore diameter of a pre-April 26, 1865 original mortar (*ex.: 24 Pdr. Coehorn Mortar = 16.8 lb. shell*). Minimum weight shall be 45 percent of the maximum weight.

B. In mortars with a bore smaller than 4.62 inches and larger than 2.75 inches the projectile shall weigh no more than the weight of a solid zinc ball of bore size. These projectiles will be used at a maximum range of **250 yards**. Mortars in use in the ACWSA prior to May 2010, using projectiles 2.75 inches or smaller the projectile shall weigh no more than the weight of a lead ball of bore diameter. These projectiles will be used at a maximum range of **250 yards**.

6. PROJECTILE WINDAGE

Windage shall be 0.010 inch or greater and the ball shall fit so as to roll out of the mortar by gravity should removing the shot be required.

7. PROJECTILE CONSTRUCTION

A. Projectiles shall be constructed of a material that shall not fracture or break apart. Pyrotechnic or frangible projectiles are prohibited.

B. Streamers may be allowed at the discretion of the Event Director provided there is enough safe zone beyond the target stake. If streamers are used they will be constructed as follows. Three inch and larger projectiles may use tails of no more than 36 inches of 3/8 inch rope (**minimum diameter**) with no more than four streamers that are no longer than four inches. Projectiles smaller than three inches may use tails no longer than 36 inches of 1/4 inch rope (**minimum diameter**) with no more than four streamers that are no longer than four inches long.

C. Mortars using projectiles with streamers are limited to a maximum range of **250 yards**.

8. EQUIPMENT REQUIRED

A. A deflector for the vent either attached to the bed or capable of being firmly set in or on the ground behind the mortar so as to prevent primers, primer remnants or hot gases from traveling more than two feet from the mortar. Mortars using an enclosed ignition device that prevents the escape of gases and debris are not required to use a vent shield.

B. Safety glasses.

C. A cylindrical target stake with a maximum diameter of 2.0 inches if a common stake is not being used.

D. Instantaneous firing primers; either friction primers, quills, or cap primers such as shotgun primers.

E. Vent brush or tool for clearing the vent between firings.

F. Individual containers for primary powder charges and charge supplements which are clearly marked to indicate the different between them.

G. Tools for cleaning the bore between firings.

H. Gimlet or a device to remove a stuck friction primer if friction primers are being used for ignition.

I. Leather primer pouch.

J. Gunner's haversack or infantry cartridge box to be used to carry powder charges from the ammunition chest.

K. Ammunition chest with lock.

L. Stopwatch for regulating the rate of fire.

Other equipment as used by Civil War period mortar crews is recommended as needed. Such as: Shell hooks, wipers, scrapers, spoon for removing fouling, platform broom, and linstock or lanyard. Crews may wish to have on hand a sponge and sponge bucket, leather gloves, and leather arm sleeves.

9. SIGHTS

Sighting shall be done in the original manner of pointing Civil War mortars. Only a gunner's level, quadrant, pointing stakes, string and plummet are permitted.

10. POWDER CHARGES

Powder charges shall be prepared in advance using commercially manufactured black powder of American standard FFG or coarser granulation. Only loose powder shall be introduced in the powder chamber, no wadding or powder bags are allowed.

11. STORAGE AND HANDLING

A. Powder charges shall be kept in individual containers which are then contained in a securely constructed ammunition box located 25 or more feet from the closest mortar. The preferred placement is 25 or more feet behind the mortar being served from it. The ammunition box shall also be located at least 20 feet from spectators. The hinged side of the lid shall be positioned closest to the mortar so the open side does not face the firing line when removing charges.

B. Once the match has started, the lid of the ammunition chest shall be closed at all times except when removing powder charges. No powder charges may be kept outside of the ammunition chest.

C. The primary powder charges must be placed in individual containers that can hold no more than a single charge. If the powder charge is to be adjusted during firing, individual increments of additional powder shall be prepared in advance and stored within the ammunition box. These incremental unit containers shall be of distinctively different from the primary charge containers. Glass and metallic containers are not to be used.

12. PROJECTILE STORAGE

Projectiles may be stored outside the ammunition chest for easy handling.

13. RATE OF FIRE

A minimum of 45 minutes should be given to conduct a 7 round match. The powder charge for each succeeding round shall not be placed into the muzzle of the mortar until at least one minute has elapsed since the previous discharge. Any rate of fire in excess of this time shall be considered an unsafe practice and shall be just cause for disqualification for that shoot.

14. ANGLE OF FIRE

Mortars shall be fired at an angle between 45 and 55 degrees only.

15. SCORING

A standard mortar match shall consist of seven rounds, the best five of which shall be counted for score. If the match consists of more than seven rounds an additional seven minutes for each additional round shall be added to the minimum 45 minute program. The method of scoring a mortar match with more than seven rounds shall be announced prior to the match.

If individual target stakes are used they shall be set out by each mortar crew. The target shall be a cylindrical stake provided by the mortar crew, and set in the ground at the prescribed distance as determined by the Mortar Match Officer or Event Director. Stakes shall be no taller than 6 feet above the ground and may be painted but shall have no wind flags or other sighting aids attached to or painted on. A common stake may be used if agreed to by all the mortar crews. The Shoot Director shall make arrangements for providing a common stake and having it placed.

The range distance shall be made known to the registered mortar crews at least two weeks in advance of the shoot to facilitate preparation of charges. If an unknown range is to be used, a minimum/maximum distance will be made known to the registered mortar crews at least two weeks in advance of the shoot to

facilitate preparation of charges. The difference between the minimum and maximum distance shall be no more than forty yards.

Each crew must find a member different organization to score their projectiles. The total distance of the nearest five balls from the stake will be used to determine the score. The distance shall be measured from the center of the stake to the nearest edge of the ball. The distances shall be recorded for each ball, starting with the closest to the stake. The recorded distances may either be listed as separate distances or cumulative distances. The shortest distance wins. Ties shall be broken by the nearest ball to the stake. If still unbroken, the tie will then be decided by the next nearest ball to the stake until the tie is broken.

Alternative scoring methods could be used by Match Officers or Event Directors provided that the method used is explained to the crews before the match.

16. CREW MEMBERS AND THEIR DUTIES

A crew shall consist of a minimum of three, one of whom shall be a Safety Officer who shall be assigned to perform safety duties for another crew on the line. Basic Civil War period mortar drill, as modified to comply with ACWSA safety procedures, shall be followed. The following procedures are for a four man crew, one of which serves as a safety officer. When a three man crew is used with one serving as a safety officer the duties listed below are redistributed to the Gunner and No. 1.

A. The gunner directs the crew in setting out the target stake and the pointing stakes (if used) before the match begins. The gunner, as necessary, scrapes any powder fouling from the bore and chamber and removes it with a spoon.

B. No. 1 cleans the chamber, and then wipes it with the wiper. Cleans the vent with the priming wire and then with the vent brush.

C. On the command "**LOAD**," given by the gunner, No. 2 opens the ammunition chest and takes out one powder charge in its individual container, plus any incremental powder charges required (also in individual closed containers); places the charges in the haversack and carries them forward to the gunner. He may, at the same time, bring one projectile to the mortar along with the powder, or he may bring it in a separate trip.

D. The gunner, after ascertaining that the chamber and vent have been cleaned, and after notification from the safety officer that a minimum of one minute has elapsed since the last discharge, pours the powder into the chamber.

E. The gunner returns the powder container(s) to No. 2 picks up the projectile and holds it for inspection. No. 2, on seeing any dirt or debris attached to the projectile, wipes it clean with the wiper and then replaces the wiper on the stake. The gunner then places the projectile into the bore.

F. The gunner then sights the mortar and is assisted by No. 1 and 2, who adjust the bed to his commands.

G. When the gun is sighted the gunner commands "**READY**," No. 1 places a primer in the vent and ensures that the vent deflector is in place. He ignites the prime upon the command "**FIRE**" from the gunner.

H. On discharge of the gun, the safety officer restarts the stopwatch.

I. If additional manpower is available, No. 4 serves at the ammunition chest. If no No. 4 is present; No. 2 secures the chest whenever the chest is unattended.

17. BLANK CHARGE

At the beginning of a match mortar crews are allowed to fire one blank charge to dry the bore if they want to.

18. RANGE LAYOUT AND REPAIR

A minimum range safety zone of 75 yards should be created beyond the 100 yard target stake. This safety zone is to act as a buffer in case of an errant shot. Longer range matches should have a correspondingly greater safe area beyond the target stake.

Spacing between mortars shall be a minimum of 15 feet. Refer to Part 11 for ammunition box placement. At the conclusion of firing the mortar competition, each mortar crew shall fill in or replace any divots created in the range during firing. Failure to do so shall result in disqualification.

Rules revised February 18, 2012