



Miniature Cannon Technologies LLC.

.177 Cal Mini Cannon Firing Instructions, Safety, and Maintenance

For use with:
-M6 Field Cannon
-M6 Naval Cannon
-Original Reenactor
And all other .177 caliber
cannons manufactured by MCT

Congratulations on acquiring your Mini Cannon Tech miniature cannon! Here, you will find detailed, step-by-step instructions for loading and firing your miniature cannon, as well as care and maintenance tips. First and foremost, NEVER under any circumstances point the cannon at yourself or any other living thing, EVER! Due to the nature of this activity, extreme caution must be used at all times! Read and understand each step completely before attempting the step. Failure to follow these instructions can result in permanent damage to your cannon. Use common sense, take your time, and if you have any questions or concerns about any of these instructions or materials, please call us at (484) 819-0492 or send an email with any questions you have to service@minicannontech.com

Materials Needed

- Safety Glasses
- Black Powder (3F or 4F) or Black Powder Substitute (3f equivalent) NO SMOKELESS POWDERS!
- Ramrod (included)
- Gimlet (sold separately) A 1/16th inch drill bit or a pipe cleaner can be substituted
- Cotton swabs (Q-tips®)
- Paper towel for wadding
- Cannon fuse or firecracker fuse (1/16th inch diameter or less)
- Small funnel or folded piece of paper
- Projectile (optional) steel or lead .177 caliber round ball (standard BB)
- Fire starter

Firing Instructions

- Step 1:** Put on your safety glasses! Double check that the bore of the cannon barrel is completely empty, clean, and dry by inserting a Q-tip® all the way into the barrel and extracting it. Examine the Q-tip® for debris or black powder residue. Repeat until the bore is completely clean. Clear the vent (fuse hole) of any debris by inserting and extracting your gimlet. You can also use a 1/16th inch drill bit or a pipe cleaner in place of a gimlet, however a properly fitting gimlet is optimal. Do not use a power drill to spin the gimlet (twist the gimlet with your fingers).
- Step 2:** Insert a piece of cannon fuse or firecracker fuse, at least an inch-long, into the vent. Make sure the fuse is fully inserted through the vent, into the bore. Verify that the fuse is fully seated by inserting your ramrod into the barrel through the muzzle end and tap the fuse from inside the bore. You should see the fuse wiggle when the ramrod touches the bottom of the fuse. **It is very important that the fuse is inserted before the black powder is poured in, to help prevent misfires.** Tip: Use sharp scissors when cutting fuse to help prevent fraying. It may also help to twist the fuse as it is inserted. Debris in the vent can make inserting the fuse difficult or impossible. Use your gimlet (1/16th inch drill bit or a pipe cleaner) to remove debris from the vent if needed.
- Step 3:** Measure out 5 grains (2 heaping scoops with included scoop) of black powder or black powder substitute and pour it into the muzzle of the cannon with a funnel or a folded piece of paper. Tilt the cannon upright and use your ramrod as a measuring stick to check that the level of powder is between the trunnions (supports on which the barrel pivots) and the vent to verify that the barrel is **no more than half full of powder.** Immediately close your black powder container and set aside. Tip: Any extra powder will be wasted and blown out of the cannon before it can be ignited. Extra powder takes up barrel space and actually makes the cannon less powerful and less accurate!
- Step 4:** Tear off a piece of paper towel about the size of a quarter, roll it into a tightly compressed ball with your fingers, and insert it into the muzzle. **The wadding should fit snugly in the bore.** Use your ramrod to push the wadding down the bore. Push the wad up against the black powder to eliminate large air pockets in the black powder. Do not pound the wadding up against the black powder. Tip: The tighter the wadding fits in the bore, the more pressure will be built up when the cannon fires, making the cannon louder and increasing muzzle velocity. Pounding on the wadding with the ramrod does not make the wadding fit tighter. The size of the piece of wadding you tear off will determine how tight it fits the bore.
- Step 5:** (This step is optional. Skip this step and continue to step 7 if you only want to fire a "blank" for sound effect.) Insert one .177 caliber round ball (BB) into the muzzle. Use the ramrod to gently seat the BB against the wadding. Do not pound or apply excessive force to the ramrod. Tear off a dime size piece of paper towel and insert it after inserting the projectile to prevent the projectile from rolling out. Use your ramrod to push this second piece of wadding down the bore until it is firmly seated against the projectile. Note: This secondary wadding should not fit tightly in the bore. Its only purpose is to keep the projectile in place.
- Step 6:** Find a suitable target with a backstop behind the target to prevent the projectile from escaping your controlled area. The backstop should be a soft material like dirt or several layers of wood or thick cardboard to absorb the projectile and help prevent ricochets. Steel projectiles are more prone to ricochet than lead projectiles.
- Step 7:** If you haven't already, **PUT ON YOUR SAFETY GLASSES!** Make sure everyone in the area is behind the cannon and wearing safety glasses. No one should be able to see the opening of the barrel. Keep in mind that these mini cannons are more than powerful enough to penetrate skin and/or clothing. Double check that your container of black powder is closed and far away from the cannon. Note: Wadding can catch on fire and stay smoldering for some time after firing. Make sure there aren't any flammable materials around or in front of the cannon. The wadding can travel long distances from the cannon, especially if there is wind.
- Step 8:** Aim your cannon at the target. The cannon will recoil backwards, so make sure the cannon is not near the edge of a table. Do not try to prevent the cannon from recoiling as this can cause damage to the carriage. Full size cannons were designed to recoil freely to prevent damage. The same concept applies to miniatures! Tip: Place rolled-up towel or rag 8 to 10 inches behind the cannon to stop the cannon from recoiling further.
- Step 9:** Make sure your face and all other parts of your body are not directly above the vent. Sparks and high velocity gasses will exit through the vent upward. Light the fuse to fire the cannon. Stand Back! To fire again, repeat from Step 1!

Misfires: If the cannon fails to fire, wait at least 5 minutes before approaching and handling the cannon. When you do handle the cannon, treat it like it could still fire. The most common causes of a misfire are the fuse not being fully inserted, forgetting to insert the powder charge, or accidentally inserting wadding before the black powder. If you are absolutely sure that there is still black powder in the correct position, use a gimlet to clean out the vent and expose fresh powder. Insert a new fuse and attempt to fire again. If the cannon continues to not fire, use compressed air to blow into the vent to force the projectile/wadding/powder out of the barrel. After you remove the projectile/wadding/powder, clean the bore and vent thoroughly before attempting to fire again.

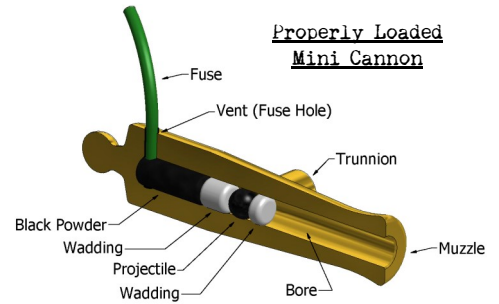
Care and Maintenance

After every shot, clear the vent with a gimlet then use a Q-tip® to clear the bore of black powder residue and other debris. At the end of a shooting session, dip a Q-tip® in water or rubbing alcohol and run it in and out of the bore a few times or until no black powder residue is left in the bore. Black powder residue is highly corrosive. Be sure not to leave powder residue in or on the barrel for an extended period of time. Do not allow cleaning chemicals to come in contact with painted wood parts. Make sure all nuts/bolts are snug (do not over tighten).

For brass, bronze, and stainless steel barrels, be sure not to leave any solvents or residue in the barrel for an extended period of time (most gun cleaning solvents are designed to dissolve brass). Before long-term storage, wipe down the barrel with gun oil or WD-40® to help prevent oxidation. To bring your cannon barrel back to an untarnished shine and remove oxidation, use steel wool or a brass cleaner like BRASSO® (brass and bronze barrels only). Use BRASSO® on a Q-tip® to remove oxidation from inside the bore.

For black coated barrels, do not use harsh solvents like acetone or alcohol for cleaning. Instead, use a Q-tip® with a small amount of water to clean the bore, then follow with gun oil or WD-40® on a Q-tip® to protect the bore from oxidation. Use a clean dry cloth to clean the exterior of the barrel. Do not use steel wool or any harsh chemical cleaners on the exterior of the barrel, as this could scratch or remove the coating.

More information on our products can be found on our website: www.minicannontech.com



Disclaimer: I, the purchaser, or user of any products from "Miniature Cannon Technologies LLC", do not hold "Miniature Cannon Technologies LLC" or its owner liable for any personal injury or property damage brought about by or involving any products of "Miniature Cannon Technologies LLC". I fully understand that the seller, under no circumstances warrants the legality of purchase or possession of any products sold from "Miniature Cannon Technologies LLC". I, the purchaser, or user, certify that I have obtained any and all necessary permits or licenses required by state, federal, or local law, to legally own and use any products from "Miniature Cannon Technologies LLC". I understand that the products from "Miniature Cannon Technologies LLC" are dangerous if used improperly, and could cause injury, or death to me, any other person, or any other living thing, therefore, I do not hold "Miniature Cannon Technologies LLC", or its owner liable or accountable for any such injury, death, or property damage. Under no circumstances will I attempt to discharge any device from "Miniature Cannon Technologies LLC" without the knowledge and proficiency to use it in a way that is in accordance with all laws and in a safe manner. I, the purchaser, hold "Miniature Cannon Technologies LLC" and its owner harmless and without any and all fault or liability, with regard to product liability for claims of defective or inherently dangerous products. By purchasing, discharging, or using in any way, any products sold from "Miniature Cannon Technologies LLC", I agree to all the previous statements in this disclaimer and understand that I, the purchaser, or user, am fully responsible for any injury or damage brought about by or involving in any way, any products from "Miniature Cannon Technologies LLC". All trademarks mentioned herein belong to their respective owners.