

**TENNESSEE BUREAU OF INVESTIGATION**  
*Forensic Services Division*

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Firearms/Toolmarks Standard Operating Procedures Manual  
Safe Firearm Handling Procedure

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**4.0 SAFE FIREARM HANDLING METHOD**

**4.1 Scope:** Firearms evidence in the laboratory environment is inherently dangerous. However, this danger can be minimized if firearm evidence is handled correctly and treated with respect. These procedures address safe firearm handling.

**All firearms should be treated as though they are loaded.** This rule cannot be overly stressed and shall be followed at all times, whether it is in the evidence receiving area, FTIU laboratory area, test firing area or in court. Safe firearm handling within the laboratory environment corresponds with safe firearm handling in general. The only way to prevent accidents is to practice safety at all times.

Occasionally, firearms are received in a loaded condition. These require special handling. Care must be taken to unload the firearm chamber and source of ammunition from the firearm (magazine, tube, etc.).

**4.2 Precautions/Limitations:** The firearm examiner shall visually inspect the firearm to ensure that it is not loaded. If loaded, immediate steps shall be taken to ensure that the firearm is safely unloaded. Follow the 5 Step Safety Check described in Appendix 3 Firearms Safety.

**4.3 Related Information:**

- 4.3.1 Physical Examination and Classification of Firearms Section 5
- 4.3.2 Test Firing Methods Section 6
- 4.3.3 Worksheet Appendix 1
- 4.3.4 Firearm Safety Appendix 3
- 4.3.5 Range of Conclusions Appendix 4

**4.4 Instruments:** Remote Firing Device

**4.5 Reagents/Materials:** None

**4.6 Hazards/Safety:**

**4.6.1** It is the responsibility of the firearm examiner to employ appropriate safety and health practices. Safe firearm handling procedures shall be strictly followed at all times.

**4.6.2** Appropriate hearing and eye protection shall be worn when applicable.

**4.7 Reference Materials/Controls/Calibration Checks:**

**4.7.1** TBI Firearms Unit Reference Collection

**4.7.2** TBI Ammunition Reference Collection

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**4.8. Procedures/Instructions:**

**4.8.1 General Firearms Safety**

**4.8.1.1** The muzzle of the firearm shall always be pointed in a safe direction.

**4.8.1.2** Always open the action when first handling a firearm to ensure it is unloaded. The action of a firearm should be open when transferring firearms from one individual to another.

**4.8.1.3** Always keep your finger off the trigger and outside the trigger guard until you are ready to pull the trigger.

**4.8.2 Safe Unloading of Firearms**

**4.8.2.1** The safe unloading of firearms is dependent upon the firearm type and design.

**4.8.2.2** Always remove or unload the ammunition source prior to opening the action. This step will prevent inadvertent loading of the firearm.

**4.8.2.3** Cycling of unfired rounds through the action of a firearm is not an acceptable method for unloading. Not only is this practice unsafe, it may also lead to additional action markings being placed on the ammunition (extractor marks, ejector marks, etc).

**4.8.3 Firearms Safety in the Laboratory**

**4.8.3.1** Never load live or primed cartridge cases into a firearm in an office or examination room. All firearms testing with live or primed cartridges/cartridge cases will be conducted in the Firearms Range and/or Bullet Recovery Tank areas.

**4.8.3.2** After completion of testing and before returning the firearm(s) to the Evidence Receiving Unit, make the firearm visually safe. This can be accomplished by placing a cable tie through the action or other suitable means.

**4.8.3.3** Some factors to consider when deciding whether or not a firearm can be safely test fired from the normal hand held position:

- Is the chamber/bore clear?
- Are there any signs of cracks or weaknesses in major parts of the firearm such as the frame, slide or barrel?
- Does the firearm function, lock-up or dry fire as you would expect it to?
- Is the correct ammunition being utilized?

**4.8.3.4** Some factors to consider when deciding if it is appropriate to utilize evidence ammunition during test firing:

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- Are there signs of reloading? If so, reconsider the need to test fire the evidence ammunition.
- Are there splits in the cartridge case neck and/or other significant damage to the cartridge case?
- Is the ammunition of the correct caliber? This assessment of caliber should not be solely based on the head stamp. Comparisons to reference ammunition and literature search may be required for caliber confirmation.
- Are there existing toolmarks on pertinent surfaces of the ammunition?
- Is the ammunition needed for other tests (e.g., distance determination)?

**4.8.3.5** Some factors to consider when a muzzleloader is safe to fire may include:

- Does the chamber/barrel appear sound?
- Do the percussion nipples have oversize flash holes?
- If a black powder firearm is received in the loaded condition, it shall have the projectile and charge removed. It may then be properly loaded prior to test firing.

**4.8.3.6** If any of the above considerations cannot be answered with a clear "yes" or otherwise rectified and test firing is necessary, that firearm should be remotely fired.

**4.9 Records:** The firearm examiner shall document their findings in the form of handwritten notes, computer generated notes, photography, or by utilizing a firearms worksheet.

**4.10 Interpretations of Results:** Not Applicable.

**4.11 Report Writing:** Most firearm report writing can be found in the Range of Conclusions Appendix 4. However, it is noted that firearms occasionally are submitted inoperable or in very poor condition and these Range of Conclusions may not be pertinent.

**4.12 References:**

Association of Firearms and Toolmark Examiners Training Manual, March 3, 2001

Association of Firearms and Toolmark Examiners Procedures Manual, July 9, 2001

Association of Firearms and Toolmark Examiners Glossary, 5<sup>th</sup> Edition, 2007

"A Guide to Firearms Safety", A Safety and Educational Publication of the National Rifle Association, May 1994.

"Technical Protocols for the Handling of Firearms and Ammunition", FBI, June 1992.

"Forensic Examiners Firearms Recall/Safety Warning List", FBI Laboratory.