

**Summary Report for Individual Task  
061-C02-1102  
Troubleshoot Inaccurate Fires  
Status: Approved**

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DISTRIBUTION RESTRICTION: Approved for public release; distribution is unlimited.

DESTRUCTION NOTICE: None

**Condition:** Given a fire direction center (FDC) with tactical automated fire control system (TAFCS), and platoon/battery of howitzers, manual fire direction equipment, an observer and an inaccurate round or volley information.

**Standard:** Troubleshoot to correct errors in firing data so that howitzer sections can provide accurate indirect fire IAW procedures listed in FM 6-40.

**Special Condition:** None

**Special Standards:** None

**Special Equipment:**

**Safety Level:** Low

**MOPP:**

<b>Task Statements</b>
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**Cue:** None

<b>DANGER</b>
None

<b>WARNING</b>
None

<b>CAUTION</b>
None

**Remarks:** None

**Notes:** When an observer reports that a unit is firing inaccurately, the FDO's first action is to troubleshoot to determine the reason for inaccurate fires. Once this is identified, steps are taken to correct the problem. A thorough understanding of ballistic theory, and the application of the 5 requirements for accurate predicted fire, is necessary to successfully conduct troubleshooting. The procedures that follow offer a step by step guideline to the FDO for successful troubleshooting within the FDC. The platoon leader will be simultaneously troubleshooting within the firing unit.

### Performance Steps

1. Determine if the error affects the entire unit or just individual howitzers.
2. Determine if the error is the range, deflection, or both.
  - a. Evaluate possible causes for range errors.
    - (1) Check muzzle velocities.
    - (2) Check propellant temperature, projectile weight, and charge fired.
    - (3) Verify with the howitzer the correct quadrant elevation setting.
    - (4) Verify Fuze settings.
  - b. Evaluate possible causes for deflection errors.
    - (1) Verify the correct azimuth of fire is entered into the database.
    - (2) Verify the howitzers have an accurate site picture.
    - (3) Verify the correct deflection is set.
    - (4) Verify correct aim points are used.
  - c. Evaluate possible causes for errors in both range and deflection.
    - (1) Verify target location data is correct.
    - (2) Ensure ORSTA is properly entered.
    - (3) Verify howitzer location is correct.
    - (4) Ensure MET data is up to date.
    - (5) Determine if there is an error in survey data.
3. Isolate the error.
4. Direct the correction of the error.
5. Verify the accurate computation and annotation of Chart Range.
6. Verify the accurate computation of Elevation.

(Asterisks indicates a leader performance step.)

**Evaluation Preparation:** Setup: Ensure that all information, references, and equipment required to perform the task are available. Use the performance measures and the references to score the Soldier's performance. Brief the Soldier. Tell the Soldier what he is required to IAW the task conditions and standards.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Determined if the error affects the entire unit or just individual howitzers.			
2. Determined if the error is the range, deflection, or both.			
3. Isolated the error.			
4. Directed the correction of the error.			
5. Verified the accurate computation and annotation of Chart Range.			
6. Verified the accurate computation of Elevation.			

**Supporting Reference(s):**

Step Number	Reference ID	Reference Name	Required	Primary
	FM 6-40	Tactics, Techniques, and Procedures for Field Artillery Manual Cannon Gunnery	No	No

**Environment:** Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects.

**Safety:** In a training environment, leaders must perform a risk assessment in accordance with FM 5-19, Composite Risk Management. Leaders will complete a DA Form 7566 COMPOSITE RISK MANAGEMENT WORKSHEET during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, NBC Protection, FM 3-11.5, CBRN Decontamination. The local commander must personally approve all training judged to be high risk. The operations officer is responsible for conducting a risk assessment in accordance with the safety assessment matrix contained in the Course Management Plan, and for obtaining the commander's approval prior to conducting such training. The principal instructor is responsible implementing safety measures according to the local safety standing operating procedure.

**Prerequisite Individual Tasks :** None

**Supporting Individual Tasks :**

Task Number	Title	Proponent	Status
061-C02-1079	Manage Muzzle Velocities	061 - Field Artillery (Individual)	Reviewed
061-C01-2040	Verify an Automated Database	061 - Field Artillery (Individual)	Analysis Completed
061-C02-1078	Validate Meteorological Messages	061 - Field Artillery (Individual)	Approved
061-C02-1077	Verify a Surveyed Firing Chart	061 - Field Artillery (Individual)	Approved

**Supported Individual Tasks :** None

**Supported Collective Tasks :**

Task Number	Title	Proponent	Status
06-2-5424	Process Fire Missions	06 - Field Artillery (Collective)	Approved
06-1-5002	Execute Fires	06 - Field Artillery (Collective)	Approved
06-4-5016	Determine Firing Data	06 - Field Artillery (Collective)	Approved