

Report Date: 26 Mar 2015  
Summary Report for Crew Drill Drill Task  
Drill Number: 07-4-D9316  
Drill Title: Perform Direct Alignment of a Mortar  
Status: Approved  
Status Date: 26 Mar 2015

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**Distribution Restriction:** Approved for public release; distribution is unlimited.

**Destruction Notice:** None

**Foreign Disclosure: FD6 -** This product/publication has been reviewed by the product developers in coordination with the MCoE G-2 foreign disclosure authority. This product is releasable to students from foreign countries on a case-by-case basis.

**Drill Data**

**Proponent:** 07 - Infantry (Collective)

**Drill Type:** Crew Drill

**Approved:**

**Obsolete:**

**Restricted Read:** No

**Route To TMD Reviewer:** No

**TMD Concurrence:**

**TMD Comments:**

**Safety Level:** Low

**Conditions:**

The unit is conducting operations as part of a higher headquarters and is required to conduct direct alignment of the mortar. The squad leader is acting as FDC and FO, sees a target visible only to him. Some iterations of this task should be performed in MOPP 4.

**Standards:**

The squad leader commands, "SQUAD, DIRECT ALIGNMENT." The mortar squad conducts direct alignment IAW FM 3-22.90 and the unit standard operating procedures (SOP).

**Drill Statements:**

<b>DANGER</b>
NONE
<b>WARNING</b>
NONE
<b>CAUTION</b>
NONE

**Safety:** In a training environment, leaders must perform a risk assessment in accordance with ATP 5-19, Risk Management. Leaders will complete the current Deliberate Risk Assessment Worksheet in accordance with the TRADOC Safety Officer 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, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination. .

**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. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT. .

**Cue:** The squad leader initiates drill by giving the order, "SQUAD, DIRECT ALIGNMENT."

**Coaching Point:** NONE

## TASK STEPS

- \* 1. Squad leader commands, "SQUAD, DIRECT ALIGNMENT."
- \* 2. Squad leader moves to a vantage point (OP) within 100 meters of the mortar firing position and on the gun target line.
- \* 3. Squad leader places an aiming device at his vantage point visible to the gunner.  
Note: The squad leader's position can be to the front of or to the rear of the mortar, as long as he is within 100 meters of the gun and on the gun target line. Once the squad leader has placed the aiming device, he can move to the left, right, or rear of the gun position, remaining within 100 meter of the mortar.
- \* 4. Squad leader positions himself so that he can sight along the horizontal portion of the aiming device to the target.  
  
5. Squad leader reverses his position and sights back along the horizontal portion of the aiming device toward the mortar position without disturbing the aiming device.  
Note: If the squad leader selects a position to the rear of the mortar, he does not reverse his position.
- \* 6. Squad leader signals to the gunner by voice command or arm-and-hand signals to mount the mortar so that it is aligned with the aiming device.  
  
7. Squad places the mortar into action. The gunner aligns the vertical crossline of the sight on the squad leader's aiming device instead of a direction stake.
- 8. Gunner ensures the traversing mechanism is centered. Ensures the sight has a deflection of 3200 mils and an elevation of 1100 mils.  
Note: If the selected squad leader's position was to the rear of the mortar, then the deflection indexed will be 0000 mils (6400).
- \* 9. Squad leader prepares and issues the initial fire command to include shell and fuze, method of fire, charge, and elevation--for example, "HE QUICK, ONE ROUND, CHARGE THREE, ELEVATION ONE ONE NINE NINE."
- 10. Gunner places the announced elevation on the sight.
- 11. Ammunition bearer prepares ammunition IAW the announced shell and fuze, method of fire, and charge.
- 12. Gunner levels the mortar so that all bubbles are centered, and the vertical crossline of the sight is laid on the device.
- 13. Gunner announces, "UP," and signals to the squad leader I AM READY, if necessary.
- 14. Squad loads and fire. When the round is fired, the squad leader will observe the impact of the round.
- 15. Once the round impacts, if any deviation corrections are needed, the squad leader will estimate the number of mils in deviation. This will give him the number of mils that the mortar needs to traverse.
- \* 16. The squad leader will add or subtract (LARS Rule-Left Add, Right Subtract) it to the mortars deflection in which it was mounted with. He would then announce this new deflection to the gunner. He will also determine any range corrections.

### EXAMPLE

Initial deflection 3200, squad leader's correction: L40 (LARS Rule) 3240

17. The gunner will place the new deflection and elevation on the sight. Once he indexes the deflection and elevation, he will then sight back on the "T" bar, by traversing half the distance to the "T" bar and cross-leveling. The squad will continue steps 5 through 17 until the desired target kill is acquired.

(Asterisks indicates a leader performance step.)

### TASK MEASURES

1. Squad leader commanded, "SQUAD, DIRECT ALIGNMENT."
  2. Squad leader moved to a vantage point.
  3. Squad leader placed an aiming device at his vantage point.
  4. Squad leader positioned himself so that he could sight along the horizontal portion of the aiming device.
  5. Squad leader reversed his position and sighted back along the horizontal portion.
  6. Squad leader signaled to the gunner by voice command or arm-and-hand signals.
  7. Squad placed the mortar into action.
  8. Gunner ensured the traversing mechanism was centered.
  9. Squad leader prepared and issued the initial fire command.
  10. Gunner placed the announced elevation on the sight.
  11. Ammunition bearer prepared ammunition.
  12. Gunner leveled the mortar.
  13. Gunner announced, "UP,"
  14. Squad loaded and fired.
  15. The squad leader estimated the number of mils in deviation.
  16. The squad leader added or subtracted (LARS Rule-Left Add, Right Subtract).
  17. The gunner placed the new deflection and elevation on the sight.
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**Talk:**

**a.Orientation:** The objective of this squad drill is to provide the squad with basic skills necessary to lay a mortar using direct alignment.

**b.Safety:** The squad leader and members must ensure that the mask and overhead clearance are sufficient.

**c.Demonstration:** If another squad has successfully performed this drill, have that squad demonstrate it. During the demonstration, explain what is being done and why, using the performance measures as a guide. After the demonstration, summarize the actions performed by the demonstrating squad.

**d.Explanation:** (1) Refer to the performance measures and explain what the squad leader, gunner, assistant gunner, and ammunition bearer is required to do upon hearing the command to "SQUAD, DIRECT ALIGNMENT."

(2) Ensure that the squad leader and squad members know their duties and responsibilities pertaining to each portion of the drill.

(3) Ask if there are any questions pertaining to the drill. If so, ensure that all questions are correctly answered before beginning to train the drill.

**e.Unit Instructions:** a. Resources. Mortar, ammunition, and all other required Table(s) of organization and equipment (TOE) assigned personnel and equipment.

b. Training Site: A mortar firing range or training area with sufficient mask and overhead clearance.

c. Unit Instructions. The squad is conducting fire missions and the squad leader gives the command "SQUAD, DIRECT ALIGNMENT."

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**Walk:**

1. Refer to the performance measures and have each squad member perform his part slowly at first as the leader talks him through.
  2. NONE
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**Run:**

**a.Run-Through Instructions:** The soldiers should practice this drill until they can perform it according to standard, without using notes. The initial run-through exercise should be conducted slowly. The soldiers should change positions in order to learn all steps and standards.

**b.Coaching Point:** NONE

**c.Performance Instructions:** When the soldiers can perform this drill according to the standard, they should be evaluated by the platoon leader or sergeant.

**Equipment (LIN)**

Step ID	LIN	Nomenclature	Qty
No equipment specified			

**Materiel Items (NSN)**

Step ID	NSN	LIN	Title	Qty
No materiel items specified				

**Support Personnel**

Personnel Type	Description	School	Qty	Remarks
No support personnel specified				

**TADSS**

Step ID	TADSS ID	Title	Product Type	Qty
	07-13A	Mortar, Pneumatic/ M32	DVC	1
	07-13B	Pneumatic Mortar Trainer/ M32A1	DVC	1
	DVC-VBS2	VIRTUAL BATTLESPACE 2 (Local TADSS – Not in TSMATS/PAM 25-30)	DVC	1

**Supporting Individual Tasks**

Step ID	Task ID	Status	Task Title
	071-074-0044	Approved	Supervise a Mortar Squad
	071-11C-1000	Approved	Fire a Mortar
	071-11C-1001	Approved	Engage Targets with a 60-mm, 81-mm, or 120-mm Mortar Using Direct Lay
	071-11C-1006	Approved	Occupy a Mortar Firing Position by a Squad
	071-11C-1008	Approved	Lay a Mortar Using Direct Alignment
	071-11C-1207	Approved	Adjust Mortar Fire Using Direct Alignment
	071-11C-1208	Approved	Control the Expenditure of Mortar Ammunition

**Prerequisite Individual Tasks**

Step ID	Task ID	Status	Task Title
No prerequisite individual tasks specified			

**Supporting Collective Tasks**

Step ID	Task ID	Status	Title
	07-3-3000	Approved	Adjust Mortar Final Protective Fire (Section-Platoon)
	07-3-3018	Approved	Fire Mortars by Direct Alignment (Section-Platoon)
	07-3-3036	Approved	Adjust Mortar Fire during a Hipshoot Mission (Section-Platoon)
	07-3-3054	Approved	Fire a Mortar Adjust Fire Mission (Section-Platoon)

**Prerequisite Collective Tasks**

Step ID	Task ID	Status	Title
No prerequisite collective tasks specified			

**Supporting Drill Tasks**

Step ID	Drill ID	Status	Drill Title
	07-4-D9290	Approved	Perform Direct Alignment of a Carrier-Mounted Mortar
	07-4-D9339	Approved	Fire a Mortar

**OPFOR**

Task Number	Title	Status
71-0-0014	Disruption	Approved

**REFERENCES**

Step Number	Reference ID	Reference Name	Required	Primary
	ATTP 3-21.90	Tactical Employment of Mortars	Yes	No
	FM 3-22.90	Mortars	Yes	Yes

## Training Setup

A mortar firing range or training area with sufficient mask and overhead clearance.

## Training Facilities

Facility ID	Facility Name	Facility Type
No Training Facilities		

## DODIC

DODIC	Name	Qty
No DODIC		

## Associated Documents

Media ID	Media Type	Title	Subtitle
No Associated Documents			

## GLOSSARY TERMS

Glossary Term	Definition
No glossary terms specified	

## ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
No acronyms/abbreviations specified	