

---

## APPENDIX F

### FIRE WITHOUT AN FDC AND EMERGENCY ENGAGEMENT TECHNIQUES

**Fire with an FDC increases the effectiveness of the mortar section. The section sets up and operates an FDC whenever it occupies semipermanent positions or makes a long halt. The FDC influences the outcome of the battle by massing mortar fires, by furnishing prearranged fires during reduced visibility, by lifting and shifting fires, by effecting time-on-target missions, or by providing fire support to other units within range. However, the mortar section must constantly be prepared to engage targets using fire without an FDC. Fire with an FDC is not always possible or desirable. The mortar section can be effective without using an FDC if the members are trained to do so.**

#### F-1. DIRECT-ALIGNMENT METHOD

The direct-alignment method engages targets without an FDC. The squad leader or an FO positions himself on the gun-target line between the target and the mortar so that he can see both. Corrections are made with respect to the gun-target line rather than the observer-target line. The light mortar squad can often use direct-alignment effectively. (See FM 23-90 for a detailed explanation of the direct-alignment method of mortar fire control.)

#### F-2. DIRECT-LAY METHOD

The direct-lay method engages targets without the use of an FDC. The mortar squad leader controls the fire of his squad when directly engaging a target that can be seen from the mortar's position. He estimates the range to the target and determines the charge and elevation to fire. The gunner uses the burst-on-target method of adjusting subsequent rounds.

a. All mortar squads must be able to conduct direct-lay fires. Although light and medium mortar sections are the most likely to use it, heavy mortars also use direct-lay to attack targets that appear suddenly.

(1) Light and medium mortar sections may use direct-lay to support platoons conducting combat patrols or to provide immediate suppressive fires during surprise engagements. Bringing the light mortar section into action using direct-lay in the hand-held mode is faster than any other method.

(2) Heavy mortars use direct lay to engage targets from alternate or supplemental positions or targets that appear suddenly and require immediate attack.

b. The section's SOP should establish the amount of ammunition to be carried ready for use in direct-lay. The extra increments can be carried in an empty ammunition canister and safely stored for reattachment. The section SOP should also state the fuze setting for this ready ammunition. An impact (IMP) setting usually provides the easiest rounds, to adjust, but proximity (PRX) or near-surface burst (NSB) settings are the most effective for immediate suppression of enemy fire.

### **F-3. HIP-SHOOT MISSION**

A hip-shoot mission is an emergency occupation of an unprepared firing position to respond to a call for fire received while the mortar section is moving. The two types of hip-shoot missions are *immediate suppression* and *adjust fire*. Normal procedures used to occupy a firing position and to lay the mortars are modified during a hip-shoot mission. The key to success in a hip shoot is the platoon leader or section sergeant. He must control the action closely. However, if he assumes too many key functions, too much time may be lost for the mission to be successful. The leader must know where he is at all times during movement. He should always look for possible hip-shoot positions by map and visual inspection.

a. When the platoon leader or section sergeant receives a call for fire, he--

(1) Ensures the call is authentic.

(2) Ensures FDC personnel monitored the call.

(3) Notifies the driver, if applicable.

(4) Signals the convoy, if applicable.

(5) Selects a firing position and passes the coordinates to the FDC personnel.

(6) Determines the best method to lay the mortars and announces it to the squad leaders.

The FDC determines the direction of fire and starts computing initial data.

b. Data must be passed quickly and efficiently. Radio is often the fastest and most efficient. Wire can be used if the platoon internal wire system is designed for rapid emplacement. In the absence of wire, use runners to obtain data as they become available. For example, as each nonadjusting mortar is emplaced, a runner moves to the aiming circle for his deflection. Another runner obtains the firing data from the FDC. On completion of the hip-shoot mission, the tactical situation dictates whether the section moves on or continues position improvement.

c. Few tactical activities require more teamwork than a hip-shoot. Everyone must know his job (drivers, gunners, computers, RATELOs) and do it automatically. If success depends on a leader shouting commands and directives to untrained personnel, the mission will fail.

d. Immediate suppression requires rounds in the target area as quickly as possible to minimize friendly casualties. Speed takes precedence over precise accuracy. When this type call for fire is received while moving, the mortar element positions itself and lays the guns rapidly using whatever means available.

#### **F-4. ADJUST-FIRE MISSION**

When an adjust-fire mission is received while moving, a conducted as follows:

a. The element leader moves into a suitable firing hip shoot is position and roughly aligns his vehicle on the direction of fire (as previously described for the immediate suppression mission). The squads pull into position in the directed formation and prepare to lay their mortars.

b. The element leader sets up and orients the aiming circle on the direction of fire determined by the FDC.

c. The base piece is laid using standard reciprocal-lay procedures and fires the first round at the charge and elevation directed by the FDC.

d. The base piece gunner levels up on the aiming circle and announces, "Base piece ready for recheck."

e. The aiming circle operator confirms the lay of the base piece and commands REFER TWO EIGHT ZERO ZERO (OR AS SOP OR FDC DIRECTS), PLACE OUT AIMING POSTS.

f. The base piece crewman places out aiming posts and continues to adjust under the direction of the FDC while the aiming circle operator resumes laying the remaining mortars.

g. After the mortars are laid, mortar squads place out aiming posts on the referred deflection and begin following the mission from that point on.

h. Both of the methods described for the immediate suppression hip shoot can be used to conduct an adjust-fire hip-shoot; however, the nature of adjust fire allows time to use an aiming circle for more accurate fires. The other methods are used when an aiming circle is not available.