

PART ONE

INTRODUCTION AND FUNDAMENTALS OF MORTAR GUNNERY

CHAPTER 1

INTRODUCTION

The mission of the mortar platoon is to provide close and immediate indirect fire support for the maneuver battalion and companies.

1-1. ORGANIZATION

Mortars are organized as part of a company and battalion. They are either sections or platoons in airborne, ranger, air assault, light infantry companies, and cavalry troops. They are organized as platoons in all tank and infantry mechanized battalions. Regardless of the organization to which they belong, mortars have the battlefield role of providing the maneuver commander with immediate indirect fires. They can fulfill that mission when all of the elements responsible for placing effective mortar fire on the enemy are properly trained.

1-2. GENERAL DOCTRINE

Doctrine demands the timely and accurate delivery of indirect fire to meet the needs of supported units. All members of the indirect fire team must be thoroughly indoctrinated with a sense of urgency. They must strive to reduce, by all possible measures, the time required to execute an effective fire mission.

a. For mortar fire to be effective, it must be dense enough and must hit the target at the right time with the right projectile and fuze. Good observation is required for effective mortar fire. Limited observation results in a greater expenditure of ammunition and less effective fire. Some type of observation is desirable for every target to ensure that fire is placed on the target. Observation of close battle areas is usually visual. When targets are hidden by terrain features or when great distance or limited visibility is involved, observation may be radar or by sound. When observation is possible, corrections can be made to place mortar fire on the target by adjustment procedures; however, lack of observation must not preclude firing on targets that can be located by other means.

b. Mortar fire must be delivered by the most accurate means that time and the tactical situation permit. When possible, survey data will be used to accurately locate the mortar position and target. Under some conditions, only a rapid estimate of the relative location of weapons and targets may be possible.

c. To achieve the most effective massed fires, units should conduct a survey using accurate maps of each mortar position and registration points and targets. The immediate objective is to deliver a large volume of accurate and timely fire to inflict as many casualties as possible on the enemy. The number of casualties inflicted in a target area can usually be increased by surprise fire. If surprise

massed fires cannot be achieved, the time required to bring effective fires on the target should be kept to a minimum.

d. The greatest demoralizing effect on the enemy can be achieved by the delivery of a maximum number of rounds from all the mortars in a mortar section or platoon in the shortest possible time.

e. Mortar units must be prepared to handle multiple fire missions. They can provide an immediate, heavy volume of accurate fire for sustained periods. Mortars are area fire weapons; however, units can employ them to neutralize or destroy area or point targets, to screen large areas with smoke for sustained periods, or to provide illumination.

f. In the armor and mechanized infantry battalions, units can normally fire mortars from mortar carriers. However, mortars maintain their ground-mounted capability. Firing from a carrier permits rapid displacement and quick reaction to the tactical situation.

1-3. INDIRECT FIRE TEAM

Indirect fire procedures are a team effort (Figure 1-1). They include locating the target, determining firing data, applying data to the mortar, and preparing the ammunition. Since the mortar is normally fired from the defilade (where the crew cannot see the target), the indirect fire team gathers and applies the required data. The team consists of a forward observer (FO), a fire direction center (FDC), and a mortar squad.

a. The team mission is to provide accurate, timely response to the unit it supports. Effective communication is vital to the successful coordination of the efforts of the indirect fire team.

b. The forward observer (FO), as part of the fire support team (FIST), is normally provided by a direct support (DS) artillery battalion. One 4-man FO team supports each mechanized infantry company. The light infantry company is supported by a 10-man company-level FO team. The team is composed of a lieutenant, a staff sergeant, a radio-telephone operator, a driver with a HMMWV at company headquarters, and six FOs (one 2-man team for each infantry platoon in the company). The FO's job is to find and report the location of targets, and to request and adjust fire.

c. The FDC has two computer personnel in each section (except the 60-mm squad, which does not have assigned FDC personnel) who control the mortar firing. They convert the data from the FO in a call for fire into firing data that can be applied to the mortar and ammunition.

d. Mechanized infantry and armor mortar squads consist of one squad leader, one gunner, one assistant gunner, and one ammunition bearer. Airborne, air assault, and light infantry squads in the battalion mortar platoon consist of one squad leader, one gunner, one assistant gunner, and two ammunition bearers. At company level, these light units have two 3-man sections consisting of one section sergeant, one squad leader, two gunners, and two assistant gunners. The squad lays the mortar and prepares the ammunition, using the data from the FDC fire command. When the data have been applied, the mortar squad fires the mortar. The squad must also be able to fire without the FDC.

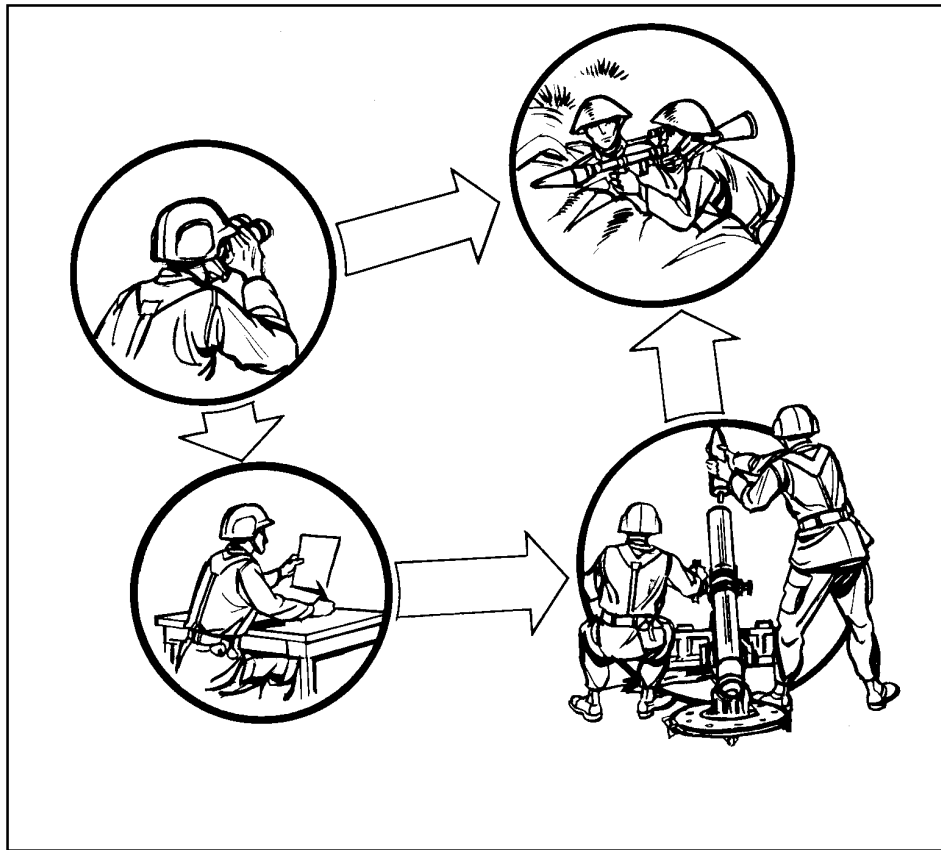


Figure 1-1. The indirect fire team.

1-4. MORTAR POSITIONS

Units should employ mortars in defilade positions when possible to protect mortars from the enemy direct fire and observation. These positions can also take the greatest advantage of the indirect fire role of mortars.

a. The use of defilade precludes sighting the weapons directly at the target (direct lay). This is necessary for survivability.

b. Mortars are indirect fire weapons. Therefore, special procedures ensure that the weapon and ammunition settings used will cause the projectile to burst on or at the proper height above the target. A coordinated effort by the indirect fire team also ensures timely and accurate engagement of targets.

c. The steps used in applying the essential information and engagement of a target from a defilade position are as follows:

- (1) Locate targets and mortar positions.
- (2) Determine chart data (direction, range, and VI from mortars to targets).
- (3) Convert chart data to firing data.
- (4) Apply firing data to the mortar and to the ammunition.
- (5) Apply FO corrections and firing for subsequent rounds until an FFE is achieved.