

CHAPTER 7

Fire Control and Distribution

The light cavalry unit will probably face a numerically superior force on the battlefield. To ensure the defeat of the enemy, the efficient use of available firepower is a must. How to use firepower efficiently can be trained through crew drills that emphasize proper use of fire commands and techniques of fire.

Principles of Fire Control and Distribution

Fire control and distribution is achieved through the proper use of boundaries, fire plans, pyrotechnics, and weapons-ready posture. In movement to contact, information about the enemy is scarce; therefore, proper use of fire control and distribution becomes increasingly important.

STANDING OPERATING PROCEDURES

A well-rehearsed platoon SOP ensures quick reaction times. Area coverage responsibilities, and weapons-ready postures for different situations (such as road marches, halts, and various battle drills) should be in the SOP. Battalion/squadron or troop SOPs should prescribe the combat load of ammunition, by type and amount. The section leader should prescribe the weapons-ready posture (battlecarry) that makes the best use of available firepower in the present situation.

Situations the section leader should plan for when forming his section SOPs (see ARTEP 17-57-10-MTP) are—

- Actions on contact.
- Reaction to ambush.
- Reaction to air attack.
- Deliberate ambush.
- Reaction to artillery strike.

The section should be prepared to engage personnel carriers and suppress ATGMs with machine guns and to engage tanks with TOWs. (TOWs can also be used on BMPs at long ranges.) TOWs are fired from covered and concealed positions. The weapons-ready posture may have to be adjusted, or ammunition redistributed, after an engagement to make sure that vehicles have the ammunition or missiles needed.

FIRE PLANNING MEASURES

Fire control and distribution measures must be simple and clear. Their use must be routine, with no need for detailed or lengthy instruction. A description of some simple measures that can be used to distribute and control fires effectively follows.

Sector of Fire and Engagement Area

Each crew or section is assigned a specific area (sector of fire) to cover. The sector of fire must be covered by observation and fire. A sector of fire is designated by easily recognizable terrain features (such as roads, streams, hills, or ridgelines) that outline the sector.

Each sector of fire can extend from a firing position to the maximum engagement range of the weapons on the vehicle, or it can be an enclosed area away from the firing position (an engagement area). If a weapon is assigned an enclosed sector (engagement area), the terrain between the sector of fire and the firing position must be covered by other weapons (such as those of tanks or rifle teams).

In most situations, the terrain and the number and type of weapons available to cover an area will dictate how sectors of fire are assigned. Sectors should be assigned so an area is completely covered with the appropriate type of fire and mutual support is established among the vehicles in the area. To ensure mutual support, each vehicle is assigned a primary sector of fire and a secondary sector of fire corresponding to another vehicle's primary sector of fire.

Fire is shifted to the secondary sector, on order, when there are no targets in the primary sector or to cover another vehicle (for example, when a vehicle is forced to move to an alternate position or is out-of action to reload its weapons).

If a mounted avenue of approach is narrow, or if there is a need to concentrate the fires of an entire platoon in a critical area (such as a choke point), overlapping sectors of fire can be assigned. Because this increases the problem of control and the probability of target overkill, additional control measures (such as engagement priorities, fire patterns, or TRPs) are needed. Vehicle commanders must select positions that allow them to observe and coordinate fires.

Target Reference Points

A TRP is an easily identifiable point on the ground—natural or man-made. It is used to designate targets of opportunity, shift fire, or assign sectors of fire.

In the defense, TRPs are assigned for vehicles along avenues of mounted approach. In the offense, TRPs are assigned on likely enemy locations or on prominent terrain features. To avoid confusion, the number of TRPs should be limited to the number required to distribute and control fire.

When using a TRP to hand off targets, compass directions—north, east, south, west—are used rather than right or left because each vehicle may be viewing the TRP from a different direction.

TRPs are indirect-fire targets that may also help control direct fires. The FIST will assign each TRP a target identification number. The target identification number consists of two letters and four numbers (for example, AB5010). These identification numbers are recorded on range cards in the data section for easy reference and control. To simplify fire commands, TRPs may be referred to by the last three digits (for example, TRP AB5010 may be referred to as TRP 010).

Phase Lines

A phase line is a simple and effective linear control measure normally used to control movement; it can also be used to control and distribute the fire of several widely separated vehicles. The section leader uses phase lines to indicate to his crews when to fire and when to displace to an alternate position. Any prominent (natural or man-made) linear terrain feature—ridgeline, river or stream, road, or railroad track—can be used as a phase line.

In either offensive or defensive operations, phase lines can be used to start or stop firing simultaneously, shift fire to another sector, or indicate when vehicles are to move to alternate or supplementary positions.

Engagement Priorities

Targets that present the greatest threat and break the momentum of an attack (such as command vehicles, mine-clearing vehicles, and bridging vehicles) should be engaged first. Usually, targets seen in formations on the battlefield will be of various types (such as tanks, personnel carriers, and air defense vehicles). Engagement priorities are used when no sectors of fire have been assigned and when overlapping sectors of fire have been designated.

FIRE PATTERNS

There are three basic fire patterns that can be used to distribute the section's fire when multiple targets appear and no other measures have been assigned—frontal fire, cross fire, and depth fire.

Frontal fire is used when targets are positioned in front of the vehicles in a lateral configuration. The section leader fires first to delineate sectors of fire. The left flank vehicle engages the left-most target; the right flank vehicle engages the right-most target. As targets are destroyed, friendly fires are shifted toward the center of the enemy formation.

Cross fire is used when targets are positioned laterally and obstructions prevent vehicles from firing to the front. The section leader fires first to delineate sectors of fire. The left wing vehicle engages the right-most target; the right wing vehicle engages the left-most target. As targets are destroyed, vehicles automatically shift their fires toward the center of the enemy formation.

Depth fire is used when targets are in a column configuration. The section leader fires first to delineate sectors of fire. The left wing vehicle engages the target farthest to the rear; the right wing vehicle engages the closest target. As targets are destroyed, vehicles shift fires to the center of the enemy formation.

Figure 7-1. Frontal Fire.

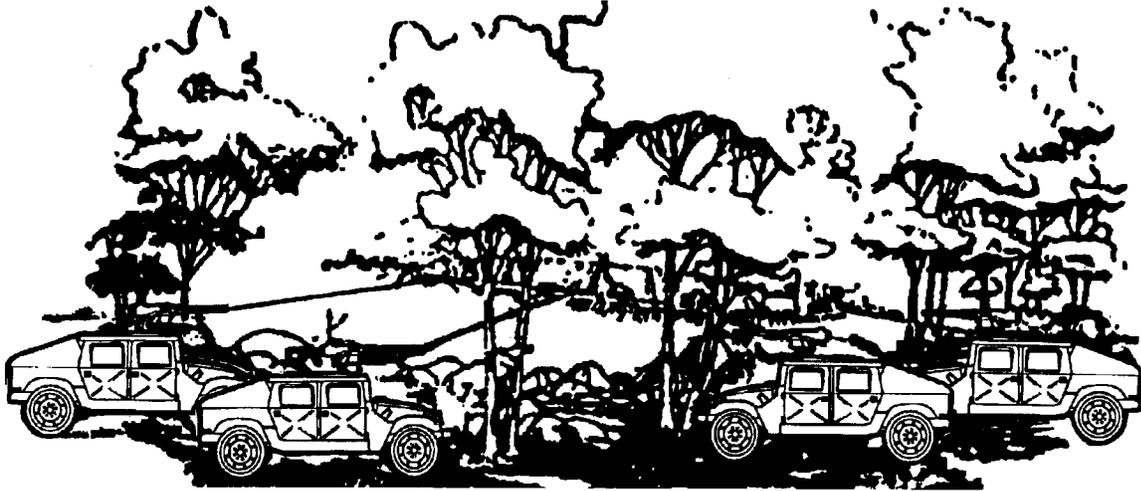


Figure 7-2. Cross Fire.

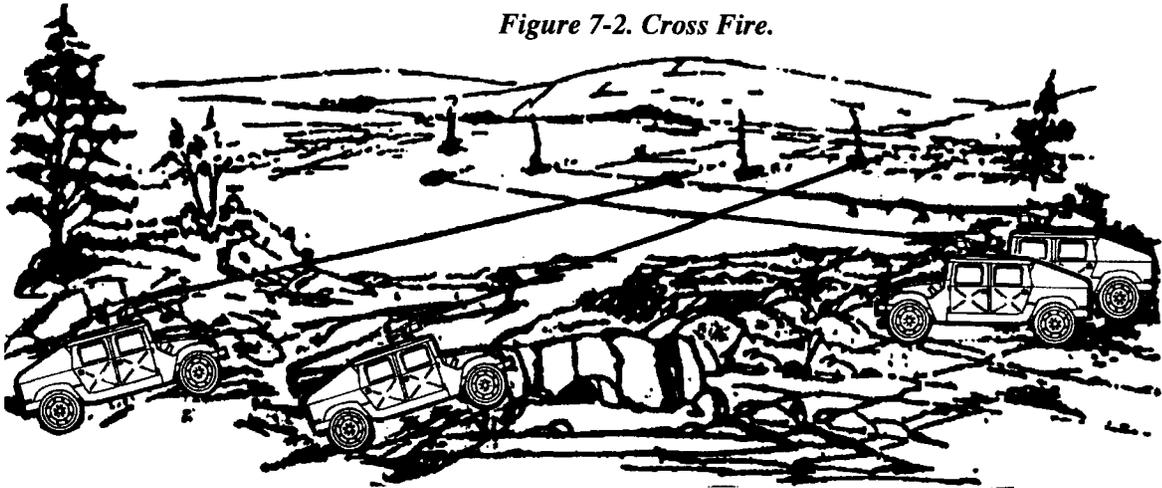
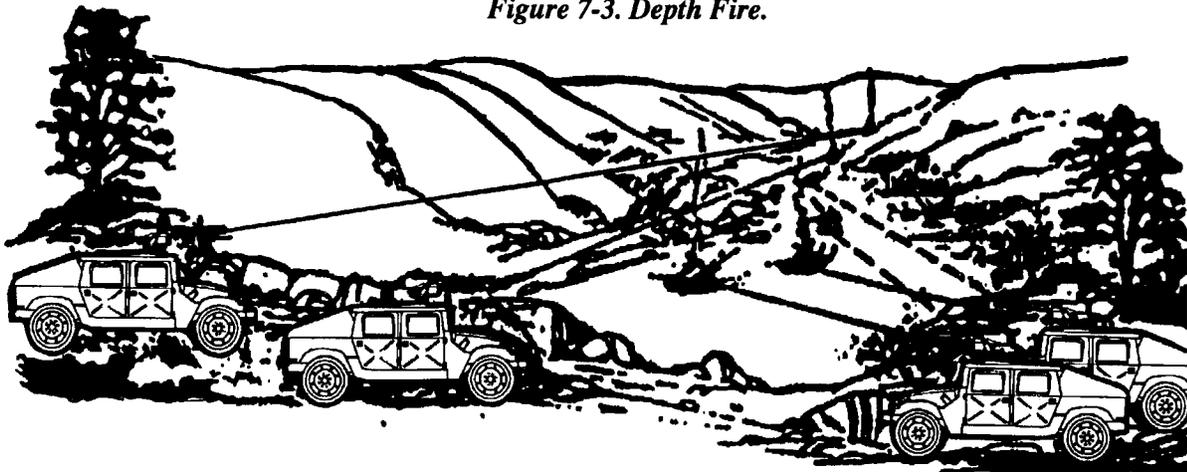


Figure 7-3. Depth Fire.



Section Fire Control

While mounted, one of the following three methods of fire control may be used.

SIMULTANEOUS FIRE

Simultaneous fire is used when all vehicles of a section are firing into their assigned sectors at the same time. This technique is used when moving unprotected or when surprised by many enemy vehicles, requiring immediate massed fires.

OBSERVED FIRE

In observed fire, the firing vehicle of a section engages targets while its wingman (nonfiring) vehicle observes the effects of the fire and helps to spot and call fire corrections. The wingman (nonfiring) vehicle is also responsible for local security while the firing vehicle concentrates on the engagement area. If a weapon malfunctions or ammunition is low, the wingman (nonfiring) vehicle immediately assumes firing duties. This technique is also used when one (firing) vehicle has a target in its sector and the other (wingman) vehicle does not have targets in its sector. This technique is normally used when vehicles are in protected defensive positions and firing at or near maximum range of their weapon systems.

ALTERNATING FIRES

Alternating fires allow one vehicle to shift firing positions while the other engages targets. This method provides constant fire into the engagement area while hindering the enemy's attempts to acquire and suppress firing vehicles. (In the defense, continuous fire from the same location will allow the enemy to locate the vehicle's position.) At extended ranges (at least 1,100 meters) the vehicles can alternate firing and observing until both are satisfied they are delivering effective fire. At this point, simultaneous fires can be employed.

Section Fire Planning

Section fire planning begins when the section leader receives a mission. It is an integral part of the section leader's troop-leading procedures. Fire planning is a continuous process. It does not stop until the section mission is accomplished. The primary goal of fire planning is to prescribe how fire is to be distributed and controlled to best support the scheme of maneuver. The section fire plan provides the section leader the information he needs to distribute and control the fire of all available weapons. Fire planning also includes indirect fires.

DEFENSIVE FIRE PLANNING

Defensive fire planning is normally deliberate and detailed because sufficient time is available to consider the following:

- Individual vehicle targets.
- Section targets.

- Indirect fire targets.
- Fire distribution and control measures.
- Alternate firing positions.

To develop a defensive fire plan, the section leader—

- Assigns primary, alternate, and supplementary firing positions to each vehicle, and assigns to each position a primary and secondary sector of fire.
- Designates possible section point or area targets and other control measures (such as TRPs and RPs, phase lines, or target priorities) to coordinate the fire when more than one vehicle is firing into the same target area or sector.
- Receives information from vehicle commanders (provided on sector sketches and individual weapon range cards). The section leader then reviews this information to ensure that fire is properly distributed across the entire section sector and that sufficient control measures are met. This will assist the section leader in determining if positions must be adjusted, minefield and obstacles emplaced, and additional indirect-fire support requested.
- Completes the section fire plan and, if practical, gives a copy of the section sector sketch to the platoon leader and has each vehicle commander make a copy of the sector sketch. (If time is short, he may only be able to give the vehicle commander a quick briefing on the sector sketch.)

OFFENSIVE FIRE PLANNING

In offensive fire planning, time is normally not available to plan fire in the same detail as in defensive fire planning. The section leader relies more on fire commands and prearranged SOP signals to bring effective fire on enemy targets rapidly. Offensive action requires planning. A section leader must plan how to engage known or suspected enemy targets, where suppressive fire may be needed, and how to control section fires against both planned targets and targets of opportunity.

Scout Section Fire Commands

Speed and accuracy are vital when engaging targets; therefore, commands must be clear and concise. In the stress of battle, the section leader or vehicle commander must analyze a situation quickly and issue concise and complete fire commands without delay.

The following is an extract of sample Signal Operation Instructions (SOI) identifying scout section fire commands.

Extract	Abbreviated Call Sign
Section	C5T
Section Leader	C5T40
1st Squad	C5T41
2d Squad	C5T42
3d Squad	C5T43

A standard format for section fire commands ensures that all necessary information is given in minimum time, even under the worst conditions. The elements of a section fire command issued in proper sequence are—

Element	Example
Alert:	“TANGO—THIS IS TANGO FOUR ZERO—
Weapon/ammunition (optional):	MISSILE—
Description:	TWO BMPs, ONE TANK—
Direction (optional):	EAST OF TRP ZERO ZERO FOUR—
Control (optional):	DEPTH—
Execution:	AT MY COMMAND—FIRE.”

Note. Weapon/ammunition may be given when tanks and BMPs appear together. Control maybe given to identify the fire pattern to be used by the section. The following are examples of section fire commands.

1. Section leader’s fire command to engage trucks with all vehicles of the section.

“TANGO (complete section)—
THIS IS TANGO FOUR ZERO—
FIRE MISSION (optional)—
FOUR TRUCKS—
FRONT—TWO HUNDRED (optional)—
CROSS (optional)—
FIRE.”
2. Section leader’s fire command to engage moving trucks and dismounted infantry.

The section leader alerts the entire section, indicating that he wants all vehicles to fire, but specifying that the second squad will engage the infantry. The other vehicles will engage the trucks.

“TANGO—THIS IS TANGO FOUR ZERO—
TRUCKS AND INFANTRY—
FIRE MISSION TRUCKS (optional)—
TANGO FOUR TWO—
TROOPS—
FRONT (optional)—
FIVE HUNDRED (optional)—
FIRE.”
3. Section leader’s command to end the engagement.

“TANGO—THIS IS TANGO FOUR ZERO—
CEASE FIRE.”