TC 3-20.31-043

CONDUCT OF FIRE

OCTOBER 2024

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CONDUCT OF FIRE

Contents

Page

Preface ..... **v**
Introduction ..... **vii**
CHAPTER 1 ..... **1**
FIRE COMMANDS **1**
Process 1
Elements 2
Terms 6
Types 12
CHAPTER 2 ..... **25**
ALERT **25**
Overview 25
Alerts During Initial Fire Command 28
Alerts During Subsequent Fire Commands 29
Alerts During Supplemental Fire Commands 31
Alerts When the Vehicle Commander is the Firer 33
CHAPTER 3 ..... **39**
WEAPON OR AMMUNITION **39**
Overview 39
Commands 39
CHAPTER 4 ..... **41**
TARGET DESCRIPTION **41**

Overview 41
Reengage 44
CHAPTER 5 45
METHOD 45
Overview 45
Engagement Prioritization 46
Modifier 47
Engagement Techniques 48
Fire Pattern 52
CHAPTER 6 55
LOCATION 55
Overview 55
Direction 56
Elevation 58
CHAPTER 7 61
RANGE 61
Overview 61
Known Range Method 62
Estimated Range Method 62
CHAPTER 8 65
CONTROLS 65
Overview 65
Delay 66
Engagement Criteria 66
Weapon Control Status 67
Rules of Engagement 71
CHAPTER 9 73
EXECUTION 73
Overview 73
Commands 73
CHAPTER 10 81
EFFECTS 81

Overview 81
Sensing 83
Kill Indicators 87
Level of Destruction 87
CHAPTER 11 89
TERMINATION 89
Overview 89
Leader Issued 90
Soldier Issued 90
Higher Authority Issued 91
Glossary 93
References 97
Index 99

Figures

Introductory figure-1. Kill chain—engage (conduct of fire) vii
Figure 1-1. Elements of a fire command 3
Figure 1-2. Relationship of the standardized elements of the fire commands across echelons, example 5
Figure 1-3. Conduct of fire (fire command) flow, example 13
Figure 1-4. Reengage fire command, example 16
Figure 1-5. Reengaging fire command, example 17
Figure 1-6. Standard adjustment example 19
Figure 1-7. Simultaneous engagement example 23
Figure 2-1. Alert element examples, crew platforms 26
Figure 2-2. Alert element examples, main gun vehicle commander as firer 26
Figure 2-3. Alert element examples, collective 27
Figure 2-4. Contact report as alert element, example 28
Figure 2-5. Primary firer as alert element, example 28
Figure 2-6. Sensing as an alert element subsequent fire command, example 30
Figure 2-7. Sensing as alert element, example 31
Figure 2-8. Sensing as alert and change of weapon, example 32
Figure 2-9. Weapon as alert element, example 33
Figure 2-10. Load ammunition alert element, Abrams example 35
Figure 2-11. From my position alert element, example 36
Figure 2-12. Watch my tracers alert element, example 37
Figure 3-1. Weapon or ammunition elements, examples 40
Figure 4-1. Target description element, examples 42

Figure 4-2. Target description actions, example 43
Figure 5-1. Target array method, example 47
Figure 5-2. Point fire, example 48
Figure 5-3. Examples of area fire 49
Figure 5-4. Fire pattern methods, example 52
Figure 6-1. Location element, examples 56
Figure 6-2. Terrain levels, example 59
Figure 7-1. Range element, examples 61
Figure 8-1. Weapon control status 67
Figure 8-2. Weapon safety status and general descriptions 67
Figure 8-3. Weapon posture framework 70
Figure 9-1. Examples of execution elements 74
Figure 9-2. Execution command to fire, example 75
Figure 9-3. Execution command to fire and adjust, example 76
Figure 9-4. Execution command to fire, weapons free, example 77
Figure 9-5. Execution command to fire, fire (ammunition), example 78
Figure 9-6. Execution command to fire, fire (weapon), example 79
Figure 9-7. Execution command to suppress, example 80
Figure 10-1. Effects on target concepts, example 83
Figure 10-2. Examples of sensing 86
Figure 11-1. Termination command 89

Preface

TC 3-20.31-043 provides the standardized direct fire engagement process for crews, teams, squads, and small units. It provides principles coordinating the actions of these entities for establishing cohesion through a common, standardized engagement process. The concepts described in TC 3-20.31-043 are applicable to all direct fire weapons, weapon systems, and small units in the Armored brigade combat team, Stryker brigade combat team, and Infantry brigade combat team.

The principal audience for TC 3-20.31-043 is all members of the profession of arms. Commanders and staffs of Army headquarters serving as joint task force or multinational headquarters should also refer to applicable joint or multinational doctrine concerning the range of military operations and joint or multinational forces. Trainers and educators throughout the Army will also use this publication.

Commanders, staffs, and subordinates ensure that their decisions and actions comply with applicable United States, international, and in some cases, host-nation laws and regulations. Commanders at all levels ensure that their Service members operate in accordance with the law of armed conflict and the rules of engagement. (See FM 6-27 for legal compliance.)

TC 3-20.31-043 uses joint terms where applicable. Selected joint and Army terms and definitions appear in the text and glossary. Terms supporting TC 3-20.31-043 are marked with an asterisk (*) in the glossary. When first defined in the text, these supporting terms are boldfaced and italicized, and definitions are boldfaced. When first defining other proponent definitions in the text, the term is italicized with the proponent publication designator and number at the end of the definition. Following uses of the term are not italicized.

TC 3-20.31-043 applies to the Active Army, Army National Guard/Army National Guard of the United States, and the United States Army Reserve unless otherwise stated.

The proponent for TC 3-20.31-043 is the Maneuver Center of Excellence. The preparing agency is the Department of Tactics, Training and Doctrine (DOTTD). Send comments and recommendations on DA Form 2028 (*Recommended Changes to Publications and Blank Forms*) to Commander, United States Army Maneuver Center of Excellence and Fort Moore, ATZK-TDD (TC 3-20.31-043), 1 Karker Street, Fort Moore, GA 31905-5410; by email to usarmy.moore.mcoe.mbx.doctrine@army.mil; or submit an electronic DA Form 2028.

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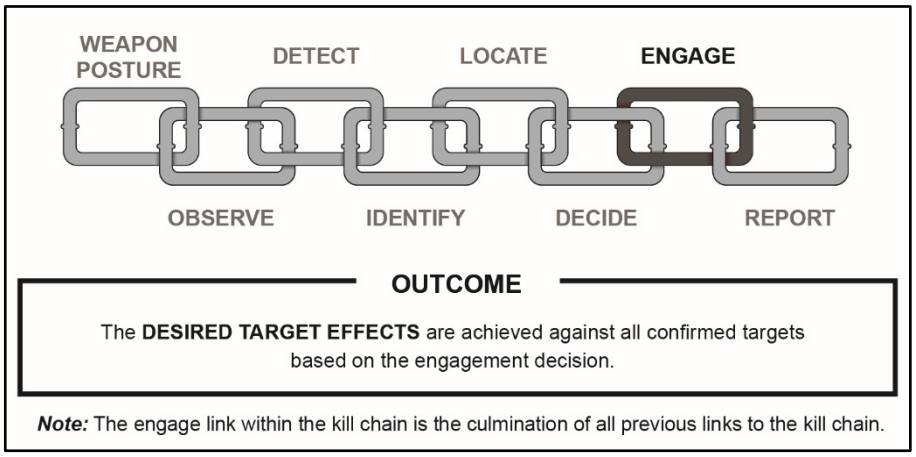
Introduction

The goal of the direct fire kill chain is to provide a standardized description of all tasks and actions taken by a firer, team, squad, crew, or platoon employing direct fire weapon systems. This allows Soldiers and leaders to maximize the effects of lethal fires against any threat while simultaneously reducing or eliminating fratricide and collateral damage. The conduct of fire lies within the engage link of the kill chain. The conduct of fire describes the elements, terms, and types of a fire commands for the squad, crew, and collective elements. This is the framework for applying direct fire against a confirmed threat.

This training circular provides a significant amount of commonality across mounted weapon platforms, small teams, squads, and collective small units. The terms “leader” or “vehicle commander” or “VC” are used to identify the appropriate position of authority to deliver a command of execution to subordinates. When clarity is required, an addition of a specific position is identified.

PURPOSE

Once the leader has made an engagement decision to employ organic direct fire against the confirmed threats, the team, crew, squad, or small unit enters the engage link of the kill chain. This link provides the conduct of the engagement, termed the conduct of fire. The leader then issues a fire command, which is standardized format containing up to nine elements used by a team or crew to deliver direct fire against a threat to eliminate or reduce the threat dilemma present (see figure introduction-1).



Introductory figure-1. Kill chain—engage (conduct of fire)

To understand the concepts presented within this training circular, certain terms must be understood for context. The terms are—

- ***Conduct of fire*** **is the specific orders, directions, phrases, terms, modifiers, actions, reactions, responses, and assessments used by two or more Soldiers with synchronized efforts to defeat a threat or threats with direct or indirect fires. Commonly referred to as "fire commands."**
- ***Fire command*** **is a standardized format containing up to nine (9) elements used by a team or crew to deliver direct fire against a threat.**
- ***Engaged target*** **is a threat that has been struck or received direct fires, but the round(s) did not achieve the desired effect.**
- ***Serviced target*** **is a target that has been struck by direct fire and achieved the desired effects.**
- ***Confirmed target*** **is a detected object that has been interrogated sufficiently to identify its model, variant, or common name, and discriminated as foe.**
- ***Discriminate*** **is the determination whether a target is friend, foe, neutral, noncombatant, or unknown.**
- ***Previously engaged target*** **is a known target that has received direct fires from the same firer or element within an ongoing engagement.**
- ***Engagement*** **is a series of one or more targets that receive direct fire from a firer, team, crew, or small unit to alter the threat's engagement decision process against a friendly force. An engagement begins with an initial fire command, may contain one or more subsequent and/or supplemental fire commands, and ends with a termination command.**
- ***Engagement sequence*** **is the order in which multiple targets are engaged with direct fire. The engagement sequence may be directed during the conduct of fire or follow standard target prioritization rules of thumb.**

Note. Refer to the vehicle crew evaluator exportable package for more information on the elements of the fire command, their proper use, and audio examples downloadable from Vehicle Crew Evaluators on milSuite.

Chapter 1

Fire Commands

This chapter provides standardized methods for directing and controlling direct fire delivered by the Soldier, team, squad, vehicle, section, and platoon. The engage process covers the procedures used from the time targets are acquired, through the placement of direct fires on those targets, to the evaluation of the effects of those fires. Considerations for fire distribution and control during offensive and defensive operations are included.

PROCESS

1-1. ***Conduct of fire*** **provides the specific orders, directions, phrases, terms, modifiers, actions, reactions, responses, and assessments used by two or more Soldiers with synchronized efforts to defeat a threat or threats with direct or indirect fires** and referred to as "fire commands." The process of the conduct of fire enables leaders to use the fire commands to smoothly deliver lethal fires in an organized manner. During training, firers and small units are evaluated on their proper application of the conduct of fire. This ensures all members of a collective firing element are trained to the same standards and allows for rapid integration of new personnel into the organization to reduce or eliminate confusion during engagements.

1-2. Within an engagement, a leader may use up to three types of fire commands: initial, subsequent, and supplemental. The term "engagement" is used frequently during training and combat operations. It has specific meaning within the kill chain in its relationship to the delivery of direct fire. ***Kill chain*** **is a deliberate, ongoing series of interconnected tasks, actions, or functions that enable the application of the appropriate combat power on a confirmed threat rapidly and effectively in order to achieve the desired tactical effects on target.**

Note. An ***engagement*** **is a series of one or more targets that receive direct fire from a firer, team, crew, or small unit to alter the threat's engagement decision process against a friendly force. An engagement begins with an initial fire command, may contain one or more subsequent and/or supplemental fire commands, and ends with a termination command.** An ***initial fire command*** **initiates a direct fire engagement on a target.** The initial fire command may contain one or more subsequent and/or supplemental fire commands**.**

All direct fire engagements are initiated with a fire command.

1-3. A ***fire command*** **is a standardized format containing up to nine (9) elements used by a team or crew to deliver direct fire against a threat.** A ***confirmed target*** **is a detected object that has been interrogated sufficiently to identify its model, variant, or common name and discriminated as foe.** ***Discriminate*** **is the determination whether a target is friend, foe, neutral, noncombatant, or unknown.** A fire command is used to coordinate the firing elements efforts, reduce confusion, control, and synchronize the conduct of the firing of weapons. This enables a rapid and efficient engagement and provides a standard basis for all direct fire engagements, referred to as "conduct of fire."

1-4. The small unit leader or vehicle commander (known as VC) is overall responsible for the conduct of fire during all engagements. The firer is responsible for all rounds fired from their weapon or weapon systems.

ELEMENTS

1-5. Within the fire commands are a series of standard elements. The elements are used to synchronize effort, understanding, and cohesion of the small unit.

1-6. Engagements utilize fire commands to describe the conduct of fire. The fire command contains up to nine distinct elements that answer specific questions about the firing event. The nine elements of a fire command are—

- Alert (who is firing).
- Weapon/ammunition (what weapon/ammunition is used).
- Target description (what targets are being engaged).
- Method (how to engage the target).
- Location (where is the target).
- Range (estimated range to target).
- Controls (synchronize to mass effects).
- Execution (when to fire).
- Effects (evaluate the effects).

1-7. Elements of the fire command are the building blocks of engagements. Nine elements are at the core of every fire command. Not all elements are specifically announced in every firing occasion; however, they are typically all provided vocally, visually, or by the fire control system automatically. The tactical situation or the firing element's capabilities may provide conditions where a required element is known, understood, or automatically induced into the firing system and becomes optional. Some elements may be provided by the unit's battlecarry standard operating procedures (SOPs), such as default firer or weapon ammunition type. ***Battlecarry*** **is a posture in which a vehicle is prepared for an engagement at all times**. The primary weapon is loaded with the designated ammunition type, the fire control system is set to fire the selected ammunition type, and a predetermined battlesight range has been applied to the system. Standard terminology and a logical sequence are used to achieve effectiveness and speed of engagement.

1-8. These nine elements (see figure 1-1) standardize the fire commands for dismounted small teams and units, crews, sections, and platoons. It places them in a logical, effective order so that a collective fire command from a platoon leader can rapidly transition to a squad leader's fire command to the squad.

Fire Command Elements	
ALERT	
The ALERT notifies the element of a pending engagement. WHO is firing	REQUIRED
WEAPON/AMMUNITION	
Provides the weapon or ammunition selected to effectively defeat the threat. WHAT weapon or ammunition type is going to be used.	SITUATION DEPENDENT
TARGET DESCRIPTION	
Provides the targeting information to the unit of what target or targets will be engaged. WHAT targets are being engaged.	REQUIRED
METHOD	
Describes the way or method the targets are engaged. This is required when presented with multiple targets to specify which target to engage first. HOW to engage the targets.	SITUATION DEPENDENT
LOCATION	
Used to guide the firer(s) on to target using common methods and orients the main armament, weapons, systems, and armor toward the threat. WHERE the targets are.	SITUATION DEPENDENT
RANGE	
Provides ballistic range information to the firer to apply or index, as appropriate to the weapon or system. Weapons or systems without an integrated laser range finder must include the RANGE element. WHAT the estimated range to target is.	SITUATION DEPENDENT
CONTROLS	
Used to synchronize the application of combat power. SYNCHRONIZE to mass the effects.	SITUATION DEPENDENT
EXECUTION	
Directs the firer to begin firing. Only the small unit leader in a position of authority is authorized to announce a command of execution. WHEN to fire.	REQUIRED
EFFECTS	
A battle damage assessment of the effects of fires. EVALUATE the effects of fire.	REQUIRED

Figure 1-1. Elements of a fire command

1-9. Figure 1-2 shows the relationship of the standardized elements of the fire command across echelons. Standardization of the fire command structure at crew, squad, collective, and platoon allows for rapid transmission of the appropriate information to all participating forces.

1-10. In example 1, the commander issues the initial fire command, the platoon leader issues a fire command based on the platoon's sector of responsibility and the commander's fire command. The squad leader provides a fire command to the small unit. In turn, the crew and team issue a fire command specific to their role in the pending decisive action.

1-11. The command of execution is delayed to mass fires once the indirect fire mission on AB6900 (for example) is complete. Once complete, the commander issues the command of execution to the subordinate leaders.

Example 1

This example includes an Armored brigade combat team's Armored company team conducting deliberate defense. It consists of three platoons:

- RED—Hunter/killer platoon.
- WHITE—Abrams platoon, pure.
- BLUE—Abrams platoon, pure.

Although not a traditional formation, the notional hunter/killer platoon consists of two sections. Each section contains—

- One Abrams main battle tank.
- One Infantry fighting vehicle.
- One squad consisting of two fire teams and one antitank team.

Element	*Company/ Troop*	*Platoon (RED)*	*Alpha Section (RED)*	*Antitank Team (JULIET)*	*CREW (TANGO)*
Alert	GUIDONS, GUIDONS, GUIDONS, THIS IS COBRA SIX	RED, THIS IS RED ONE	ALPHA SECTION, THIS IS RED ONE	GUNNER	GUNNER
Weapon/ Ammunition	MISSILE AND SABOT	MISSILE AND SABOT	MISSILE AND SABOT	JAVELIN	SABOT
Target Description	ARMOR AND LIGHT ARMOR APPROACH-ING PHASE LINE DENVER	MULTIPLE ARMOR MOVING IN SECTOR	MULTIPLE ARMOR	TANKS	TANKS
Method	RED, ENGAGE ARMOR	NEAR TO FAR, FRONTAL ALTERNAT-ING FIRES, JULIET FIRST	NEAR TO FAR, FRONTAL ALTERNAT-ING FIRES, JULIET FIRST	NEAR TANK, ALTERNAT-ING FIRES WITH TANGO, WE INITIATE	NEAR TANK FIRST, ALTERNAT-ING FIRES, RED JULIET FIRST
Location	VICINITY TRP NOVEMBER ECHO 25 AND SIERRA 25	VICINITY NOVEMBER ECHO 25	NOVEMBER ECHO 25, JULIET LEFT TANGO RIGHT	LEFT OF NOVEMBER ECHO 25	RIGHT OF NOVEMBER ECHO 25
Range					
Controls	WEAPONS HOLD UNTIL ROUNDS COMPLETE ON ALPHA BRAVO 6900, THEN WEAPONS TIGHT	WEAPONS HOLD STAND BY	WEAPONS HOLD STAND BY	WEAPONS HOLD (AWAITING ROUND COMPLETE ON AB6900)	WEAPONS HOLD (AWAITING JULIET MISSILE STRIKE)
Execution	ROUND COMPLETE, ENGAGE UPON POSITIVE ID	WEAPONS TIGHT	WEAPONS TIGHT	FIRE	FIRE
Effects	SECTOR CLEAR	SECTOR CLEAR	SECTOR CLEAR	TARGET	TARGET

Legend: ID—identification; TRP—target reference point

Figure 1-2. Relationship of the standardized elements of the fire commands across echelons, example

TERMS

1-12. In addition to the nine elements of a fire command discussed earlier, a fire command includes terms used to respond to, confirm an action, add to, repeat, or correct a fire command. Each Soldier in the small unit or crew has specific duties to perform in response to certain elements of a fire command. The responses and actions taken by each vary by the situation but are an essential component to the overall efficiency and effectiveness of the small unit or crew. These terms are classified into basic groups:

- Response.
- Common.
- Modifiers.
- Clarification.
- Correction.
- Movement.

RESPONSE

1-13. Responses are a confirmation that the Soldier or crewmember understands the fire command, has completed an implied or directed task provided by the fire command, or provides information to the small unit or crew. These responses vary by small unit, weapon system, and echelon. They are essential components of the fire commands and increase the tempo of the engagement process by providing rapid confirmation of action to the leader.

1-14. Responses may be verbal, an action, or a combination of both. When ballistics or safety are involved, an action and a verbal response is required. The response terms in paragraphs 1-16 through 1-22 are required by the crew.

IDENTIFIED (DETERMINED RANGE)

1-15. The gunner uses this term to inform the VC that the target(s) stated in the fire command is located. If the gunner gave an acquisition or contact report for the target, the gunner does not have to say, IDENTIFIED, but must announce the determined range to target. IDENTIFIED, (DETERMINED RANGE) indicates to the VC that the gunner (or loader) has confirmed the target as stated in the description and that the gunner has the proper range input into the fire control system or applied to the weapon. When firing a subsequent round at the same target (not returning to a ***previously engaged target***—**a known target that has received direct fires from the same firer or element within an ongoing engagement**), the gunner does not have to announce IDENTIFIED, only the (DETERMINED RANGE) input. For main gun/antitank guided missile (ATGM) crews, announcing, IDENTIFIED (DETERMINED RANGE) indicates the fire control system is providing range through the laser range finder (LRF).

IDENTIFIED CHOKED (RANGE)

1-16. The gunner uses this term to signify the use of the auxiliary sight and is utilizing the stadia reticle to estimate range to the target announced in the fire command. For main gun/ATGM crews, this is only required when using a degraded method. For mounted machine gun crews, this is used when the firer uses the stadia reticle to estimate the range to target.

ON THE WAY

1-17. This term informs all crewmembers that a weapon is being fired, alerting them to sense the round(s), if possible. The firer must announce ON THE WAY before firing any weapon and announce, ON THE WAY for every trigger squeeze, regardless of burst length or weapon system. When the firer re-lases the target before execution, the updated range to target is stated before announcing, ON THE WAY. This aids the VC, crew, and dismounted Infantry's situational awareness during engagements.

Last Verbal Response

1-18. ON THE WAY is the last verbal response announced by a firer. The firer squeezes the trigger on the Y of WAY. When firing machine guns or the platform's main gun, each time the trigger is squeezed—butterfly is depressed, or an electrical trigger is depressed—the firer must announce, ON THE WAY. If there is a break in firing for adjustment, corrections, or additional commands directed by the VC, ON THE WAY must be announced again prior to firing.

When Adjustments are Required

1-19. If the firer is making minor adjustments for point of aim versus point of impact when engaging with a machine gun, the firer performs three actions but does not need to provide a subsequent fire command:

- Makes the necessary point of aim correction.
- Announces ON THE WAY.
- Continues to engage the target

Note. A **subsequent fire command directs the firer to continue engaging a target by delivering subsequent rounds against the same target**.

(CREWMEMBER) COMPLETE

1-20. This term informs the VC that individual crewmembers are finished with their portion of an engagement (or when the VC is using an independent viewer to ***scan*—the act of observing designated areas in the assigned sector**—for targets) and that their systems are free to engage other targets. Examples are: GUNNER–COMPLETE, VC–COMPLETE, or LOADER–COMPLETE. VC–COMPLETE informs the crew that the VC has completed firing a weapon system and is prepared to resume control of the turret.

POWER/OVERRIDE (For vehicles equipped with a VC power control handle override)

1-21. When the VC is required to move the armament's orientation for any reason using the power control handle override, the VC announces, POWER or OVERRIDE. This directs the gunner to place the control handles in the center position and to release the palm switches. This eliminates the rapid movement of the turret and loss of armament orientation when the override is released.

CANNOT IDENTIFY

1-22. This term informs the VC that the gunner cannot find the target. The VC then directs the gunner onto the target, re-lays the weapon, or engages the target. For platforms equipped with a commander's override, commander's hand station, the VC may override the gunner's power control handles and lay the gun for direction, as necessary. For vehicles equipped with a commander's sight independent of the gunner, the VC may designate the target and hand off the target to the gunner, once identified.

CANNOT ENGAGE

1-23. This term informs the VC that the gunner can identify the target but is unable to conduct the engagement.

IMPLIED TASKS

1-24. The required terms in paragraphs 1-25 through 1-28 are used by the crew to inform the VC of actions taken as implied tasks from a fire command or other instruction.

(AMMUNITION TYPE) INDEXED

1-25. The gunner must use this response to indicate that the proper ammunition change directed in the fire command, battlecarry posture, or crew report has been indexed.

(AMMUNITION TYPE) LOADED

1-26. This is an administrative response by the crew during a battlecarry command. This informs the crew that the proper ammunition is prepared (loaded or cycled, as appropriate) for combat operations. This can be used in response to a crew report. When using this term, the main gun is not armed.

UP (Abrams and M10 Booker)

1-27. This term is used by the loader to signify that the main gun (Abrams or Booker) is loaded with the ammunition required in the fire command, the main gun is armed, and the recoil path of the main gun is clear.

(AMMUNITION TYPE) UP (Abrams and Booker)

1-28. This term is used by the loader to signify that the main gun is loaded with the proper ammunition change directed in the fire command, the main gun is armed, and the path of recoil of the main gun is clear for firing.

COMMON USEFUL TERMS

1-29. The common terms in paragraphs 1-28 through 1-36 are not required, but useful to the crew in varying situations. They assist in proper armament orientation and ***engagement techniques*—effects-oriented fire distribution measures**. Crews are not required to use these specific terms and may have developed SOP with specific terms that meet their needs. Paragraphs 1-30 through 1-38 list common terms used.

GUNNER CONTROL (For Vehicles Equipped with a VC Power Control Handle Override)

1-30. When the VC completes moving the armament for orientation in azimuth or elevation, the VC announces, GUNNER CONTROL. This directs the gunner to grasp the power control handles in the center position and resume the active ***crew search*—a thorough, deliberate method of observation of a refined area**. Announcing, GUNNER CONTROL ensures the gunner establishes positive control of the turret and armament systems without losing the VCs established weapon system orientation.

CHECK YOUR WORK

1-31. The VC issues this command to the crew at the conclusion of an engagement. It may be announced before or after, CEASE FIRE. It directs the firers to scan the target area(s) from the completed engagement, ensuring the appropriate effects on the target are achieved.

Z-PATTERN

1-32. Z-PATTERN directs the firer to use the standard Z-pattern engagement technique to engage or suppress threat dismounts.

RE-LASE

1-33. RE-LASE directs the firer to re-lase to a target due to an actual or perceived inaccurate range to target.

ADD/LESS LEAD

1-34. ADD/LESS LEAD directs the firer to increase or reduce the amount of lead applied to the target. The VC can direct the gunner to ADD/LESS LEAD by mil increments using reticle lead lines.

SHIFT

1-35. SHIFT tells the firer to prepare to move fires in a direction to be announced by the commander. Typically, this command is given when friendly forces are moving toward the target area and is used as a control measure to protect friendly forces.

LOW POWER (Mag)

1-36. LOW POWER tells the gunner to switch to the lowest magnification to identify or engage targets at extremely close ranges.

HIGH POWER (Mag)

1-37. HIGH POWER tells the gunner to switch to a higher magnification before receiving the command of execution to facilitate positive target identification and classification. *Identification* is in ground combat operations, discrimination between recognizable objects as being friendly or enemy, or the name that belongs as a member of a class (JP 3-01).

IDENTIFIED FRIENDLY (Neutral or Unknown)

1-38. If the gunner cannot confirm the target as hostile, the gunner announces, IDENTIFIED, followed by FRIENDLY, NEUTRAL, or UNKNOWN.

MODIFIERS

1-39. Modifiers are provided as part of the method to define which target of many will be engaged first. Modifiers are mandatory for use within the METHOD element (as described later in chapter 5) of the fire command when multiple targets are present.

1-40. When there are multiple targets, the leader is required to better identify the targets and accurately describe which target to engage first, regardless of the firer. When a modifier is given to the firer, they must repeat the modifier that is given when identifying the threat. For example, if the VC provides GUNNER, SABOT, TWO TANKS, LEFT TANK, the gunner responds when they have identified and determined the correct range to the appropriate target. In this case, the gunner would respond with IDENTIFIED, LEFT TANK, ONE-SIX HUNDRED. This serves as a confirmation of the modifier when the VC does not maintain the ability to view the firer's actions through an associated optic.

1-41. Some of other descriptions could be—

- NEAR, FAR.
- LEFT, RIGHT, CENTER.
- STATIONARY, MOVING, DEFILADE.
- LEFT TO RIGHT, RIGHT TO LEFT.
  - Directs the gunner to engage the targets identified in a certain order that may be different from most dangerous to least dangerous.
  - This is mostly used when firing collectively with a section or platoon element.
  - Typically, this term is used with a section or platoon fire command to adhere to that higher element's instruction or the SOP for the platoon.
- NEAR TO FAR, FAR TO NEAR.
  - Directs the gunner to engage the targets identified in a certain order that may be different from most dangerous to least dangerous.
  - This is mostly used when firing collectively with a section or platoon element to adhere to that higher element's instruction or the SOP for the platoon.

CLARIFICATION

1-42. Clarification terms allow a Soldier to announce when an element or portion of a fire command is not understood. When this occurs, the Soldier announces the element

that is unclear. For example, if the Soldier did not hear or understand the ammunition type to index or prepare, they announce AMMO. The leader responds with the element announced by the crew for clarity and continues with the fire command sequence.

CORRECTION

1-43. To correct an error in a fire command, the commander announces, CORRECTION and corrects only the element in error. For example, GUNNER, (AMMO), TRUCK, ONE—SIX—HUNDRED, CORRECTION, ONE—EIGHT—HUNDRED. This informs the gunner to index the corrected range provided by the VC.

Note. If an error has been made and the command of execution has been given, the leader announces, CEASE FIRE, and issues a new fire command, which reduces crew confusion and ensures complete understanding of the fire command.

MOVEMENT

1-44. Movement terms provide guidance or direction to the small unit or crew on required movements that occur during the engagement. Movement terms can be used by dismounted, mounted, or collective elements, based on the tactical situation. These terms are typically common to the organization, basic tactics or movement techniques, or their SOPs. Leaders can use any tactical term to move the appropriate small unit at the appropriate time. For example, the leader announces BRAVO SECTION, BOUND TO PHASE LINE SPRINGS. This informs the section in the platoon to move to the established phase line.

1-45. Commands to the driver on a crew are used to facilitate vehicle movement before, during, and after an engagement. Driver action terms are not a requirement but are used as necessary. All commands to the driver should be preceded by announcing, DRIVER. They include, but are not limited to—

- DRIVER, MOVE UP.
- DRIVER, BACK UP.
- DRIVER, STOP.
- DRIVER, SEEK ENFILADE.
- DRIVER, SEEK DEFILADE.
- DRIVER, MOVE OUT.
- GUNNER, TAKE OVER.

Note. GUNNER, TAKE OVER is a command given after a driver action term, and the gunner now controls the vehicle's movement. This command is used when the VC requires the gunner to place the vehicle in an enfilade position where the main gun can fire. When the gunner identifies the weapon system is completely unmasked (safe to fire from the enfilade position), the gunner directs, DRIVER STOP.

TYPES

1-46. There are three types of fire commands—initial, subsequent, and supplemental. They establish a common language and framework (conduct of fire) to engage single or multiple threats and assist the coordinated effort to the adjustment of direct fires to achieve the desired effects on target.

1-47. A fire command (initial, subsequent, and supplemental) with an authorized command of execution must be given for each threat engaged. Leaders and the firer are required to confirm the threat prior to engaging every target. Small unit leaders are required to authorize their subordinates to engage using fire commands.

1-48. Figure 1-3 shows how the three types of fire commands interact with each other. This flow chart shows the logic behind each type and why each type of fire command is used. The key principles governing the types of fire commands are—

- All engagements begin with an initial fire command.
- If the leader wants to continue firing at the same target, the leader issues a subsequent fire command.
- If the leader wishes to engage a different target during the engagement, the leader issues a supplemental fire command to transition fires to the new target.
- A ***supplemental fire command*****, given after the initial fire command is executed, shifts fires to another target described during the initial fire command or at targets that present themselves during the engagement**.
- If the leader wishes to return to a previously engaged target, the leader issues a supplemental fire command.

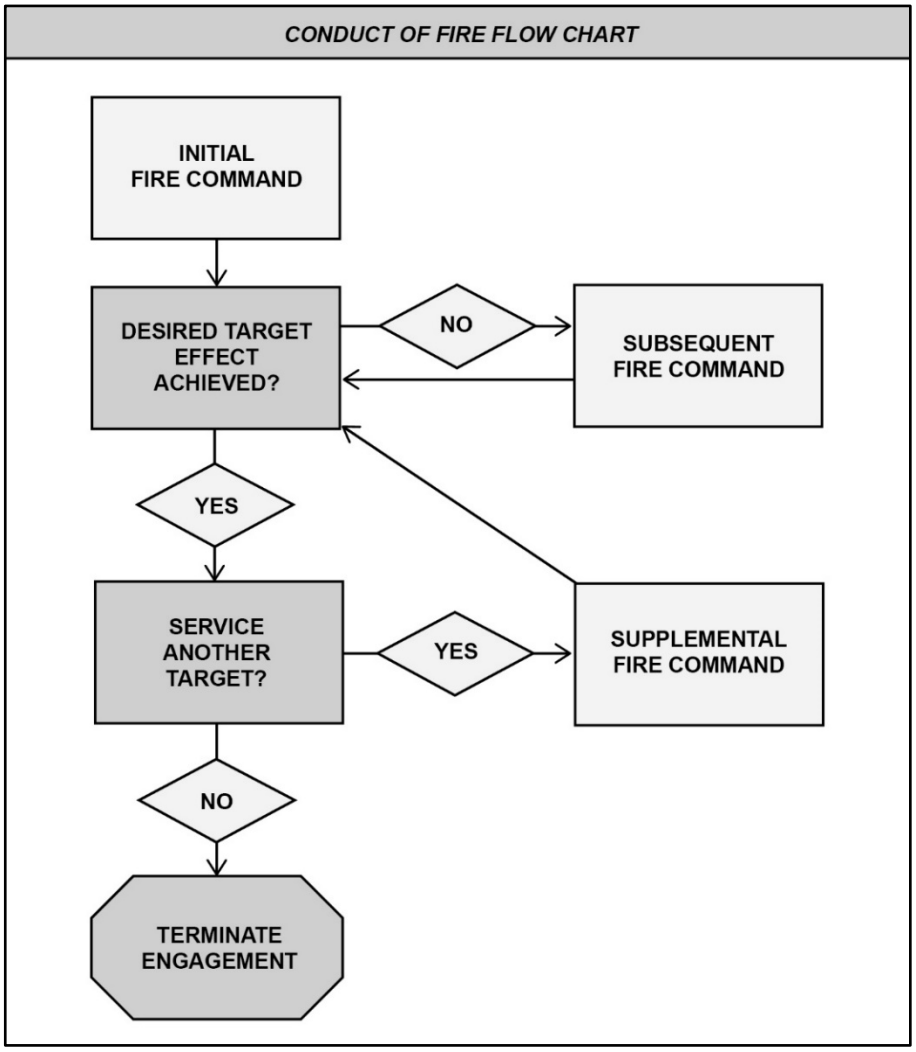


Figure 1-3. Conduct of fire (fire command) flow, example

1-49. The three types of fire commands are specific to the firing occasion within the engagement. All engagements begin with an initial fire command. Once that command is executed, its outcome and the remaining tactical situation drives the leader's continuing engagement decisions.

INITIAL FIRE COMMAND

1-50. An initial fire command initiates a direct fire engagement on a confirmed target. In general terms, the initial fire command contains all the elements required to answer the following questions:

- Who is firing—alert?
- Which weapon or ammunition is used—weapon/ammunition?
- What target—***target description*** **is the description of the threat or threats that the small unit or crew is engaging**—is being engaged?
- How the target will be engaged—method or technique?
- Where is the target located—direction or elevation?
- How far is the target from the firer—range?
- What controls are in place to manage the firing—controls?
- When to fire the weapon or execute the engagement—command of execution?

SUBSEQUENT FIRE COMMAND

1-51. Subsequent fire commands direct the firing element to continue engaging the same target by delivering subsequent rounds. Subsequent fire commands may be given after an evaluation of the effects of fire are provided after any fire command. The leader gives subsequent fire commands under the following conditions:

- The previous round or burst did not achieve the desired effect on target.
- Although the effect on target was achieved, additional rounds are required to suppress other less dangerous threats in the same vicinity.

1-52. Subsequent fire commands are specifically given to the crew in the event the initial round (main gun) or burst (machine gun) misses the target or target area. The subsequent fire command is also used in the event the VC determines the target effect from a hit requires additional servicing to reduce the threat. The subsequent fire command contains corrections, techniques, or modifications to the firer's sight picture or point of aim to increase the accuracy and deliver the lethal effects desired.

Target Miss Factors

1-53. Many factors can cause a target miss. These factors depend on the direct fire technique used and the ammunition fired. The following factors could contribute to target misses:

- Incorrect boresight or zero.
- Battle damage to own vehicle or weapon.
- Failure of the crew to perform correct before-operation checks or an armament accuracy check of the fire control system (Booker and Abrams).
- Incorrect target acquisition system alignment (M2A3/A4).
- Error in crew drill during the engagement, such as an incorrect lay of the sight (reticle) on the target aiming point (poor sight picture).
- Loss of boresight or zero.
- Round-to-round dispersion (predominantly with large-caliber ammunition).
- Incorrect range to target.
- Excessive cant of the firing platform (gun trunnion tilt).

- Refraction (optical path bending).
- Incorrect meteorological data input (such as air temperature and barometric pressure).

Subsequent Fire Command Elements

1-54. A subsequent fire command contains at least three and up to seven elements. The complete elements of a subsequent fire command are alert, deflection correction, range or elevation correction, method correction, controls correction, execution, and effects. The alert, execution, and effects elements are the minimum required elements.

Alert (Required)

1-55. During a subsequent fire command, a sensing (to include TARGET) is used to alert the crew. When TARGET is used, it indicates the crew needs to be prepared for additional commands but does not necessarily indicate a subsequent fire command is pending.

Deflection Correction (Optional)

1-56. A deflection correction is based on the VCs or gunner's sensing of where the round strikes in relation to the target. A deflection error of more than one target form indicates a fire control malfunction (if so equipped), optical path bending, or an error in the gunner's lay.

Range/Elevation Correction (Optional)

1-57. A range/elevation correction (only if necessary) is based on the VC’s or gunner's sensing of where the round strikes in relation to the target.

Method Correction (Optional)

1-58. Method correction provides any corrections to the method of engagement, as necessary.

Controls Correction (Optional)

1-59. Controls correction provides any necessary changes to the controls element based on the tactical situation, synchronization of fires or maneuver, or to manage ammunition, as appropriate.

1-60. Once the correction for direction/deflection and range is completed, the VC continues the fire command with the following elements, as appropriate:

- Execution (required)—the VC announces FIRE or another command of execution, as needed for the situation.
- Effects (required)—the VC assesses the effects of fire on the target prior to initiating another subsequent fire command or issues a supplemental fire command.

Direct Fire Adjustments

1-61. Two direct fire adjustment methods are reengage and standard. Each method of direct fire adjustment requires an understanding of the platform's engagement techniques, its capabilities, and limitations to use them correctly.

Reengage

1-62. This method uses REENGAGE or REENGAGE (TARGET DESCRIPTION) to apply lethal effects on a target that was previously engaged. For vehicles with a fully operational fire control system, the reengage method is preferred for subsequent rounds after a first-round miss, first-burst miss, or when the VC determines that additional rounds are required to service the threat. The firer would re-lase to get an updated ballistic solution into the fire control system when given the command of reengage.

1-63. REENGAGE can be the target description for a subsequent fire command as shown in figure 1-4. Once the firer is prepared to reengage the threat, the firer announces IDENTIFIED (DETERMINED RANGE). The VC then issues the command of execution. When used as a supplemental fire command to return to a previously engaged threat, the VC must include the target description.

REENGAGE, Abrams Example			
Type	***Crewmember***	***Example***	***Element/Term***
Initial Fire Command	VC	GUNNER	*Alert*
		SABOT	*Weapon/Ammunition*
		TANK	*Target Description*
	Gunner	IDENTIFIED ONE—SIX HUNDRED	*Response Term*
	Loader	UP	*Response Term*
	VC	FIRE	*Execution*
	Gunner	ON THE WAY	*Response Term*
Subsequent Fire Command	VC	SHORT	*Effects*
			Alert
		REENGAGE	*Target Description*
	Gunner	IDENTIFIED, ONE—SIX HUNDRED	*Response Term*
	Loader	UP	*Response Term*
	VC	FIRE	*Execution*
	Gunner	ON THE WAY	*Response Term*
	VC	TARGET	*Effects*
		CEASE FIRE	*Termination*
Legend: VC—vehicle commander			

Figure 1-4. Reengage fire command, example

1-64. For the use of REENGAGE in a subsequent fire command, the firer must continue engaging the same target with subsequent rounds. The VC then issues a supplemental fire command to transition the gunner to another target within the engagement.

1-65. If the gunner has been given the FIRE AND ADJUST command, the firer observes the strike of the round(s) and announces the sensing. The gunner announces the sensing, REENGAGING, intended correction, the updated range to target; and when the crew is prepared, fire the subsequent round or weapon. See example in figure 1-5.

REENGAGING, Abrams Example			
Type	***Crewmember***	***Example***	***Element/Term***
Initial Fire Command	VC	GUNNER	*Alert*
		SABOT	*Weapon/Ammunition*
		TANK	*Target Description*
		DESIGNATE	*Location*
	Gunner	IDENTIFIED, ONE-SIX HUNDRED	*Response Term*
	Loader	UP	*Response Term*
	VC	FIRE AND ADJUST	*Execution*
	Gunner	ON THE WAY	*Response Term*
		SHORT	*Effects*
Subsequent Fire Command			*Alert*
		REENGAGING	*Target Description*
		ONE-SIX HUNDRED	*Response Term*
	Loader	UP	*Response Term*
	Gunner	ON THE WAY	*Execution*
		TARGET	*Effects*
		GUNNER COMPLETE	*Response Term*
	VC	CEASE FIRE	*Termination*
Legend: VC—vehicle commander			

Figure 1-5. Reengaging fire command, example

1-66. If the crew has a sensing of TARGET, but the target has not been destroyed (for example, it cannot move but can still fire), the firer re-lays using the same sight picture, announces, TARGET. The VC will announce TARGET–REENGAGE. The firer announces, IDENTIFIED (DETERMINED RANGE), and once given the command of execution, fires the subsequent round.

Standard Adjustment

1-67. The standard adjustment method is the primary means for weapon systems without a fire control system, or those vehicles whose fire control systems are damaged or degraded, to direct fires on a target accurately and effectively.

1-68. When firing and unable to hit the target using the reengage method (or when using degraded methods of engagement using the primary sight), the VC or crewmember may choose to use the standard adjustment method. The standard adjustment for both elevation and deflection are not less than a one-half target form or more than one target form.

1-69. When the crew observes a round missing the target in elevation (range) and deflection, the deflection correction is given before the range correction, like the order of the elements of a fire command. If the crew observes over, short, lost, or doubtful, the VC or crewmember announces their sensing and the intended correction in one of the following ways:

- Deflection correction: DOUBTFUL LEFT (RIGHT)–RIGHT (LEFT) HALF FORM.
- Range correction: SHORT (OVER)–ADD (DROP) HALF FORM
- Combination of deflection and range correction: DOUBTFUL–LEFT (RIGHT), OVER (SHORT)–RIGHT (LEFT) HALF FORM–DROP (ADD) HALF FORM.
- Lost: LOST–DROP HALF FORM:
  - Typically, if the round is lost, the round traveled over the target to beyond the line of sight of the crew.
  - In this instance, dropping one half or one form is the preferred adjustment.

Note. During combat, the VC may have to make larger corrections than the standard corrections listed in paragraph 1-69 to get target effect as rapidly as possible. The VC has the option of increasing the gunner's adjustment beyond one target form based on the situation.

1-70. After making the sight correction, the gunner announces, (DEFLECTION/RANGE CORRECTION), awaits the command of execution, announces, ON THE WAY, and fires. This informs the VC that the gunner understands the intended correction and has applied it before firing. In the event the gunner has incorrectly applied the correction, it allows the VC time to cease fire the engagement rather than knowingly fire a round or burst ineffectively. Figure 1-6 shows an example of a fire command using the standard adjustment.

Standard Adjustment, Abrams Example			
Type	***Crewmember***	***Example***	***Element/Term***
Initial Fire Command	VC	GUNNER	*Alert*
		MPAT	*Weapon/Ammunition*
		PC	*Target Description*
		CHOKE	*Range*
	Gunner	IDENTIFIED, CHOKED ONE-SIX HUNDRED	*Response Term*
	Loader	UP	*Response Term*
	VC	FIRE	*Execution*
	Gunner	ON THE WAY	*Response Term*
Subsequent Fire Command	VC	SHORT	*Effects*
			Alert
		REENGAGE	*Target Description*
		ADD HALF FORM	*Range Correction*
	Gunner	IDENTIFIED, ADD HALF FORM	*Response Term*
	Loader	UP	*Response Term*
	VC	FIRE	*Execution*
	Gunner	ON THE WAY	*Response Term*
	VC	TARGET	*Effects*
		CEASE FIRE	*Termination*
Legend: MPAT—multipurpose antitank, PC—personnel carrier; VC—vehicle commander			

Figure 1-6. Standard adjustment example

SUPPLEMENTAL FIRE COMMAND

1-71. Supplemental fire commands are used during multiple target engagements to transition a firer to another target within an engagement. The transition to another target may include a change to the weapon or ammunition employed. They are given after any fire command is executed and the leader wishes to transition to another target. Supplemental commands transition fires to a different target than was just engaged. Supplemental commands contain all elements necessary to—

- Alert the gunner or firer to prepare to engage additional targets (sensing of TARGET from previous fire command).
- Determine what target to engage (target description).
- Direct the gunner or firer onto a new target (location).

- Direct any change of weapon or ammunition type as required (weapon/ammunition).
- Commence firing (command of execution).

1-72. In combat, vehicle crews encounter multiple targets and must use the appropriate engagement techniques. Multiple target engagements can be executed as multiple single target engagements, one engagement distributing fires to multiple targets, or executing the engagement against multiple targets with multiple weapons.

1-73. Multiple target engagements and multiple weapon system engagements require additional commands and responses from the crew beyond the initial fire command. Crews use supplemental fire commands to direct the crew onto secondary targets for engagement, or to direct a crew onto a previously engaged target that was not destroyed. An ***engaged target*** **is a threat that has been struck or received direct fires, but the round(s) did not achieve the desired effect.**

1-74. Supplemental fire commands require at least three elements: alert, target description, and the command of execution. The effects, or sensing, of TARGET on a previous fire command serves as the alert for supplemental targets. More elements may be added, as necessary. Supplemental fire commands are used specifically to engage multiple targets with single or multiple weapons.

1-75. For use in a supplemental fire command, VC states, REENGAGE (TARGET DESCRIPTION), to return to a previously engaged target. This indicates to the crew to adjust their engagement to a specific target that has previously been engaged but not successfully defeated.

1-76. The gunner re-lays, re-lases to the target, and announces IDENTIFIED followed by the updated induced range (DETERMINED RANGE). The VC then issues the command of execution.

1-77. The VC can transition from a subsequent fire command to a supplemental fire command. This allows the crew to continue to engage threats in their sector without breaking the tempo of their engagement process. If the subsequent fire command completes the engagement and no other visible targets are engaged, the VC terminates the engagement by announcing, CEASE FIRE.

Note. The VC has several options to announce the fire command properly. In the case in paragraph 1-77, the VC could have announced CEASE FIRE when switching between weapon systems, or the VC could have announced, INDEX COAX or INDEX SABOT, and the gunner would have responded accordingly. Crew training and experience allows for the crew to use the least number of elements in the fire command to ensure the target is engaged effectively.

Multiple Target Engagements

1-78. A multiple main gun or coaxial (coax) machine gun engagement is where more than one target is engaged with the same weapon. These engagements require rapid and accurate fire, target destruction, and swift transition to new targets. The VC determines which target presents the greatest threat (most dangerous) and issues an initial fire command to engage the most dangerous target first. The VC determines the next most dangerous target, directs fires to that threat, and continues this process until all targets are destroyed.

1-79. The VC must decide whether a target is destroyed. Indications that a target is sufficiently damaged include secondary explosions or crewmembers abandoning the vehicle. Multiple target engagements require the VC to shift fires quickly from one target to the next as the classification of most dangerous changes from moment to moment.

1-80. Multiple coax machine gun engagements are performed in the same manner. The most dangerous target is engaged first; fires then are transitioned to the next most dangerous target. Firers must understand the limits of their platform's fire control system and apply the appropriate engagement techniques to defeat the threats rapidly.

Multiple Weapon System Engagement

1-81. Two distinct ways multiple weapon system engagements can be executed are sequential and simultaneous. Both use the supplemental fire commands to defeat the threats presented, however, their use is directly related to the capabilities of the platform.

Sequential Engagements

1-82. Sequential engagements can be used by any platform. ***Sequential engagements*** **require the use of one or more weapon systems against multiple targets in a sequential manner, one after the other, and use an initial fire command when initiating direct fires at the first target and a supplemental fire command to direct fires against secondary targets.**

Simultaneous Engagement

1-83. ***Simultaneous engagement*****—an engagement where multiple weapon systems are engaging one or more targets, these targets can be engaged at the same time, or in a sequenced series of events.** They are specific to platforms that have a weapon or weapon system that operates independently of the main fire control system. It is an engagement where multiple weapon systems are engaging one or more targets. These targets can be engaged at the same time, or in a sequenced series of events. The goal of the simultaneous engagement is to mass effective fires on one or more targets in a synchronized manner.

> ***Note.*** For Abrams and Booker platform crews, if simultaneous fires are required against the same target, see the method element of the fire command.

1-84. Simultaneous engagements use an initial fire command for each firer when directed to engage their respective first target. The VC uses a supplemental fire command to direct fires toward secondary targets. Simultaneous engagements always require the use of FIRE AND ADJUST as part of the command of execution. The VC cannot maintain control of multiple firers' actions. The use of FIRE AND ADJUST allows independent engagements and direct fire adjustments.

1-85. An example fire command and the crew's responses to a multiple weapon system engagement are shown in figure 1-7. The initial fire command is outlined for the loader and VC targets, and the supplemental fire command for the gunner's target.

Simultaneous Engagement, Abrams Example			
Type	***Crewmember***	***Example***	***Element/Term***
Initial Fire Command	VC	LOADER	*Alert*
		240	*Weapon/Ammunition*
		TROOPS	*Target Description*
		TRP 1	*Direction*
		FOUR HUNDRED	*Range*
	Loader	IDENTIFIED TROOPS, FOUR HUNDRED	*Response Term*
	VC	CALIBER .50	*Alert*
		TRUCK	*Target Description*
		TRP 2	*Direction*
		ONE THOUSAND	*Range*
		FIRE AND ADJUST	*Execution (Loader)*
		ON THE WAY	*Execution (VC)*
	Loader	ON THE WAY	*Response Term*
		TARGET	*Effects*
		LOADER COMPLETE	*Response Term*
	VC	TARGET	*Effects*
		VC COMPLETE	*Response Term*
Supplemental Fire Command		GUNNER	*Alert*
		COAX	*Weapon/Ammunition*
		TRUCK	*Target Description*
	Gunner	IDENTIFIED SIX HUNDRED	*Response Term*
	VC	FIRE	*Execution*
	Gunner	ON THE WAY	*Response Term*
	VC	TARGET	*Effects*
		CEASE FIRE	*Termination*
Legend: COAX—coaxial; TRP—target reference point; VC—vehicle commander			

Figure 1-7. Simultaneous engagement example

1-86. During some multiple weapon systems engagements, the VC may need to stop firing their engagement temporarily to assist the gunner. Common situations are—

- When the gunner cannot identify the target, the VC lays the main gun on target.
- VC announces, VC COMPLETE, engages the commander's override or commander's control handle, and lays gunner on the target.
- Once the gunner identifies the target, the VC announces, CALIBER FIFTY, TRUCK, TRP 2, ONE THOUSAND, ON THE WAY, and continues to engage the target.
- When the gunner cannot sense the effect of the round, the VC helps sense rounds, as practical.

Note. For Abrams crews, the VC should only direct the loader to engage targets that are to the left of the main gun or commander's independent thermal viewer.

Chapter 2

Alert

The first element of the fire command is the alert. All types of fire commands (initial, subsequent, and supplemental) begin with an alert to the firing element. The alert performs two functions; it notifies (alerts) the crew or small unit of a pending engagement, and it identifies who fires within the crew or unit.

OVERVIEW

2-1. The first element of the fire command is the alert. Although a contact report can be considered an alert, only the VC or gunner can issue the alert element. There are several ways to alert the crew depending on the type of fire command issued for a pending engagement. In certain situations, other elements of the fire command can serve as the alert.

Note. An *alert* notifies the element of a pending engagement and describes who will be firing. There are several ways to provide the alert based on the type of fire command, the unit's SOP, and the tactical situation.

2-2. The alert element of a fire command can be specific to echelons from crew, through collective. Each echelon has elements that are specific to that echelon. See figures 2-1 through 2-3 on pages 26 and 27 for alert examples for a crew, main gun platforms when the VC is the firer, or collective elements. For crew platforms, the default firer is the gunner. On platforms where there is only one firer (when the VC is the gunner) the target description serves as the alert element. When a contact report or target description is provided by the VC, this serves as the alert element for the gunner unless stated otherwise.

Alert	*Description*
CONTACT, (TARGET DESCRIPTION) or (TARGET DESCRIPTION)	Any member of the crew can announce CONTACT when identifying a potential threat. Only the VC or gunner can announce CONTACT (TARGET DESCRIPTION) or (TARGET DESCRIPTION) as the alert element.
(TARGET DESCRIPTION)	Serves as the alert element on platforms with only one firer (where the VC is the gunner). On platforms with a gunner and VC, the gunner is the default firer unless stated otherwise.
(LOCATION) (TARGET DESCRIPTION)	Serves as the alert element when the location element is provided with the target description
GUNNER	VC states the firer for the engagement.
LOADER	
DOUBTFUL	Sensing that indicates additional direct fire engagement is required to defeat the threat. Informs the crew to be prepared for a subsequent fire command to defeat the threat.
LOST	
OVER	
SHORT	
TARGET	Sensing that informs the crew to be prepared for subsequent or supplemental fire commands, specific to crew actions, or termination of the engagement.
Legend: VC—vehicle commander	

Figure 2-1. Alert element examples, crew platforms

Alert	*Description*
(VC WEAPON)	VC announces the crew served weapon system that is going to be fired.
LOAD (AMMUNITION)	VC announces LOAD plus the AMMUNITION when the VC intends to fire the main gun.
INDEX (AMMUNITION)	VC announces INDEX plus the AMMUNITION when the VC intends to fire a specific ammunition other that what is currently set or indexed.
INDEX (WEAPON)	VC announces INDEX plus the WEAPON when the VC intends to fire a specific weapon other that what is currently set or indexed.
FROM MY POSITION	Announced by the VC when intending to fire from the override or primary optic.
WATCH MY TRACERS	Announced by the VC when the gunner cannot identify the target announced, indicating the VC will fire the machine gun to mark the target.
Legend: VC—vehicle commander	

Figure 2-2. Alert element examples, main gun vehicle commander as firer

Alert	*Description*
CONTACT, (TARGET DESCRIPTION)	Only contact reports provided by the small unit leader can serve as the alert element.
GUIDONS	Represents all subordinate elements.
(UNIT COLOR)	RED, WHITE, BLUE, GREEN, BLACK, for example.
(CALL SIGN)	Specific subordinate call sign.
(ALPHANUMERIC) TEAM or SECTION	ALPHA, BRAVO, CHARLIE, and so forth.
(NAMED SQUAD)	1st Squad, 2nd Squad, and so forth.
(TEAM NAME)	MACHINE GUN, AT-TEAM, and so forth.
(VEHICLE NUMBER)	
ANTITANK	
JAVELIN	Or MISSILE. See Weapon/Ammunition element used as an Alert.
GUSTAV	See Weapon/Ammunition element when used as an Alert.
GRENADIER	M203, M320, or XM25.
MACHINE GUN	M249, M240B, M2.
HEAVY	Large caliber elements.
LIGHT	Dismounted light Infantry elements.

Figure 2-3. Alert element examples, collective

ALERTS DURING INITIAL FIRE COMMAND

2-3. A contact report followed by a target description by the gunner alerts the crew of a pending engagement. When the gunner announces CONTACT, the VC verifies the threat, and provides the command of execution. Figure 2-4 shows an example fire command with the gunner providing the contact report which serves as the alert element.

Type	*Crewmember*	*Example*	*Element/Term*
Initial Fire Command	Gunner	CONTACT	*Alert*
		PC	*Target Description*
		ONE-THOUSAND	*Response Term*
	VC	FIRE	*Execution*
	Gunner	ON THE WAY	*Response Term*
		TARGET	*Effects*
	VC	CEASE FIRE	*Termination*
Legend: PC—personnel carrier, VC—vehicle commander			

Figure 2-4. Contact report as alert element, example

2-4. Announcing the primary firer (GUNNER or LOADER) alerts the crew who fires the engagement. When directing the loader for the Abrams, the VC uses FIRE AND ADJUST as the command of execution (see figure 2-5).

Type	*Crewmember*	*Example*	*Element/Term*
Initial Fire Command	VC	LOADER	*Alert*
		TWO-FORTY	*Weapon/Ammunition*
		TRUCK	*Target Description*
		LEFT FRONT	*Location*
		TWO-HUNDRED	*Range*
	Loader	IDENTIFIED TWO HUNDRED	*Response Term*
	VC	FIRE AND ADJUST	*Execution*
	Loader	ON THE WAY	*Response Term*
		TARGET	*Effects*
		LOADER COMPLETE	*Response Term*
	VC	CEASE FIRE	*Termination*
Legend: VC—vehicle commander			

Figure 2-5. Primary firer as alert element, example

ALERTS DURING SUBSEQUENT FIRE COMMANDS

2-5. The effects (sensing) from a previous round can serve as the alert element for a subsequent fire command when the sensing indicates additional direct fire engagement is required to defeat the threat. Figure 2-6 on page 30 shows an example of a sensing serving as the alert in a subsequent fire command. The most common alerts to the crew when the VC wishes to apply additional (subsequent) munitions at the same threat target are listed in paragraphs 2-6 and 2-7.

SENSING FOLLOWED BY AN ADJUSTMENT

2-6. A subsequent fire command is initiated by announcing to the crew that the target was engaged but not destroyed. This is done by announcing one of the standard sensings: TARGET, DOUBTFUL (LEFT or RIGHT), LOST, OVER, or SHORT. Examples of alerts for a subsequent fire command are—

- TARGET–REENGAGE.
- OVER–REENGAGE DROP HALF FORM.
- SHORT–REENGAGE ADD ONE FORM.
- DOUBTFUL–LEFT–REENGAGE RIGHT HALF FORM.

SENSING FOLLOWED BY A CHANGE OF WEAPON OR AMMUNITION TYPE

2-7. Used on main gun platforms, this subsequent fire command alert is used when the target is engaged and hit, but not destroyed, and the VC directs the use of another weapon or ammunition type to defeat the target. This is most commonly used when initially firing the Abrams main gun CANISTER round at a target, following up the initial round with the coax machine gun. An example of this alert is: TARGET-INDEX COAX, where the main gun is fired initially at a target and the VC directs the gunner to select coax and be prepared to engage. This is an advanced skill and is only recommended for experienced crews.

Note. For Abrams crews, the loader places the main gun in SAFE when an ammunition or weapon other than the main gun is announced as part of the fire command.

Type	*Crewmember*	*Example*	*Element/Term*
Initial Fire Command	VC	MOVING PC	*Alert/Target Description*
		DESIGNATE	*Location*
	Gunner	IDENTIFIED, ONE-TWO HUNDRED	*Response Term*
	VC	FIRE	*Execution*
	Gunner	ON THE WAY	*Response Term*
Subsequent Fire Command	VC	DOUBTFUL LEFT	*Effects*
			Alert
		REENGAGE	*Target Description*
		RIGHT HALF FORM	*Deflection Correction*
	Gunner	IDENTIFIED, RIGHT HALF FORM	*Response Term*
	VC	FIRE	*Execution*
	Gunner	ON THE WAY	*Response Term*
	VC	TARGET	*Effects*
		CEASE FIRE	*Termination*

Legend: COAX—coaxial; PC—personnel carrier, VC—vehicle commander

Figure 2-6. Sensing as an alert element subsequent fire command, example

ALERTS DURING SUPPLEMENTAL FIRE COMMANDS

2-8. When a supplemental fire command is used, the VC (or at times, the gunner) issues the alert to the crew to initiate fires on a secondary target. This is only used when multiple targets are identified during the initial fire command or when additional targets present themselves before the termination of an engagement.

2-9. Announcing a sensing on the initial target followed by the next target's description serves as the alert for the supplemental fire command. This is done when both targets were stated during the initial fire command and the first target was successfully defeated. The first (initial) target was defeated during the initial fire command. An example of this alert is described in figure 2-7.

Type	*Crewmember*	*Example*	*Element/Term*
Initial Fire Command	VC	TWO PCs	*Alert/Target Description*
		FRONTAL PC	*Modifier*
	Gunner	IDENTIFIED	*Response Term*
		FRONTAL PC	*Modifier*
		NINE-HUNDRED	*Response Term*
	VC	FIRE	*Execution*
	Gunner	ON THE WAY	*Response Term*
		TARGET	*Effects*
Supplemental Fire Command	VC	TARGET	*Alert*
		MOVING PC	*Target Description*
	Gunner	IDENTIFIED	*Response Term*
		MOVING PC	*Modifier*
		ONE-THOUSAND	*Response Term*
	VC	FIRE	*Execution*
	Gunner	ON THE WAY	*Response Term*
	VC	TARGET	*Effects*
		CEASE FIRE	*Termination*

Legend: PC—personnel carrier; VC—vehicle commander

Figure 2-7. Sensing as alert element, example

2-10. Announcing a sensing on any target and returning to a previously engaged target serves as the alert element. This is done when the crew has fired at multiple targets and identifies a previously engaged target has not been eliminated as a threat. This type of supplemental command returns the direct fire engagement from the established target to a previously engaged target. TARGET–RIGHT PC or TARGET–REENGAGE RIGHT PC directs the gunner to return to the right-most personnel carrier (known as PC) in the array.

2-11. Announcing a sensing is followed by a weapon and target description. This is used to alert the crew that the supplemental target requires the use of a different weapon to defeat it effectively. This is typical when engaging multiple targets of varying levels of protection. For example, a crew identifies a PC and TROOPS, where the PC has been classified as most dangerous. The crew engages the PC first, destroying that vehicle, then issues a supplemental fire command to engage the troops (see example in figure 2-8).

Type	*Crewmember*	*Example*	*Element/Term*
Initial Fire Command	VC	PC, TROOPS, PC FIRST	*Alert/Target Description*
	Gunner	IDENTIFIED PC, ONE-THOUSAND	*Response Term*
	VC	FIRE	*Execution*
	Gunner	ON THE WAY	*Response Term*
		TARGET	*Effects*
Supplemental Fire Command	VC	TARGET	*Alert*
		INDEX COAX	*Weapon/Ammunition*
		TROOPS	*Target Description*
	Gunner	COAX INDEXED, IDENTIFIED TROOPS, FIVE HUNDRED	*Response Term*
	VC	FIRE	*Execution*
	Gunner	ON THE WAY	*Response Term*
	VC	TARGET	*Effects*
		CEASE FIRE	*Termination*
Legend: COAX—coaxial; PC—personnel carrier, VC—vehicle commander			

Figure 2-8. Sensing as alert and change of weapon, example

ALERTS WHEN THE VEHICLE COMMANDER IS THE FIRER

2-12. When a VC is firing a weapon or system, the VC is only required to announce those elements necessary to coordinate the required crew actions for the engagement. This reduces the redundancy of the VC directing actions to themselves as the primary firer. It streamlines the engagement process and facilitates increased crew situational awareness for the engagement.

VEHICLE COMMANDER ANNOUNCES WEAPON AS ALERT ELEMENT

2-13. Typically, announcing the weapon is the second element of the fire command (as described in chapter 3), but it may be considered the alert in certain cases. This is used for main gun/ATGM platforms when the VC is going to engage a target with the weapon announced. Only crew-served machine guns are stated in this manner. The weapon announcement can be used as the alert element for the VC. For mounted machine gun platforms, the VC or authorized gunner may use these terms as an alert but is not required to do so.

2-14. Commands that announce the weapon to establish the VC as the firer on main gun/ATGM platforms as capable (see example in figure 2-9) are—

- MARK–NINETEEN alerts the crew that the VC is firing the MK19 from their position.
- CALIBER–FIFTY alerts the crew the VC is firing the caliber .50 machine gun mounted in the commander's weapon station.
- TWO–FORTY alerts the crew the VC is firing the M240 machine gun when it is in the commander's weapon station.

Type	*Crewmember*	*Example*	*Element/Team*
Initial Fire Command	VC	CALIBER FIFTY	*Alert*
		TRUCK	*Target Description*
		RIGHT FRONT	*Location*
		ONE-THOUSAND	*Range*
		ON THE WAY	*Execution*
		TARGET	*Effects*
		VC COMPLETE	*Response Term*
		CEASE FIRE	*Termination*
Legend: VC—vehicle commander			

Figure 2-9. Weapon as alert element, example

VEHICLE COMMANDER ANNOUNCES LOAD OR INDEX A WEAPON OR AMMUNITION

2-15. When the VC announces to the crew to load or index a weapon or ammunition (as appropriate), this alerts the crew that the VC will be firing the engagement. These commands consist of—

- LOAD (AMMUNITION)
  - This alerts the crew to ensure the named ammunition is loaded in the weapon and selected in the fire control system.
  - It may alert the loader to load the named ammunition for a subsequent engagement.
  - The gunner indexes the appropriate ammunition and announces (AMMUNITION) INDEXED after the battle-carried ammunition is fired (Abrams and Booker, only).
- INDEX (AMMUNITION)
  - This alerts the crew that the next portion of the engagement uses the main gun with the identified type of ammunition and may indicate changing from the coaxially mounted machine gun.
  - This is used during subsequent or supplemental fire commands.
  - If a VC uses this term during an initial fire command, it indicates that the VC is the firer, and the gunner indexes the announced ammunition type.
- INDEX (WEAPON)
  - This alerts the crew that the next portion of the engagement is no longer using the main gun (currently in use) and directs switching to the coaxially mounted machine gun.
  - This is only used during subsequent or supplemental fire commands.
  - If a VC uses this term during an initial fire command, it indicates that the VC is the firer, and the gunner selects the announced weapon in the fire control system.

LOAD AMMUNITION ALERT ELEMENTS

2-16. Announcing ammunition as an alert includes a prefix LOAD or INDEX in the command. This is done on main gun/ATGM platforms when the VC fires the main gun. Examples of ammunition used as an alert are LOAD SABOT, LOAD HEAT (high explosive antitank), and LOAD MPAT (multipurpose antitank). This may occur at the beginning of the initial fire command, in the middle of an engagement if the gunner has a misfire or is not capable of firing the engagement, or for another reason. (See example in figure 2-10.)

Type	*Crewmember*	*Example*	*Element/Term*
Initial Fire Command	VC	LOAD SABOT	*Alert*
		TANK	*Target Description*
	Loader	UP	*Response Term*
	VC	ON THE WAY	*Execution*
		TARGET	*Effects*
Supplemental Fire Command		LOAD SABOT	*Alert*
		MOVING TANK	*Target Description*
	Loader	UP	*Response Term*
	VC	ON THE WAY	*Execution*
		TARGET	*Effects*
		CEASE FIRE	*Termination*

Legend: VC—vehicle commander

Figure 2-10. Load ammunition alert element, Abrams example

FROM MY POSITION ALERT ELEMENT

2-17. Announcing, FROM MY POSITION alerts a main gun crew that the VC fires the engagement using the commander's control handle during a subsequent or supplemental fire command. When used during a subsequent fire command, the VC is assuming control of the turret away from the gunner and the VC intends to engage the target. This may be done for many reasons, including the following:

- Gunner failing to identify the target.
- Gunner is applying the wrong corrective action to defeat the target, or the gunner has lost control handle functionality.
- The VC can use this alert to fire any of the available weapons associated with the fire control system.

2-18. When the VC announces FROM MY POSITION, this alerts the crew that the VC fires the currently loaded and indexed ammunition, whether it is a main gun, or the coaxially mounted machine gun and the VC intends to fire the weapon from the commander's override. The VC can use this alert to fire any of the available weapons associated with the fire control system, typically if the gunner fails to identify the target stated in the fire command (see figure 2-11).

Type	*Crewmember*	*Example*	*Element/Term*
Initial Fire Command	VC	GUNNER	*Alert*
		COAX	*Weapon/Ammunition*
		TRUCK	*Response Term*
	Gunner	CANNOT IDENTIFY	*Response Term*
	VC	FROM MY POSITION	*Alert*
		ON THE WAY	*Execution*
		TARGET	*Effects*
		VC COMPLETE	*Response Term*
		CEASE FIRE	*Termination*
Legend: COAX—coaxial; VC—vehicle commander			

Figure 2-11. From my position alert element, example

WATCH MY TRACERS SPECIAL ALERT

2-19. The use of WATCH MY TRACERS is a special use alert that is extremely rare. It is for the VC of an Abrams or Booker platform where the VC has a machine gun in the commander's weapons station. This alert is only used where the firer could not identify the target described in the previous fire command and the VC wishes to use machine gun tracer rounds to guide the firer onto target (see figure 2-12). This alert is technically part of an initial fire command nested within another fire command (initial, subsequent, or supplemental).

Type	*Crewmember*	*Example*	*Element/Term*
Initial Fire Command	VC	GUNNER	*Alert*
		CANISTER	*Weapon/Ammunition*
		TRUCK	*Target Description*
	Gunner	CANNOT IDENTIFY	*Response Term*
	VC	WATCH MY TRACERS	*Alert*
		DIRECT FRONT	*Location*
		ON THE WAY	*Execution*
	Gunner	IDENTIFIED, TWO-HUNDRED	*Response Term*
	Loader	UP	*Response Term*
	VC	FIRE	*Execution*
		VC COMPLETE	*Response Term*
	Gunner	ON THE WAY	*Response Term*
		TARGET	*Effects*
	VC	CEASE FIRE	*Termination*

Legend: VC—vehicle commander

Figure 2-12. Watch my tracers alert element, example

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Chapter 3

Weapon or Ammunition

The second element of the fire command is the weapon or ammunition. This identifies to the crew or small unit which weapon, or ammunition type is fired during the engagement. Certain instances require the leader to specify which ammunition or weapon to select for an engagement.

OVERVIEW

3-1. The weapon/ammunition element may be omitted on crew platforms that have only one weapon system, or on crew platforms where there is only one firer (when the VC is the gunner). When changing ammunition from the battlecarry posture, the leader must announce the ammunition change to the firer. In the instance that FIRE AND ADJUST has been given to the gunner in the initial fire command, the gunner must announce the change of weapon or ammunition in any subsequent fire command.

Note. Weapon/ammunition element provides the weapon or ammunition type to be used to engage the current threat as determined during the DECIDE link in the kill chain (selection of combat power).

COMMANDS

3-2. For a collective fire command, the leader uses this element for the small unit or subordinate element to identify which weapon or ammunition type to fire during the engagement. This element may be omitted when the leader intends to utilize the entire unit's combat power.

3-3. If the VC announces a change of weapon from main gun to coaxially mounted M240, the VC announces COAX. TWO–FORTY is not used to direct the gunner on main gun platforms to engage with coaxially mounted M240. Figure 3-1 on page 40 provides examples to identify and announce the weapon or ammunition during a fire command.

Weapon/Ammunition	*Description*
AMP	Advanced multipurpose, functioning in point detonated mode
AMP-DEE	Advanced multipurpose, functioning in delay mode
AMP-AIR	Advanced multipurpose, functioning in air mode
SABOT/AP	Armor piercing
HE	High explosive
HEP	High explosive, plastic
HEAB	High explosive, air burst
HEAT	High explosive antitank
HEDP	High explosive, dual purpose
CAN or CANISTER	Antipersonnel ammunition, typically for Abrams and Booker platforms
MPAT	Multipurpose antitank
MPAT-AIR	Multipurpose antitank, functioning in air mode
OR	Obstacle reduction
CALIBER-FIFTY	M2HB, M2, M48 series machine guns
TWO-FORTY	M240 series machine guns
COAX	Coaxially mounted machine guns
MARK-NINE-TEEN	MK19 mod III grenade machine gun
MISSILE	TOW or other missile or shoulder launched munition
JAVELIN	Javelin missile system
AT	Antitank
GUSTAV	M3 Carl Gustav, 84mm
Crew Defined	Other ammunition not described, use the most common term to clearly identify the ammunition type.
Note. When a leader issues the weapon or ammunition element to subordinate elements, this applies to the initial fire command. All subsequent and supplemental fire commands will be provided by the vehicle commander or subordinate element leader.	
Legend: mm—millimeter, TOW—tube-launched, optically-tracked, wire-guided	

Figure 3-1. Weapon or ammunition elements, examples

Chapter 4

Target Description

The third element of the fire command is the target description. This is the description of the threat or threats that the small unit or crew is engaging.

OVERVIEW

4-1. All types of fire commands, regardless of the firer (leader, Soldier, VC, gunner, or loader), are required to have a target description. The target description is given to identify which target the firer engages. This includes multiple threats that are engaged with multiple weapons.

Note. Target Description–States what target(s) to engage. When multiple targets are identified for elimination during the DECIDE process, the leader must include a modifier described in the method that specifies which target to engage first.

TARGET DESCRIPTION PURPOSE

4-2. The target description is given to identify which target the firer engages or in which order (for multiple threats). For platforms that have only one weapon system and one firer, the target description serves as the alert element. Most targets can be described by one of the terms listed in figure 4-1 on page 42.

Target Description	*Definition*
TANK	Armored tank or tank-like vehicle
TRUCK	Light armored wheeled cargo vehicle
CAR	Wheeled vehicle
MOTORCYCLE	Two or three wheeled motorized vehicles
PC	Medium armored personnel carrier
CHOPPER	Rotary wing aircraft
PLANE or FAST MOVER	Fixed wing aircraft
TROOPS or DISMOUNTS	Personnel
SNIPER	Sniper or sniper team
RPG TEAM	RPG team
MACHINE GUN	Machine gun team
ANTITANK	Antitank gun, rocket, missile, or towed artillery
BUNKER	Fortified threat emplacement
REENGAGE	Used to continue fires at the same target
REENGAGING	Used by the firer to continue fires at the same target when FIRE AND ADJUST has been given by the vehicle commander
REENGAGE (TARGET DESCRIPTION)	Used to transition to a previously engaged target
Crew Defined	Other targets not described, use the most common term to clearly identify the threat to the firer
Note: When a leader issues the target description element to subordinate elements, this applies to the Initial fire command. All Subsequent and supplemental fire commands will be provided by the vehicle commander or subordinate element leader.	
Legend: RPG—rocket propelled grenade	

Figure 4-1. Target description element, examples

COMBINING TERMS

4-3. Combining terms (ANTITANK TRUCK) can identify combination targets, such as truck mounted ATGM systems. Units may define targets specific to their operation environment and state the standard terms within their tactical SOP.

ENGAGING MULTIPLE TARGETS

4-4. If multiple targets present themselves, the VC identifies which one to engage first. For example, GUNNER–(AMMO)–STATIONARY AND MOVING TRUCKS–STATIONARY FIRST. The description includes a clear means of relaying which target is most dangerous and should be engaged first. VCs use modifier terms to distinguish the initial target from the supplemental or secondary target(s). These modifiers are described later in chapter 5.

TARGET DESCRIPTION COMPONENTS

4-5. The target description may contain up to three components to enable leaders to identify the threat clearly. The three components are described in paragraphs 4-6 through 4-8.

Description

4-6. This component is mandatory, and the leader identifies what the enemy threat is in relation to the friendly force in the clearest manner.

Quantity

4-7. This is an optional component that provides the actual or estimated size of the enemy threat to be engaged. This allows subordinate leaders to assign rates of fire, engagement techniques (methods), and manage their unit's ammunition.

Action

4-8. This is an optional component that is used to distinguish one enemy threat from another when target description is identical. Figure 4-2 provides the most common terms used to describe the actions of the target.

Action	*Description*
STATIONARY	Threat appears to be in a defensive posture.
MOVING	Threat is conducting offensive tactical movement.
BREACHING	Threat force is clearing, breaching, or moving through an obstacle (friendly or threat).
CROSSING	Element is tactically moving across a point, line, or structure (bridge).
OCCUPYING	Threat is establishing defensive positions, hasty or deliberate.
(SOP Defined)	As defined by the unit’s SOP.
Legend: SOP—standard operating procedure	

Figure 4-2. Target description actions, example

REENGAGE

4-9. REENGAGE can be used as a target description during subsequent fire command. When used in a subsequent fire command, this alerts the firer to continue engaging the same target. When used in a supplemental fire command, it directs the firer to return to a previously engaged target to acquire, confirm, and prepare to engage. When used in a supplemental fire command, it includes the target description.

4-10. For subsequent rounds, if the firing vehicle's fire control system is fully operational, REENGAGE is the preferred method. Reengage is a rapid technique where an updated ballistic solution is entered in the fire control system when the gunner re-lases to the target.

4-11. If the crew has a sensing of TARGET, but the target has not been completely destroyed (for example, it cannot move but can still fire), the gunner or VC re-lays using the same sight picture and announces, TARGET–REENGAGE. The firer states the updated range to target by announcing, (DETERMINED RANGE). Once the firer is given the command of execution, the firer engages the threat with the subsequent round.

Chapter 5
Method

The fourth element of a fire command is method. This describes to the firer the way or method the target(s) are engaged. The method of engagement was determined within the DECIDE link of the kill chain and delivered to the firer in the method element of a fire command.

OVERVIEW

5-1. When there are multiple targets, the leader is required to better identify the targets and accurately describe which target to engage first. The leader may use multiple methods when necessary to convey the actions required of the crew or subordinate unit.

Note. Method describes how multiple targets will be engaged by a collective small unit. This may include a modifier to specify which target to engage, a prioritization to direct fires against a type of target, the fire pattern to employ, or an engagement technique.

APPLYING THE DECIDE LINK

5-2. Once the leader makes the engagement decision, the information from the DECIDE link of the kill chain is applied to the respective element of the fire commands. Leaders use this element when presented with multiple targets to specify the following:

- Prioritization (collective engagements) is when leaders use the outcomes from the engagement decision (prioritization and method) to select the most appropriate threat types to kill first in series or sequence.
- Modifiers are used to pinpoint a specific threat to engage the first of multiple targets of the same or varying types that are present.
- Based on the tactical situation, weapon, or ammunition selected for use, ammunition conservation, or to reduce friendly exposure to the threat, the leader my elect to prescribe an engagement technique.
- Fire pattern (collective engagements) indicates the fire pattern used to engage the threats, and multiple methods may be used in one fire command.

VEHICLE COMMANDER DECIDES ON THE METHOD

5-3. When receiving a collective fire command, the VC translates the method element from the collective fire command to a method as it relates to the crew's sector of responsibility. To support the collective method of engagement, the VC may use one or more of the engagement techniques as necessary that are described in paragraphs 5-6 through 5-8.

ENGAGEMENT PRIORITIZATION

5-4. The leader prioritizes the collective efforts to kill a specific target type before all others. As an example, multiple tanks, infantry fighting vehicles, and trucks are moving into the engagement area. The leader would use prioritization to select the type of target to engage first, such as TANKS AND TRUCKS, TANKS FIRST.

5-5. Engagement priorities, which entail the sequential ordering of targets to be engaged, can serve one or more of the critical fire control functions listed in paragraphs 5-6 through 5-8.

PRIORITIZE HIGH PRIORITY TARGETS

5-6. In concert with the concept of the operation, the commander determines which target types provide the greatest payoff and can then set these as a unit engagement priority. For example, the commander may decide that destroying enemy engineer assets is the best way to prevent the enemy from breaching an obstacle.

EMPLOY THE BEST WEAPONS FOR THE TARGET

5-7. Establishing engagement priorities for specific friendly systems increases the effectiveness with which the unit employs its weapons. For example, the engagement priority for the company team's tanks could be enemy tanks first, then enemy PCs. This decreases the chance that the team's lighter systems engage enemy armored vehicles.

DISTRIBUTE THE UNIT'S FIRES

5-8. Establishing different priorities for similar friendly systems helps to prevent overkill and achieve effective distribution of fires. For example, the commander may designate the enemy's tanks as the initial priority for one Bradley fighting vehicle platoon while making the enemy's PCs the priority for another platoon. This decreases the chance of multiple tube-launched, optically-tracked, wire-guided missiles being launched against two enemy tanks while the dangers posed by the PCs are ignored.

MODIFIER

5-9. When there are multiple targets with the same target description, the VC is required to better identify the targets and accurately describe which target to engage first, regardless of the firer. This must be used to delineate which to kill first for the firer. When a modifier is given to the gunner, the gunner must repeat the modifier that was given. This verbal response is to ensure the gunner has understood which target the VC intends to engage first.

5-10. For example, two tanks and a PC are present. The leader may prioritize the tanks first but must use a modifier to select the most dangerous threats. Following the rules of direct fire (near before far, frontal before flank, and so forth), the leader uses a modifier as a method after the target description. The leader would direct the firer on to the target to engage first by announcing GUNNER, SABOT, TANKS AND PC, STATIONARY TANK FIRST. Of the two tanks, the leader directs the firer on to the stationary tank. The gunner would respond with IDENTIFIED STATIONARY TANK (DETERMINED RANGE). This response is a verbal cue to the VC that the gunner understood which tank to engage first and has identified the stationary tank.

5-11. The leader identifies which target within the array the firer is directed to engage first. These are required when multiple targets are present. The leader announces the multiple target descriptions, followed by the target array method. Figure 5-1 provides common examples of the target array method.

Target Array	*Example*	*Description*
Posture	MOVING (TARGET DESCRIPTION)	VC states the posture followed by the target description to engage first.
	STATIONARY (TARGET DESCRIPTION)	
	DEFILADE (TARGET DESCRIPTION)	
Formation	RIGHT/LEFT/CENTER (TARGET DESCRIPTION)	VC states where in the array the target is located.
	LEAD/LAST (TARGET DESCRIPTION)	
Priority	(MOST DANGEROUS) FIRST	VC states the target description of the target they perceive as most dangerous or dangerous to engage first.
	(DANGEROUS) FIRST	
Legend: VC—vehicle commander		

Figure 5-1. Target array method, example

ENGAGEMENT TECHNIQUES

5-12. The leader can apply any of the following engagement techniques to destroy or suppress enemy targets, while minimizing friendly exposure listed in paragraphs 5-13 through 5-36. Techniques include point fire, area fire, reconnaissance by fire, simultaneous fire, alternating fire, observed fire, sequential fire, and time of suppression.

POINT FIRE

5-13. Point fire may be used on platforms with multiple weapon systems and multiple firers (Abrams and Booker). Point fire entails concentrating the effects of a crew's fire against a specific, identified target such as a vehicle, bunker, or ATGM position. When the VC directs point fire, some or all of the crew's weapons engage the same target, firing until it is destroyed, or CEASE FIRE is announced.

5-14. This is announced to reduce confusion in the turret caused by identifying the same target for multiple firers to engage. This ensures the firers are aware of the VCs intent to mass fires on a single threat. Figure 5-2 is an example of a crew fire command executing the point fire method. It does not include any required responses or terms required for the fire command.

Element	***Example***	***Remarks***
Alert	GUNNER AND LOADER	Identifies two firers.
Weapon/Ammunition	COAX	M240 is implied to the Abrams Loader.
Target Description	TROOPS	
Method	POINT FIRE	Indicates a single target to engage with multiple weapons.
Location	DIRECT FRONT	M240 is not part of the fire control system, and therefore requires direction and range elements of the fire command.
Range	THREE-HUNDRED	
Controls	AT MY COMMAND	VC maintains the timing of the engagement.
Execution	FIRE AND ADJUST	Abrams M240 requires the use of FIRE AND ADJUST.
Effects	TARGET	Announce the sensing of TARGET once the desired effects have been achieved.
Termination	CEASE FIRE	Upon satisfactory completion of the engagement, or as appropriate.
Legend: COAX—coaxial; VC—vehicle commander		

Figure 5-2. Point fire, example

AREA FIRE

5-15. Area fire may be used on platforms with multiple weapon systems and multiple firers (Abrams and Booker). Area fire involves distributing the effects of a crew's fire over an area in which enemy positions are numerous or are not obvious. If the area is large, the VC assigns sectors of fire to crewmembers as appropriate. Typically, the primary purpose of the area fire is suppression; however, sustaining effective suppression requires judicious control of the rate of fire.

5-16. The VC will provide a fire command with the method, AREA FIRE. This indicates multiple targets in a given area exist. The VC uses FIRE AND ADJUST when using area fires to support maneuvering the vehicle, sensing rounds, and controlling additional fires.

5-17. The VC should use a location description of the area, where practical. This can include any method of clearly determining the location of the intended area fires. (See figure 5-3.)

Element	***Example***	***Remarks***
Alert	GUNNER	
Weapon/Ammunition	COAX	
Target Description	TROOPS	
Method	AREA FIRE	Indicates multiple targets to engage that may or may not be visible.
Location	LEFT OF TRP THREE	
Execution	FIRE AND ADJUST	
Effects	TARGET	Announce the sensing of TARGET once the desired effects have been achieved.
Termination	CEASE FIRE	Upon satisfactory completion of the engagement, or as appropriate.
Legend: COAX—coaxial; TRP—target reference point		

Figure 5-3. Examples of area fire

RECONNAISSANCE BY FIRE

5-18. *Reconnaissance by fire* is a technique in which a unit fires on a suspected enemy position (FM 3-90). It is the process of engaging possible enemy locations to elicit a tactical response, such as return fire or movement. This response permits the commander and subordinate leaders to make accurate target acquisition and then mass fires against the enemy element. Typically, the commander directs a subordinate element to conduct the reconnaissance by fire. (For example, the commander may direct an over-watching platoon to conduct the reconnaissance by fire against a probable enemy position before initiating movement by a bounding element.)

5-19. The VC must announce a target description of the type of threat the crew is attempting to identify. This serves as an indicator to the gunner to fire machine gun bursts in the locations the target description would most likely be operating.

5-20. The VC will announce a direction (location), regardless of weapon system type when using the reconnaissance by fire command. This informs the gunner of the general area to focus the reconnaissance.

5-21. The VC will announce RECONNAISSANCE BY FIRE as the method element. The VC must use FIRE AND ADJUST as the command of execution to provide the gunner or firer sufficient latitude to conduct a proper reconnaissance by fire.

SIMULTANEOUS FIRE

5-22. Simultaneous fire may be used on platforms with multiple weapon systems and multiple firers (Abrams and Booker). Crews employ simultaneous fire to mass the effects of their fires or to gain fire superiority rapidly. For example, a unit may initiate a support by fire operation with simultaneous fire, and then revert to alternating or sequential fire to maintain suppression. Simultaneous fire is rapidly employed to suppress a common threat in support of another crew, small unit, or element.

5-23. This method of engagement requires the VC to use the section or platoon leader's control and execution as a precursor to the command of execution. The VC states, SIMULTANEOUS or SIMULTANEOUS FIRES for the method to inform the gunner to be prepared for a slight delay in the command of execution. This facilitates the coordination and timing of the engagement.

5-24. The VC may choose to use, STAND BY or AT MY COMMAND as the control element when using simultaneous fire in support of a collective fire command. This provides additional control over the timing and sequencing of the engagement (see controls in chapter 8).

ALTERNATING FIRE

5-25. In alternating fire, pairs of elements continuously engage the same point or area target one at a time. For example, a company team may alternate fires of two platoons; a tank platoon may alternate the fires of its sections; or an Infantry platoon may alternate the fires of a pair of machine guns. Alternating fire permits the unit to maintain suppression for a longer duration, forcing the enemy to acquire and engage alternating points of fire.

5-26. This method of engagement requires the VC to use the section or platoon leader's control and execution as a precursor to the command of execution. The VC states, ALTERNATING or ALTERNATING FIRES for the method to inform the gunner to be prepared for a slight delay in the command of execution. This facilitates the coordination and timing of the engagement.

5-27. The VC may choose to use, STAND BY or AT MY COMMAND as the control element when using simultaneous fire in support of a collective fire command. This provides additional control over the timing and sequencing of the engagement (see controls later in chapter 8).

OBSERVED FIRE

5-28. Observed fire is normally used when the company team is in protected defensive positions with engagement ranges greater than 2,500 meters. It can be employed between elements of the company team, such as the tank platoon lasing and observing while the Bradley fighting vehicle platoon fires, or between sections of a platoon.

5-29. The commander or platoon leader directs one element or section to engage. The remaining elements or section observes fires and prepares to engage on order in case the engaging element consistently misses its targets, experiences a malfunction, or runs low on ammunition. Observed fire allows for mutual observation and assistance while protecting the location of the observing elements. When the vehicle is part of the firing element for observed fires, no action is required.

5-30. When the vehicle is identified as the observing element, the VC announces, OBSERVE FIRES as the method element. The gunner observes fires of the target described in the fire command, maintains tracking of the target, and is prepared to engage the target. The observing element continues to observe as directed by the senior leader until a command of execution is given (if required). When the VC determines that the crew will not engage during observed fires, CEASE FIRE is announced to the crew and the mission continues.

SEQUENTIAL FIRE

5-31. Sequential fire entails the subordinate elements of a unit engaging the same point or area target one after another in an arranged sequence. For example, a mechanized Infantry platoon may sequence the fires of its four Bradley fighting vehicles to gain maximum time of suppression. Sequential fire can help to prevent the waste of ammunition, as when an Infantry rifle platoon waits to see the effects of the first Javelin before firing another.

5-32. Sequential fire permits elements that have already fired to pass on information they have learned from the engagement. An example would be an Infantryman who missed a BMP fighting vehicle with AT4 fires passing range and lead information to the next Soldier preparing to engage the BMP with an AT4.

5-33. For crews, the VC must announce, SEQUENTIAL FIRE and use AT MY COMMAND as the controls element. The VC is responsible for issuing the command of execution at the appropriate time based on the collective fire command.

TIME OF SUPPRESSION

5-34. Time of suppression is the period, specified by the commander, when an enemy position or force is required to be suppressed. Suppression time is typically dependent on the time it takes a supported element to maneuver. Normally, a unit suppresses an enemy position using the sustained rate of fire of its automatic weapons.

5-35. In planning for sustained suppression, leaders consider several factors: the estimated time of suppression, the size of the area being suppressed, the type of enemy force to be suppressed, range to the target, rates of fire, and available ammunition quantities.

5-36. The VC is not required to announce this method in order to execute effectively. The VC will use controls to limit the amount of firing, as required by the collective fire command.

FIRE PATTERN

5-37. The fire pattern method directly supports the fire pattern stated in the collective fire command. It is used in relation to the crew's position in the friendly formation, sector of fire, or specific instructions, as appropriate. The *sector of fire* is that area assigned to a unit, or weapon system in which it will engage the enemy according to the established engagement priorities (FM 3-90). VCs state the fire pattern for use and may include additional descriptions, if necessary. These methods use a known point, such as a target reference point (TRP), to establish the focus of fires for the engagement. Figure 5-4 provides some common fire pattern methods. A *target reference point* is a predetermined point of reference, normally a permanent structure or terrain feature that can be used when describing a target location (JP 3-09.3).

Fire Pattern	*Example*	*Description*
Location	NEAR (LOCATION)	VC states the general location around a known point or marker the target array is located.
	LEFT/RIGHT OF (LOCATION)	
	HEADING TOWARD (LOCATION)	
Orientation	NORTH/SOUTH OF (LOCATION)	VC states the cardinal direction in relation to a known point the array the target is located.
	EAST/WEST OF (LOCATION)	
Legend: VC—vehicle commander		

Figure 5-4. Fire pattern methods, example

FRONTAL

5-38. Leaders may initiate frontal fire when targets are arrayed in front of the unit in a lateral configuration. Weapon systems engage targets to their respective fronts. For example, the left flank weapon engages the left-most target; the right flank weapon engages the right-most target. As targets are destroyed, weapons shift fires toward the center of the enemy formation and from near to far.

CROSS

5-39. Leaders initiate crossfire when targets are arrayed laterally across the unit's front in a manner that permits diagonal fires at the enemy's flank or when obstructions prevent unit weapons from firing frontally. Right flank weapons engage the left-most targets; left flank weapons engage the right-most targets. Firing diagonally across an engagement area provides more flank shots, thus increasing the chance of kills. It reduces the possibility that friendly elements are detected if the enemy continues to move forward. As enemy targets are destroyed, weapons shift fires toward the center of the enemy formation.

DEPTH

5-40. Leaders initiate depth fire when targets are dispersed in depth, perpendicular to the unit. Center weapons engage the closest targets; flank weapons engage deeper targets. As the unit destroys targets, weapons shift fires toward the center of the enemy formation.

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Chapter 6

Location

The fifth element of the fire command provides the location (any necessary direction or elevation) to guide the firer to a threat. Certain instances require the leader to determine the location of the target for an engagement.

OVERVIEW

6-1. The location, establishing the direction or elevation of a target, is given to guide the firer onto the target in various ways. The leader or VC may use direction or elevation terms to assist the firer acquiring the correct target, or they may perform the action themselves (commander's override, control hand station, or commander's handle, for example) when appropriate.

Note. Location includes the general direction to slew the armament and armor toward. This element may include elevation to the threat to better direct the firer onto the desired target, as necessary.

6-2. The location element serves to orient weapons and armor protection toward the threat. It is used in crew/team fire commands to direct the firer onto the target. Announcing the direction or elevation provides situational awareness for the crew, dismounts in the vehicle, or both. In collective engagements, location may also be used to direct a contact or action drill to orient fires, weapons, and armor protection.

6-3. The VC may include the ELEVATION of the target as necessary. DIRECTION is mandatory for—

- All mounted machine gun crews.
- All two-man crews (where the gunner is the VC).
- Abrams crews when directing the loader to fire the machine gun.
- Abrams and Booker when the VC is firing the commander's weapon station.

Note. Providing the direction in the instances discussed in paragraph 6-3 provides situational understanding for other members of the crew/team and instructs them to sense impacts of small arms rounds, if possible.

6-4. Crews must be proficient in the various means of directing the firer onto target. There are several ways to orient the firer onto a target or target area, and the most common are listed in figure 6-1 on page 56.

Location (Direction)	*Description*
DESIGNATE	VC designating the main armament using an independent thermal viewer or similar optic
(NUMBER) O'CLOCK	Clock method
TRAVERSE LEFT/RIGHT…STEADY...ON	Traverse method to talk the firer onto the threat or threat area
REFERENCE POINT (LOCATION) or TRP (LOCATION)	Reference point or TRP method
LEFT/RIGHT FRONT	Sector or quadrant method of describing threat direction based on the hull of the vehicle or direction of travel
LEFT/RIGHT SIDE	
LEFT/RIGHT REAR	
LEFT/RIGHT ONE-HALF TARGET FORM	Smallest standard adjustment for subsequent round(s)
LEFT/RIGHT ONE- TARGET FORM	Standard adjustment for subsequent round(s)
(SECTOR or QUADRANT NAME)	Preestablished sector or quadrant for the collective element
GRID	Provides a military grid coordinate to the subordinate element(s)
Location (Elevation)	Description
(GROUND/NUMBER) FLOOR or ROOF	Used in an urban environment to identify the floor a threat is located on within a building
HIGH/LOW	
ALPHA/BRAVO/CHARLIE	Used in restricted terrain to identify the location based on ethe elevation in terrain
Legend: TRP—target reference point; VC—vehicle commander	

Figure 6-1. Location element, examples

DIRECTION

6-5. There are several general methods to describe direction to the gunner or collective element, not including any SOP defined methods. These items do not include stating which target to engage first when multiple targets are presented. These provide a means to bring the main armament to bear against the selected threat as discussed in paragraphs 6-6 to 6-13.

DESIGNATE

6-6. On vehicles equipped with an independent viewer, the VC must announce DESIGNATE prior to pressing the target designate button. This function temporarily removes control over the turret from the gunner and orients the turret/optics onto target. When the VC announces DESIGNATE, the gunner should center the control handles and release the palm switches. When the main armament is moved onto the target, the VC releases the palm switch to disengage the override and should announce GUNNER CONTROL to inform the gunner to grasp the power control handles and resume control of the turret. The VC can then use the independent viewer to continue to scan for additional targets.

CLOCK

6-7. The VC announces the direction as it relates to the target's location using the hands of a clock. Twelve o'clock is always the orientation of the hull of the vehicle or direction of travel. For example, when the VC announces GUNNER–TROOPS–ONE O'CLOCK, troops approximately 30 degrees to the right of the hull orientation or direction of travel have been observed.

TRAVERSE

6-8. The VC directs the gunner, TRAVERSE LEFT (RIGHT). The gunner traverses the turret in the direction announced. As the main armament nears the target, the VC announces, STEADY, and the gunner slows the traverse in the same direction. When the VC believes the target is in the gunner's field of view, the VC announces, ON. When the gunner sees the target(s), the gunner announces, IDENTIFIED, lases to the target, and announces (DETERMINED RANGE). The gunner should use the lowest magnification when using this method to identify potential targets. For example, TRAVERSE LEFT–TRAVERSE LEFT–STEADY-ON. The crew may use SHIFT rather than TRAVERSE for clarity.

Note. During supplemental fire commands, the crew or leader may state TRAVERSE or SHIFT prior to announcing the target description.

REFERENCE POINT

6-9. The reference point is one that the gunner can see and recognize easily, typically used in a deliberate defense after creating a DA Form 5517 (*Standard Range Card*). For example, the VCs command might be REFERENCE POINT–BRIDGE–TRAVERSE RIGHT. The gunner identifies the reference point and traverses right, looking for the target. The VC may have to define the target description and location further. Once the gunner identifies the target, the gunner announces, IDENTIFIED (DETERMINED RANGE). Another example of this method is TROOPS–TRP 2.

SECTOR OR QUADRANT

6-10. The VC announces the sector or quadrant the target is in relation to the vehicle. For example, GUNNER–TROOPS–LEFT FRONT. A ***quadrant*** **is a subdivision of an area created by superimposing an imaginary pair of perpendicular axes over the terrain to create four separate areas or sectors**.

GRAPHIC CONTROL MEASURE

6-11. The leader may state a known graphic control measure to identify the direction or elevation to the threat. PHASE LINE (NAME), FINAL PROTECTIVE FIRE, or RIGHT LIMIT are some examples.

GRID

6-12. The leader provides a grid coordinate to the subordinate element(s) to the direction of the threat.

POINTER

6-13. The leader may choose to illuminate the target with an infrared laser or pointer. When using a pointer for this purpose, the leader should keep the pointer on the threat until it is engaged or identified by the appropriate subordinate element.

ELEVATION

6-14. When operating in an urban environment or restricted terrain, using elevation commands increases the firer's ability to rapidly identify the correct target(s). This is useful to leaders when targets present themselves in buildings or higher on terrain features. This may include the building story, obvious descriptions of the target area, or other means to identify the target quickly. Their location requires VCs to provide elevation information to the firer (see figure 6-2). Some examples of the elevation method are explained in paragraphs 6-15 to 6-17.

FLOOR/ROOF

6-15. The VCs state the floor of a building the target is located on. It can be followed by additional information such as the window location of the threat. For example–GUNNER–COAX–SNIPER–RIGHT FRONT–THIRD FLOOR–SECOND WINDOW FROM LEFT.

HIGH/LOW

6-16. The VC may use the terms HIGH or LOW for an elevation description in urban, rural, and restricted terrains.

TERRAIN LEVEL

6-17. When fighting in restricted terrain with rugged, steep hills or mountains, VCs should identify where on the terrain feature the target is located. Figure 6-2 shows these sections that are divided. For example, the VC can announce, TROOPS–LEFT FRONT–THREE HUNDRED–BRAVO, identifying a troop target to the left front in the middle section.

A – Alpha Terrain	Valley floor, closest to the vehicle
B – Bravo Terrain	Middle section of the field of view
C – Charlie Terrain	Crest or hilltop

Figure 6-2. Terrain levels, example

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Chapter 7
Range

The sixth element of the fire command tells the firer what range the target is in reference to the firing platform or element. This also tells the firer what range to set on the weapon sight, to index, or apply to the fire control system.

OVERVIEW

7-1. When the fire control system's LRF is operational, the range element of the fire command normally is omitted. When the fire control system's LRF is not available or is nonoperational (not mission capable), this element is required.

> ***Note.*** Range is the estimated range to target for the engagement. This is used when a fire control system does not integrate accurate range to target information into a ballistic solution automatically or if that capability is degraded for any reason.

7-2. When announcing the specific range, it is typically announced in even 100- or 1000-meter increments such as ONE—EIGHT—HUNDRED, TWO—THOUSAND, and so on. Figure 7-1 provides some examples.

Range	*Mounted Machine Gun or Degraded*	*Main Gun Applied to Fire Control System*
840 meters	EIGHT—HUNDRED	INDEX EIGHT—HUNDRED
2,000 meters	TWO—THOUSAND	INDEX TWO—THOUSAND
1,200 meters	ONE—TWO—HUNDRED	INDEX ONE—TWO—HUNDRED
860 meters	NINE—HUNDRED	INDEX NINE—HUNDRED
3,040 meters	THREE—THOUSAND	INDEX THREE—THOUSAND

Figure 7-1. Range element, examples

7-3. This element is not to be confused with the response terms described in chapter 1. The range element is a separate entity from the crew response term. The ***crew response*** **is a confirmation that the crewmember understands the fire command, has completed an implied or directed task provided by the fire command, or to provide information to the crew**. The range element of the fire command is optional when the fire control system provides the range. The range element is mandatory when the range to target cannot be determined using an electronic device or LRF. As a crew response term, the range is always announced after IDENTIFIED by the gunner (or loader) to ensure the appropriate range to target is induced or applied.

7-4. When the vehicle is equipped with a VC sight independent of the gunner's, the VC can determine the range to a target independently from the gunner using the stadia

reticle, if available. When the VC designates a target they have choked using a stadia reticle, the VC can announce the estimated choked range to the gunner.

7-5. When an accurate range to target cannot be determined using an electronic device or LRF, the leader must use an alternate method to determine the range to target. The different range methods are known range and estimated range.

KNOWN RANGE METHOD

7-6. By knowing the range to probable target areas before engagements, the crew can reduce engagement time and improve accuracy by indexing the known vehicle-to-target range. The known range from a previous target engagement or established TRP may be used. This is primarily used in the defensive posture after creating a Standard Range Card.

ESTIMATED RANGE METHOD

7-7. To engage targets when an accurate range cannot be determined electronically or is unknown, the VC or gunner estimates the range to the target. Range data is typically announced in the fire command in even 100s or 1000s. Some examples of the estimated-range method are described in paragraphs 7-8 through 7-13.

(RANGE)

7-8. For mounted machine gun platforms, this estimated range allows the gunner to focus the target acquisition in a certain area from their position.

INDEX (RANGE)

7-9. The gunner manually enters the range into the fire control system. This term is typically used prior to an engagement or as a correction term to the gunner.

CHOKE

7-10. The VC directs the gunner to shift to the gunner's auxiliary sight, select the appropriate reticle, use the stadia reticle (choke sight) to estimate the range. After the gunner has determined the estimated range with the stadia reticle, they announce IDENTIFIED, CHOKED (DETERMINED RANGE), to inform the VC of the choked range to the target. The CHOKE method for determining estimated range does not include dismounted troop targets.

CHOKED (DETERMINED RANGE)

7-11. The VC has determined the estimated range using the commander's independent viewer stadia reticle (does not include dismounted troop targets). The gunner uses the gunner's primary sight and the determined range from the VC.

BATTLESIGHT

7-12. Battlesight range is a range applied only to vehicles with a fire control system. The purpose of the battlesight is to provide a predetermined range to target for the ballistic computer in situations that require firing without lasing. The VC pushes the BTL SGT button on the commander's panel, inducing a predetermined range into the ballistic

computer (Abrams or Booker) or inputs the range using the manual range selector switch in the Bradley fighting vehicle.

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Chapter 8
Controls

The seventh element of the fire command, controls, provides the leader the ability to manage ammunition, friendly exposure to the threat, reinforce the rules of engagement (ROE), or provide conditions that are met before engaging the threat. The controls are specific to the timing of the engagement to enable massing of fires.

OVERVIEW

8-1. Multiple controls may be used within the fire command, as necessary. Controls in a collective fire command can delegate the authority to give the command of execution to an authorized subordinate leader.

Note. Controls provide synchronization instructions (timing) to the collective engagement that describes the limitations, restrictions, or authorizations during the engagement.

8-2. The controls element provides the VC with the ability to control the fires of the crew. The commander or platoon leader may use this element to direct desired target effects, distribution methods, or engagement techniques. The VC may include the control element to support the commander's instructions and achieve effective distribution. When receiving a collective fire command with a control element, the VC translates the element into a control element as it pertains to the crew.

8-3. The VC has several methods to control the fires of the crew to best manage ammunition, follow the commands of the next higher element, or to allow for synchronization of other direct or indirect fires. These methods include delay, engagement criteria, weapon control status, and the ROE.

DELAY

8-4. The delay method of control allows the leader to synchronize fires within the firing element. The delay method commands are AT MY COMMAND and STAND BY.

AT MY COMMAND

8-5. The VC can use, AT MY COMMAND to delay the firing of the engagement. This command implies that the command of execution will follow shortly and to remain prepared to engage. AT MY COMMAND is used when the VC maintains the timing of the engagement, not a senior leader. ***At my command*** **is a term used to synchronize fires from a single vehicle when the VC maintains the timing of the engagement**.

STAND BY

8-6. The leader can announce, STAND BY to delay for longer periods of time, specifically when the timing of the engagement is controlled by an external senior leader for synchronization of an action or event. STAND BY is typically used to complete external coordination, synchronization of indirect fires, or digital messaging that are directly related to the pending engagement and massing of fires is desired.

8-7. Leaders using STAND BY must indicate to the subordinate units that the command of execution is pending by stating AT MY COMMAND once the external coordination, action, or event is complete. This allows the unit to prepare to engage within a short period of time. It serves as a preparatory command to the execution and enables the synchronization of fires. As an example, a leader issues STAND BY when waiting on effects of indirect fire. Once SPLASH is received by the leader indicating indirect fire has been initiated; they prepare their unit to engage by announcing AT MY COMMAND and issues the command of execution.

ENGAGEMENT CRITERIA

8-8. Engagement criteria are a specific set of conditions that dictates initiation of fires. By specifying the engagement criteria, the leader provides the firing element the circumstances where subordinate elements are authorized to engage. These circumstances may be based on a friendly or enemy's action, event, or a point in time. For example, the engagement criteria for a friendly platoon to initiate the engagement could be three or more enemy combat vehicles passing or crossing a given point, trigger line, or graphic control measure. For this example, the control element can delegate the command of execution to an authorized subordinate leader.

8-9. This command is used to direct the firer to respond once the firing conditions have been met. The VC announces a control measure, such as AT PHASE LINE DENVER. Once the firer confirms the condition has been met, the gunner announces the control trigger back to the VC; in this case, the gunner's response would be, PHASE LINE DENVER.

WEAPON CONTROL STATUS

8-10. A ***weapon control status*** **is a tactical method of fire control given by a leader that incorporates the tactical situation, rules of engagement for the area of operations, and expected or anticipated enemy contact.** The weapon control status outlines the target identification conditions under which friendly elements may engage a perceived threat with direct fire.

8-11. Figure 8-1 describes the standard weapon control status used in tactical operations, both in training and combat. They describe when the firer is authorized to engage a threat target once the threat conditions have been met.

Weapon Control Status	***Engage Only When:***
WEAPONS HOLD	Engaged or ordered to engage
WEAPONS TIGHT	Target is positively identified as enemy
WEAPONS FREE	Target is not positively identified as friendly
Note. When the weapon control status is provided as a stand-alone measure, leaders will include the prefix WEAPONS as in WEAPONS HOLD, or WEAPONS TIGHT, or WEAPONS FREE, as appropriate for the tactical situation.	

Figure 8-1. Weapon control status

Note. When the VC has directed a weapon control status to the gunner, the VC resumes control of the turret by announcing CEASE FIRE or use the commanders override (if equipped).

WEAPON SAFETY STATUS

8-12. ***Weapon safety status*** **is a standard code that uses common colors (green, amber, red, and black) to represent the level of safety for a given weapon** (see figure 8-2). Each color represents a specific series of actions that are applied to a weapon to place it in a specific level of safety. The colors are used in training and combat to place or maintain a level of safety relevant to the current task or action of a Soldier, small unit, or group.

Weapon Safety Status	***General Description***
Green	Fully safe
Amber	Substantially safe
Red	Marginally safe
Black	Not safe/In use

Figure 8-2. Weapon safety status and general descriptions

8-13. All firers and leaders must be fluent in the general meaning of each weapon safety status(known as WSS), how it pertains to the weapon being employed, and the responsibilities of the firer to own each shot or burst. For the process for a specific weapon, refer to the respective weapon's training circular.

Green

8-14. Fully safe is where the weapon is clear, no ammunition is present (no magazine or belt), the chamber is empty, and the weapon is on SAFE. All weapons have an individual task to clear their weapon.

Amber

8-15. Substantially safe is where the weapon must be cleared and verified by a leader, the bolt or slide is forward (weapon dependent), and ammunition is introduced to the weapon. This is an administrative/preparatory WSS. It is used primarily for mounted weapons and during combat operations when directed to maintain a substantially safe weapon with the ability to rapidly transition and escalate to RED or BLACK, based on the situation.

Red

8-16. Marginally safe is when the weapon is on SAFE, the magazine is locked into the well or the belted ammunition is on the feed tray with the cover closed (weapon dependent). For pistols, rifles, carbines, and sniper weapon systems, a round is in the chamber and the bolt is forward in the locked position. For the M249- and M240-series, the bolt is locked to the rear, with the ammunition on the feed tray with the cover closed.

Black

8-17. Not safe indicates when the weapon is fully prepared to fire, the firer has positively identified the target, the weapon is on FIRE, the firer's finger is on the trigger, and is in the process of engaging the threat.

8-18. WSS BLACK is used to describe the actions of the firer when in a RED status and entering an *engagement sequence* as part of the kill chain, ENGAGE. It is used to describe the clear difference between RED and actively, deliberately engaging a threat. **The *engagement sequence* is the order in which multiple targets are engaged with direct fire. The engagement sequence may be directed during the conduct of fire or follow standard target prioritization rules of thumb.**

8-19. The WSS also directly supports the rules of firearms safety for each separate weapon. The principles of the rules of firearms safety are reinforced during every training event for each respective weapon and are further reinforced within the direct fire kill chain, specifically within the weapon posture and engage functions.

WEAPON POSTURE DESCRIPTION

8-20. Firers are ultimately responsible for their weapons and the actions conducted with their weapons. They have a legal and moral obligation to tactically employ their weapons and systems appropriately. Commanders and leaders provide weapon postures that take all four components of the WSS into consideration as they apply to force protection and the mission at hand.

8-21. During development of the unit's tactical SOPs and later in the orders process, commanders use the weapon posture to describe the battlecarry condition of the weapons or weapons systems, the ammunition and ballistic information for those weapons as appropriate, the WSS and weapon control status. The battlecarry information (ammunition prepared and tactically relevant engagement distance for selected ammunition) may be standardized for the organization.

8-22. Both a weapon control and a WSS are implemented and available to leaders to prevent fratricide and limit collateral damage. These postures or statuses are typically developed for a particular area of operations or type of mission. Leaders should clearly outline both for all Soldiers, typically in the operation order, warning order, or fragmentary order. The descriptions for how the WSS and weapon control status are integrated are shown in figure 8-3 on page 68.

DEFINITION	WEAPONS POSTURE			
	WSS	WCS		
	STATUS	HOLD	TIGHT	FREE
All weapons clear, mechanical and electrical SAFE	GREEN			
BATTLECARRY, ammunition is PREPARED, ELECTRICAL SAFE MANUAL SAFE (except open bolt weapons) ALERT is ANNOUNCED	AMBER	HOLD	TIGHT	FREE
AMMUNITION LOADED ELECTRICAL SAFE MANUAL SAFE (except open bolt weapons) TARGET DESCRIPTION ANNOUNCED	RED	HOLD	TIGHT	FREE
COMMAND OF EXECUTION GIVEN	BLACK			
ENGAGE ONLY WHEN:		ENGAGED or ORDERED TO ENGAGE	Threats are POSITIVELY IDENTIFIED as ENEMY	Threats are NOT POSITIVELY IDENTIFIED as FRIENDLY
Note. Information concerning the specific loading procedures for any weapons may be found in its respective technical manual or training circular for tactical employment.				
Legend: WCS—weapon control status, WSS—weapon safety status.				

Figure 8-3. Weapon posture framework

8-23. Soldiers operating the weapon or weapon system remain ultimately responsible for each munition fired from their weapon. It is the Soldier's responsibility to completely understand their weapon's cycle of function, capabilities, limitations, ammunition, the rules of firearms safety, and the application of the ROE as they apply to the tactical situation in which they employ those weapons.

8-24. As shown in figure 8-3, when directing a GREEN WSS, no weapon control status is provided. A leader would provide orders to increase the weapon posture from GREEN as part of escalation of force based on the ROE and tactical situation.

RULES OF ENGAGEMENT

8-25. ROE are Department of Defense directives issued by competent military authority that delineate the circumstances and limitations under which Soldiers may initiate or continue combat engagement with other forces encountered. The ROE reflect the law of land warfare and operational considerations and are primarily concerned with the restraints on the use of force. The ROE are the primary means by which leaders convey legal, political, diplomatic, and military guidance to Soldiers. Leaders at every level must train their Soldiers thoroughly concerning the ROE, and laws that govern armed conflict before deployment. During the conduct of operations, leaders ensure Soldiers properly apply the ROE to preclude inappropriate engagements.

8-26. ROE and tactics, techniques, and procedures will depend on the theater. Before a force deploys, the Judge Advocate General Corps will review and approve through the chain of command the rules by which a target can be engaged. These rules will address the appropriate escalation of force.

8-27. Rules of interaction (known as ROI) provide guidance for interacting with people encountered in the operational environment. ROI, when applied with good interpersonal communication skills, improve the Soldier's ability to accomplish the mission, while reducing possible hostile confrontations. ROI founded on firm ROE provide the Soldier with the tools to address nontraditional threats, such as political friction, ideologies, cultural idiosyncrasies, religious beliefs, and rituals. ROI must be regionally and culturally specific. Leaders should integrate ROE and ROI into all training where appropriate.

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Chapter 9

Execution

The command of execution is the eighth element of the fire command. Only the small unit leader in a position of authority is authorized to announce a command of execution.

OVERVIEW

9-1. All fire commands (initial, subsequent, or supplementary) must be executed for the firer to commence the engagement. The VC is the only crewmember authorized to announce a command of execution for the initial fire command. If the command of execution has been provided to the firer, the VC resumes control of the weapon system by announcing CEASE FIRE or uses the commander's override (if equipped).

Note. Execution (command of execution) is a lawfully based and morally driven order to commence firing against a confirmed threat, or a delegation of that authority to a legally responsible subordinate leader to deliver a command of execution to their subordinates.

COMMANDS

9-2. The following list includes the authorized commands of execution (see figure 9-1 on page 72 for further description):

- FIRE.
- ON THE WAY.
- FIRE AND ADJUST.
- FIRE (WEAPON CONTROL STATUS).
- FIRE, FIRE (AMMUNITION).
- FIRE, FIRE (WEAPON).
- FIRE, FIRE (AMMUNITION) AND ADJUST.
- SUPPRESS.

Execution	*Description*
FIRE	Directs the firer to commence firing. This is the standard and most common command of execution for all weapon systems. This allows the firer to engage with one round or burst (machine gun) at the threat announced in the fire command.
ON THE WAY	Used as the command of execution when the VC is firing a weapon system. Indicates when the VC initiates fires at a target. When the VC engages from their position, they must announce, ON THE WAY before squeezing the trigger as other firers would. The VC's announcement of ON THE WAY is the command of execution in this instance. When the gunner has been given FIRE AND ADJUST, the gunner's announcement of ON THE WAY is the command of execution for a subsequent fire command.
FIRE AND ADJUST	Directs the firer to commence firing and that they will not receive any additional commands from the VC for any subsequent rounds. This provides the firer the ability to continue to engage the threat by engaging with subsequent rounds until the desired effects are achieved, or the VC resumes control of the weapon system.
FIRE (WEAPON CONTROL STATUS)	Combines FIRE with the weapon control status provided by the VC. This directs the firer to engage the threat provided in the fire command, then continue to engage any additional threats by providing a subsequent and/or supplemental fire command (as required) until the desired effects are achieved, or the VC resumes control of the weapon system.
FIRE, FIRE (AMMUNITION)	Directs the firer to commence firing, and for the crew to prepare to fire the AMMUNITION announced for subsequent or supplemental engagements.
FIRE, FIRE (WEAPON)	Directs the firer to commence firing, and for the crew to prepare to fire the WEAPON announced for subsequent or supplemental engagements.
FIRE, FIRE (AMMUNITION) AND ADJUST	Combines FIRE, FIRE (AMMUNITION) with FIRE AND ADJUST shown in row three.
Note. When a leader issues the execution element to subordinate elements, this applies to the initial fire command. All subsequent and supplemental fire commands will be provided by the vehicle commander or subordinate element leader.	
Legend: VC—vehicle commander	

Figure 9-1. Examples of execution elements

9-3. When the VC announces FIRE, this tells the firer to initiate fires on the threat as identified in the target description. The firer will commence firing after the announcement of ON THE WAY. After the VC or firer has provided the effects element

(SENSING), and additional rounds are required to engage the threat, the VC must provide a subsequent fire command as shown in figure 9-2.

FIRE, Abrams Example			
Type	***Crewmember***	***Example***	***Element/Term***
Initial Fire Command	VC	GUNNER	*Alert*
		SABOT	*Weapon/Ammunition*
		TANK	*Target Description*
		DESIGNATE	*Location*
	Gunner	IDENTIFIED, ONE-SIX HUNDRED	*Response Term*
	Loader	UP	*Response Term*
	VC	FIRE	*Execution*
	Gunner	ON THE WAY	*Response Term*
	VC	SHORT	*Effects*
Subsequent Fire Command			*Alert*
		REENGAGE	*Target Description*
	Gunner	IDENTIFIED, ONE-SIX HUNDRED	*Response Term*
	Loader	UP	*Response Term*
	VC	FIRE	*Execution*
	Gunner	ON THE WAY	*Response Term*
	VC	TARGET	*Effects*
		CEASE FIRE	*Termination*
Legend: VC—vehicle commander			

Figure 9-2. Execution command to fire, example

Note. If the firer adjusts for point of aim versus point of impact, while engaging with machine gun, when given the command of FIRE, the firer makes the necessary point of aim correction, then announces ON THE WAY and continues to engage the target. The firer does not need to provide a subsequent fire command.

9-4. If the commander cannot assist the firer with direct fire adjustment, they announce, FIRE AND ADJUST. When the VC announces FIRE AND ADJUST, this tells the firer to engage the threat, without additional commands for subsequent rounds from the VC. If the firer fails to achieve the desired effects, the firer issues a subsequent fire command and announces ON THE WAY prior to squeezing the trigger. The announcement from the firer of ON THE WAY for the subsequent fire command is the command of execution in this instance. When the threat has been defeated, the firer must announce the effects (SENSING) and announce (CREWMEMBER) COMPLETE. This informs

the VC that the firer has completed engaging the threat and is prepared for any supplemental threats as shown in figure 9-3.

FIRE AND ADJUST, Bradley Example			
Type	***Crewmember***	***Example***	***Element/Term***
Initial Fire Command	VC	GUNNER	*Alert*
		AP	*Weapon/Ammunition*
		PC	*Target Description*
		DESIGNATE	*Location*
	Gunner	IDENTIFIED PC, ONE-TWO HUNDRED	*Response Term*
	VC	FIRE AND ADJUST	*Execution*
	Gunner	ON THE WAY	*Response Term*
		SHORT	*Effects*
Subsequent Fire Command			*Alert*
		REENGAGING	*Target Description*
		ONE-FOUR HUNDRED	*Response Term*
		ON THE WAY	*Execution*
		TARGET	*Effects*
		GUNNER COMPLETE	*Response Term*
	VC	CEASE FIRE	*Termination*

Legend: COAX—coaxial; AP—armor piercing, PC—personnel carrier, VC—vehicle commander

Figure 9-3. Execution command to fire and adjust, example

Note. When the gunner has been given FIRE AND ADJUST during the initial fire command, the gunner's announcement of ON THE WAY is the command of execution for a subsequent fire command.

9-5. In the event the VC has directed, FIRE AND ADJUST to the gunner on a canister engagement (Abrams or Booker), the gunner may switch between weapon systems by announcing a sensing of the round fired, the intended ammunition or weapon intended to use, and a new target description. For example, during a canister engagement, the gunner fires the canister round and needs to engage remaining troop targets with the coax machine gun. The VC's sensing of the first round is TARGET–(COAX INDEXED) –TROOPS–(DETERMINED RANGE)–ON THE WAY. If the VC disagrees with the firer's actions, the VC must regain control of the turret.

9-6. When the VC announces FIRE (WEAPON CONTROL STATUS), the firer has control of the weapon system based on the weapon control status provided (see figure 9-4). If additional rounds are needed, the firer issues the appropriate fire

command and continues to engage. The gunner may continue to initiate fires toward additional threats identified in this manner until the VC resumes control of the turret.

FIRE, WEAPONS FREE, Abrams Example			
Type	***Crewmember***	***Example***	***Element/Term***
Initial Fire Command (Target 1)	VC	GUNNER	*Alert*
		MPAT	*Weapon/Ammunition*
		PC	*Target Description*
		DESIGNATE	*Location*
	Gunner	IDENTIFIED PC, ONE-TWO HUNDRED	*Response Term*
	Loader	UP	*Response Term*
	VC	WEAPONS FREE	*Control*
		FIRE	*Execution*
	Gunner	ON THE WAY	*Response Term*
		SHORT	*Effects*
Subsequent Fire Command (Target 1)			*Alert*
		REENGAGING	*Target Description*
		ONE-FOUR HUNDRED	*Response Term*
		ON THE WAY	*Execution*
		TARGET	*Effects*
Supplemental Fire Command (Target 2)		TRUCK	*Target Description*
		ONE-FOUR HUNDRED	*Response Term*
	Loader	UP	*Response Term*
	Gunner	ON THE WAY	*Execution*
		TARGET	*Effects*
Supplemental Fire Command (Target 3)		TROOPS	*Target Description*
		COAX INDEXED	*Response Term*
		FOUR HUNDRED	
		ON THE WAY	*Execution*
		TARGET	*Effects*
		GUNNER COMPLETE	*Response Term*
	VC	CEASE FIRE	*Termination*

Legend: COAX—coaxial; MPAT—multipurpose antitank, PC—personnel carrier, VC—vehicle commander

Figure 9-4. Execution command to fire, weapons free, example

9-7. If the commander wants the next main gun round for the loader to load, or the gunner to index to be a different type than is currently chambered, the VC uses the command of execution, FIRE, FIRE (AMMUNITION). In a multiple target engagement, this ensures that the proper ammunition for the threat is used. This directs the loader to load the announced ammunition type into the main gun, and the gunner to index the appropriate ammunition into the fire control system or appropriate optic. (See example in figure 9-5.)

FIRE, FIRE (AMMUNITION), Abrams Example			
Type	***Crewmember***	***Example***	***Element/Term***
Initial Fire Command	VC	GUNNER	*Alert*
		SABOT	*Weapon/Ammunition*
		TANK	*Target Description*
	Gunner	IDENTIFIED, ONE-SIX HUNDRED	*Response Term*
	Loader	UP	*Response Term*
	VC	FIRE, FIRE MPAT	*Execution*
	Gunner	ON THE WAY	*Response Term*
		TARGET	*Effects*
Supplemental Fire Command			*Alert*
	VC	PC	*Target Description*
		DESIGNATE	*Location*
	Gunner	IDENTIFIED, ONE-FOUR HUNDRED	*Response Term*
		MPAT INDEXED	*Response Term*
	Loader	MPAT LOADED, UP	*Response Term*
	VC	FIRE	*Execution*
	Gunner	ON THE WAY	*Response Term*
		TARGET	*Effects*
	VC	CEASE FIRE	*Termination*
Legend: MPAT—multipurpose tank, PC—personnel carrier, VC—vehicle commander			

Figure 9-5. Execution command to fire, fire (ammunition), example

9-8. If the VC uses the designate function (if equipped) to move the main armament onto additional targets, this provides the firer the location (direction) element, and the firer provides the remaining required elements of the supplemental fire command and continues to engage once the command of execution has been provided.

9-9. The purpose of FIRE, FIRE (WEAPON) is to provide the VC the ability to direct the gunner on multiple targets using multiple weapons. This allows the VC to announce

multiple threats and provide the method the firer must follow by prioritizing the most dangerous target first. (See example in figure 9-6.)

FIRE, FIRE (WEAPON), Bradley Example			
Type	***Crewmember***	***Example***	***Element/Term***
Initial Fire Command	VC	GUNNER	*Alert*
		HE	*Weapon/Ammunition*
		TRUCK, TROOPS	*Target Description*
		TRUCK FIRST	*Method*
	Gunner	IDENTIFIED TRUCK, ONE—THOUSAND	*Response Term*
	VC	FIRE, FIRE COAX	*Execution*
	Gunner	ON THE WAY	*Response Term*
		TARGET	*Effects*
Supplemental Fire Command	VC	TROOPS	*Target Description*
		DESIGNATE	*Location*
		GUNNER CONTROL	*Common Term*
	Gunner	IDENTIFIED TROOPS, SEVEN HUNDRED	*Response Term*
		COAX INDEXED	*Response Term*
	VC	FIRE	*Execution*
	Gunner	ON THE WAY	*Response Term*
		TARGET	*Effects*
	VC	CEASE FIRE	*Termination*
Legend: COAX—coaxial; HE—high explosive, VC—vehicle commander			

Figure 9-6. Execution command to fire, fire (weapon), example

Note. Announcing GUNNER CONTROL after the VC has used the designate function ensures the gunner establishes positive control of the turret and armament systems without losing the VCs established weapon system orientation. This term is not required by the crew but is useful to inform the gunner that the VC has completed movement of the turret.

9-10. The command of execution SUPPRESS directs the firer to continue to engage to suppress the target. This is typically given after the desired target effect has been achieved, but dismounts remain in the target area, either dispersing or dismounting from vehicle targets. SUPPRESS can only be used as a command of execution for subsequent fire commands where the original target area engaged does not change. If dismounts

deploy from a defeated vehicle, the VC must announce the new target description and the command of execution of SUPPRESS (see figure 9-7).

SUPPRESS, Bradley Example			
Type	***Crewmember***	***Example***	***Element/Team***
Initial Fire Command	VC	GUNNER	*Alert*
		COAX	*Weapon/Ammunition*
		TRUCK	*Target Description*
	Gunner	IDENTIFIED SEVEN HUNDRED	*Response Term*
	VC	FIRE	*Execution*
	Gunner	ON THE WAY	*Response Term*
		TARGET	*Effects*
			Alert
Subsequent Fire Command	VC	TROOPS	*Target Description*
		SUPPRESS	*Execution*
	Gunner	ON THE WAY	*Response Term*
		TARGET	*Effects*
	VC	CEASE FIRE	*Termination*
Note. After the gunner achieved a target on the truck, dismounted troops deploy from the defeated vehicle.			
Legend: COAX—coaxial; VC—vehicle commander			

Figure 9-7. Execution command to suppress, example

9-11. VCs that need to reengage the current target may use the SUPPRESS command of execution, provided there is no direction or deflection or range correction. This is not authorized for 105-mm or 120-mm rounds, except when firing canister. During those engagements, the firer switches to the coaxially mounted machine gun automatically once SUPPRESS is announced.

Chapter 10
Effects

The ninth element of the fire command is effects. The effects, or the evaluation of the recent direct fire engagement, is used to determine the effects on target, and to determine if additional rounds are required to achieve the desired outcome.

OVERVIEW

10-1. The evaluation alerts the Soldier, team, crew, or small unit of changes to the current engagement and to prepare for additional commands from the leader. Firers must be aware of the effects on target of each round or burst for each target engaged.

Note. Effects (or effects on target)—An evaluation of direct fire against the threat based on the strike of the round, the kill indicators present at the time of impact, and the resulting level of destruction. This element informs the leader of tactical understanding that supports another engagement decision.

10-2. Leaders and firers must visually confirm the effects of fire to build sufficient tactical information to enable subsequent engagement decisions. This includes observation of the strike of the round(s) or their perceived point of impact in relation to the target, the actions of the threat once struck with those rounds, and determination of the threat's remaining military capability. Generally, the sensing is a short description that requires the leader to determine the best tactical engagement decision to protect the force and eliminate the threat dilemma.

10-3. Regardless of the effects on target, the minimum acceptable result is hitting the target. For dismounted targets, suppression may be a desired outcome that provides time for the friendly force to maneuver to a position of advantage to defeat the threat. In general, suppression of dismounts and target hits on all other target types provide a significant tactical event that alters the threat's engagement decision process. This in turn typically provides more time to the friendly force to eliminate the threat.

10-4. The enemy engagement decision process, or kill chain, is comparable to that of U.S. Forces. In a continuous cycle, the threat elements perform the actions to detect, identify, locate, decide to engage, engage, and assess the effectiveness of their fires against U.S. Forces or a friendly force.

10-5. If the enemy's kill chain is interrupted, the target is suppressed. Once the threat target is suppressed, they may return to the beginning of their engagement process. This allows the friendly force time to reposition and provide more effective fires on the threat target. Suppressive fires may continue depending on how rapidly the threat returns to the engage element of their kill chain or until the threat has been neutralized or destroyed.

10-6. Suppression should only be used to define the tactical actions of dismounted threats. Suppression of other threats does not necessarily alter the enemy kill chain, but rather could provide information to move their kill chain further along. This can effectively reduce the time remaining for the friendly force to eliminate the threat before the enemy delivers effective fires.

Only dismounted targets may be considered suppressed

For example, rounds may impact on a threat tank that appears to stop moving shortly after the strike. Although the vehicle stops, it may not indicate the threat was suppressed, but rather allowed the threat to determine the firing vehicle location as part of their kill chain. This could technically reduce the time the friendly force has to eliminate that threat tank.

10-7. The effects on target are derived from three basic concepts: sensing, kill indicators, and the level of destruction. These concepts are shown in figure 10-1.

Effects on Target					
Sensing	Kill Indicator	LEVEL OF DESTRUCTION			
		Suppression	Mobility	Firepower	Catastrophic
DOUBTFUL	Impact left/right of the target	POSSIBLE			
LOST	Unable to verify strike of rounds				
OVER	Observed over target				
SHORT	Impact in front of target	POSSIBLE			
TARGET	Impact on target	LIKELY	POSSIBLE	POSSIBLE	
	Ceased Movement	POSSIBLE	POSSIBLE		
	Ceased Firing	POSSIBLE		POSSIBLE	
	Smoking Frame	LIKELY	LIKELY		
	Smoking Turret	LIKELY		LIKELY	
	Vehicle Explosion	YES	YES	YES	YES
	Crew Abandons Vehicle	YES	YES	YES	YES

Figure 10-1. Effects on target concepts, example

SENSING

10-8. A sensing is the verbal response from the firer, VC, or leader to a round or series of rounds (such as machine gun burst) of where the round(s) strike or pass the target in relation to the target aiming point. If the first round or burst fails to destroy the target, a sensing enables the small unit or crew to adjust fire for subsequent rounds when directed. When used as part of the collective kill chain process, the assessment provides a standardized reporting function to the next higher leader. This, in turn, develops the situation report to the higher headquarters on the actions taken, friendly forces status, and an estimate of the effects of the engagement.

10-9. Sensing effectively must determine the impact of the round(s) in relation to the target. Each of these sensings provides the crew with a representation of the area the last round or burst of fires that struck, passed through, or passed by a target in relation to the target engaged. The impacts are described in paragraphs 10-10 to 10-14.

DOUBTFUL

10-10. The announcement of DOUBTFUL (LEFT/RIGHT) is the observed impacts are to the flanks of the intended threat. This assessment generally leads to a subsequent fire command for the firing element.

LOST

10-11. The announcement of LOST indicates that no impact was observed or could be determined by the firer or leader. Lost rounds typically indicate the rounds have gone over the intended threat. This generally requires the leader or firer to make a more drastic adjustment during a subsequent fire command to bring the rounds on target or where their impact can be observed for more accurate adjustments.

OVER

10-12. The announcement of OVER is an observation of rounds (typically tracers or impacts above the threat) that indicate subsequent rounds must be dropped a known amount to achieve impacts on target.

SHORT

10-13. The announcement of SHORT indicates that the observed strike of the round(s) in front of the target. This generally indicates a range-to-target or other firer/crew induced error to correct using a subsequent fire command.

TARGET

10-14. The announcement of TARGET indicates that the observed strike of the round is on the intended target. Once assessed, the leader must ascertain the effects of fire by observing the threat's actions immediately after.

10-15. Sensings alone do not define the pending engagement decision. The target type, desired outcome, sensing, and threat actions provide actionable intelligence for the leader. Leaders use the kill indicators to determine if the direct fires suppressed or killed the threat.

10-16. Sensings provide the crew a means to announce the perceived strike of a round or burst from a fired weapon. Although sensings should be announced for every round or burst fired, three specific rules are adhered to for all crews. The firer or VC must announce a sensing—

- Before any subsequent fire command.
- Before any supplemental fire command.
- Before terminating engagements, which also requires that the crew confirm all threats have been effectively serviced.

10-17. Sensings serve as the alert to the crew for subsequent or supplemental fire commands. Those commands cannot begin until a sensing is provided by the firer or

VC. A sensing always serves as an alert to the crew of a pending engagement or a change to the engagement as described in the chapter 2.

10-18. The ability of the firer or VC to sense rounds depends on local obscuration created from firing, target area obscuration from smoke or dust created from the impact of rounds, and time of flight of the round. Figure 10-2 on page 84 shows the standard sensings given by the crew.

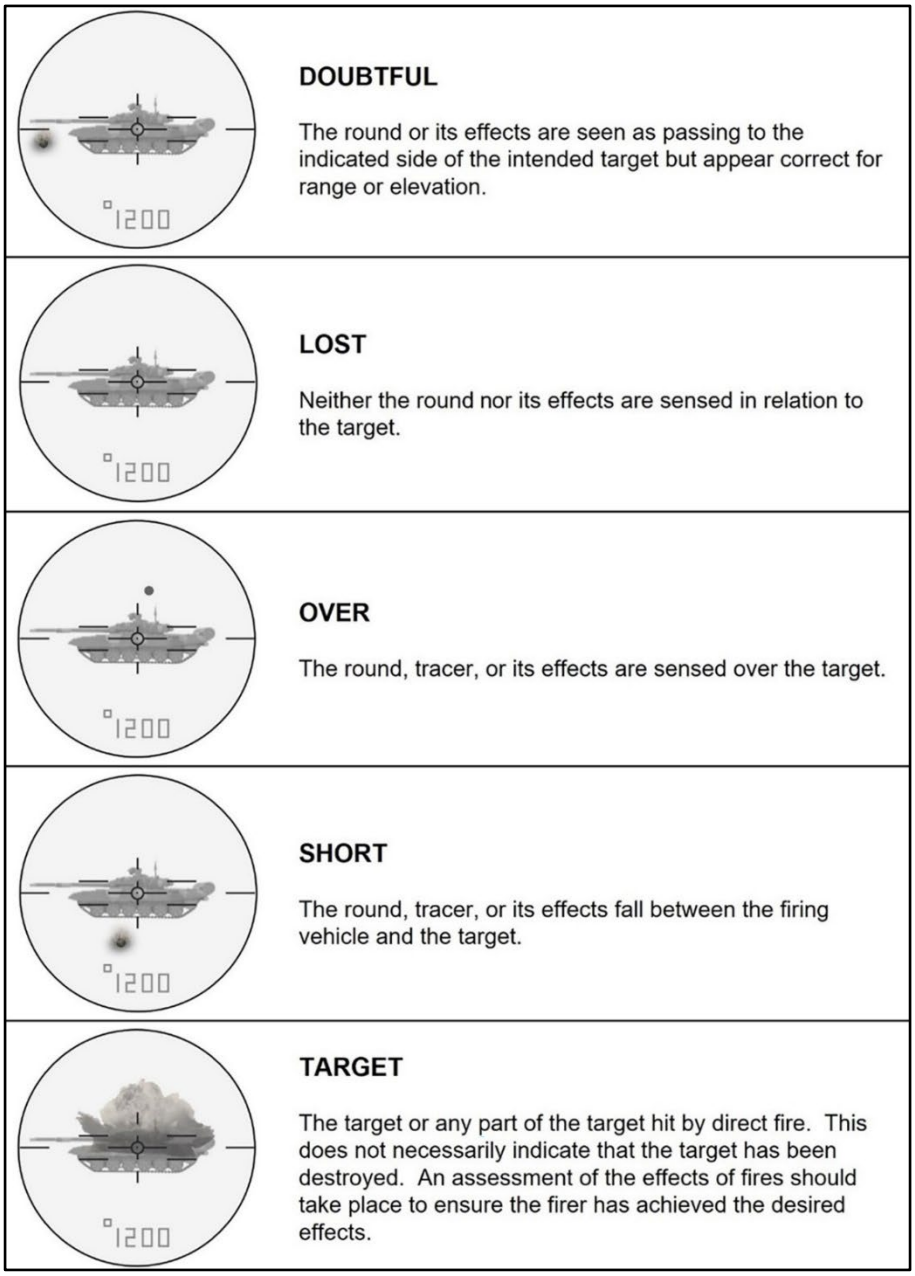

Figure 10-2. Examples of sensing

KILL INDICATORS

10-19. When assessing the effects of combat power against a threat the firer and leader look for signs at the target location that are indicative of a change to the threat's military significance, based on the threat type by domain. The ***target location*** **is the determination of where a target is in the operational environment in relation to the shooter, the small unit, and adjacent units.**

10-20. For tracked and wheeled targets, kill indicators that demonstrate a change in hostile intent include:

- Vehicle stops moving: if a vehicle stops moving, leaders may wish to reengage in the event the vehicle maintains the ability to engage with direct fires in a degraded capacity.
- Vehicle stops firing.
- Vehicle is smoking from what appears to be internal damage.
- Vehicle explodes.
- Crew abandons the vehicle.

Note. When a round or missile hits an armored vehicle, an observable explosion with flash occurs. This is the effect of the round impacting on the target, not necessarily an indication of damage to the target.

A ***serviced target*** **is a target that has been struck by direct fire and achieved the desired effects.**

LEVEL OF DESTRUCTION

10-21. There are different characteristics for assessing whether a target has been adequately engaged. There are indicators that the leader can use to evaluate the battlefield. The levels of destruction aid the leader in determining the subsequent engagement decision. The levels of destruction are suppression, mobility, firepower, combined, and catastrophic.

SUPPRESSION

10-22. Suppression occurs when there are no observable strikes on the target; however, the target has reacted to contact, altering their engagement decision process. The primary objective of suppressive fires is to get the enemy to keep their heads down, which reduces shoot, move, or observation capability of their surroundings. Suppressive fire can be aimed directly at an area target such as a tree line where suspected enemy troops are hiding.

Note. Suppression is only applied to dismounted targets.

10-23. When suppressing an area target, the duration of the required suppression is based on the requirements of the situation. Suppression should be maintained as long as possible for the unit to gain a tactical advantage or until another element can close with the target and destroy it. The other elements should only close on the enemy once coordination has been conducted and fires have been lifted or shifted.

10-24. Suppression fire has three purposes:

- To kill or destroy threat targets as quickly as possible.
- To stop the threat's engagement decision process.
- To allow the maneuver force to close in on the threat position and provide more accurate fires.

MOBILITY KILL

10-25. Mobility kills occur when the effect of fire degrades a target's ability to move under its own power but still maintains the ability to communicate and use its weapon systems. This does not apply to dismounted threats (see suppression). A mobility kill is considered an engaged target, but additional rounds may be needed to defeat the threat.

FIREPOWER KILL

10-26. A firepower kill prevents a threat's ability to use its weapon systems, but the threat may still maintain the ability move and communicate. This does not apply to dismounted threats (see suppression). A firepower kill is considered an engaged target, but additional rounds may be needed to defeat the threat.

COMBINED KILL

10-27. A combined kill is when both a mobility and firepower kill are rendered against the threat, making the vehicle combat ineffective. This does not apply to dismounted threats (see suppression). The vehicle may still have means of communicating or using any other onboard equipment. A combined kill is considered an engaged target, but additional rounds may be needed to defeat the threat.

CATASTROPHIC KILL

10-28. A catastrophic kill is derived when the total loss of weapon systems, mobility, and all onboard equipment are achieved. This applies to all target types. A catastrophic kill is announced as TARGET, TARGET in the sensing. The double use of the sensing indicates the catastrophic kill.

Chapter 11
Termination

Although not an element of a fire command, each direct fire engagement must be terminated by announcing CEASE FIRE. The announcement of CEASE FIRE requires all firers that hear the command to immediately stop firing.

OVERVIEW

11-1. Every engagement must be terminated. The termination command informs all the crewmembers to stop firing all weapons and systems (see figure 11-1.) This command may be given by any crewmember for any reason. The VC must terminate every engagement by announcing, CEASE FIRE, even when another crewmember announced it.

Termination	*Description*
CEASE FIRE	Directs all firing to stop immediately, regardless of threat status

Figure 11-1. Termination command

11-2. Normally, once the leader determines the sector is clear of threats, the termination order is given. Terminations to any fire command come in three ways: from a Soldier, the leader, or a higher authority. The termination delivered cannot be overridden, regardless of the situation.

11-3. On change of weapon system engagements, the use of CEASE FIRE to change between one weapon system and another is the VC's discretion. Transitioning between weapon systems without CEASE FIRE of the first weapon is an advanced skill and should only be used by experienced crews. Failure to clear the path of recoil by Abrams crews is a critical safety consideration when changing weapon systems. The VC is ultimately responsible for ensuring the safety of the crew.

11-4. For multiple weapon system engagements, each crewmember announces when they have completed engaging their target(s) by announcing, (POSITION) COMPLETE. This includes the VC when firing their weapon. Once complete, the firer must place their weapon system in the appropriate weapon safety posture. Stating, (POSITION) COMPLETE does not take the place of CEASE FIRE. Announcing, (POSITION) COMPLETE, indicates to the VC that the firer has achieved the desired effects on the threat provided in the fire command and is prepared for additional commands from the VC. If any additional threats are presented, the VC issues a subsequent or supplemental fire command.

CAUTION

Two common administrative means to cease fire or cease tracking during an engagement are CEASE FIRE, FREEZE, and CHECK FIRE. In either event, commands are given from a range tower; the crew immediately ceases all firing, releases their controls, and halts all movement of the vehicle. It is critical for the safety of the crew and others on the range to follow these administrative cease fires immediately. 1-1. FREEZE and CHECK indicate that members of the range crew verify the position, azimuth, elevation, and ballistic solution induced into the firing system. No movement of the gun, optics, fire control system configuration, or inputs may be done until the FREEZE or CHECK is lifted by an authorized commander.

LEADER ISSUED

11-5. The leader issues a termination once the threat has been reduced or eliminated such that no additional combat power should be expended. The leader may also issue a CEASE FIRE to prevent actions or unsafe conduct from injuring friendly, noncombatant, or neutral persons, or cause damage to equipment.

SOLDIER ISSUED

11-6. A Soldier issued CEASE FIRE is given when any safety or hazardous conduct is observed and must cease. Any Soldier may announce CEASE FIRE for any act that may injure or kill friendly, noncombatant, or neutral persons or cause damage to equipment. The Soldier should announce after all firing has ceased their position or identity and state the reason for the CEASE FIRE announcement.

HIGHER AUTHORITY ISSUED

11-7. A higher authority announcement of CEASE FIRE is driven by the tactical situation, commander intent, munitions available, and threat activity. As a subordinate leader receives the command to CEASE FIRE, the leader must notify all subordinates actively engaging to cease all direct fires. Once confirmed all subordinates have gone to a RED HOLD status, the leader reports their weapon posture to the higher authority.

11-8. In the event of an administrative cease fire, typically during live fire training events, the higher authority may announce CEASE FIRE FREEZE. Actions taken by the subordinate units firing are to immediately stop all movement, cease all firing and leave all firing controls, ballistic solution, ammunition, and weapon azimuth and superelevation as they are. Weapons may be placed in mechanical and electrical SAFE, provided those procedures used do not move the weapon from its firing position, change the ballistic solution, or fire control information. Announcement of CEASE FIRE FREEZE is generally for a significant live fire event that requires immediate attention and possible investigation.

11-9. It is imperative that the crew does not change any inputs the fire control system, or the position of the weapon system fired after the announcement of CEASE FIRE FREEZE. For example, if the round has landed outside of the impact area, the fire control inputs and position of the weapon system will be needed to determine where the round landed.

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Glossary

The glossary lists acronyms and terms with Army or joint definitions. The Army proponent publication for other terms is listed in parentheses after the definition.

SECTION I – ACRONYMS AND ABBREVIATIONS

ATGM	antitank guided missile
coax	coaxial
DA	Department of the Army
FM	field manual
JP	joint publication
LRF	laser range finder
MCTP	Marine Corps tactical publication
PC	personnel carrier
ROE	rules of engagement
ROI	rules of interaction
SOP	standard operating procedure
TC	training circular
TRP	target reference point
VC	vehicle commander
WSS	weapon safety status

SECTION II – TERMS

***at my command**

A term used to synchronize fires from a single vehicle when the VC maintains the timing of the engagement.

***battlecarry**

A posture in which a vehicle is prepared for an engagement at all times.

***conduct of fire**

The specific orders, directions, phrases, terms, modifiers, actions, reactions, responses, and assessments used by two or more Soldiers with synchronized efforts to defeat a threat or threats with direct or indirect fires. Commonly referred to as “fire commands.”

***confirmed target**

A detected object that has been interrogated sufficiently to identify its model, variant, or common name and discriminated as foe.

***crew response**

A confirmation that the crewmember understands the fire command, has completed an implied or directed task provided by the fire command, or to provide information to the crew.

***crew search**

A thorough, deliberate method of observation of a refined area.

***discriminate**

The determination whether a target is friend, foe, neutral, noncombatant, or unknown.

***engaged target**

A threat that has been struck or received direct fires, but the round(s) did not achieve the desired effect.

***engagement**

A series of one or more targets that receive direct fire from a firer, team, crew, or small unit to alter the threat's engagement decision process against a friendly force. An engagement begins with an initial fire command, may contain one or more subsequent and/or supplemental fire commands, and ends with a termination command.

***engagement sequence**

The order in which multiple targets are engaged with direct fire. The engagement sequence may be directed during the conduct of fire or follow standard target prioritization rules of thumb.

***engagement techniques**

Effects-oriented fire distribution measures.

***fire command**

A standardized format containing up to nine (9) elements used by a team or crew to deliver direct fire against a threat.

identification

In ground combat operations, discrimination between recognizable objects as being friendly or enemy, or the name that belongs as a member of a class. (JP 3-01)

***initial fire command**

Initiates a direct fire engagement on a target.

***kill chain**

Deliberate, ongoing series of interconnected tasks, actions, or functions that enable the application of the appropriate combat power on a confirmed threat rapidly and effectively in order to achieve the desired tactical effects on target.

***previously engaged target**

A known target that has received direct fires from the same firer or element within an ongoing engagement.

***quadrant**

A subdivision of an area created by superimposing an imaginary pair of perpendicular axes over the terrain to create four separate areas or sectors.

reconnaissance by fire

A technique in which a unit fires on a suspected enemy position. (FM 3-90)

***scan**

The act of observing designated areas in the assigned sector.

sector of fire

That area assigned to a unit, or weapon system in which it will engage the enemy according to the established engagement priorities. (FM 3-90)

***sequential engagements**

Require the use of one or more weapon systems against multiple targets in a sequential manner, one after the other, and use an initial fire command when initiating direct fires at the first target and a supplemental fire command to direct fires against secondary targets.

***serviced target**

A target that has been struck by direct fire and achieved the desired effects.

***simultaneous engagement**

An engagement where multiple weapon systems are engaging one or more targets, these targets can be engaged at the same time, or in a sequenced series of events.

***subsequent fire command**

Directs the firer to continue engaging a target by delivering subsequent rounds against the same target.

***supplemental fire command**

Given after the initial fire command is executed, shifts fires to another target described during the initial fire command or at targets that present themselves during the engagement.

***target description**

The description of the threat or threats that the small unit or crew is engaging.

***target location**

The determination of where a target is in the operational environment in relation to the shooter, the small unit, and adjacent units.

target reference point

A predetermined point of reference, normally a permanent structure or terrain feature that can be used when describing a target location. (JP 3-09.3)

***weapon control status**

A tactical method of fire control given by a leader that incorporates the tactical situation, rules of engagement for the area of operations, and expected or anticipated enemy contact.

***weapon safety status**

A standard code that uses common colors (green, amber, red, and black) to represent the level of safety for a given weapon.

References

All websites accessed on 6 June 2024.

REQUIRED PUBLICATIONS

These documents must be available to intended users of this publication.

DOD Dictionary of Military and Associated Terms. April 2024

FM 1-02.1. *Operational Terms*. 28 February 2024.

RELATED PUBLICATIONS

These documents are cited in this publication.

JOINT PUBLICATIONS

Most joint publications are available online: https://www.jcs.mil/Doctrine

JP 3-01. *Countering Air and Missile Threats*. 6 April 2023.

JP 3-09.3. *Close Air Support*. 10 June 2019.

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Index

Entries are by paragraph number.

F

fire command
  correction. 1-41

fire pattern method
  cross. 5-39
  depth. 5-40
  frontal. 5-38

R

ROE. 8-25, 8-26

ROI. 8-27

S

sensings. 10-11

V

vehicle movement
  movement
    commands. 1-43

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03 October 2024

By Order of the Secretary of the Army:

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