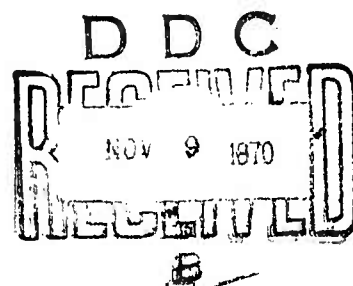


AD 713822

# HumRRRO



Reproduced by  
NATIONAL TECHNICAL  
INFORMATION SERVICE  
Springfield Va 22151

This document has been approved  
for public release and sale; its  
distribution is unlimited.

**The George Washington University  
HUMAN RESOURCES RESEARCH OFFICE**

18

Research By-Product

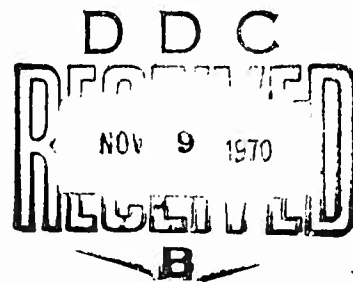
CRITICAL COMBAT PERFORMANCES,  
KNOWLEDGES, AND SKILLS REQUIRED OF THE  
INFANTRY RIFLE SQUAD LEADER

Squad Formations, Battle Drill, and  
Elementary Fire and Maneuver

by

Fred K. Cleary, Herbert Thompson,  
Arthur J. DeLuca, and George J. Magner

March 1969



Technical Advisory Service

This document does not represent official opinion or policy  
of the Department of the Army.

HumRRO Division No. 4  
(Infantry)

The George Washington University  
HUMAN RESOURCES RESEARCH OFFICE  
operating under contract with  
THE DEPARTMENT OF THE ARMY

## FOREWORD

In response to a request from the United States Army Infantry School (USAIS), HumRRO Division No. 4 (Infantry) initiated a Technical Advisory Service research project to identify and record the critical combat performances, knowledges, and skills required of the Infantry Rifle Squad Leader (IRSL) and the Infantry Fire Team Leader (IFTL).

The requirements imposed upon the IRSL and IFTL are essentially the same, except that the former is responsible for the control of the men and fires of both fire teams in a rifle squad, rather than only one. The senior IFTL within each squad must be prepared to assume effective leadership of the squad immediately if the IRSL becomes a casualty, completes a prescribed combat tour, or is absent for any reason. Since it is common practice to provide the same training for candidates for both positions of leadership and to employ the outstanding candidates in the higher position, each paper in this series will set forth the critical requirements imposed upon the IRSL and, therein, those imposed upon the IFTL as well.

Under Work Unit LEAD, Work Sub-Unit I, the critical combat performances, knowledges, and skills of the Infantry Rifle Platoon Leader were published in a series of 41 papers covering a like number of subject areas. Each paper was published with prior review and concurrence by the USAIS Instructional Departments concerned. These papers are being used as the primary source of data in completing a parallel series of papers for the Infantry Rifle Squad Leader and the Infantry Fire Team Leader. This document details the requirements in the area of squad formations, battle drill, and elementary fire and maneuver.

This Technical Advisory Service research is being performed at HumRRO Division No. 4 (Infantry), Fort Benning, Georgia. The present Director of Research is Dr. T. O. Jacobs.

Military support for the study is being provided by the U.S. Army Infantry Human Research Unit, Fort Benning, Georgia. LTC Chester I. Christie, Jr. is the present Unit Chief.

HumRRO research is conducted under Army Contract DA 44-188-ARO-2 and under Army Project 2J024701A712 01, Training, Motivation and Leadership Research.

Meredith P. Crawford  
Director  
Human Resources Research Office

SQUAD FORMATIONS, BATTLE DRILL, AND  
ELEMENTARY FIRE AND MANEUVER

General Considerations

Introduction

Men moving in an aircraft, a boat, or an armored vehicle are bound together by their vehicle and seldom become separated from each other, from their leader(s), or from their vehicle. All go where the vehicle goes and all go at the same time. Constant vigilance may not be required of all; in an armored personnel carrier, for example, men inside may relax, even rest. Movement, without adversely affecting security, efficiency, or control, may be possible, e.g., in a transport aircraft.

The Infantry Rifle Squad enjoys no such advantages during movement in dismounted combat. Terrain, reduced visibility, proficient individual use of cover, concealment, and camouflage, or enemy action may prevent men and leaders from maintaining visual, physical, or voice contact sufficient to ensure control. Every man must be constantly vigilant; the failure of one man--even the newest, most junior rifleman--may doom the squad to destruction. The squad's security may be compromised if even one man changes his position without being required to do so by orders or the situation.

Obviously, the Infantry Rifle Squad Leader (IRSL) needs a vehicle to bind his squad together, to move the squad as a unit and according to plan, and to initiate action automatically, if required by the situation, or with minimum orders or signals. And, he does have such a vehicle--in reality, three vehicles--in standard squad combat formations, fire and maneuver/fire and movement, and standard/nonstandard battle drill.

The standard squad combat formations can serve as an effective binder. Each disposes the squad in a configuration designed to provide maximum security, control, and flexibility in given general situations. Each man/weapon/leader has an assigned position in relation to every other man and an area of responsibility for observation, security, and fire. Effective use of these formations permits the IRSL to move his squad as a unit, with protection against separation.

Fire and maneuver/fire and movement provides a vehicle for taking coordinated offensive action by individuals, fire teams, or as a compact unit.

Battle drill provides the vehicle for swift and positive individual, fire team, or squad automatic reaction, or rapid reaction without lengthy orders or complex signals.

The effectiveness of these vehicles--thus, the effectiveness of the squad--does not depend solely on the knowledge and skill of the IRSL. Each squad member, especially the IRSL and his Infantry Fire Team Leaders (IFTL's), must know his position and task, the positions and tasks of all other squad members, and the positions and tasks of both fire teams in all

of the squad combat formations. To ensure this is the IRSL's responsibility. He must instruct, train, and rehearse individuals (including IFTL's), fire teams, and the squad until proficiency is attained.

#### Scope

This paper covers standard squad combat formations, the use of fire and maneuver/fire and movement, and the use of standard and nonstandard battle drill.

Closely related material is contained in the papers on Mounted and Dis-mounted Platoon Combat Formations; Patrolling; Mission, Organization, and General Operation of the Rifle Squad and Platoon; Tactical Movement; and Technique of Fire of the Rifle Squad.

#### Materiel

All TOE and special equipment composing the combat load for the Infantry Rifle Squad.

#### Battlefield Cues

Orders and instructions from commanders.

Receipt of combat intelligence reports from higher echelons; attached, supporting, or adjacent units; or any other reliable agency.

Enemy targets or the indications of existence of enemy targets, including suspected positions and possible ambush sites.

Receipt of fire from the enemy.

Detection of significant sounds and odors indicating possible enemy activity.

Recognition of fields of fire and observation, concealment and cover, obstacles, key terrain, and avenues of approach likely to affect the mission.

Discovery of significant differences in observed terrain as compared to impressions gained from map study during planning.

Observed weather conditions or the perception of indications of changes in weather conditions, visibility, or tide levels likely to affect human performance, movement of surface vehicles or aircraft, the control of weapons and fires or the functioning of weapons, equipment, or ammunition.

Receipt of pertinent weather forecasts, light data, tide tables, etc.

Performances, Knowledges, and Skills

1. THE INFANTRY RIFLE SQUAD LEADER (IRSL) WILL MOVE HIS SQUAD IN STANDARD SQUAD COMBAT FORMATIONS, TO ASSIST IN GAINING OR MAINTAINING THE DEGREE OF CONTROL, SECURITY, FLEXIBILITY, OR SPEED OF MOVEMENT REQUIRED IN THE VARYING CONDITIONS OF TERRAIN, VISIBILITY, OR ENEMY ACTIVITY THE SQUAD ENCOUNTERS DURING MOVEMENT IN COMBAT.

He must : know that the standard squad combat formations are: 1

- a. Squad file.
- b. Squad line.
- c. Squad columns (two versions):
  - (1) Fire teams in column.
  - (2) Fire teams abreast.
  - (3) Two variations of (1) and (2) above:
    - (a) "Normal"--each fire team in fire team file.
    - (b) "Modified"--expanded laterally to a general oval configuration.

: explain the characteristics of each formation. 2

- a. In squad file:
  - (1) Initial dispersion in depth is as great or as little as desired and is readily increased or decreased during movement.
  - (2) Lateral dispersion is poor, compared to other formations, although men are staggered left and right from the long axis of the formation.
  - (3) Speed and direction of movement are easily controlled.
  - (4) Vulnerability to flanking enfilade fire is less than in any other formation.
  - (5) Vulnerability to frontal enfilade fire is greater than in any other formation.
  - (6) Security (i.e., observation and delivery of fire) is excellent to the flanks, but limited to the front and rear.

- (7) The squad can deliver all of its fire to either flank, or, through designation of individuals to fire left and right, can deliver equal fire to both flanks simultaneously.
- (8) Change to squad column (fire teams in column) is rapid, requiring only that men quickly move left or right until they reach their proper relative positions (i.e., increase the distances they are staggered from the long axis of the formation).
- (9) Change to squad column (fire teams abreast) or to squad line is difficult to execute and to control in close terrain and when visibility is limited.
- (10) Rapid execution of standard battle drill is difficult in close terrain and when visibility is limited.

b. In squad line:

- (1) Initial lateral dispersion is as great or as little as desired and is fairly readily increased or decreased during movement.
- (2) Dispersion in depth is poor, compared to other formations, although men are staggered front and rear from the long axis of the formation.
- (3) Speed is difficult to control and change of direction is difficult.
- (4) Maintenance of the formation is difficult.
- (5) The squad is less vulnerable to frontal enfilade fire than in any other formation.
- (6) The squad is more vulnerable to flanking enfilade fire than in any other formation.
- (7) Security (i.e., observation and delivery of fire) is excellent to the front, but poor to the flanks and rear.
- (8) The squad can deliver all of its fire to the front (rear), or, through designation of individuals to fire front and rear, can deliver equal fire to front and rear simultaneously.

- (9) Change to squad column (fire teams abreast) is rapid, requiring only that men move more or less quickly until they reach their proper relative positions.
  - (10) Rapid change to squad column (fire teams in column) or to squad file is difficult, especially when visibility is limited.
  - (11) Maneuver left and maneuver right can be executed rapidly.
  - (12) Execution of fire and movement is facilitated.
  - (13) The squad's disposition is the same as when it has executed maneuver front.
- c. In squad column (all versions):
- (1) Initial dispersion, laterally and in depth, is as great or as little as desired, and is readily increased or decreased during movement.
  - (2) Speed and direction of movement are easily controlled.
  - (3) Vulnerability to flanking enfilade fire generally is slightly greater than in squad file, but much less than in squad line.
  - (4) Vulnerability to frontal enfilade fire generally is slightly less than in squad file, but much greater than in squad line.
  - (5) All-around security (i.e., observation and delivery of fire) is possible.
  - (6) Change from squad column (fire teams in column) to squad file is rapid, requiring only that men quickly move left or right until they reach their proper relative positions (i.e., decrease the distances they are staggered from the long axis of the formation).
  - (7) Change from squad column (fire teams abreast) to squad line is rapid and easy to control.
  - (8) Rapid change from squad column (fire teams abreast) to squad file is difficult to execute and to control, especially when visibility is limited.



(9) Standard battle drill can be initiated rapidly.

He will : when terrain and situation permit choice of formations, use squad column (appropriate version), recognizing that this formation offers a good combination of control, security, flexibility, speed of movement, firepower, and minimum vulnerability to enfilade fire. 3

: use squad column (fire teams in column), specifying distance to be maintained between fire teams, in situations where he expects action to the front and terrain does not restrict lateral maneuver of the trailing fire team (e.g., in open areas, particularly when distance to adjacent squads is great). 4

: use squad column (fire teams abreast) in situations where he expects action to the front and terrain may restrict lateral movement of fire teams, (e.g., when moving along terrain features which may come under fire, such as roads, trails, and ridges, with men on both sides, this formation places all of each fire team on one side and allows either to maneuver to its outer flank without crossing the terrain feature under fire. In contrast, fire teams in column splits both teams and precludes lateral maneuver of either team without some members crossing the terrain feature under fire.) 5

He must : use squad fire when terrain, obstacles, reduced visibility, or the need for speed or close control precludes use of squad column, e.g.: 6

- a. In dense terrain, such as jungle, for speed, control, quieter movement, and to conserve squad energy (only the leading man--who should be changed often--is required to "break trail").
- b. At night, to prevent men becoming separated (if necessary, each man can maintain hand contact with the man ahead).
- c. When moving on narrow trails through dense terrain.
- d. To negotiate mined areas, reducing danger to all but the leading man.
- e. To pass through gaps in wire or other obstacles.

He will : use squad line: 7

- a. When maximum firepower to the front is required, e.g., when assaulting.

- b. To cross roads, trails, short open areas, and shallow streams, if the reduced time of exposure is significant and outweighs the immediate need for closer control and greater flexibility.
- c. When the exact enemy location to the front is unknown and when flanks are secured, e.g., when moving toward an enemy with squads or platoons moving on the immediate flanks.

He must : to speed orderly formation of the squad, particularly from dispersed positions, establish SOP fire team positions in each squad combat formation, e.g., prescribe that: 8

- a. ALPHA (BRAVO) team leads for squad file and squad column (fire teams in column).
- b. ALPHA (BRAVO) team forms on the right for squad line and squad column (fire teams abreast).

: over time, vary fire team positions to: 9

- a. Ensure equitable distribution of extra-hazardous or fatiguing duty (e.g., as leading fire team).
- b. Spur alertness.
- c. Provide the fire teams uniform experience in operating in different positions within the various formations.

He will : form the squad and begin movement in the initial formation prescribed by the IRPL, or, if the IRPL does not prescribe an initial squad formation, adopt the formation most appropriate for the circumstances of terrain, visibility, and enemy situation. 10

: change the initial formation, and subsequent formations, as required to meet changes in terrain, visibility, and enemy situation. 11

: train his squad to change formations quickly, quietly, and smoothly, and without halting or unduly slowing movement. 12

He must : know and ensure that his men know the three positions the squad may occupy in each of the five standard dismounted platoon formations. 13

- He will : assign each squad member an SOP position in each version of each formation (making assignments according to duty, e.g., riflemen, IFTL, grenadier, etc., as shown in FM 7-15, and not as individuals). 14
- : require each man to know his own SOP positions and the SOP positions of every other man. 15
- : temporarily change his SOP position in a formation only as required to properly direct and control the squad. 16
- : permit (require, if appropriate) IFTL's to change their SOP positions, temporarily, as necessary to direct and control their fire teams. 17
- : permit (require, if appropriate) IFTL's to make temporary changes in their men's SOP positions as necessary to ensure equitable distribution of extra-hazardous or fatiguing duty (e.g., rotation of duty as point). 18
- : otherwise, change SOP positions only: 19
- a. When altering the composition of fire teams to regroup firepower to meet the demands of a specific situation. (See Items 34 and 35, below.)
  - b. To adjust for reduced strength.
- He must : recognize that, from his SOP positions in formations, he can: 20
- a. Best observe the terrain over which the squad is to move without significantly changing position.
  - b. Best observe and maintain direct contact with his IFTL's.
  - c. Readily be seen by his IFTL's without undue movement on their part.
- He will : ensure that his IFTL's know that, from their SOP positions, they can best: 21
- a. Observe the terrain over which their fire teams are to move.
  - b. Observe and maintain direct contact with their men and, particularly, with their grenadiers and automatic riflemen.

- c. Observe and react to his signals and commands.
- He must : know and ensure that his IFTL's and other squad members know that assignment of SOP positions: 22
- a. Speeds orderly formation of the fire teams and the squad.
  - b. Enhances all-around observation and security through assignment of specific areas of principal responsibility for observation.
  - c. Positions grenadiers and automatic riflemen for maximum capitalization on their firepower in situations most likely to be encountered.
  - d. Enhances security and coordination between individuals, particularly during reduced visibility, by providing each man a means for knowing who is, or should be, to his left, right, front, and rear.
- He will : emphasize to his men that, when increasing or decreasing dispersion to adjust to terrain, visibility, or enemy situation, each man must maintain his relative position in the formation. 23
- He must : in training and in combat, continually observe for any hesitancy of men to assume or maintain their SOP positions, or to respond to orders or signals for formation changes, recognizing such hesitancy as indicative of the need for additional training. 24
2. THE IRSL WILL DIRECT ATTACK BY FIRE AND MANEUVER OR BY FIRE AND MOVEMENT, AS DEMANDED BY THE EFFECTIVENESS OF ENEMY FIRE RECEIVED.
- He must : define effective fire (i.e., effective enemy fire) as enemy fire that is: 25
- a. Causing casualties to his squad.
  - b. Likely to cause casualties if the squad continues its course of action (e.g., if the squad or an element of the squad continues to move as a group).
- : when the squad is not actually sustaining casualties, base his determination that incoming fire is effective by its proximity and sounds (e.g., bullet strikes and ricochets) and the observed effects of bullet strikes, grenade fragments, and mortar and artillery round fragments (e.g., dust kicked up; leaves, twigs, or grass clipped off; debris thrown up; bark knocked off trees; splinters knocked off buildings, posts, etc.). 26

- He will : define fire superiority as the condition existing when fire placed on the objective prevents the enemy on the objective from placing effective fire on the squad by: 27
- a. Destroying him.
  - b. Inflicting such heavy casualties that he does not attempt to fire.
  - c. Forcing him to keep down in position so that he can neither deliver aimed direct fire nor effectively adjust indirect fire.
- He must : define fire and maneuver as a method of attack in which one element of a command (the maneuver element) moves while being supported by another element (the base-of-fire element), e.g.: 28
- a. In platoon fire and maneuver, the rifle squads--the platoon maneuver element--move while being supported by the weapons squad and other supporting fire--the platoon base-of-fire element.
  - b. In squad fire and maneuver, one fire team--the squad maneuver element--moves while being supported by the other fire team and other supporting fire--the squad base-of-fire element.
- : recognize that squad fire and maneuver differs from platoon or larger unit fire and maneuver only in the sizes and compositions of maneuver and base-of-fire elements. 29
- : explain that the mission of a maneuver element is to close with and destroy or capture the enemy on the objective. 30
- : explain that the mission of a base-of-fire element is to prevent or help prevent the enemy on the objective from interfering with the movement of the maneuver element by gaining and maintaining or helping gain and maintain fire superiority over the enemy on the objective. 31
- He will : recognize that standard organization of the rifle squad into two fire teams provides two elements that are interchangeable as maneuver/base-of-fire elements for the conduct of squad fire and maneuver. 32

- : normally designate: 33
  - a. One (either) fire team as the squad maneuver element.
  - b. The other fire team, plus attached weapons, as the squad base-of-fire element.
  
- : deviate from this procedure (i.e., alter the composition of fire teams) only when a specific situation requires regrouping of firepower (e.g., placing both grenadiers or both automatic riflemen in the base-of-fire element). 34
  
- : recognize that alterations may: 35
  - a. Be unduly time-consuming.
  - b. Eliminate fire team interchangeability.
  - c. Destroy fire team integrity.
  
- He must : define fire and movement as a method of attack in which parts of an element alternate in supporting and moving in short bounds by rushing or crawling, e.g.: 36
  - a. The squad, as a maneuver element of the platoon, executes fire and movement by:
    - (1) Fire teams alternating in supporting and moving, with no more than two or three men of the moving fire team moving simultaneously.
    - (2) A few men moving simultaneously, supported by the rest of the squad.
  - b. A fire team, as the squad maneuver element, executes fire and movement by one or two men moving at a time, supported by the rest of the fire team and the squad base-of-fire element.
  - c. A fire team, as the squad base-of-fire element, executes fire and movement by one or two men moving at a time, supported by the rest of the fire team.
  
- : know and ensure that his men know and follow these three general principles of squad and fire team fire and movement: 37
  - a. Only a few men move at a time, to minimize simultaneous exposure.
  - b. Men normally do not attempt to fire while moving.

- c. Men not moving deliver maximum aimed fire on the enemy.
- d. Men must not establish patterns of movement.
- e. Two key weapons do not move simultaneously.

He will : attack by fire and maneuver when the squad encounters an isolated enemy position (e.g., a sniper or an outpost), using his base-of-fire element, and if necessary, his maneuver element and other supporting fires, to gain fire superiority; then use his maneuver element to eliminate the resistance or to move into position for the assault. 38

He must : attack by fire and movement (squad or fire team) when he is not able to gain, or is not able to maintain, fire superiority with all fire available to him. 39

3. THE IRSL WILL USE SQUAD BATTLE DRILL TO OBTAIN SWIFT AND POSITIVE REACTIONS AUTOMATICALLY OR WITH MINIMUM ORDERS OR SIGNALS.

He will : define squad battle drill as the simple, well-practiced courses of action the squad executes as automatic reactions to situations or as immediate reactions to brief oral commands or simple arm-and-hand signals. 40

: further define squad battle drill as standard and nonstandard, as follows: 41

a. Standard squad battle drill is:

- (1) Individual, fire team, and squad fire and movement, executed automatically or on oral command.
- (2) Squad fire and maneuver (maneuver left, maneuver right, and maneuver front), executed on oral commands or standard arm-and-hand signals.

b. Nonstandard squad battle drill is:

- (1) Locally developed courses of action designed to provide swift and positive individual, fire team, or squad reaction to situations not covered by standard battle drill (usually those situations peculiar to the local combat environment).

- (2) Executed automatically, on oral commands, or standard or locally devised arm-and-hand signals.

NOTE: This performance is concerned primarily with standard squad battle drill, as described in FM 7-15, Rifle Platoon and Squads, Infantry, Airborne, and Mechanized. Nonstandard squad battle drill is discussed only as necessary to show its purpose, establish the responsibility of commanders to design appropriate drills, and emphasize the responsibility of the IRSL to use every available means to ensure successful operation. Examples of nonstandard battle drill that may be developed to meet special situations are discussed as "immediate action" drills in FM 21-75, Combat Training of the Individual Soldier and Patrolling.

He must : train his men to execute fire and movement automatically on receipt of effective frontal small arms fire while moving in any squad combat formation, as follows:

42

- a. All men in position to do so immediately place maximum aimed fire on located and likely enemy positions.
- b. Members of the leading fire team move, by individual rushes or by crawling, taking advantage of cover afforded by terrain and supporting fire, to positions generally abreast of their IFTL and attempt to gain fire superiority.
- c. Members of the trailing fire team who are not in position to fire effectively immediately seek firing positions and take up the fire to help gain fire superiority.
- d. All squad members continue in this manner until he (the IRSL) makes an estimate of the situation and selects and initiates a course of action.

: develop and train his men in similar drills to ensure automatic reaction to fire from the flanks or rear.

43

He will : train his men to execute squad fire and maneuver (maneuver left, maneuver right, and maneuver front) quickly and properly, from all standard squad combat formations, in response to appropriate signals or oral commands.

44



- He must : recognize that execution of squad fire and maneuver requires a maneuver element and a base-of-fire element-- the elements provided by standard rifle squad organization; ensure retention of these elements when making or considering temporary alterations in squad organization (see Items 32-35 above). 45
- He will : develop and train his men in nonstandard battle drill actions and maneuvers designed for anticipated situations in which automatic reaction is desired or in which "normal" issuance of orders is not practicable, e.g.:
- a. Automatic fire and movement if ambushed.
  - b. Immediate response to signals or commands to:
    - (1) Halt in place.
    - (2) React to air observation or attack.
    - (3) React to chance contact (visual or physical).
- : use standard arm-and-hand signals to initiate battle drill actions, as far as practicable; beyond this, develop and train his men in appropriate signals. 47
- He must : both in training and in combat, habitually observe for hesitancy of IFTL's to relay signals or commands or of men to respond, recognizing such hesitancy as indicative of a need for additional training. 48